

CALIFORNIA COASTAL COMMISSION

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Staff: JP-SF
Staff Report: April 20, 2000
Hearing Date: May 9, 2000

REVISED PROPOSED FINDINGS FOR CEASE AND DESIST ORDER

CEASE AND DESIST ORDER: CCC-00-CD-02

RELATED VIOLATION FILE: V-7-93-001

PROPERTY LOCATION: Submerged lands totaling 10 acres, 300 yards offshore of the Balboa Peninsula in the City of Newport Beach, Orange County (**Exhibit 1**)

PROPERTY OWNER: City of Newport Beach

VIOLATION DESCRIPTION: The placement on the seafloor of an artificial reef made of a variety of materials, including, but not limited to: (1) used automobile tires; (2) PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod; and (9) concrete blocks.

ALLEGED VIOLATOR Marine Forests Society (MFS), Rodolphe Streichenberger, President and Founder

SUBSTANTIVE FILE DOCUMENTS: CDP E-93-13; CDFG aquaculture lease No. M-738-02; CC Artificial Reef Workshop Handout August 8, 1999, Item W12.

CEQA STATUS: Exempt (CEQA Guidelines (CG) §§ 15061 (b)(1) and (3)) and Categorically Exempt (CG) §§ 15061(b)(2), 15307, 15308 and 15321)

I. SUMMARY

The above-referenced violation activity consists of development (as that term is defined in section 30106 of the California Coastal Act) that has been undertaken in a manner that is inconsistent with the permitting requirements set forth in section 30600 of the Act. This development consists of the placement, over time, on the seafloor of an artificial reef consisting of a variety of materials, including, but not limited to: (1) used automobile tires; (2) PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod;

and (9) concrete blocks. These activities first began in 1988 and have continued to the present without the California Coastal Commission's regulatory approval.

On April 9, 1997, the California Coastal Commission, by a vote of 0 in favor and 12 opposed, denied an application by Marine Forests Society (MFS) for an after-the-fact coastal development permit for the subject development activities (**Exhibit 2**). At the time of the hearing Commissioners agreed to postpone enforcement action against MFS until the Commission held a public workshop on artificial reefs.

On August 11, 1999 the Commission held the artificial reef workshop. At the end of the workshop the Commissioners directed staff to proceed with enforcement action against MFS to seek removal of the denied artificial reef development.

Since August 1999, Commission staff has contacted MFS on numerous occasions in writing and by telephone, requesting that MFS apply for a CDP to remove the denied development. MFS has not complied with staff's requests. As a result of MFS's refusal to remove the illegal development, the Executive Director of the Commission instituted proceedings for the Commission to issue, pursuant to Coastal Act section 30810, a Cease and Desist Order to resolve the subject violation.

The proposed cease and desist order would require MFS to: (1) refrain from engaging in any further development activity off the shores of Newport Beach; (2) obtain from the Commission a coastal development permit authorizing removal of the denied development, and (3) carry out removal activities authorized by the permit within a specified timeframe.

II. HEARING PROCEDURES

The procedures for a hearing on a proposed Cease and Desist Order are outlined in section 13185 of the California Code of Regulations (CCR), Title 14, Division 5.5, Chapter 5, Subchapter 8. The Cease and Desist hearing procedure is similar in most respects to the procedures that the Commission utilizes for permit and LCP matters.

For a Cease and Desist hearing the Chair shall announce the matter and request that all parties or their representatives identify themselves for the record, indicate what matters are already part of the record, and announce the rules of the proceeding including time limits for presentations. The Chair shall also announce the right of any speaker to propose to the Commission, at any time before the close of the hearing, any question(s) for any Commissioner, in his or her discretion, to ask of any other speaker. The Commission staff shall then present the report and recommendation to the Commission, after which the alleged violator(s) or their representative(s) may present their position(s) with particular attention to those areas where an actual controversy

exists. The Chair may then recognize other interested persons, after which staff shall respond to the testimony and to any new evidence introduced.

The Commission should receive, consider, and evaluate evidence in accordance with the same standards it uses in its other quasi-judicial proceedings, as specified in CCR section 13186, incorporating by reference section 13065. After the Chair closes the hearing, the Commission may ask questions as part of its deliberations on the matter, including, if any Commissioner chooses, any questions proposed by any speaker in the manner noted above. Finally, the Commission shall determine, by a majority vote of those present and voting, whether to issue the Cease and Desist order, either in the form recommended by staff, or as amended by the Commission. Passage of a motion, per staff recommendation or as amended by the Commission, as the case may be, will result in issuance of the order.

III. MOTION

Staff recommends adoption of the following motion:

I move that the Commission issue Cease and Desist Order No. CC-00-CD-02 as proposed by staff.

Staff recommends a **Yes** vote. An affirmative vote by the majority of the Commissioners present will result in the issuance of the order set forth in Section V of this report.

IV. PROPOSED FINDING

Staff recommends the Commission adopt the following findings of fact in support of its action:

A. Background and Administrative Resolution Attempts

From 1988 and continuing through the present the Marine Forests Society (MFS) placed a variety of structures and materials on the seafloor offshore from Newport Beach in Orange County (**Exhibit 1**). The project was intended to examine the technical feasibility of large-scale marine habitat enhancement. Structures included approximately 2,000 plastic jugs wrapped with plastic mesh, 100 20-foot long air-filled 6-inch PVC pipes, 1,500 automobile tires tied together, and a variety of other materials (**Exhibit 3**).

In April 1987 the California Department of Fish and Game (CDFG) conditionally granted to MFS a lease (No. M-738-02) for the conduct of aquaculture activities at the property location (**Exhibit 4**). Condition G of the lease agreement explicitly requires the leasee to obtain Coastal Commission regulatory approval prior to proceeding with the project. The lease also specified

that MFS must enter into a production agreement with CDFG and meet minimum planting and production requirements after five years in operation in order for the lease to be renewed. In October 1994, the CDFG declared lease No. M-738-02 abandoned by mutual agreement between MFS and CDFG. Condition "F" of the lease required all project-related improvements be salvaged and removed within 90 days of the termination of the lease. MFS has not complied with this condition.

On June 7, 1993 the Commission became aware of the unpermitted development (also known as Project 1) when MFS submitted an incomplete Coastal Development Permit (CDP) application (E-93-13) for a Tire Reef Demonstration (TRD) Project (Project 2). On June 18, 1993, Commission staff simultaneously issued an "incomplete" filing status letter for the TRD project embodied in Project 2 and opened a Coastal Act violation case on Project 1.

On August 8, 1995 MFS applied for an after-the-fact coastal development permit (CDP) (E-95-5) for Project 1 (**Exhibit 5**). On April 9, 1997 the California Coastal Commission denied E-95-5 (**Exhibit 2**). At the time of the hearing the Commissioners agreed to postpone enforcement action against MFS to secure removal of the denied development until the Commission held a public workshop on artificial reef construction.

On August 11, 1999 the Commission held the artificial reef workshop (**Exhibit 6**). At the end of the workshop the Commissioners directed staff to proceed with enforcement action against MFS to cause the development denied in E-95-5 to be removed.

Since August 1999 Commission staff have contacted Streichenberger as representative of MFS to request removal of the denied development. As of the date of this report, MFS has failed to comply with staff's requests.

B. Resource Impacts

Coastal Act sections 30230, 30231, and 30233 state:

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

30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and

for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges.

30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

Marine Forests Society's denied development has posed and continues to pose a danger to both human and marine ecosystem health since the project's inception in 1988. The dangers from the project come from the project's location near a sewage outfall, leachates from tires used in the project, and materials used in the project that have become debris on the ocean floor.

The development is located within the shellfish harvesting exclusion zone established by the National Shellfish Sanitation Plan. This zone was established around the outfall of the Orange County Sanitation District Ocean Discharge and local marinas to provide a buffer zone between the bacterial and environmental contaminants associated with these facilities and the area where harvesting of shellfish occurs. The siting of an artificial reef in an area of degraded water quality raises concerns regarding the marine life attracted to the area, and ultimate human consumption of contaminated fish and shellfish. By attracting and congregating fish in this area, the MFS development increases the risk that unsuspecting recreational anglers may catch and consume fish contaminated with *E. coli* and other pathogens associated with sewage outfall.

Tires, of which there are over 1,500 used in the project, contain compounds that are harmful to some marine organisms and actually toxic to other organisms. Although there seems to be some disagreement in the scientific community as to the levels of toxicity that may leach from tires and the degree of harm posed to individual species, there is a general consensus that tires in the marine environment pose some health risk to marine organisms.

The materials used for the MFS project, tires, plastic jugs, PVC pipe, plastic mesh, netting, nylon rope, Styrofoam, and a variety of other, man-made materials, are not sufficiently dense to remain in place on the sea floor under heavy storm and wave conditions. The project structures are anchored to the sandy bottom by means of small plastic anchors and 1/4-inch-diameter nylon rope. Over the years some of the material has broken free and become marine debris. Site inspections in September 1993, and October 1995 showed only a few of the original 2,000 deflated plastic

jugs planted for the development remained in place.¹ At sea, the materials used in the development create problems for both marine life and human activities. Drifting plastic can foul props and jam intake valves on small vessels. Discarded netting and rope assemblies can trap fish and marine mammals long after they are abandoned. Given that the Commission denied an after-the-fact permit request to retain the project, the denied development now constitutes ocean dumping.

C. Staff Allegations

The staff alleges the following:

1. The Marine Forest Society, of which Rodolphe Streichenberger is the President and Founder of, has undertaken development as defined by Coastal Act section 30106 on 10 acres of submerged lands, 300 yards offshore of the Balboa Peninsula in the City of Newport Beach. This land falls within the coastal zone as defined by Coastal Act section 30103. The Marine Forest Society has failed to first obtain a coastal development permit (CDP) as required by Coastal Act section 30600 for this development. From 1988 and continuing to the present MFS placed and maintained the following on the ocean floor: (1) used automobile tires; (2) PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod; and (9) concrete blocks.
2. On April 9, 1997 the Coastal Commission denied MFS's ATF application for CDP E-95-5. Since that time, MFS has failed to remove or file for a CDP to remove the denied development.

D. Alleged Violators Defense and Commission Response

1) **Other facts which may exonerate or mitigate your possible responsibility or otherwise explain your relationship to the possible violation (be as specific as you can; if you have or know of any document(s), photograph(s), map(s), letter(s), or other evidence that you believe is/are relevant, please identify it/them by name, date, type, and any other identifying information and provide the original(s) or (a) copy(ies) if you can:**

MFS Defense:

In November 25, 1986 the newly founded Maine Forests Society (MFS) wrote to E.J. Smith, Supervisor of the Marine Resources Division of the California Department of Fish and Game (CDFG), requesting an aquaculture lease for "the experiment of Sea Bio-Structuring, a key

¹ Table 1. Adopted Findings for Coastal Development Permit E-95-5. April 9, 1997

process to implement enhancement of the sea, kelp field restoration, and mitigation programs". See attachment I.

On February 23, 1987, the City of Newport Beach endorsed the MFS "aquaculture research project" on the submerged lands, which have been legislatively granted to the City in a public trust. See attachment II.

On April 1, 1997 the CDFG granted the MFS an aquaculture lease in order to cultivate kelp, abalone, mussels, sea urchins, scallops, and oysters "planted on bio-structures anchored on the seafloor... No other mode of operation or culture method is authorized unless Lessee shall first obtain approval from the F & G Commission. See attachment III.

From 1986 to 1993 the MFS conducted experimentation of such above-mentioned bio-structures. This Project 1 consisted of 2,000 seafloor-anchored 2-gallon plastic jugs for kelp, 150 seafloor-anchored 20-ft. long plastic tubes, and 1500 seafloor-anchored used tires grouped in 15 tire ribbons.

In 1993 and at the request of the Integrated Waste Management Board (CIWMB), the MFS planned for demonstrating the possibility of the recycling of used tires in marine habitats. This Project 2, which consisted of 4.5 acre "Tire Mussel Ribbon (TMR)" made of 30,000 used tires. On April 28, 1993 the MFS Project 2 was granted \$100,000 by CIWMB. Project 2 was never implemented. The project was attacked and destroyed by (1) Susan Hansch, the CCC's Deputy Director promoting the use of a quarry rock-made artificial reef for an environmental mitigation of the Edison Nuclear Plant at San Onofre, and by (2) Dennis Bedford, an agent of the Artificial Reef Unit at the CDFG. Mr. Bedford and Ms. Susan Hansch were promoting the same quarry rock project for the Edison Company.

The "Quarry Rock Lobby" of the CCC Hansch and CDFG Bedford proclaimed that Project 2 will never be authorized by the CCC. So, they forced the CIWMB and the MFS to abandon Project 2, in spite of the fact that the project had been approved by the CIWMB State Agency (June 30, 1993), the City of Newport Beach (March 27, 1995), and the CDFG Commission (August 26, 1993) See attachment IV, V, VI.

Having destroyed the MFS's Project 2, the "Quarry Rock Lobby" wanted to go further and destroy also the MFS's Project 1.

After having obstructed for 4 years the Commission's hearing for the June 4, 1993 after-the-fact application permit for Project 1 (MFS's Appeal on April 29, 1995), the commission's staff presented false "Findings" and recommended the denial of the permit for Project 1. On April 1997 the Commission denied the granting of a permit for Project 1, but ordered the CCC's staff to hold a workshop in order to review the project of the MFS within 2 months. In spite of the

MFS protest, the CCC's after-hearing report omitted to report the objections of the MFS at the hearing and the workshop decision of the Commission. See attachment V, III, XI, XVI.

On August 11, 1999, after 2 years of delaying a workshop, which could have changed the Commission's misruling of April 9, 1997, the CCC's staff held a biased workshop without the participant of the MFS. Once again, D. Bedford and S. Hansch organized this other sabotage of the MFS existing development.

On October 28, 1999, and as a result of 6 years of machination by the "Quarry Rock Lobby," the staff of the CCC is now presenting the MFS a Cease and Desist Notice.

B. OUR REFUTATION OF PERMIT VIOLATION NO. V-E-93-001

a) The CCC text "California Coastal Act of 1976 Questions and Answers", which is a guide to California develops, contains the question: What types of development require a coastal permit?" The CCC has answered this questions as follows: Under the Coastal Act, most structures or activities that modify land or water use in the coastal zone require a coastal development permit: Therefore, it makes sense to believe that submerged structures which do not modify the water use in the coastal waters are exempt from a CCC permit. This is particularly true when underwater structures are experimental and removable as the bio-structures of MFS Project 1 are.

b) The MFS has inquired with the Marine Resources Division of the CDFG about the necessity to ask for a CCC permit for Project 1. The CDFG answer was negative.

c) Several years before sending the June 1993 Violation notice V-E-93-001 the CCC's staff knew and had been informed of the MFS's activity. During several years the CCC's staff did not require the MFS to file for a permit for Project 1. See attached X.

d) On June 18, 1993 Susan Hansch wrote that the CCC's staff had not yet determined if "a coastal development permit was required for the existing experimental bio-structures". This undecidedness, after several years of acceptance of the fact, suggests that the CCC's staff is today arbitrary accusing the MFS of a violation of the CEQA law.

C. OUR REFUTATION OF THE ACCUSATION OF HAVING DEVELOPED WITHOUT A PERMIT AN "ARTIFICIAL REEF."

In 1988 the MFS did not begin the development of an "artificial reef" as stated in the October 28, 1999 Cease and Desist letter.

During 6 years, the MFS development was described by the CCC's staff as follows: "structures", "existing structures", "existing experimental bio-structures", "unpermitted

structures", kelp bio-structures", "mussel columns", "used tires", "diverse little units", materials", "various experimental structures", "fill in open waters", "artificial marine habitat experiment."

It is only on October 28, 1999 that for the first time the CCC's staff gave the label "Artificial Reef" to the MFS bio-structures Project 1. In so doing the CCC's staff are denying the novelty and originality of the MFS structures and comparing them with the artificial reefs they promote.

Having created the above-mentioned confusion the CCC's argue that according the CEQA Section 21080.5 (d)(2)(I) they must permit the MFS bio-structures because they are "artificial reefs" of greater environmental impact than the rock concrete-made available artificial reefs that they recommend. See: W-12a Staff Recommendation, Page 30, 2.5. Our answer to the argument of the CCC's staff is:

- 1. The MFS bio-structures cannot be compared to the CCC's artificial reefs. The MFS bio-structures are different from any other structures ever built in the world. The proof lies in the fact that the MFS bio-structures have been granted US patents of invention.*
- 2. The MFS bio-structures do not cause the adverse environmental impacts that the rock or concrete artificial reefs of the CCC do to the environment. All the contrary, it is the CCC's artificial reefs which cause "significant and unavoidable" adverse impacts to the environment, as reported in the May 1999 Environmental Impact Report (EIR) of Resources Insights Inc.*
- 3. The MFS bio-structures have never been found actually doing adverse environmental impacts.*

Therefore, the "Artificial Reef" accusation is a false accusation.

Commission's response:

The Marine Forests Society makes essentially five arguments in its defense.

1. The activity that is the subject of this proceeding does not constitute development under the Coastal Act.

Section 30106 of the Coastal Act defines development as

...the placement or erection (on land in or under water) of any solid material or structure;
...change in the intensity of use of water, or of access there to; construction,
reconstruction, demolition, or alteration of the size of any structure, including any facility

of any private, public, or municipal utility; and the removal or harvesting of major vegetation other than for agricultural purposes...As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line.

MFS's Project 1 involved the placement of scrap tires and other readily available discarded materials on the sandy seafloor off Newport Beach. Such activity constituted "the placement...under water, of...solid material or structures." Contrary to MFS's contention, it also changed the intensity of use of the water from a sandy sea floor to marine habitat for mussels and fish. Consequently, the subject activities satisfy the definition of development contained in section 30106 of the Coastal Act.

2. MFS is exempt from filing for a CDP because staff at CDFG told MFS a CDP was not necessary

MFS gives no information as to the identity of the CDFG staff person who supposedly gave this advice. Even if the statement MFS alleges to have been made had in fact been made, under California law one public agency cannot by giving erroneous advice impair the legal jurisdiction of another public agency. (*California Tahoe Regional Planning Agency v. Day and Night Electric Inc.* (1985) 163 Cal.App.3d 898.)

MFS was aware of the need to apply for a CDP when CDFG conditionally approved its aquaculture lease in 1987. Condition G of the lease agreement, expressly required MFS to obtain Coastal Commission regulatory approval (**Exhibit 4**). In any event, beginning in 1993, after the CDFG lease had expired, the Commission began notifying MFS independent of CDFG's action that the MFS needed to apply for an AFT CDP from the Commission.

3. Prior to 1993 Coastal Commission Staff had knowledge of MFS activities and did nothing

The argument made by MFS is essentially one of "laches." That is to say that because the Commission took such a long time enforcing MFS's violation of the Coastal Act, the Commission essentially abandoned its right to take action against MFS.

As evidence to support this defense MFS cites articles published in the L. A. Times, the Orange County Register, and the Daily Pilot from 1987 to 1993. However, MFS cites no evidence that these articles were ever read by or called to the attention of Commission staff.

MFS also cites a letter to the Commission dated July 12, 1991, from State Assemblyman Tom Mays (**See Exhibit 8, Attachment X**). The letter is in reference to the Southern California Edison Company's San Onofre Nuclear Generating Station in San Diego County. In the letter Assemblyman Mays discusses the merits of MFS's project and recommends that the Commission consider MFS's reef design as an alternative to a proposed concrete reef planned for

offshore of the power plant. While it may be true that this letter provided the Commission with technical "notice" of the MFS's Project 1, it did so in the context of a comment on another project as distinguished from a report of unpermitted development.

In any event, the doctrine of laches does not apply in this case. It is well settled that, as in the case of estoppel, the equitable defense of laches "will not ordinarily be invoked to defeat policy adopted for the public protection." (*City of San Francisco v. Pacello* (1978) 85 Cal.App.3d 637, 646.²) Furthermore, to invoke the defense of laches a party must show not only unjustified delay but also that the delay has caused prejudice to the party and that party has a good faith belief in the correctness of his conduct. (*Id.*) The Chapter 3 resource policies of the Act previously cited in this report constitute policies adopted for the benefit of the public. The Coastal Act creates a permit program to, among other objectives, protect the integrity and productivity of coastal waters and of the marine organisms that inhabit them. Additionally, the MFS cites no evidence that the short period of two years (1991-1993) between Assemblyman Mays' letter and the Commission's commencement of this enforcement proceeding caused any prejudice to MFS. Lastly there is no basis for ascribing to the MFS a good faith belief in the correctness of its actions (implementation of Project 1 without obtaining a coastal development permit therefor) in light of Condition G of its CDFG lease agreement, which, as previously noted, provided the MFS with clear and unambiguous notice of the need to obtain such a permit.

4. MFS's project is not an artificial reef; it is a bio-structure

MFS argues that its development is not "an artificial reef" as stated in the Notice of Intent (NOI) letter (**Exhibit 7**). It is irrelevant what the marine development in which MFS has engaged is called. The Commission's NOI letter identified the activity of the MFS and correctly defined it as development based on the definition of that term contained in section 30106 of the Coastal Act.

5. MFS project does not have an adverse effect on the environment

The last argument made by MFS is that the development does not cause adverse coastal impacts. The Coastal Commission itself has already considered whether or not the cited development is consistent with Chapter 3 Coastal Act resource policies and has found that the project is not consistent with sections 30210, 30211, 30230, 30231, 30233, and 30253. Specifically, the Commission found in its denial of CDP E-95-5 that the project poses a danger to the both the environment and public health based on 1) the project's location near a sewage outfall, 2) leachates from tires used in the project, and 3) materials used in the project that have become debris on the ocean floor. If MFS believed that the Commission's findings were in error it had the ability, pursuant to section 30801 of the Coastal Act and Section 1094.5 of the Code of Civil Procedure and within 60 days after the decision had become final, to seek judicial review of the

² Accord: *Morrison v. California Horse Racing Board* (1988) 205 Cal.App.3d 211, 219 ("Where there is no showing of manifest injustice to the party asserting laches, and where application of the doctrine would nullify a policy adopted for the public protection, laches may not be raised against a governmental agency.").

allegedly erroneous findings. MFS did not file a writ of mandate within 60 days. As a result the Commissioners' findings are now final and binding upon Marine Forests Society.

2) **Any other information, statement, etc. that you want to offer or make:**

MFS's Defense:

During the 4 years, from 1995 to 1999, the CCC has ignored the MFS's warnings and complaints about the wrongdoings of the CCC's staff. Communications from the MFS signaled fraudulent reports and extortion. Not one of these warnings was answered. The CCC was completely unresponsive to the allegation of very serious transgressions. See attachments XI, VII, XII, IX, XIII, XIV, XVII, XV, XVII, XIII, XX.

A summary of the wrongdoings and motivations of the CCC's staff can be read in the July 29, 1999 letter (ATT. XLX) that the MFS addressed to Ms. Sara Wan, Chairwoman of the Commission. It reads as follows:

"For many years the CCC's staff has sabotaged the MFS permitted application; then they have sabotaged the MFS workshop whose purpose was to show that the permit could be granted.

The sabotage of the MFS project by the CCC's staff is a scheme to prevent the development of the MFS technique, which is able to successfully compete with the CCC's projects of rock-made artificial reefs.

Rock-made artificial reefs are environmentally and economically counter productive. The CCC's staff is using this defective technique to extort mitigation contracts from the Edison Company.

The initial cause of the present wrongdoings by the CCC's employees is the policy of the CCC Executive Director, Peter Douglas, who mistakenly extended the regulatory function of the California Coastal Commission to the business of environmental mitigation."

Commission's response:

The argument MFS presents above is a familiar one that MFS began during the permit evaluation process and has continued through the present day. MFS, like all alleged Coastal Act violators, has been notified of the Commission's regulatory requirements and procedures. In 1993 the Commission staff requested MFS to file a CDP for unpermitted development. Despite being asked, MFS failed to file a complete CDP for four years. In 1997, the Commission denied a

CDP for MFS. Despite the denial MFS refuses to comply with the Commission's action and remove the denied development. MFS asserts that California law does not apply to their activities and this simply is not so. The Commission's denial of MFS's CDP and subsequent enforcement action has been in line with the policies and procedures set in the California Coastal Act.

- 6) **Documents, exhibits, declarations under penalty of perjury or other materials that you have attached to this form to support your answers or that you want to be made part of the administrative record for this enforcement proceeding (Please list in chronological order by date, author, and title, and enclose a copy with this completed form):**

Streichenberger's Defense:

- I November 25, 1986 MFS letter to E.J. Smith
- II February 24, 1987 letter from the City of Newport Beach to E.J. Smith
- III April 01, 1987 Indenture of Lease
- IV June 4, 1993 Letter from CIWMB to MFS
- V August 26, 1993 letter from Fish and Game to MFS
- VI March 27, 1995 Minutes of City of Newport Beach
- VII March 8, 1996 letter to Peter Douglas, CEO
- VIII August 28, 1996 letter from R.A. Higbie to Coastal Commission
- IX November 26, 1996 letter to Peter Douglas, CEO
- X April 9, 1997 "CCC staff awareness" MFS Note
- XI April 9, 1997 "Deceptive Statements" MFS Note
- XII April 9, 1997 "Unacceptable Recommendations" MFS Note
- XIII January 7, 1997 MFS letter to Peter Douglas, CEO
- XIV February 5, 1997 letter to Peter Douglas, CEO
- XV February 20, 1997 MFS letter to Coastal Commissioners
- XVI September 05, 1997 MFS FAX to Susan Hansch, Director
- XVII June 23, 1998 MFS letter to Rusty Areiras, Chairman
- XVIII July 29, 1999 MFS letter to Sara Wan, Chairwoman
- XIX August 11, 1999 "Will Continue" letter to Coastal Commissioners
- XX October 14, 1999 MFS letter to Sara Wan, Chairwoman

Commission's response:

See **Exhibit 8** for MFS's complete Statement of Defense and attachments.

V. CEASE AND DESIST ORDER

Staff recommends that the Commission issue the following Cease and Desist Order:

Pursuant to its authority under Public Resource Code section 30810, the California Coastal Commission hereby orders MFS, its directors, officers, members, employees, agents and any person acting in concert with or pursuant to the authorization of any of the foregoing, to cease and desist from 1) engaging in any future development activity the subject property without a Coastal Development Permit, and 2) maintaining on the property any development for which the Commission has denied an application for a CDP. Accordingly, all persons subject to this order shall fully comply with paragraphs A and B:

- A. Within 60 days of the date of this order, or within such additional time as the Executive Director may grant for good cause, MFS shall submit to the Coastal Commission's South Central District Office, a complete coastal development permit application for the removal of unpermitted development specified below.
- B. In a manner which complies fully with the terms conditions of any coastal development permit for the removal of the unpermitted development that the Commission may grant, carry out such removal within 180 days from the date of issuance of the permit, or within such additional time as the Executive Director may for good cause grant.

Persons Subject to the Order

Marine Forests Society (MFS), Rodolphe Streichenberger, President and Founder of the MFS, all directors, officers, members, employees, and agents of the MFS, and any person acting in concert with or pursuant to the authorization of any of the foregoing.

Identification of the Property

The property that is subject to this cease and desist order is the following:

Submerged lands totaling 10 acres, 300 yards offshore of the Balboa Peninsula in the City of Newport Beach, Orange County

Description of the Unpermitted Development

This unpermitted development consists of the placement on the seafloor of an artificial reef consisting of a variety of materials, including, but not limited to: (1) used automobile tires; (2)

PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod; and (9) concrete blocks.

Term of the Order

The effective date of this order is February 16, 2000. This order shall remain in effect permanently unless and until modified or rescinded by the Commission.

Compliance Obligation

Strict compliance with this order by all parties subject thereto is required. Failure to comply strictly with any term or condition of this order including any deadline contained in this order or in the above required coastal development permit(s) as approved by the Commission will constitute a violation of this order and may result in the imposition of civil penalties of up to SIX THOUSAND DOLLARS (\$6,000) per day for each day in which such compliance failure persists. The Executive Director may extend deadlines for good cause. Any extension request must be made in writing to the Executive Director and received by Commission staff at least 10 days prior to expiration of the subject deadline.

Appeal

Pursuant to Public Resource Code section 30803(b), any person or entity against whom this order is issued may file a petition with the Superior Court for a stay of this order.

EXHIBITS

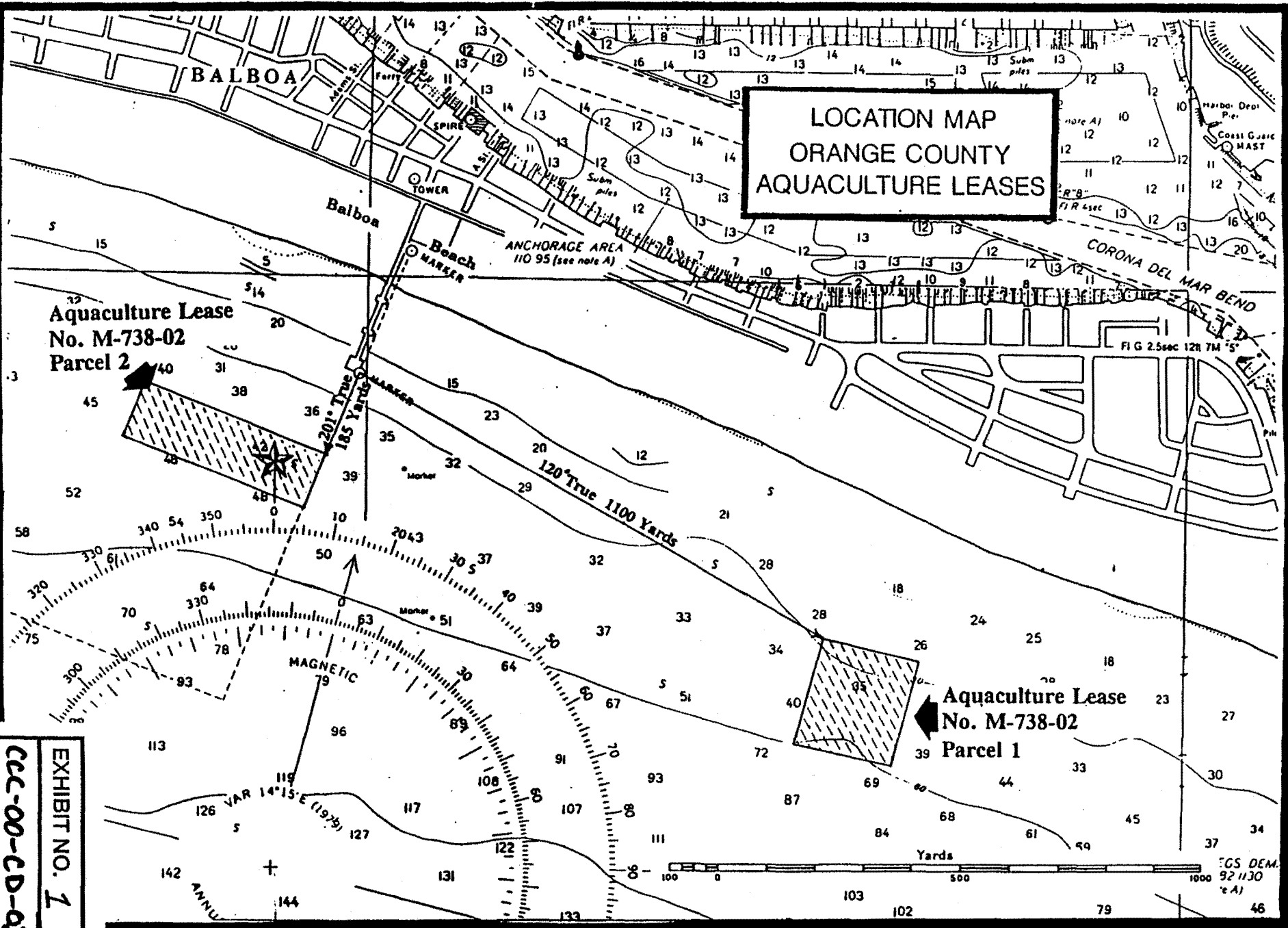
1. Location of the property.
2. Adopted Findings for CDP E-95-5
3. MFS Project
4. Department of Fish and Game Commission Lease Agreement M-738-02
5. CDP E-95-5
6. Artificial Reef Workshop Handout
7. Notice of Intention
8. Marine Forests Society Statement of Defense

LOCATION MAP
ORANGE COUNTY
AQUACULTURE LEASES

Aquaculture Lease
No. M-738-02
Parcel 2

Aquaculture Lease
No. M-738-02
Parcel 1

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CALIFORNIA COASTAL COMMISSION

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



Date Filed: October 24, 1996
49th Day: Waived
180th Day: Waived
Staff: DR/CK-SF
Staff Report: March 21, 1997
Hearing date: April 9, 1997
Item No.: 12a
Commission Action: Denied 12-0

ADOPTED FINDINGS

APPLICATION NO.: E-95-5

APPLICANT: Marine Forests Society

AGENT: Rodolphe Streichenberger, President

PROJECT LOCATION: The project is located on a 10-acre, sub-tidal parcel, approximately 300 yards offshore the Balboa Peninsula, Newport Beach, Orange County (Exhibit 1).

PROJECT DESCRIPTION: An after-the-fact permit request for an existing, artificial marine habitat experiment. The development includes the placement of a variety of materials on the sea floor, including but not limited to: (1) scrap automobile tires; (2) PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod; and (9) concrete blocks. (See Section 2.1.3)

SUBSTANTIVE FILE DOCUMENTS: See Appendix A

Staff Note: Although the development occurred prior to the submission of a CDP application, the analysis contained in this report is based solely upon the project's consistency with the Chapter 3 policies of the Coastal Act. Commission action on an after-the-fact permit application does not constitute a waiver of any possible legal action with regard to the alleged violation nor does it constitute an admission as to the legality of any development undertaken without a coastal development permit.

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SYNOPSIS

Staff recommends denial of this project on the basis that it is inconsistent with the Chapter 3 policies of the Coastal Act.

The Marine Forests Society (MFS) project consists of the placement of a variety of structures on the sea floor as a basis to examine the technical feasibility of large-scale marine habitat enhancement utilizing plastic structures, tires, and other materials. The development was conducted between 1988 and 1993, and is described by the applicant in the following manner:

1. approximately 2000 "kelp bio-structures," installed in 1988-1989, each consisting of an air-filled, one-gallon, plastic jug which is wrapped with plastic mesh, floating approximately 12 feet above the sea floor, and moored with 1/4-inch-diameter, nylon rope and a plastic anchor;
2. approximately 100 "mussel columns," installed in 1988-1989, each consisting of a 20-foot-long, 6-inch-diameter, polyvinylchloride (PVC) pipe, filled with air and capped in order to be suspended vertically in the water column, and moored 15 feet below the water surface with 5/8-inch-diameter, nylon rope and a plastic anchor;
3. approximately 15 "tire ribbons," installed in 1993, each consisting of approximately 100 scrap, automobile tires, tied together with nylon rope, and moored with 3/8-inch-diameter, nylon rope and plastic anchors, totaling approximately 1500 tires;
4. four "plastic tube and net habitats," installed in 1989, consisting of 20-foot-long, PVC pipes, nylon ropes, and nylon nets;
5. two "pyramid habitats," made of iron rods with nylon mooring line, three feet high;
6. one "bundle habitat," made of iron rods with nylon mooring line, three feet high;
7. four "plastic boulder habitats," described as 4 feet high, made of polyethylene mesh;
8. three "concrete block habitats," each consisting of eight, hollow, concrete blocks;
9. five "tire columns," installed in 1991, made of an unspecified number of automobile tires filled with polyurethane foam; and
10. two "unrelated experimental habitats," described as consisting of plastic substrates, floats and anchors.

The staff recommends that the Commission deny the MFS permit application because the design, siting, and operation of the project fail to implement appropriate measures to reduce impacts to coastal resources, in conflict with the resource protection policies of the Coastal Act and the requirements of the California Environmental Quality Act (CEQA).

Table 1 summarizes the basis for the staff recommendation for coastal development permit denial. Reference citations and in-depth analysis's of each issue area are included in Section 2 of this report.

Table 1. Issue Summary: Potential Project-Related Impacts

Issue	Analysis
Sewage Outfall	The proposed project is located within a shellfish harvesting exclusion zone due to its proximity to an Orange County Sanitation District sewage outfall. Artificial reefs are designed to attract and/or produce fish and invertebrates and to enhance sport fishing opportunities. The siting of an artificial reef in an area of degraded water quality increases the risk that marine life attracted to the area will be adversely affected by exposure to contaminants. Recreational anglers may catch and consume fish contaminated with <i>E. coli</i> and other pathogens associated with the sewage outfall. In addition, the Marine Forests Society (MFS) CDP application states that recreational divers may harvest shellfish from the project site. Siting the MFS project at this location is not consistent with the marine resource protection policies of Coastal Act sections 30230 and 30231.
Toxic Leachates from Tires	Tires contain compounds that are harmful to some organisms and acutely toxic to other organisms. Studies conducted by the Ontario Ministry of the Environment and for the Maryland Department of Natural Resources indicate that tires submersed in water release toxic chemicals. Additionally, used automobile tires are contaminated with road debris, dirt, oil, and other substances. These contaminant materials pose a risk to marine life and compromise water quality. Analysis regarding bio-accumulation of chemical compounds and the resultant impacts have not been completed. The impacts associated with the concentration of these noxious substances resulting from the placement of tires into the marine environment is potentially significant. The staff of the Santa Ana Region Regional Water Quality Control Board does not recommend approval of the MFS project due to their concerns regarding the release of toxic compounds from the tires and the bio-accumulation of these substances. California Department of Fish and Game biologists believe that surface toxicity may interfere with the ability of marine species to attach to tire surfaces. The use of automobile tires for the MFS project poses an unacceptably high risk of release of toxic substances into the marine environment in conflict with the requirements of Coastal Act sections 30230 and 30231 to protect the biological productivity and quality of coastal waters.
Marine Debris	The materials used for the MFS project, including used automobile tires, plastic jugs, PVC pipe, plastic mesh, netting, nylon rope, Styrofoam, and a variety of other, man-made materials, are not sufficiently dense to remain in place on the sea floor under heavy storm and wave conditions. The project structures are anchored to the sandy bottom by means of small plastic anchors and 1/4-inch-diameter, nylon rope. The MFS states that it does not intend to maintain the project site and has in fact already abandoned in-place several past experiments. For example, in 1988 the MFS installed 2000 "kelp bio-structures," each consisting of 12-foot-long, 1/4-inch-diameter anchoring lines, protruding above sand level, topped by a one-gallon plastic jug wrapped in plastic mesh. When it canceled the kelp experiment, the MFS abandoned the plastic jugs, ropes, and mesh netting in-place. During site inspections in September 1993, and October 1995, only a few of the original 2000 deflated plastic jugs were observed. Past experience demonstrates that project structures will eventually break loose from their moorings and become marine debris. At sea, discarded plastics create problems for both marine life and human activities. Drifting plastics can foul props and jam cooling intakes of small vessels. Beaches become cluttered with discarded materials. Sea life dies from eating plastics or from entanglement. PVC piping is shattered and moved about by rough ocean waters. Discarded netting and rope assemblies can trap fish and marine mammals long after they are abandoned. Abandoning project components in-place constitutes ocean dumping. The use of the such materials for artificial reef construction is inconsistent with public access and marine resource protection policies contained in Coastal Act sections 30210, 30211, 30230 and 30231.

Beach Erosion	The MFS project is located within nearshore waters, at depths of -30 to -40 feet, in an area known as the littoral zone. Sediment deposition within the littoral zone affects the rate and force with which ocean waves contact the shoreline. When sand is trapped by structures placed within the littoral zone and not allowed to complete its natural migratory cycle, shoreline sand deposition and beach erosion both up-coast and down-coast can be altered. Consequently, the dynamics of beach erosion and accretion can be altered by structures within the littoral zone. As sand is lost from the littoral zone in one area, the ocean waves will break closer to shore and increase shoreline erosion. The Balboa Peninsula is losing sand at a retreat rate of about 5 feet per year. The MFS project is designed to trap and hold sand and probably has affected local sediment transport. Because the MFS project may create or contribute to beach erosion, it is inconsistent with Coastal Act section 30253.
Public Access—Recreation	The use of fragile and low density materials for the MFS project, the limited life expectancy of the anchoring system, the lack of monitoring and maintenance of the project, and the planned in-place abandonment of project components, all increase the potential that materials from the project will litter nearby beaches, resulting in aesthetic degradation and user hazards in conflict with Coastal Act sections 30210 and 30211.
Project Alternatives	Using materials more suitable for the marine environment (i.e., materials of sufficient density, and persistence to assure long-term stability, and materials that do not contain toxic substances), using a more reliable anchoring system, locating the project outside of the littoral zone and in an area of higher water quality are all feasible alternatives that would substantially lessen the adverse effects of the MFS project to coastal resources. Because it does not incorporate the least environmentally damaging feasible alternatives, the proposed project is inconsistent with Coastal Act section 30233(a) and the CEQA.
Mitigation	Feasible mitigation measures that would lessen the project's impacts to coastal resources include: (1) a mechanism for long-term financial security for proper cleanup and/or removal of project materials; (2) a monitoring, mitigation and reporting plan which examines impacts to water quality, marine organisms and shoreline erosion; and (3) a long-term monitoring and maintenance program for the physical condition of the anchoring system and the structural integrity of the various project components. The MFS project should also include a well thought experimental methodology and a quantifiable measure of success. Because it does not incorporate such measures, the MFS project is inconsistent with Coastal Act section 30233(a) and the CEQA.

1.0 STAFF RECOMMENDATION

Denial

The staff recommends that the Commission adopt the following resolution:

The Coastal Commission hereby denies a permit request for the Marine Forests Society project on the grounds that feasible alternatives and mitigation measures are available which would substantially reduce significant adverse impacts on coastal resources within the meaning of section 30233(a) of the California Coastal Act of 1976 and the California Environmental Quality Act, and that the development is otherwise inconsistent with the provisions of Chapter 3 of the Coastal Act.

2.0 FINDINGS AND DECLARATIONS

2.1 Project Location and Background

2.1.1 Location

The project is located on a 10-acre, sub-tidal parcel in the Pacific Ocean, approximately 300 yards offshore of the Balboa Peninsula, Newport Beach, Orange County. The parcel is located on tidelands granted to the City of Newport Beach, and has an approximate latitude of 33° 35' 37" north and longitude of 117° 53' 00" west (see Exhibit 1).

2.1.2 Background and History

The Marine Forests Society (MFS) corporation is a non-profit organization, mainly staffed by volunteers, whose stated purpose is to demonstrate new possibilities in marine sciences, techniques, and economics to develop life in the sea. The MFS project is intended to demonstrate how scrap tires and other readily available discarded materials can be formed into productive artificial marine habitats and how successfully using tires as an artificial reef substrate can help alleviate solid waste disposal problems. The MFS project is additionally intended to determine the biological, technical and economic feasibility of using scrap tires and other discarded, man-made materials as artificial reef substrate.

In April 1987, the MFS applied for and received a conditionally approved aquaculture lease from the California Fish and Game Commission (CF&GC). Appendix B, CF&GC Lease History, summarizes the aquaculture lease agreement chronology. Consistent with the California Department of Fish and Game's (CDFG) aquaculture program to promote aquacultural development in the State, the lease specified that the MFS must either enter into a production agreement with the CF&GC and meet minimum planting and production requirements after five

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years of operation in order to renew the lease or abandon the lease site and remove the development. Condition G of the lease agreement explicitly requires the lessee to obtain Coastal Commission regulatory approval prior to proceeding with the project. In conflict with this requirement, the MFS undertook the project without notifying the Coastal Commission or obtaining a coastal development permit or regulatory approval from other interested agencies. Thus, an environmental analysis to identify project-related impacts, as required by the Coastal Act and the California Environmental Quality Act was avoided. According to Rodolphe Streichenberger, President of the MFS, the MFS knowingly chose not to pursue regulatory approval from the Coastal Commission.¹

Also, the lessee (MFS) did not fulfill the minimum aquaculture production requirements. In fact, the MFS had no production (sales of products) from the lease. The project therefore failed to qualify as an aquaculture operation. More importantly, the project is located in an area where mariculture (marine aquaculture) of shellfish is prohibited due to potential contamination from the nearby Orange County Sanitation District wastewater out-fall and local marinas (see Section 2.2.5, California Department of Health Services). In October 1994, the CF&GC declared Lease No. M-738-02 abandoned by mutual agreement between Rodolphe Streichenberger and the CDFG.²

Condition "F" of Aquaculture Lease M-738-02 required that all project-related improvements be salvaged and removed within 90-days of the termination of the lease. The MFS has not removed any project-related materials. The CDFG has taken no action to enforce the removal requirement of the aquaculture lease during the MFS's pending pursuit of an after-the-fact CDP for the project. All project related materials remain on the site today or have been carried away by ocean currents.

2.1.3 Related Projects

The coastal permit application states that the MFS's aim is to establish financially profitable methods for creating artificial marine habitats. As discussed in greater detail in this report, the MFS proposes that if the project is a technical and economic success, large portions of California's sandy ocean bottoms can be used to create reefs composed of waste tires. The CDP application presents the MFS project as one that will lay the groundwork, and set precedent for similar future projects. According to the Marine Forests Society's 1993 Business Plan,

"after the expected success of the MFS project, the MFS will transfer the acquired knowledge to entrepreneurs willing to participate in the fifty tire reef/marine forest program that the MFS has promised to California ... the habitats will be built and exploited for profit by private entrepreneurs."

¹ Personal communications between Rodolphe Streichenberger, MFS, and Darryl Rance, Coastal Analyst, California Coastal Commission, June 14, 1995, and October 23, 1995.

² Letter from Robert Treanor, Executive Director, California Department of Fish and Game to Rodolphe Streichenberger, MFS, October 19, 1994.

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2.1.3.1 MFS Tire Reef Demonstration Project

In March 1995, the City of Newport Beach granted a Harbor Permit to the MFS for a separate, different project consisting of the construction of an artificial reef using 30,000 scrap tires adjacent to the location of the project discussed in this report. At the same time, the City also issued a Negative Declaration for the proposed "tire reef demonstration project" (TRDP). In June 1994, the MFS submitted an incomplete CDP application for the TRDP.

2.1.3.2 Nautilus Farms Tire Reef

On March 16, 1994, Nautilus Farms Inc., secured a conditional aquaculture lease for a aquaculture/artificial reef project offshore of Huntington Beach from the Fish and Game Commission. The Nautilus Farms Tire Reef project proposal consists of the construction of a scrap tire reef consisting of three million tires. The issuance of the CDFG aquaculture lease agreement is contingent upon: (1) obtaining a lease agreement for the sub-tidal lands upon which the project is proposed; (2) obtaining a CDP from Coastal Commission (Nautilus Farms Inc. has not submitted a CDP application for this project); (3) agreement to an aquaculture planting and production plan; (4) and the preparation of an Environmental Impact Report to assess and mitigate impacts associated with the placement of tires into the marine environment. The Nautilus Farms project is proposed to closely follow the design and operational techniques established by the MFS. The EIR required for the Nautilus Farms project has not been completed.

2.1.4 Project Description

2.1.4.1 Purpose

The MFS describes the purpose of its project as an attempt to demonstrate the technical feasibility and financial profitability of creating large-scale, artificial, marine habitats with used tires and other, man-made materials, stating:

"[t]ires are a major component of solid waste generated throughout the world with some 28,500,000 used tires produced annually in California. Tire disposal is a major solid waste problem. The MFS project is intended to show how miscellaneous discarded materials and scrap tires can be formed into a productive reef. If the project is an economic success and technical success, the MFS has proposed that large portions of California's sandy ocean bottoms may be used to create habitats composed of waste tires."

The MFS specifies that while it is conducting aquacultural research, the project does not include the harvest of any aquacultural product for human consumption. However, the MFS permit application states that recreational divers may collect shellfish from the project site.

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2.1.4.2 Structures

The permit application proposes after-the-fact CDP authorization of a variety of structures installed during 1988, 1991 and 1993, described as:

1. approximately 2000 "kelp bio-structures," installed in 1988-1989, each consisting of an air-filled, one-gallon, plastic jug which is wrapped with plastic mesh, floating approximately 12 feet above the sea floor, and moored with 1/4-inch-diameter, nylon rope and a plastic anchor;
2. approximately 100 "mussel columns," installed in 1988-1989, each consisting of a 20-foot-long, 6-inch-diameter, polyvinylchloride (PVC) pipe, filled with air and capped in order to be suspended vertically in the water column, and moored 15 feet below the water surface with 5/8-inch-diameter, nylon rope and a plastic anchor;
3. approximately 15 "tire ribbons," installed in 1993, each consisting of approximately 100 scrap, automobile tires, tied together with nylon rope, and moored with 3/8-inch-diameter, nylon rope and plastic anchors, totaling 1500 tires;
4. four, "plastic tube and net habitats," installed in 1989, consisting of 20-foot-long, PVC pipes, nylon ropes, and nylon nets;
5. two "pyramid habitat," made of iron rods with nylon mooring line, three feet high;
6. one "bundle habitat," made of iron rods with nylon mooring line, three feet high;
7. four "plastic boulder habitats," described as 4 feet high, made of polyethylene mesh;
8. three "concrete block habitats," each consisting of eight, hollow, concrete blocks;
9. five "tire columns," installed in 1991, made of an unspecified number of automobile tires filled with polyurethane foam; and
10. two "unrelated experimental habitats," described as consisting of plastic substrates, floats and anchors.

See Exhibit 2 for schematic diagrams of the project structures. The MFS identifies items 4-10 above as "miscellaneous units of canceled past experiments," and has not specified the exact materials, designs, locations and installation dates of these structures. The MFS administration encouraged volunteer participants to experiment with a full range of materials without administrative oversight or coordination. In response to the Commission staff's request to provide specific information concerning this development, the MFS responded:

"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."

2.1.4.3 Anchoring System

The MFS employs a "water jet mooring system" to anchor the various project components to the sea floor. The anchoring system consists of nylon rope secured to a short piece of PVC pipe which is split lengthwise and buried in the sandy bottom with a water jet (see Figure 1 below).

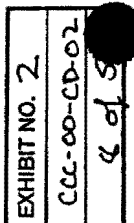
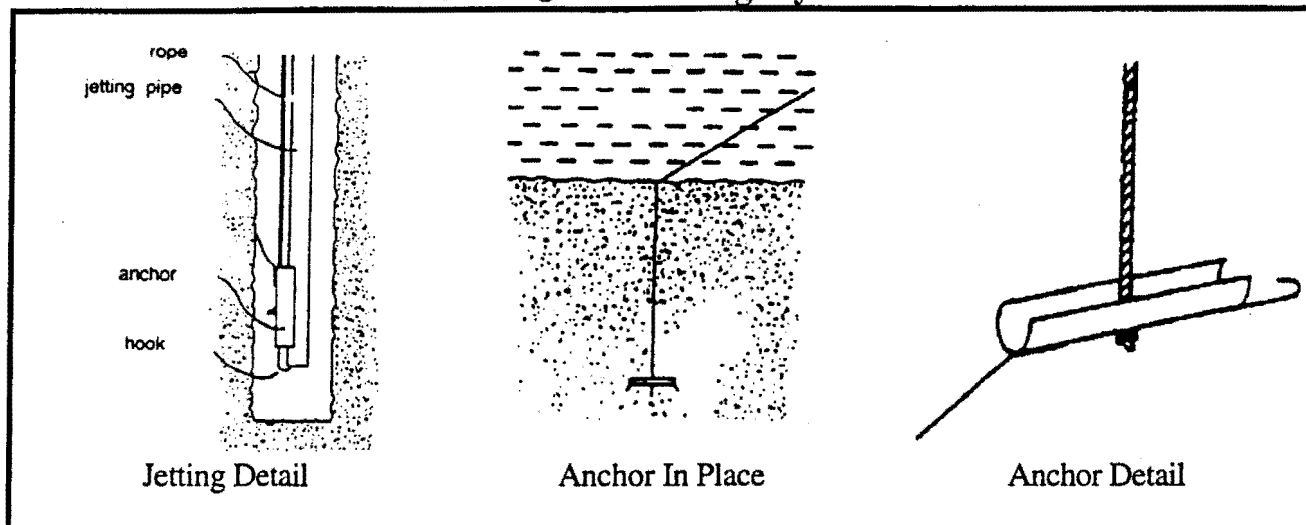


Figure 1.
MFS Jet Mooring System



The MFS has provided the following specifications for the anchors:

"Kelp substrate anchors were made of split pvc pipe, Diam. 1.4", Length 4.5" with a quarter inch mooring line.

Mussel column anchors were made ... of 2 superimposed split pvc pipes, I.D. 2", Length 7".

Tire ribbon anchors, placed every 100 tires i.e. 100 feet, were made of 2 superimposed split pvc pipes, Diam. 2.5", Length 7".

All anchors were water jetted 9 ft deep below sand surface."

The MFS has not provided technical information concerning the mooring capacity or longevity of this anchoring system, stating in response to staff's requests for such information that:

"The mooring capacities of the anchoring systems have been calculated in 1987 according to the indications 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 Forests Society."

2.1.4.4 Maintenance

The project description includes several canceled, past experiments which have been abandoned in-place in accordance with the MFS's "lay-it-flat" technique. The "lay-it-flat" technique consists of deflating or not maintaining the air that keeps the project components buoyant and allowing them to fall to the ocean floor and be covered and/or moved about by the migrating sandy substrate. The MFS provides the following information concerning these abandoned structures.

Kelp bio-structures (approximately 2000 installed):

"The kelp experiment was abandoned because of fragility of kelp growth due to unfavorable natural conditions."

Plastic tube and net habitat (four installed):

"This type of bottom habitat was abandoned because better results were obtained with tire-made bottom habitats."

"At experiment's end (inconclusive) the net-made volumes were detached from the structures by divers and dropped on the bottom where they stay now incorporated in a mussel layer."

Pyramid and Bundle Habitats (3 structures installed):

"At experiment's end (inconclusive) the pyramids [and bundles] disassembled and got buried into the sand."

Plastic boulder habitat (four installed):

"At experiment's end (inconclusive) the boulders disassembled and got buried into the sand."

Tire columns (five installed):

"Their floatation assured by plastic foam degraded after 6 months. Their stability when lying on the sea bottom and filled with sand led to the invention of the self anchored tire-ribbons."

Cement block and plastic mesh habitats (three installed):

"At experiment's end (inconclusive) the blocks subsided into the sand."

"Miscellaneous experiments with cement blocks and aquaculture mesh were soon abandoned because of poor stability."

2.2 Other Local, State and Federal Agencies

2.2.1 City of Newport Beach

The MFS development is located on submerged lands granted to the City of Newport Beach. As such, the City has authority concerning the MFS development as: (1) the local government within whose regulatory jurisdiction the project is located; (2) the owner of the property upon which the development is located; and (3) the "Lead Agency" for the project under the California Environmental Quality Act (CEQA).

2.2.1.1 Local Approval

On March 27, 1995, the Newport Beach City Council granted a Harbor Permit to the MFS for a proposal to place 30,000 used tires 500-1000 feet offshore Newport Beach in water 60 to 110

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feet deep (hereinafter "TRDP"). The Harbor Permit states that one of the parcels on which the proposed TRDP would be located, "contains a variety of experimental reef projects consisting of pipes, tires, and floats." However, the findings for the approval of the permit address only the placement of the proposed TRDP in water 60 to 110 feet deep. The Harbor Permit does not analyze the effects of placing the MFS development in shallower water (30-40 feet) or the use of any materials except for tires as artificial reef substrate. Despite the obvious differences between the existing MFS development and the proposed TRDP, the City's intention is that the Harbor Permit, as conditioned, function as local regulatory approval for both projects.³

2.2.1.2 Property Ownership

The MFS development is located on submerged lands granted by the State Legislature to the City of Newport Beach pursuant to Chapter 74, Statutes 1978. The statute provides that the lands shall be used for the following purposes: (1) public harbors and related improvements for the promotion or accommodation of commerce and navigation; (2) public beaches, marinas, aquatic parks and other public recreational facilities; and (3) preservation, maintenance, and enhancement of the lands in their natural state and to serve as ecological units for scientific study and as environments which provide food and habitat for birds and marine life. The City is authorized to grant franchises for wharves and other public uses and may issue leases for purposes consistent with the trust upon which such lands are held.

The City indicates that pursuant to the aforementioned Harbor Permit it has authorized the MFS to use lands subject to the above described tide and submerged lands grant.⁴

2.2.1.3 California Environmental Quality Act

On March 27, 1995, at the same time that it granted the Harbor Permit, the Newport Beach City Council also adopted a Negative Declaration for the proposed TRDP. The project description for the negative declaration states:

"The proposal is a demonstration project funded in part by the California Integrated Waste Management Board to determine the feasibility of using scrap tire to create artificial reefs. Approximately 30,000 tires in "ribbons" would be anchored in two 10-acre parcels to create enhanced habitat for marine resources."

The only mention of the existing MFS development contained in the negative declaration is the statement on page 13 of the document that one of the parcels on which the TRDP would be

³ Letter from Tony Melum, Deputy Chief, Marine Division, City of Newport Beach, to Darryl Rance, Coastal Analyst, California Coastal Commission, July 9, 1996. Letter from Chris Kern, Coastal Analyst, California Coastal Commission, to Robin Clauson, Assistant City Attorney, City of Newport Beach, October 18, 1996. Personal communication between Melum, Clauson and Kern September 30, 1996. Personal communication between Clauson, and Kern, October 21, 1996.

⁴ See Footnote No. 3, supra.

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located, "contains a variety of experimental reef projects consisting of pipes, tires, and floats." The existing MFS development is not part of the project defined for the purpose of the Negative Declaration, and the document does not therefore consider the environmental effects of the existing MFS development. The City received a number of comment letters from Responsible Agencies concerning the proposed TRDP in response to the Draft Negative Declaration. However, none of the comments addressed the existing MFS development.⁵ The City acknowledges that the environmental document includes no analysis of the existing MFS development, but states that the document is intended to satisfy the environmental analysis requirements under CEQA for the existing development as well as for the proposed TRDP.⁶

2.2.2 County of Orange

The Orange County Environmental Management Agency expressed several areas of concern with the proposed TRDP which are paraphrased below and include: (1) biological effects to the local marine community; (2) increased beach and shoreline erosion; (3) inadequate experimental methodology; and (4) the eventual failure of the MFS anchoring system and resulting marine debris.⁷ Although these concerns are expressed in the context of the proposed TRDP, and not the existing MFS development described in this permit application, the issues raised are relevant to the Commission's consideration of this after-the-fact CDP request. Furthermore, because the aforementioned Negative Declaration for the TRDP does not properly identify the existing MFS development, none of the comments on the document pertain directly to the project currently before the Commission.

1. The release of toxic chemicals from tires may cause long-term, adverse impacts to the food chain due to bio-accumulation of these substances. The MFS should test the organisms living in and on the reef to determine if the project has introduced toxins into the food chain, and clean road debris and other hazardous materials (e.g. oil, gas, metals etc.) from the tires prior to placement in the marine environment.
2. The Preliminary Coast of California Storm and Tidal Wave Study has shown that the Balboa Peninsula is losing sand at a retreat rate of about 5 feet per year. The Beach profile analysis in the vicinity of Balboa Pier shows that the depth at which any sand passes will not return to the littoral zone is in the range of -30 to -40 feet MLLW. Coastal structures within the littoral zone affect long-shore and offshore sediment

⁵ Although the comment letters concerning the Draft Negative Declaration for the TRDP do not directly address the existing MFS development described in this permit application, they do discuss issues concerning the use of automobile tires for constructing artificial reefs, and the expected durability of the MFS "jet mooring system." Because these issues are relevant to the Commission's consideration of this permit application, the comments are discussed in this report.

⁶ See Footnote No. 3, supra.

⁷ Letter from Kari Rigoni, Acting Manager, Orange County Environmental Planning Agency to John Douglas, the City of Newport Beach, April 3, 1995.

transport. The MFS project has most likely exacerbated the on-going erosion of the shoreline in the project area.

3. The MFS project does not include a scientific measure of "success" and is seriously lacking in experimental methodology, (e.g., there is no control group designated for qualitative or statistical comparison). The project description discusses visual inspection to determine success but provides no quantitative means for assessing it. There are no provisions for a regulatory agency to inspect the project to verify the claim of success or failure.
4. The County believes that the MFS anchoring system will eventually fail. The project includes no provision to assure that loose tires and other project components will be collected and properly disposed of.

2.2.3 California Regional Water Quality Control Board—Santa Ana Region (RWQCB)

The RWQCB denied clearance for the TRDP project due to: (1) lack of evidence showing that the project would not affect water quality; (2) the absence of a monitoring program to assess water quality and biological communities; and (3) the absence of any meaningful monitoring done on previous experiments.⁸ The RWQCB staff does not recommend approval of the existing MFS development because of concerns regarding the release of toxic substances from tires into the marine environment and the bio-accumulation of such compounds.⁹

2.2.5 California Department of Health Services (CDHS)

Health and Safety Code section 112170 authorizes the California Department of Health Services (CDHS) to conduct surveys of any proposed shellfish growing areas to determine if it meets bacteriological, chemical, and toxicological standards prescribed by regulation. If the water in the growing area is found to be in compliance with the required standards, a certificate attesting to said compliance will be issued.¹⁰

The CDHS has determined that the MFS project site lies within two safety zones drawn around the large un-disinfected ocean outfall of the Orange County Sanitation District and the marinas in Newport Bay, an area in which mariculture of shellfish is prohibited due to high concentrations of *E. coli* bacteria and other contaminants. Harvesting shellfish for human consumption is prohibited in this area under the National Shellfish Sanitation Program.¹¹ Consequently, the CDHS could not issue a Shellfish Growing Area Certificate for the project site under any

⁸ Letter from Joanne E. Schneider, Environmental Program Manager, Regional Water Quality Control Board, to Rodolphe Streichenberger, MFS, May 19, 1995.

⁹ Letter from Joanne E. Schneider, Environmental Program Manager, Regional Water Quality Control Board, to Susan Hansch, California Coastal Commission, August 31, 1995.

¹⁰ California Code of Regulations, Title 17, § 7760.

¹¹ The National Shellfish Sanitation Program is a voluntary program administered by the U.S. Food and Drug Administration involving State shellfish control agencies, the shellfish industry, and other Federal agencies.

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conditions, and the sale of, or the offer, or hold for sale for human consumption of any shellfish from the MFS project is prohibited. The CDHS staff have offered the MFS assistance to find a more suitable location for their project.¹²

2.2.6 California Department of Parks and Recreation (CDPR)

The Orange Coast District of the CDPR identified several concerns in response to the Draft Negative Declaration for the TRDP.¹³ These concerns are paraphrased below and include: (1) shoreline erosion; (2) scrap tire suitability for brown algae growth; and (3) the questionable strength and longevity of the nylon rope and plastic pipe anchoring system. Although these concerns are expressed in the context of the proposed TRDP, and not the existing MFS development described in this permit application, the issues raised are relevant to the Commission's consideration of this after-the-fact CDP request. Furthermore, because the aforementioned Negative Declaration for the TRDP does not properly identify the existing MFS development, none of the comments on the document pertain directly to the project currently before the Commission.

1. Location of the MFS development in water 30 to 40 feet deep could affect wave refraction and concentrate wave energy on local beaches exacerbating localized erosion.
2. Past reports show that tires are not suitable for most brown algae that provide a basis for kelp forests and provides for true increases in species diversity.
3. The nylon ropes used to secure and anchor the bio-structures will be exposed to ocean wave and current forces, resulting in stress, chafing and ultimately leading to failure. The rope attachments are of questionable strength and design. At some point, the attachments will break and allow tires to migrate under wave and current action. Additionally, an artificial reef will attract fisherman to the site. Fishing boat activity in the area will increase the potential of snagging the MFS development with anchors. These impacts will add to failure rates of the nylon ropes from both individual and cumulative anchor snagging occurrences. During the stormy winter of 1983 at Huntington Beach, thousands of tires washed up onto the shore from a CDFG tire reef experiment. The inevitable large storm episode will move the MFS tires. Tires do become buried in inshore sand creating visitor use hazards. Sand temporarily filling 40-60% of the tire cavities will not guarantee their attachment to the sea floor. Oceanographic literature is rife with examples of even the largest and best designed man-made structures failing in storm episodes.

¹² Letter from Kenneth Hansgen, California Department of Health Services, to Rodolphe Streichenberger, MFS, June 22, 1993.

¹³ Letter from Jack Roggenbuck, California Department of Parks and Recreation (CDPR) to Nadell Gayou, The Resources Agency, March 3, 1995 and letter from David Pryor CDPR Resource Ecologist, to Gayou, March 3, 1995.

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2.2.7 California Department of Boating and Waterways (CDBW)

The CDBW has identified the following concerns regarding the proposed TRDP:¹⁴

1. Development should be placed no shallower than -60 feet (MLLW) so as not to obstruct the on-off movement of sand and to avoid adverse effect on beach equilibrium profile. Careful consideration should be given to locating the tires into deeper water. Relocating the tires will most likely increase the life of the structures due to decreased effects of wave and swell energy.
2. Tires placed partially above the ocean bottom could entangle or snag boat anchors. If the vessel is powerful enough, it could break tires loose from their respective anchor and rope toggles. Therefore, the CDBW also suggest that the development should be noted on nautical charts and included in a "Notice to Local Mariners" to help avoid any hazards relating to anchoring in, or near these areas.

Although these concerns are expressed in the context of the proposed TRDP, and not the existing MFS development described in this permit application, the issues raised are relevant to the Commission's consideration of this after-the-fact CDP request. Furthermore, because the aforementioned Negative Declaration for the TRDP does not properly identify the existing MFS development, none of the comments on the document pertain directly to the project currently before the Commission.

2.2.8 California Department of Fish and Game (CDFG)

The California Legislature formalized the CDFG's status as the principal agency in the State's artificial reef building process by passage of Assembly Bill 706 (Fish and Game Code, Article 2, §§ 6420-6425). This legislation authorized the CDFG to investigate efforts to enhance marine species through the placement of artificial reefs and implement a program of artificial reef research and development, including reef design, placement, and monitoring.

As the principal agency for the construction of artificial reefs offshore California, CDFG biologists have been involved in the planning, construction and monitoring of over 30 artificial reefs. Through this working experience, the CDFG has established the following guidelines for artificial reef materials:¹⁵

1. The material must be persistent. It must be hard, but may not be so brittle that collisions with other materials, or boat anchors would tend to shatter it. It must remain essentially unchanged after years of submersion in salt water;

¹⁴ Letter from John R. Banuelos, Director of the Department of Boating and Waterways, to Nadell Gayou The Resources Agency, March 7, 1995.

¹⁵ California Department of Fish and Game, Marine Resources Division, Material Specifications and Notification Procedures -- Surplus Materials for Augmentation To Artificial Reefs, November 15, 1991. See Appendix C.

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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 storm events, even in water depths as shallow as 30 feet;
3. The material must not contain potentially toxic substances. The CDFG preferred artificial reef materials include quarried rock and high density concrete; other materials are considered on a case by case basis.

The materials utilized in the MFS project do not meet the material specifications of the CDFG's Artificial Reef Program and are not suitable for long-term use in the marine environment. In that regard, the CDFG staff have stated that they are not convinced that the benefits that can be reasonably be expected to result from tire reef construction and PVC structures will outweigh the environmental hazards to California's marine resources.¹⁶

On October 12, 1995, the CDFG staff inspected the MFS project site, reporting: (1) the PVC columns, with their high-vertical relief and dense mussel growth typical of pier pilings, are providing some habitat value to fishes; (2) the fish-related habitat value of the tire-ribbons, in absence of the PVC columns, is questionable; (3) several of the PVC columns have sunk to the bottom and assorted other webbing/netting structures are scattered about the area in various states of disrepair.¹⁷

The CDFG has identified three main areas of concern regarding the existing MFS development, which are paraphrased below.¹⁸

1. The MFS has not presented any documentary evidence to support its claims that tire ribbons are highly productive. Based on past artificial reef experiments with tires, the CDFG regards tires as an inferior material for the attachment and development of a complex reef community. The tire reef will continue to lack many large invertebrates like rock scallops, giant keyhole limpets and sea urchins due to insufficient algae and a lack of a suitable substrate/habitat. Further, there is no evidence that mussels have or will become established on the tire substrates. Low relief, susceptibility to sand scour and predation appear to be working against mussel colonization of tires. In contrast, the PVC columns are supporting dense mussel colonies.
2. The MFS project site has attracted a number of fish, but is unlikely to provide the resources to increase local fish production. Any structure in nearshore waters will attract fish, but the CDFG believes it is important for an artificial reef to increase productivity of fish populations by providing permanent habitat and not merely to concentrate them. Lack of adequate cover and high numbers of predators will make it difficult for the young-of-the-year fish to recruit and survive on the tire reef. The sparsely attached community

¹⁶ Letter from Rolf E. Mall, Chief, Marine Resources Division, California Department of Fish and Game, to Darryl Rance, California Coastal Commission, June 29, 1995.

¹⁷ Letter from David O. Parker, Senior Biologist, California Department of Fish and Game, to Darryl Rance, California Coastal Commission, November 27, 1995.

¹⁸ See Footnote No. 17, supra.

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growing on the tires will provide little additional food for fish, thus limiting any potential increase in resident fish stocks.

3. During a recent inspection of the project site, some tire ribbons were completely buried while others were almost completely exposed. The majority of the tires were half buried in the sand. Although most of the tires have remained in place, they may not survive strong storms like those that damaged or destroyed breakwaters and piers in the Los Angeles and Orange counties during the 1980's. Some of the lines holding the tire ribbons showed wear. Without continued maintenance, these lines will eventually wear away. Storm wave activity could dislodge the tires and scatter or wash them ashore. The PVC columns and their mooring lines will also require continued maintenance. PVC columns that break free may become hazards to boaters and/or may wash ashore. Mussels will not survive if the PVC columns sink to the bottom where predators and sand scour are present. The various materials abandoned from previous unpermitted MFS experiments currently serve no purpose. These materials are being covered with sand or moved about by ocean currents. This is not an acceptable way to deal with waste materials. The exact amount of this material is not known since some of the materials may have been scattered or buried.

2.2.9 U.S. Army Corps of Engineers (ACOE)

The MFS project requires review and approval by the ACOE. Pursuant to the Federal Coastal Zone Management Act (CZMA), any activity authorized by a permit issued by a federal agency that affects the coastal zone of a state, must be consistent with a federally approved coastal zone management program. Under the CZMA, the ACOE cannot issue a permit until the Coastal Commission concurs with a federal consistency certification or issues a Coastal Development Permit for the project. The ACOE has opened a violation file for the existing MFS development.

2.3 Coastal Act Issues

2.3.1 Filling of Coastal Waters

Coastal Act section 30108.2 defines "fill" as:

"Fill" means earth or any other substance or material, including pilings placed for purposes of erecting structures thereon, placed in a submerged area.

The MFS project includes the placement of various "experimental" materials, including scrap automobile tires, PVC pipe, plastic mesh, plastic jugs, various ropes and anchoring devices, and other miscellaneous materials on existing sand substrate. As such, the MFS project constitutes "fill" within the meaning of Coastal Act section 30108.2.

Coastal Act section 30233(a) provides in applicable part:

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

...(8) *Nature study, aquaculture, or similar resource dependent activities.*

Coastal Act section 30100.2 adopts for purposes of the Coastal Act the definition of aquaculture contained in section 17 of the Fish and Game Code. In relevant part, section 17 defines "aquaculture," in the following manner:

"Aquaculture" means that form of agriculture devoted to the propagation, cultivation, maintenance, and harvesting of aquatic plants and animals in marine, brackish, and fresh water. (Emphasis added.)

The MFS project involves the placement of structures in the ocean, some of which have increased the local production of and/or attracted naturally occurring aquatic plants and animals, and might therefore be associated with the propagation of such species. It does not however include cultivation, maintenance or harvesting of these organisms. The MFS project does not therefore qualify as aquaculture under section 17 of the Fish and Game Code and thus under the Coastal Act. Nevertheless, the project can be characterized as a resource-dependent activity similar to aquaculture or nature study. Accordingly, the purpose of the MFS project qualifies as an allowable fill under Coastal Act section 30233(a)(8).

Therefore, the Commission must review the MFS project in accordance with the remaining criteria specified in Coastal Act section 30233(a). The MFS project is allowable only if there are no feasible less environmentally damaging alternatives and if feasible mitigation measures have been provided to minimize adverse environmental effects. As discussed in Sections 2.3.2, 2.3.3, and 2.3.4 below, the Commission finds that the MFS project is not the least environmentally damaging feasible alternative and does not provide feasible mitigation measures to minimize the adverse effects of the project to coastal resources in conflict with Coastal Act section 30233(a).

2.3.2 Marine Water Quality and Marine Resources

Coastal Act section 30230 states:

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

Section 30231 states in part:

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The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible restored through, among other means, minimizing adverse effects of waste water discharges...

2.3.2.1 Sewage Outfall

The MFS development is located within a prohibited harvesting zone for bivalve shellfish for human consumption established under the National Shellfish Sanitation Plan. This zone was established around the outfall of the Orange County Sanitation District Ocean Discharge and the local marinas to provide a buffer zone from the bacterial and environmental contaminants associated with these facilities. The CDHS has stated that it could not issue a Shellfish Growing Certificate for the project site under any conditions.¹⁹

Artificial reefs are designed to attract and/or produce fish and enhance sport fishing opportunities. The siting of an artificial reef in an area of degraded water quality raises concerns regarding the marine life attracted to the area, and human consumption of contaminated fish and shellfish. By attracting and congregating fish in this area, the MFS development increases the risk that recreational anglers may catch and consume fish contaminated with *E. coli* and other pathogens associated with the sewage outfall. The MFS CDP application states that recreational divers may harvest shellfish from the project site.

In its action on the Federal Consistency Certification for the Point Loma Artificial Reef (PLAR), the Commission considered the potential impacts on the reef of sewage discharges from the outfall from the proposed International Wastewater Treatment Plant in San Diego.²⁰ The planned sewage outfall would discharge treated wastewater into the area proposed for the placement of the PLAR. The Commission examined the proposed location of the PLAR to determine if the reef site would be adversely affected by future discharges from the sewage outfall. A site originally selected for the PLAR was found to be located too near the sewage outfall, thus increasing the potential that discharges from the outfall would accumulate near the reef.²¹ Consequently, the USEPA recommended locating the reef farther from the sewage outfall.²² The Commission ultimately approved a new location for the reef away from the sewage outfall.

Conclusion: Sewage Outfall

The location selected for the MFS project is inappropriate given its proximity to the Orange County Sanitation District sewage outfall, local marinas and the corresponding exclusion zone established under the National Shellfish Sanitation Plan which prohibits harvesting shellfish for

¹⁹ See Footnote No. 12, supra.

²⁰ Coastal Commission Consistency Certification CC-38-91.

²¹ Engineering Science Tiajauna Oceanographic Engineering Study, 1988, (CC-38-91).

²² Letter from Keith Taka, USEPA, to Colonel Charles S. Thomas, ACOE, June 7, 1991, (CC-38-91).

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human consumption. A Shellfish Growing Certificate could not be issued for the project site under any conditions. The project will result in adverse impacts from degraded water quality to marine organisms attracted to, or cultured at the site. Siting the project in this area increases the risk of human exposure to *E. coli* bacteria and other contaminants. The MFS has presented no evidence that the project could not feasibly be located in an area with higher water quality, thereby avoiding these adverse impacts. The MFS has neither provided mitigation measures to reduce the adverse environmental effects of locating the development in this area nor demonstrated that such measures cannot feasibly be provided.

The Commission therefore finds that MFS project has been carried out in a manner that does not: (1) sustain the biological productivity of coastal waters and maintain healthy populations of all species of marine organism adequate for long-term commercial, recreational, scientific, and educational purposes in conflict with Coastal Act section 30230; and (2) maintain the biological productivity of coastal waters to maintain optimum populations of marine organisms and for human health in conflict with Coastal Act section 30231. The Commission also finds that the MFS project is inconsistent with Coastal Act section 30233(a) because as sited the project is not the least environmentally damaging feasible alternative and because the project does not provide feasible mitigation measures to minimize the adverse environmental effects associated with siting the project in an area of poor water quality.

2.3.2.2 Toxic Leachates

Tires contain compounds that are harmful to some organisms and acutely toxic to other organisms. When placed in water, tires release these toxic hydrocarbon by-products into the local environment.²³ In addition to the substances that leach from the tire compound itself, used automobile tires are contaminated with road debris, dirt, oil, and other substances. These contaminant materials pose a risk to marine life and compromise water quality. Studies conducted by the Ontario Ministry of the Environment, the U.S. Bureau of Reclamation, and for the Maryland Department of Natural Resources indicate that tires submersed in water release toxic chemicals, including the following compounds: Quinoline, Naphtalene, I-methylnaphthalene, Dibenzothiophene, and Pyrene.²⁴ These compounds are primarily hydrocarbon by-products that are generally associated with petroleum based products. In the laboratory, leaching declines over time. The conclusion drawn is that the substances leach only from the exposed surface of the tires and is therefore temporary. However, the MFS project tire ribbons are located on a sandy sea floor in shallow water, and are subjected to constant scour from moving sand. In this erosive environment, new tire surface is constantly exposed to marine waters. Thus the rate that toxins leach from the MFS project tire ribbons should not be expected to decrease over time to the extent shown in the laboratory.

²³ Kellough, 1991.

²⁴ Hartwell, 1994.

The extent of toxicity is extremely variable depending on the animal or plant species being tested. For example, in the Maryland study, rainbow trout are killed but flathead minnows and Daphnia appear unaffected,²⁵ whereas the Bureau of Reclamation study showed tire leachates to be acutely toxic to Daphnia.²⁶ Similar analysis regarding bio-accumulation of chemical compounds and the resultant impacts have not been investigated. The impacts associated with the concentration of these noxious substances resulting from the placement of large numbers of tires into the marine environment is unknown but is potentially significant.

The CDP application contains two letters from S. Ian Hartwell of the Toxic Aquatic Contaminants Program, Maryland Department of Natural Resources which state that 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, 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. Mr. Hartwell's personal opinion is that the use of scrap tires in the marine environment will not result in acute toxic effects. However, his statement is very clear that the Maryland Department of Resources has not established an official policy regarding the safety of using scrap tires in marine applications. In fact, the Fisheries Division of the Maryland Department of Natural Resources will not consider using scrap tires in Chesapeake Bay until more information on potential secondary effects to fisheries is available. Mr. Hartwell also states that the identification of the toxic chemicals in the leachates is not fully understood. No assessment has been made regarding the persistence, fate, and transport and possible bio-accumulative effects of the toxic leachates on marine species.²⁷

As discussed in Section 2.2.3 of this report, the RWQCB staff does not recommend approval of the existing MFS development due to their concerns regarding the release of toxic compounds from the tires and the bio-accumulation of these substances.

The CDFG's experience with tire reefs constructed in the 1970's indicated that the use of tires for reef material did not produce a high quality reef structure and consequently, such use was abandoned. Tire reef efforts by the CDFG indicate lower levels of development over a longer period of time than could be expected using quarry rock or high-density concrete rubble. It is the position of CDFG biologists that this reduced invertebrate and algae community attachment may be attributed to surface toxicity. Surface toxicity may interfere with the colonization of tire surfaces by sessile attached invertebrates and algae.²⁸ This position is supported by a study of the colonization of artificial reef materials by corals and other sessile organisms in Hawaii, which finds that of the materials tested, recruitment of sessile organisms was lowest for tires.²⁹ The

²⁵ Letter from S. Ian Hartwell, Maryland Department of Natural Resources, to Rodolphe Streichenberger, MFS, March 23, 1995.

²⁶ Nelson, 1993.

²⁷ Letter from S. Ian Hartwell, Maryland Department of Natural Resources, to CCC, December 9, 1996; see Footnote No. 25, supra.

²⁸ Letter from John Turner, Chief of the Environmental Services Division, CDFG, to John Douglas, City of Newport Beach Planning Department, March 9, 1995.

²⁹ Fitzhardinge, 1989.

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study suggests that toxic components of the tires prevented corals from settling directly on the tires, or that corals had settled directly on the tires but had died.

As discussed in Section 2.2.8 of this report, the CDFG specifies that materials used for the construction of artificial reefs should not contain potentially toxic substances. Substituting the tires used for the MFS project with a material or materials that meet the CDFG criteria concerning toxicity would eliminate the risk to the marine environment posed by the release of toxic compounds from the tires. The Commission has granted numerous approvals for artificial reef projects using materials that do not contain toxic substances.³⁰ The MFS has not demonstrated that using such materials would not be feasible for its project. As constructed, the MFS project is not the least environmentally damaging feasible alternative.

As discussed above, the significance of the effects of toxic leachates from the MFS tire ribbons and tire columns is not fully understood, because several important subjects have not been investigated (e.g., persistence, fate, and transport and possible bio-accumulative effects of the toxic leachates on marine species, the effect of surface toxicity on the colonization of the tires by sessile attached organisms, and the influence of sand scour on leaching). The risk of harm to the marine environment associated with the use of tires in the MFS project could be reduced if the project included a scientifically valid monitoring program to study these effects and provided for removal of the tires if an adverse impact were detected. The MFS project does not include a monitoring program. In fact, the MFS has failed to comply with the monitoring and reporting requirements imposed by the City of Newport Beach through the aforementioned Harbor Permit/Negative Declaration, stating in its CDP application:

"This monitoring and evaluation of biological productivity is not considered of first interest. It is known that structures always do benefit life in the sea. [Monitoring to know how specific structures or reefs are biologically active is too often a pretext to keep scientists busy. Otherwise they would be short of projects on which to spend public money]."

Conclusion: Toxic Leachates

The use of automobile tires for the MFS project poses an unacceptably high risk of harming marine organisms and of reducing the biological productivity of coastal waters due to the release of toxic substances into the marine environment. The persistence, fate, transport and possible bio-accumulative effects of these toxic leachates on marine species has not been adequately studied. The use of tires for the MFS project does not represent the least environmentally damaging feasible alternative, and the MFS project does not include feasible mitigation measures to minimize the adverse impacts caused by the release of toxic substances to the marine environment. The Commission therefore finds that MFS project has been carried out in a manner that does not: (1) sustain the biological productivity of coastal waters and maintain healthy populations of all species of marine organism adequate for long-term commercial, recreational, scientific, and educational purposes in conflict with Coastal Act section 30230; and (2) maintain

³⁰ See Appendix A.

the biological productivity of coastal waters to maintain optimum populations of marine organisms and for human health in conflict with Coastal Act section 30231. Additionally, the Commission finds that the MFS has not demonstrated that there is no feasible less environmentally damaging alternative and that feasible mitigation measures have been provided to minimize adverse environmental effects in conflict with Coastal Act section 30233(a).

2.3.2.3 Marine Debris

The MFS project is intended to demonstrate: (1) how used tires and other readily available, man-made materials can be formed into productive artificial marine habitats; and (2) how successfully using tires as an artificial reef substrate can help alleviate solid waste disposal problems. In addition to used automobile tires, the MFS project uses PVC pipe, plastic mesh, netting, plastic jugs, Styrofoam, concrete blocks, various ropes and anchoring devices, and other miscellaneous materials. The MFS administration has placed no guidelines on the type of materials utilized in the project and have ardently encouraged volunteer participants to experiment with a full range of materials. The MFS does not know exactly what materials have been placed on the project site. These proposed materials were selected because they were available to the MFS at little or no cost. According to the applicant, scrap tires could provide the MFS with a \$0.25 to \$2.00 ea. disposal fee, whereas the acquisition and transportation materials such as quarry rock would increase project cost.

The CDFG has experimented with a variety of materials, including scrap automobile tires, to determine their suitability for artificial reef construction. The experimental tire reefs broke apart and were either moved about or washed onto the shore during storm events in 1977 and 1983 which resulted in major beach cleanup efforts. Based on these experiences and the potential that toxic substances may leach into the marine environment from tires, the CDFG determined that tires are unsuitable for the construction of artificial reefs. As discussed in Section 2.2.8 of this report above, the CDFG has developed criteria for evaluating the suitability materials used to construct artificial reefs. These criteria consider a material's density relative to seawater, persistence in the marine environment, and potential toxicity. Toxicity is discussed in Section 2.3.2.2 above. Below is an evaluation of the persistence and density of the materials used for the MFS project.

Persistence

Some of the materials used in the MFS project, including tires, may meet this criteria. However, other materials used (e.g., PVC pipe which is too brittle and nylon rope which abrades and deteriorates) are not persistent in the marine environment.

Johnson's Oyster Farm, an aquaculture operation in Tomales Bay, Marin County, utilizes sections of PVC pipe as a substrate for the culture of oysters. Although Johnson's aquaculture facility is located within the semi-sheltered environment of Tomales Bay, tidal currents have broken up and carried many sections of the PVC pipe out to sea. Eventually, some of the PVC

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pipe washed up on beaches along the Point Reyes National Seashore and beyond. According to a personal conversation with John Del Osso, Ranger, at the Point Reyes National Seashore, PVC pipe is easily moved about by ocean forces. Once in the surf zone, the PVC can be broken up by the forces of the crashing waves. PVC pipe has been the source of on-going clean-up within the Point Reyes National Seashore.

Density

To assure that artificial reefs remain intact and in place during periods of heavy seas, the CDFG specifies that materials used for reef construction are at least twice the density of sea water. With the exception of the concrete block used to construct the "cement block habitat," none of the materials used in the MFS project are dense enough to remain in position during strong winter storms.

The instability of reefs constructed from scrap tires is well documented. In its August 14, 1996, Draft Guidelines for Marine Artificial Reef Materials, the U. S. Minerals Management Service (MMS) finds that tires are basically unstable in salt water and that attempts to address this problem in artificial reef projects by bundling tires together have failed because the materials used to bale the tires together eventually corrode, resulting in loose, unballasted tires on the sea bottom.³¹ The MMS report includes accounts of tires from failed reefs washing up onto beaches in Florida and North Carolina, stating:

"hundreds of tires were bundled together using nylon strapping and sunk off Ft. Lauderdale, Florida several years ago. Those tire bundles separated, scattering tires over a large area. Local residents consider the tires an eyesore and want them removed. Foster and Fowler (1992) reported that North Carolina has experienced large numbers of tires washing up onto beaches in the southern part of the state after deployment of tens of thousands of tires, unballasted, and strung together by cables. North Carolina no longer permits the use of tires as artificial reefs."

The Associated Press reported that in late January and early February 1996, seven shrimp trawlers were employed by the State of North Carolina to collect old tires released when cables holding an artificial reef together failed.³² The article states that in 1993-94, the State of North Carolina spent \$118,000 to collect and dispose of tires from the failed reef, and that the latest effort cost \$200,000. A fisherman quoted for the story states that "tires are a lot harder on the gear than catching shrimp," and another said that the tires "cost us all enough in shrimp nets over the years."

The New Jersey Marine Fisheries Administration undertook a study to determine the stability of various tire reef designs, stating:³³

³¹ Minerals Management Service, 1996.

³² Assoc. Press, February 2, 1996.

³³ Myatt, 1989.

"...anecdotal reports of tires washing ashore in other states provide ample justification for approaching a tire reef project with caution."

The study concludes that in order to remain stable in water at least 60 feet deep, tire reefs must be ballasted with concrete to substantially increase the density of the reef units. The recommended design criteria include: minimum submerged density of 275 kg/m^3 ; minimum ballast-to-rubber ratio of 10 kg of concrete /kg of rubber; and minimum ballast-to-tire ratio of 11 kg of concrete per tire. The study advises additional testing if reefs are proposed to be constructed in water shallower than 60 feet. These recommendations echo the conclusions drawn from a study of artificial reef designs undertaken in Chesapeake Bay and nearby coastal waters which concludes that:

"(1) Unballasted tires should not be used for reef structure because they move offsite during storm activity...Tires have only 15% of their in-air weight when submerged in sea water...and require substantial quantities of concrete to keep them in place."

The tire ribbons and columns included in the MFS project are unballasted and, do not therefore meet any of these recommended criteria, designed to assure stability of tire reefs in water 60 feet deep. Moreover, the MFS project is sited in water 30 to 40 feet deep, and is therefore subjected to significantly stronger storm and wave forces than these criteria address.

Another study of artificial reef designs from Southeast Asia states that:

"Debris, tires, and scrap materials have ended up along beaches due to inadequate fastening and anchoring methods. They have often damaged fishing nets and result in litter along beach resorts."³⁴

California too has experience with the adverse consequences of unstable tire reefs. The Huntington Beach Tire Reef (HBTR) project was funded by the Los Angeles Rod and Reel Foundation, a non-profit organization, at no initial cost to the State. However, during the 1977 storms, large numbers of tires from the reef washed onto shore, resulting in a major clean-up effort.³⁵ According to a personal communication with Dennis Bedford of the California Department of Fish and Game's (CDFG) Artificial Reefs Program, the Los Angeles Rod and Reel Foundation failed to assume responsibility for the clean-up, and, instead, CDFG removed the tires at public expense. Similarly, the MFS is an organization whose continued operation and financial accountability is not guaranteed. Project site and beach clean-up consideration must be approached with caution to avoid making beach clean-up and/or project site remediation a financial burden to the public.

The MFS states that the materials are permanently anchored to the sea floor, and that material density is therefore not an issue. The MFS anchoring system consists of small plastic anchors and 1/4-inch nylon rope to secure project components to the ocean floor. The MFS expects the nylon, mooring line to last approximately 20 years in the marine environment and that the

³⁴ White, 1990.

³⁵ Lewis, 1989.

anchoring system is sufficient to assure that the project components remain in place during severe winter storms, stating:

*"No storm ever in nine years pulled any MFS structure out of the sea bottom. If in the past such a thing occurred it was because of unpermitted boat anchoring or vandalism."*³⁶

The CDP application states that "the lifetime of the anchoring system is expected to be a minimum of 20 years." The staff has requested the documentation necessary to analyze the long-term compatibility of the anchoring system in the marine environment. In response to this request the CDP application states:

"...the mooring capacities of the project anchoring systems were calculated in 1987... however, these calculations are not available for review."

The long-term capacity of the anchoring system cannot be verified. It is reasonable to expect that the nylon rope used for project moorings will chafe and wear in the turbulent nearshore environment and eventually fail.

If the MFS project included regular maintenance and replacement of the anchoring system components, it is possible that the materials would remain in place. However, the MFS states that it does not intend to maintain the project site, and the project description includes several failed, past experiments which have been abandoned in-place. When an experiment fails to meet the applicant's objective, it is abandoned in-place in accordance with the MFS's "lay-it-flat" technique. The MFS's "lay-it-flat" technique consists of deflating or not maintaining the air that keeps the project components buoyant and allowing them to fall to the ocean floor and be covered and/or moved about by the migrating sandy substrate. For example, in 1988, the MFS installed 2000 "kelp bio-structures," each consisting of 12-foot-long, 1/4-inch-diameter anchoring lines, protruding above sand level, topped by a one-gallon plastic jug wrapped in plastic mesh. When the kelp experiment failed, the plastic jugs, ropes, and mesh netting were abandoned in-place. During site inspection in September 1993 and October 1995, only a few of the original 2000 deflated plastic jugs were observed, and they were providing little or no habitat value. Without maintenance, it is likely that the low-density materials used for the MFS project will eventually become marine debris.

At sea, discarded plastics create problems for both marine life and human activities. The small vessel operator experiences fouled props and jammed cooling intakes from drifting plastics. Beaches become cluttered with discarded materials. Sea life dies from eating plastics or from entanglement. PVC piping is shattered and moved about by violent ocean waters. Discarded netting and rope assemblies can trap fish and marine mammals long after they are abandoned. Consequently, some of the MFS project materials (e.g., plastic bottles, nets, tires, PVC pipe,

³⁶ This statement is contained in a supplement to the MFS project description dated July 31, 1995. At that time, the oldest project components had been in place for approximately seven years, according to the project description, and the tire ribbons had been in place for two years. In accordance with the installation dates provided by the MFS, none of the project components had been in place for nine years at the time that the MFS made this claim regarding the longevity of the mooring system.

various rope assemblies etc.) continue to create potential hazards for marine life and are not compatible for long-term use in the marine environment. Abandoning project components in-place constitutes ocean dumping.

The use of these materials in the marine environment creates a significant risk of harm to marine resources and to the quality and biological productivity of coastal waters. Feasible, less environmentally damaging alternative materials such as high-density concrete rubble and quarry rock are available. By using materials that meet the CDFG's recommended guidelines for artificial reef construction, the MFS project would be less environmentally damaging.

Feasible mitigation measures which could minimize the potential that project materials may become marine debris and the associated adverse effects to coastal resources include: (1) a mechanism for long-term financial security for proper cleanup and/or removal of project materials; and (2) a long-term monitoring and maintenance program for the physical condition of the anchoring system and the structural integrity of the various project components. The MFS has not complied with the conditions of the City Harbor Permit which require both a financial security bond or letter of credit and a monitoring and reporting program for the structural condition of the project. The MFS project does not provide mitigation measures to minimize the adverse effects from the use of low density and fragile materials in the construction of artificial reef components.

Conclusion: Marine Debris

The materials used for the MFS project are not dense enough to remain in place during heavy seas, and many of the materials used are not persistent in the marine environment. Calculations and quantifiable documentation to support the mooring capacity and the life expectancy of the anchoring system have not been provided. The applicant proposes to abandon project components in-place, and does not intend to provide long-term maintenance of the project site. The Commission therefore finds that the MFS project is not consistent with Coastal Act sections 30230 and 30231 because the materials used for the project pose a significant risk of harm to marine resources and to the quality and biological productivity of coastal waters.

Section 30233(a) of the Coastal Act requires that filling of open coastal waters shall be permitted where there is no feasible, less environmentally damaging alternatives and where feasible mitigation measures have been provided to minimize adverse environmental effects. As discussed above, there are feasible less environmentally damaging alternatives to the materials used for the MFS project, and the project does not include feasible mitigation measures to minimize its adverse environmental effects. The Commission therefore finds that the MFS project is not consistent with Coastal Act section 30233(a).

2.3.3 Sediment Transport and Beach Erosion

Coastal Act section 30253 states in part:

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New development shall...neither create nor contribute significantly to erosion...

The project site is located at the edge of the littoral zone, at depths of -30 to -40 feet MLLW. Within the littoral zone, sediments are moved by waves and currents, with parallel (long shore transport) and perpendicular (on-offshore transport) to the shore. Structures placed within the littoral zone affect the movement and deposition of sediment. When sand is trapped by structures placed within the littoral zone and not allowed to complete its transport, shoreline sand deposition and beach erosion both up-coast and down-coast can be altered.

By letter to MFS President Rodolphe Streichenberger dated May 5, 1995, Coastal Engineer David Skelly states that: "At a depth of 40 feet the tires [of the existing MFS development] are essentially outside the littoral zone." Skelly's letter concludes: "There is absolutely no basis for expecting the MFS tire experiment to have any impact on the sand deposition at the shoreline." (See Exhibit 5.)

The Coast of California Storm and Tide Wave Study, South Coast Region, Orange County "Existing State of Orange County Coast" (Final Report April 1993, Report 93-1), has shown that the Balboa Peninsula beaches have been artificially widened by nourishment and much of the littoral cell has been modified by shoreline structures, nourishment and other human activities. At present, the beaches at the Balboa Peninsula are eroding several feet a year, but this has not been considered a serious problem due to the tremendous width of the nourished areas.

Field studies reported in the above cited wave study indicate that sand is moving along the Balboa Peninsula to the south and south-west as a broad migrating lobe into water depths of -44 to -50 feet. Further north, at Huntington Beach, surveys of the mooring site used by the American Trader, in -45 feet of water, show about 5 feet of shoaling in recent years. Transport through and shoaling in water depths greater than -30 to -40 feet indicate active transport of material at the project site.

At its present location, the MFS development can alter on-shore/off-shore sediment transport. Site inspections conducted in September of 1994 and October of 1995 revealed that many of the tires are either partially buried or completely buried in sediment. The burial status of the tires affirms that they are located within the littoral zone. While the effects to sediment transport would be expected to be greater if the structures were located at the -10-foot to -15-foot depth, the MFS development has likely caused some modification to sediment transport.

The City of Newport Beach granted a permit for a proposed MFS tire reef located in water -60 to -110 deep (as discussed in Section 2.2.1 of this report). Evidently, the MFS believes that it is feasible to construct a tire reef at such depths. Siting the project in deeper water, outside of the littoral zone is a less environmentally damaging feasible alternative to the MFS project.

Conclusion: Sediment Transport and Beach Erosion

The Commission finds that the MFS project may create or contribute to beach erosion in conflict with Coastal Act section 30253(2), and that the MFS has not demonstrated that there is no

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feasible less environmentally damaging alternative to locating the project in the littoral zone in conflict with Coastal Act section 30233(a).

2.3.4 Recreation--Public Access

Coastal Act section 30210 states:

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

Coastal Act section 30211 states:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

The MFS project has the potential to adversely impact recreational opportunities. Consistent with experience using such materials in the marine environment, it is likely that materials used for the MFS project, including scrap tires and PVC pipe will eventually wash up onto nearby beaches. As discussed in Section 2.3.2.3 above, PVC pipe from the Johnson's Oyster Farm is a source of on-going beach debris within the Point Reyes National Seashore. Section 2.3.2.3 also discusses in detail several instances where the failure of tire reefs has resulted in tires washing up on beaches, requiring publicly funded clean-up. The California Department of Parks and Recreation states that tires buried in nearshore sand are hazardous to beach users.³⁷ Many of the MFS project materials are not commonly used in artificial reefs and are not therefore addressed in the literature concerning reef design and stability. However, other low density materials used for the MFS project (e.g., PVC pipe and other plastic materials) cannot be expected to remain permanently in place, and do not therefore meet the CDFG artificial reef material specifications.

The Commission has granted a number of permits for artificial reef projects constructed with materials sufficiently dense and persistent to assure long-term stability, and that are located further offshore in deeper water than the MFS project.³⁸ All of these alternatives would reduce or avoid the adverse effects to public access and recreation resulting from the MFS project. The MFS has not demonstrated that there are no less environmentally damaging feasible alternatives that would lessen or avoid the impacts of the project to public access and recreation.

Feasible mitigation measures that could minimize the impacts of the project to public access and recreation include: (1) a mechanism for long-term financial security for proper cleanup and/or

³⁷ Letter from Jack Roggenbuck, California Department of Parks and Recreation (CDPR) to Nadell Gayou, The Resources Agency, March 3, 1995 and letter from David Pryor CDPR Resource Ecologist, to Gayou, March 3, 1995.

³⁸ See Appendix A

removal of project materials; and (2) a long-term monitoring and maintenance program for the physical condition of the anchoring system and the structural integrity of the various project components. The MFS has failed to comply with the conditions of the City Harbor Permit which require both a financial security bond or letter of credit and a monitoring and reporting program for the structural condition of the project. The MFS project does not provide mitigation measures to minimize the adverse effects from the use of low density and fragile materials in the construction of artificial reef components.

Conclusion: Recreation--Public Access

The use of fragile and low density materials for the MFS project, the limited life expectancy of the anchoring system, the lack of monitoring and maintenance of the project, and the planned in-place abandonment of project components, all increase the potential that materials from the project will litter nearby beaches, resulting in aesthetic degradation and user hazards. The MFS has not demonstrated that there are no feasible alternatives that would avoid these impacts and has not provided feasible mitigation measures to minimize these adverse effects. The Commission therefore finds that the MFS project is not consistent with Coastal Act sections 30210, 30211, and 30233(a).

2.4 Violation

The MFS began constructing this project in 1988, without an approved coastal development permit. The MFS project thus appears to be in violation of the Coastal Act. As demonstrated in the preceding sections, the Commission finds that the MFS project is inconsistent with Coastal Act sections 30210, 30211, 30230, 30231, 30233, and 30253. The project has already been constructed and is causing ongoing adverse impacts to coastal resources.

2.5 California Environmental Quality Act

Section 21080.5 (d)(2)(i) of the California Environmental Quality Act (CEQA) states:

The rules and regulations adopted by the administering agency shall require that an activity will not be approved or adopted as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment.

The MFS project, as discussed herein, would have significant adverse environmental impacts to coastal resources. Project alternatives and mitigation measures are available which would substantially lessen these adverse environmental impacts, as discussed in Section 2.3 of this report. The Commission therefore finds that the MFS project is not consistent with section 21080.5 (d)(2)(i) of the CEQA.

Appendix A Substantive File Documents

Coastal Development Permit Application File No. E-95-05

Donald Y. Aska, ed., State University System of Florida and Florida Sea Grant College, "Artificial Reefs in Florida" (Proceedings of a conference held June 10 and 11, 1977 at the University of South Florida, St. Petersburg; Report No. 24), May 1978.

Feigenbaum, D., M. Bushing, J. Woodward and A. Friedlander. 1989. Artificial Reefs in Chesapeake Bay and Nearby Coastal Waters. *Bull. Mar. Sci.* 44(2): 734-742.

Fitzhardinge, R.C. and J.H. Bailey-Brock. 1989. Colonization of Artificial Reef Materials by Corals and Other Sessile Organisms. *Bull. Mar. Sci.* 44(2): 567-579.

Hartwell, S.I. Et al. 1994. Toxicity of Scrap Tire Leachates in Estuarine Salinities. Special Report for the Maryland Department of Natural Resources.

Integrated Waste Management Board, "California Tire Grant Program, 1992-93 Information and Application Instructions," January 1993.

Kellough, R.M. 1991. The Effects of Scrap Automobile Tires In Water. Ontario Ministry of the Environment. December, 1991.

Lewis, R.D. and K.K. McKee. 1989. A Guide To Artificial Reefs of Southern California. California Department of Fish and Game.

MFS, "Mussel Reefs, Ecosystems of the Future" brochure [no date given].

Myatt, D.O., E.N. Myatt and W.K. Figley. 1989. New Jersey Tire Reef Stability Study. *Bull. Mar. Sci.* 44(2): 807-817.

Nelson, Mueller, and Hemphill, 1993. Identification of Tire Leachate Toxicants and a Risk Assessment of Water Quality Effects Using Tire Reefs in Canals. U.S. Bureau of Reclamation.

White, A.T., L.M. Chou, M.W.R.N. De Silva and F.Y. Guarin. 1990. Artificial Reefs for Marine Habitat Enhancement in Southeast Asia. ICLARM Education Series 11, 45 p. International Center for Living Aquatic Resources Management, Philippines.

Notice of Preparation of a Draft Environmental Impact Report, CDFG (Robson Collins, contact), January 31, 1994.

U.S. Environmental Protection Agency and Pacific Environmental Services, Noyes Data Corporation (Park Ridge, NJ), *Scrap Tire Technology and Markets* [no date provided].

U. S. Minerals Management Service. 1996. Draft Guidelines for Marine Artificial Reef Materials. August 1996.

"Fishermen Find Sideline Picking Up Old Tires," *The Associated Press*, February 2, 1996.

"State Ok's OC sea farms to grow kelp and mussels," *The Orange County Register*, February 5, 1993.

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"State grant will allow Newport Beach group to build up mussels while sinking used tires," *The Orange County Register*, June 2, 1993.

"Grant Will Build Mussel in Used Tires," *Los Angeles Times*, June 26, 1993.

"Plan for man-made kelp forest sunk for now despite its champion's zeal," *The Orange County Register*, May 9, 1994.

"Plan to make kelp bed with tires is way off schedule," *The Orange County Register*, May 9, 1994.

The Marine Forester, Exploring the Oasis of Life in the Sea, Vol. 1, No. 1, March 1993 and Vol. 1, No. 2, August 1993.

State/Local Government Actions

Fish and Game Commission, agenda for meeting of August 5, 1993.

California Coastal Commission. 1996. Adopted Findings on CDP E-96-07 (Big Sycamore Canyon Ecological Reserve Artificial Reefs), including substantive file documents.

_____. 1995. Adopted Findings on Consistency Certification No. CC-81-95 (Bolsa Chica Artificial Reef), including substantive file documents.

_____. 1992. Adopted Findings on Consistency Certification No. CC-9-92 (Bolsa Chica Artificial Reef), including substantive file documents.

_____. 1991. Adopted Findings on Consistency Certification No. CC-67-91 (Pt. Loma Artificial Reef), including substantive file documents.

_____. 1989. Adopted Findings on CDP E-89-7 (Palos Verdes Artificial Reef), including substantive file documents.

_____. 1987. Adopted Findings on CDP E-87-3 (Santa Monica Bay Artificial Reef), including substantive file documents.

_____. 1987. Adopted Findings on CDP E-87-5 (Topanga Artificial Reef), including substantive file documents.

_____. 1986. Adopted Findings on Consistency Certification No. CC-6-86 (Bolsa Chica Artificial Reef), including substantive file documents.

_____. 1986. Adopted Findings on CDP E-86-3 (Pacific Beach Artificial Reef), including substantive file documents.

_____. 1986. Adopted Findings on CDP E-86-4 (Mission Bay Park Artificial Reef), including substantive file documents.

_____. 1986. Adopted Findings on CDP E-86-5 (Oceanside Artificial Reef No. 2),
including substantive file documents.

_____. 1986. Adopted Findings on CDP E-86-6 (Oceanside Artificial Reef No. 1),
including substantive file documents.

Appendix B

CF&GC Lease History

Date	Action
April 1987	<p>The California Fish & Game Commission (CF&GC) conditionally approved an aquaculture lease (No. M-738-01) on approximately 10 acres of sub-tidal lands. The purpose of the aquaculture lease was specifically to experiment with "bio-structures" (9-foot lengths of rope anchored in the sea floor with plastic anchors) and support buoys as artificial substrates for the attachment of kelp and shellfish (scallops and mussels).</p> <p>The lease was issued subject to several terms, conditions, and covenants. Condition G of the lease specifically required the lessee to comply with the rules and regulations of, and obtain permits from the Coastal Commission (<i>Lease No. M-738-01, Section G</i>). The MFS did not notify the Coastal Commission of the proposed development and did not obtain a CDP or regulatory approval from other agencies. According to a personal communication with Rodolphe Streichenberger, President of the MFS, the MFS did not to pursue regulatory approval from the Coastal Commission because "it was a relatively small project and the permitting process would be bureaucratic and cumbersome (pers. comm. with Rodolphe Streichenberger, MFS, October 23, 1995).</p>
April 1988	<p>The original conditionally approved lease was superseded by another lease (No. M-738-02) which authorized movement of the site to a different 10-acre parcel located 1,100 yards further northeast, with abandonment of the original lease site once the move was approved and completed. No new modes of operation or culture methods were authorized. As in the original lease, the lessee was to observe and comply with all rules and regulations promulgated by any governmental agency having authority by law, including the Coastal Commission, and obtain any other permits or licenses required by such agencies. (<i>Lease No. M-738-01, Section G</i>).</p>
October 1988	<p>The CF&GC amended the lease to allow placement of 50 mussel bio-structures (as defined in the original lease, 9-foot lengths of rope anchored in the sea floor with plastic anchors and support buoys), and again in February 1993 to allot ten additional acres of State water bottoms for aquaculture purposes. The additional allocation was consolidated under the existing lease to comprise a single lease of two parcels. The boundaries of the aquaculture lease sites were subsequently amended several times to experiment with different near-shore environments.</p>
August 1993	<p>The CF&GC amended the conditionally approved lease to authorize use of "tire mussel ribbon" (TMR) structures in cultivating mussels. The use of tires was contingent upon (1) the MFS securing a bond for the clean-up requirement, and (2) the preparation of an environmental document for the proposed TMR project that the CF&GC could certify. This was the first time the CF&GC considered the use of tires as an artificial reef substrate; however, the MFS had already placed 1,500 tires on the lease site in 1993 without CF&GC or Coastal Commission approval.</p>
October 1994	<p>The CF&GC declared Lease No. M-738-02 abandoned by mutual agreement between Rodolphe Streichenberger and the CDFG, as aquaculture operations at the lease site did not materialized.</p>

Appendix C

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 seawater. 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.)

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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

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California Coastal Commission

LOCATION MAP

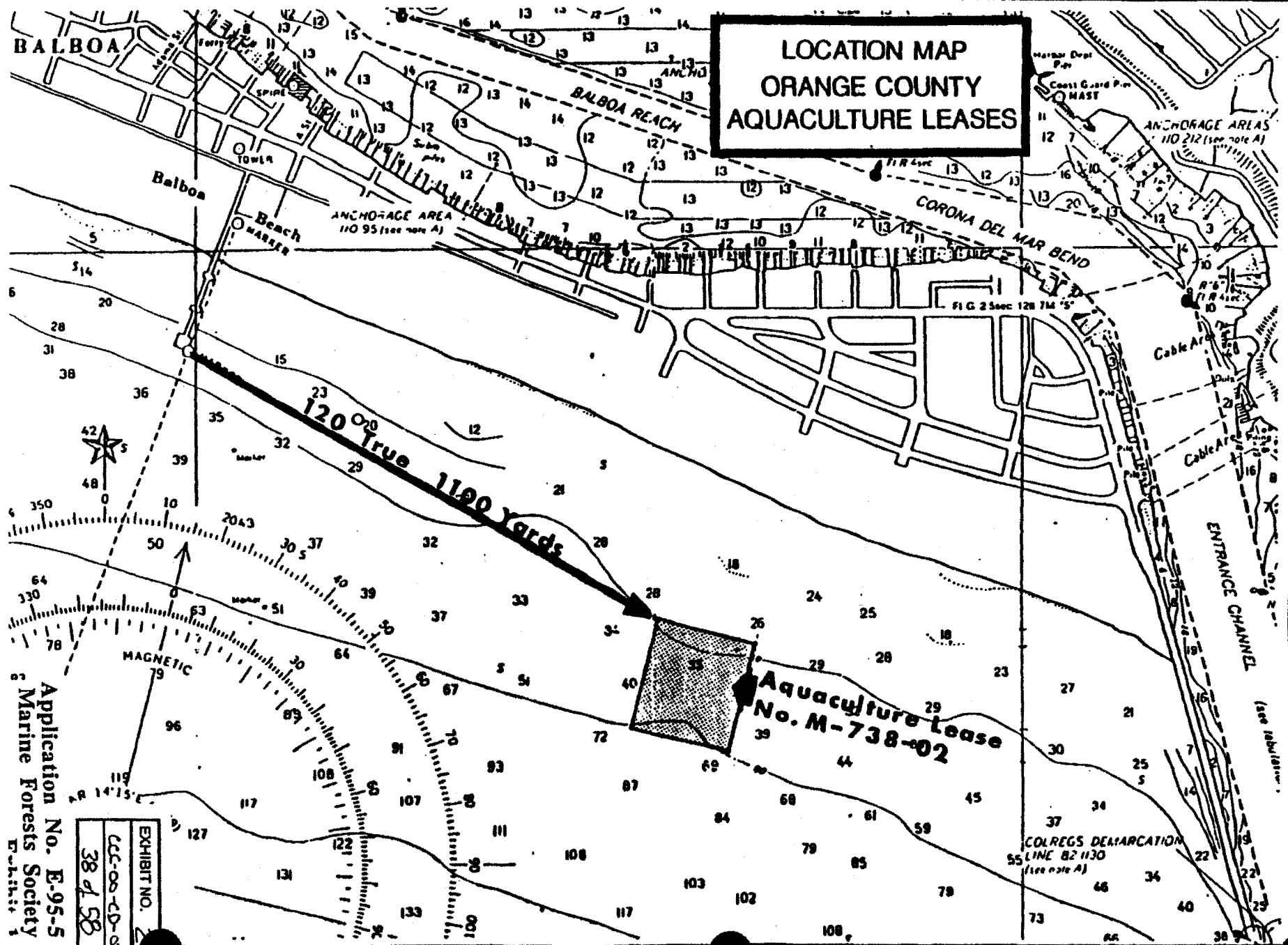
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County of Orange

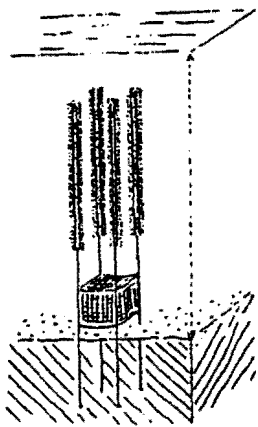
Application No. E-95-5
 Marine Forests Society

LOCATION MAP ORANGE COUNTY AQUACULTURE LEASES

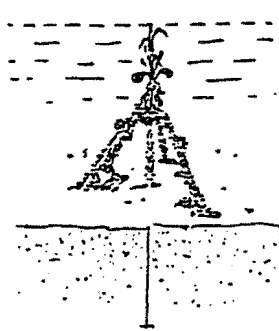


Application No. E-95-5
Marine Forests Society

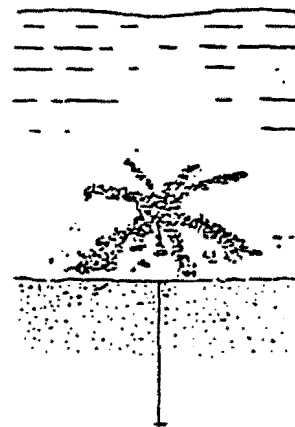
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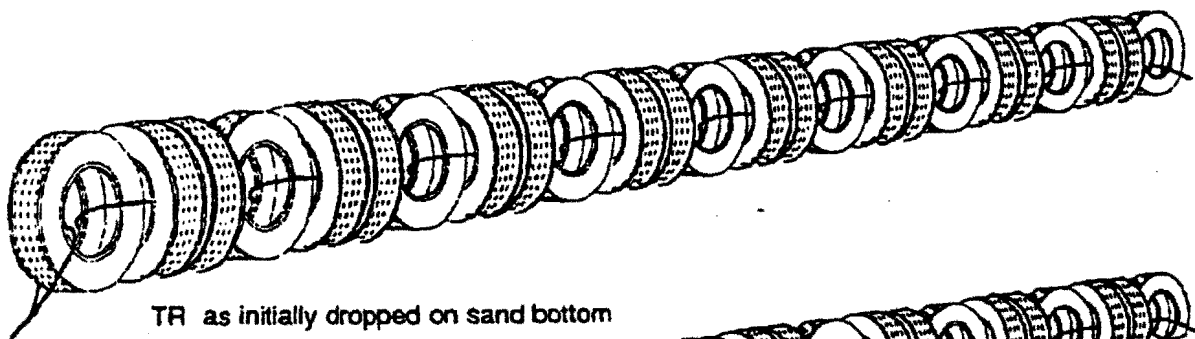
Net and Tube Habitat



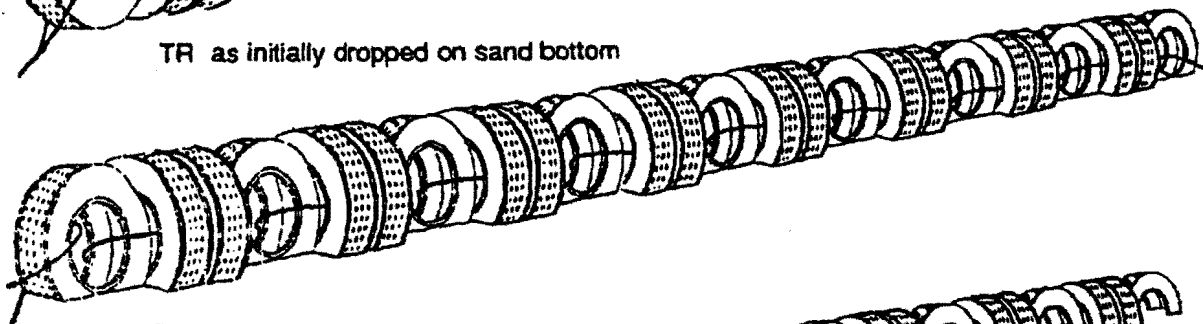
Pyramid Habitat



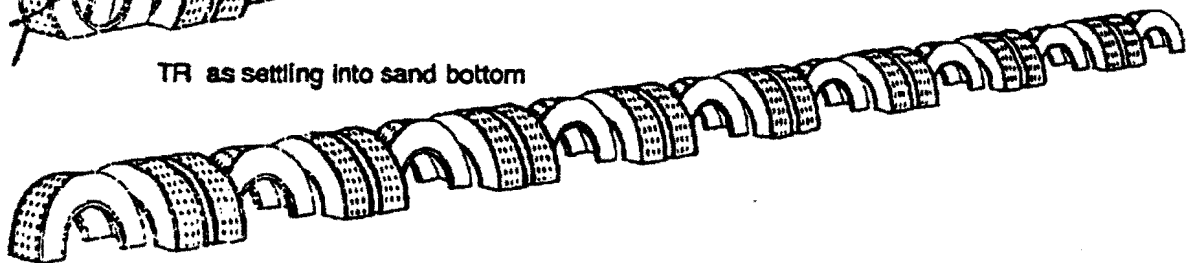
Bundle Habitat



TR as initially dropped on sand bottom

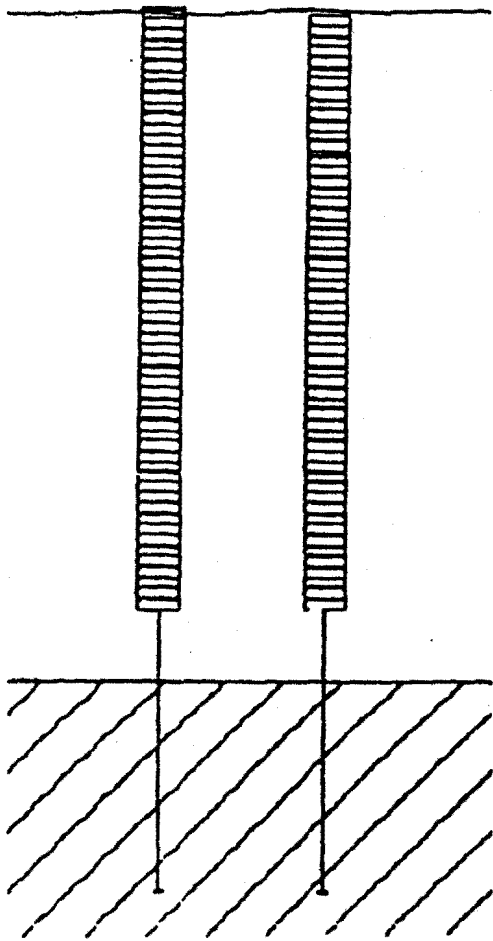


TR as settling into sand bottom

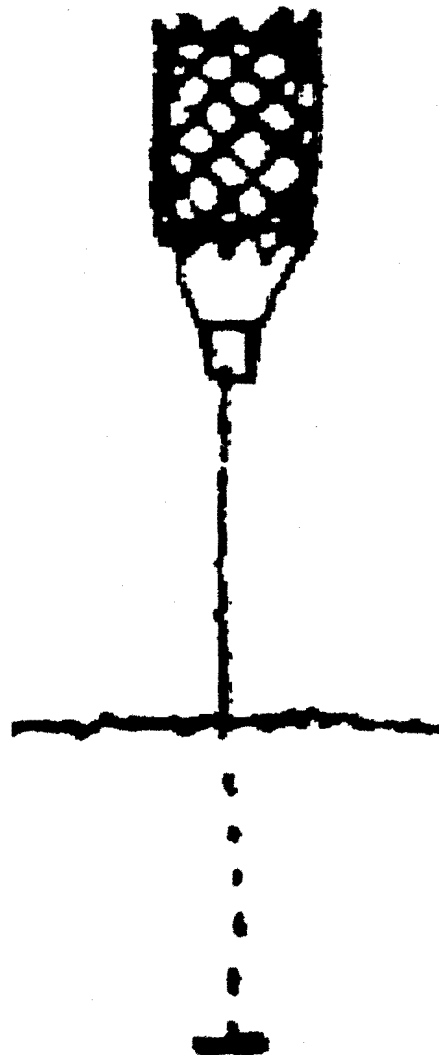


TR as stabilized in sand bottom

Tire Mussel Ribbons



Tire Columns



Kelp Bio-structure

WHEELER J. NORTH

March 18 1995

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

Dear Rodolphe,

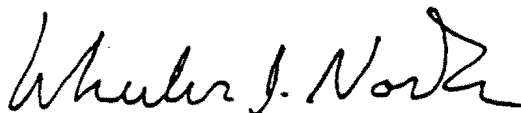
This responds to your request for a letter of endorsement for the experimental tire reef project being proposed by Marine Forests to the City of Newport Beach. It is my understanding that the proposed reef will consist of 30,000 tires deployed over ten acres of sandy bottom, to provide an overall coverage of about 20 percent. The tires will be assembled by the methods already proven successful by means of your small tire reef experiment.

The small tire reef experiment has demonstrated several important facts:

1. The system design is stable and has survived winter storms here.
2. The tires resemble natural hard bottom sufficiently well so that they become encrusted by various sessile animals including mussels.
3. The artificial reef structure attracted motile animals such as fishes that commonly associate with rocky bottom and kelp beds.
4. Your project shows that your group has the capability of designing, constructing, installing and monitoring tire reefs.

It seems to me that Marine Forests on a small scale has developed a system with good potential for turning a liability (scrap tires) into an asset (enhancing marine life). The logical next step is to repeat the effort on a significantly larger scale to determine whether unanticipated differences might occur as the size of the activity is expanded. To me, the project appears to have value and I hope that you will be successful in obtaining regulatory approval to conduct the follow-on study.

Sincerely,



Wheeler J. North
Prof. of Environmental Science Emeritus

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CALIFORNIA INSTITUTE OF TECHNOLOGY

September 22 1989

KERCKHOFF MARINE LABORATORY
101 DANLIA STREET
CORONA DEL MAR, CALIFORNIA 92625

TELEPHONE (714) 673-8804

TO WHOM IT MAY CONCERN

This letter describes and endorses the accomplishments and activities of Rodolphe Streichenberger. Mr. Streichenberger and I have been exchanging scientific ideas and information since 1984 and he spent a year at my laboratory in 1986. Our collaborative studies during this period resulted in an invention that permitted easy and inexpensive implantation of solid objects such as kelp and shellfish substrates on a sedimentary bottom. The new technique opened up a significant potential for commercial cultivation of living marine resources in coastal sedimentary areas which are usually desertlike in that attached plants and animals are scarce or absent. Mr. Streichenberger's concept of thus enriching marine habitats is called Sea Biostructuring.

Observations of development of fish populations in waters that had been artificially structured with inert or living materials led Mr Streichenberger to conclude that:

- 1) Available nutrients are sufficiently plentiful in coastal waters and can be stored and recycled provided the habitat is sufficiently structured.
- 2) Underwater structures for fixation of sessile organisms are the first element required for the process of enhancing development by sea life.
- 3) Function of the structure is greater than a simple thigmotactic effect. The most important function is provision of a foundation for growth.

Mr. Streichenberger has continued his research and development activities here in southern California from 1987 onward. In 1988 he installed the first "marine forest" on a sandy plain lying just west of the entrance to Newport Harbor. He and his associates are continuing to augment this unique facility by transplanting additional kelp and shellfish-culturing substrates. This is a first-of-its-kind advance in marine utilization.

Mr. Streichenberger must be credited for pioneering work in a difficult but promising research and development program in marine science.

Sincerely,

Whelan J. North

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Application No. E-95-
Marine Forests Society
Exhibit

SE SKELLY ENGINEERING

DAVID W. SKELLY COASTAL ENGINEER

May 5, 1995

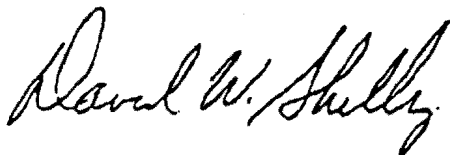
Mr. Rodolphe Streichenberger
Marine Forests Society
P.O. Box 5843
Balboa Island, CA 92662

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

EXHIBIT NO. 2
CC-00-CD-02
43 & SB

D.I.V.E.R.S.

**Divers
Involved
Voluntarily in
Environmental
Rehabilitation and
Safety**

April 19, 1995

To whom it may concern,

The Marine Forest Society's Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. The California Department of Fish and Game no longer consider tires to be a suitable material for creating artificial reefs because of their risk of breaking free and coming ashore, which they have experienced in the past. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project. We are too busy cleaning up other underwater debris and do not wish to retrieve more trash that could be avoided.

Sincerely,

Divers Involved Voluntarily in Environmental Rehabilitation and Safety

EXHIBIT NO. 2
CCC-00-CD-0
44 of 58

Application No. E-95-5
Marine Forests Society
Exhibit 6

The Marine Forest Society Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
Kella Brinkner	17150-H Sunclateo	714-964 3726	Kella M. Brinkner
LAWRENCE MADSEN	1046 E. CUMMINS ST. LONG BEACH CA 90801 (310) 365-3921		
ANA WILKINS	2181 STATE AVE. C.M.	714 722 1930	Ana Wilkins
MELINDA KIRK	126 LORALYN DR., ARCADIA CA 90066	(714) 859-8617	Melinda Kirk
Charles Dickson	12831 Aspenwood Garden Grove CA 92641	7505/12	Charles Dickson
Ann S. J. J. J.	1074 Cordellwood Irvine CA 92612	(714) 524-1355	Ann S. J. J. J.
John J. Cornell	3337 Clinda Lane Anaheim CA 92704	714 822 1804	John J. Cornell
TONY NAVARRO	9140 LARKSPOR DR WESTMINSTER	(714) 898-5194	Tony Navarro
RICHARD CAROL	1848 TEDMAN ANAHEIM	(714) 525-0756	Richard Carol
JEFF J JEWELL	12541 CHARLTON TUSTIN	714 535 1417	Jeff J Jewell
Karen Withers-Smith	1685 Hwy Dr Chino Hills Ca	714 534 6306	Karen Withers-Smith
DAWN MARCUM	16 VIA LANTANA RSM CA	914 858 1364	Dawn Marcum
TONY MARCUM	16 VIA LANTANA RSM CA	(714) 858 1364	Tony Marcum
W. J. Williams	1930 STEVELY AVE	(310) 430 9916	Eugene W. Williams
Harold Costello	12516 Emel Buena Vista CA 92610	714 534 1071	Harold Costello
Frank Kindhart	2038 GOLDENVIEW LONG BEACH CALIF.		Frank Kindhart
ATENCIA D. Ray	4918 JESSIE AVE, Apt. A. LONG BEACH, CA 90805		Atencia D. Ray
MIKE TONER	17931 TAYLOR CIR #3 Huntington Beach	926 477	Mike Toner
VINCE HALL	1915 S. De la Cruz SAN CEBASIEL	917 96	Vince Hall
Eugene Anderson	11375 Woodman Garden Grove	926 113	Eugene Anderson
Don Dan	2100 1/2 Ocean Dr. MBSO C 1900		Don Dan
Anthony J. J. J.	767 W. Fairview Glendale CA 91202		Anthony J. J. J.
PL 1 P. 1	7294 B. J. Rd. B. J. Rd. CA 9277		PL 1 P. 1

EXHIBIT NO. 2

CC-00-00-02

45 of 58

The Marine Forest Society's Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
Elizabeth Francisco	1079 Camino Mariposa T. 1	916 888-2512	[Signature]
TESS FITZPATRICK	5704 TYPAN WAY	(215) 255-1000	[Signature]
John Edward	501 Hermosa St. 33	310 318-1820	[Signature]
Howard Fisher	441 N. 11th Ave. Phoenix AZ 85001	602 249-1171	[Signature]
HELEN ATCHEE	1714 SORREL RD	800 866-678	[Signature]
Charlynn Brown	2484 Hollywood Blvd. Burbank CA	915 (415) 341-373	[Signature]
BRIAN HILL	POB 729	Redlands CA 92353	[Signature]
Michael C.	4264	837-8072	[Signature]
Gene Olson	1274 CHESHIRE ROAD	421-0308	[Signature]
Andrew Lissie	18914 Allen St. Torrance CA	91356	[Signature]
Tammie Brinell	9141 W. 35th	713 740-8771	[Signature]
Jennifer Baiton	7200 Fashion Ave	(410) 492-6489	[Signature]
Gregoria Bortov	3712 Bortov Court	913 423-9775	[Signature]
ERANTIS	64190 3236 Sun Ave	LOS ANGELES CA 90034	(310) 20-0512
Jo. Sheppard	14003 Candlewood Dr. S. Lynn CA	91342	[Signature]
DAN TAYLOR	234 CAHILL PLUMASAN	LEMANO 92673	[Signature]
ANGEL RODRIGUEZ	3200 C. ALEXANDRIA # L.A.	CA 90004	[Signature]
Ms. [Name]	757 OCEAN AVE	S.M. CA 90407	[Signature]
STANLEY MILER	8522 FRANKLIN	GRANT AND PH 99715	[Signature]
Deborah Johnston	9511 1/2 HURON	LOS ANGELES CA 90035	[Signature]
Arden Sanjoe	First Sanjoe - Dr #104	Hunter CA 94785	[Signature]
Marie P. [Name]	21272 L...	CA 91777	[Signature]
Bill Stroup	PO Box 491	Redondo Beach CA 902	[Signature]
James [Name]	309 NORWICH	CA 91016	[Signature]

EXHIBIT NO. 2
 CCC-00-CD-02
 46 of 58

The Marine Forest Society Fire Reef Demonstration Project sh^{ld} not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
Annette Matsuda	1111 W. Sepulveda Bl. Torrance CA.		Annette Matsuda
Linda Mergosa	PO Box 922022 Sylmar, Ca	91392	Linda Mergosa
Paula Spyle	545 Howell Mtn Rd N Arcadia 707 905 0137		Paula Spyle
Kim Dorn	1444 S. Gilman Ave #307, L.A. CA 90025		Kim Dorn
Carolina Galvez	1109 E. Mendocino St. Altadena CA 91001	818 9484305	Carolina Galvez
Mike Bradley	same 1109 E. Mendocino St Altadena CA 91001	818 9484305	Mike Bradley
Vanessa Adams	636 Beverly Dr. Arcadia, CA 91006	(818) 574-5457	Vanessa Adams
Elma Allen	688 11th St San Monica	(818) 574-5457	Elma Allen
Mark Black	2407 20th Santa Monica 90405		Mark Black
Jim Crawford	103 Welcome Ln Seal Beach 90740		Jim Crawford
Tony Chaves	35401 N Sky, Vitoria Acton cal 91750		Tony Chaves
Jennifer Saldivar	" " " "		Jennifer Saldivar
Diana Stringer	4100 Arch Dr #12A Studio City CA 91606		Diana Stringer
Leticia Zula	4100 Arch Dr #12 Studio City CA 91606		Leticia Zula
Rebecca Gilbert	447 Hermosa St, Hermosa (310) 376-0722		Rebecca Gilbert
Rebecca Gilbert	447 Hermosa St, Hermosa 310-376-0722		Rebecca Gilbert
Sarah Mayers	1475 N Mills Ave Claremont CA 91711		Sarah Mayers
Chris Ramsey	215 E. Orange Street Ale #201 Fullerton CA 92632		Chris Ramsey
Chavaria Maniz	220 Maple Place Menlo Park CA 94025		Chavaria Maniz
David Campbell	2208 Pinchard Repose Beach CA 90278		David Campbell
Adam Silva	437 Macalester Dr Walnut 91789	709-465-5536	Adam Silva
Robert A. Mann	903 Palm Park Dr F San Jose, CA 95134	513	Robert A. Mann
Bob ...	3525 Maplewood LA CA 90008		Bob ...

EXHIBIT NO. 2
CCC-00-CD-02
47 of 58

The Marine Forest Society's Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
JOE ENRIKER	1605 SHIRINGTON PI	414-642-6993	Joe Enriker
PAUL HIRSCH	2100 S Lewis	928-7415	Paul Hirsch
WILL KUCIAP	22965 Victory Bl. Woodland Hills CA	913-617	Will Kuciap
GIGI DEREZANIN	3118 HONCLULLA AVE, LA CRESCENTA CA	912-14	Gigi Derazanin
Brian Barand	3412 North F Street San Bernardino CA	924-05	Brian Barand
Karen George	1505 Northpark Blvd. Apt 133 San Bernardino CA	924-07	Karen George
KAREN AYUB	17 DUDLEY AVE #4 VENTURE	902-91 (310) 916-6277	Karen Ayub
Valerie Shatynski	13726 Penn St Whittier, CA	404-02 (310) 966-577	Valerie Shatynski
Ronnie Espelt	4518 Long Beach Blvd LA	(310) 428-5445	Ronnie Espelt
Scott Carrey	11684 Ventura Blvd. Ste 495 Studio City CA	916-04 48-956	Scott Carrey
T.A. KOLB	235 E. COLORADO BLVD #257 PASADENA CA	916-1	T.A. Kolb
J.A. KOLB	" " " " " CA	916-1	J.A. Kolb
William T. Park	3540 SANDPINE PL. CRENSHAW CA	570-6	William T. Park
ETHEL M. PARK	3540 SANDPINE PL. CRENSHAW CA	(310) 631-5236	Ethel M. Park
STEVEN TAYLOR	4038 REDWOOD AVE LA CA	900-6	Steven Taylor
YOSHIKO MAKI	6000 ETIWANING AVE #209 TARZANA CA	913-6	Yoshiko Maki
BRUCE CAMPBELL	114 GREENWICH GLENWAY LA CA	900-49	Bruce Campbell
Georgianna Paras	3531 Venture Dr Huntington Beach CA	926-19	Georgianna Paras
GLENN SPANKER	4215 LEXINGTON F771 CA	215-377-4611	Glenn Spanker
Anthony POCENAS	810 E. Montebello Blvd. Montebello CA	818-956-8192	Anthony POCENAS
Marielle HART	9100 E. University St. Montebello CA	(818) 440-2492	Marielle Hart
Budget Valverde	1830 E 194th St SA CA	927-01	Budget Valverde
Am. Jensen	3250 Borham Blvd LA	911-68	Am. Jensen
Em. Mitchell	9100 E. University Ave #306 E. Montebello CA	818-440-2492	Em. Mitchell

The Marine Forest Society Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
303 Ruhl	3686 S Main St.	(213) 233-3506	K. & Ruhl
STUE SAMPSON	1205 Hillside Dr	(818) 217-1201	Stue
THOMAS VASSERBERGEN	1005 Greenville Ave	LA. CA 90019	Thom
J. J. Flier	14852 Dupont St	Whittier CA 90611	J. J. Flier
Gunn Saraman	Khalisa 2337 N 9th St	Phx AZ 85006	Gunn Saraman
Israel Roid	55 Roswell #4	Long Beach CA 90803	(310) 434-6552
Julie Johnson	62 Granada #4	LA CA 90803	Julie
ARNOLD MCARDI	7939 Vulcan Drive	(213) 871-105-90	Arnold
MIKE MICHNE	653 Boycroft Ave	(310) 967-1795	Mike
Dennis Knight	12955-B Littleton Cyn	LA CA 91342	(818) 875-5572
JUDITH MITCHELL	4117 MICHAEL AVE.	LA 90066	(310) 827-2500
ANITA	1622 S. Mayflower Ave	#13, Monrovia 91016	Anita
MICHELLE	1622 S. Mayflower Ave	#13, Monrovia 91016	Michelle
KEITH BUTLER-BATES	601 E. FAS IEND	MONROVIA CA 91016	Keith
ANAM ARBA	5727 Canoga Ave #257	Van Nuys CA 91411	Anam
RACHEL BOPP	19557 Eagle Ridge Ln	Northridge CA 91340	Rachel
YVONNE HILKE	15515 Sunset #201	Pacific Palisades CA 90272	Yvonne
M. STIGER	21041 PRETHAM ST	#114, Van Nuys CA 91411	M. Stiger
P. C. SMOOKER	771 Wallace St	Birmingham AL 35205	P. C. Smoker
Dan Zehfuss	7226 Le Bertho St	Van Nuys CA 91411	Dan
BARRY FLETCHER	6650 Hayvenhurst	108 VN CA 91425	Barry
LARA WERSH	30473 Mulholland Hwy	#61 Agoura CA 91301	(818) 839-7601
EDITH E. JOHNSON	2104 Catherine Blvd	#504 Hollywood CA 90028	Edith
JOHN J. HALL	12721 N Hollywood Blvd	LA 91601	John

CCC-00-CD-02

The Marine Forest Society's Tire Reef Demonstration Project should not be permitted anywhere along our coasts because of the impact it will have on the environment. An Environmental Impact Report was advised for this project by the California Department of Fish and Game and the California Coastal Commission yet, the Marine Forest Society has bypassed their recommendation by submitting a negative declaration to the City of Newport Beach. This negative declaration did not include any scientific results that prove the impact would be insignificant to the underwater parcels. It also did not prove with any scientific documentation that the project is feasible. The declaration also did not state any impact the project will have on the Pismo Clams' environment, which will obviously be affected. Divers have noticed a repopulation of the clams since their disappearance ten years ago. The tires' toxicity, their inability to act as a good substrate, and the sand area they will occupy will all have a detrimental effect on the Pismo Clams' recovery. For these obvious reasons we, the undersigned, support any and all opposition to the Balboa Marine Forest Artificial Reef Project.

NAME	ADDRESS	PHONE #	SIGNATURE
1120 Puchala	4105 W. Univ Dr. #105 Pomona		[Signature]
STANA J WANG	1511 HOLLY OAK DR. W. COVINA, CA 91791		[Signature]
Chloe F. Figue	3350 Truxtun Rd San Diego	92135-1212	[Signature]
Kevin Caste	MSC 315, Caltech Pasadena, CA	91126 818-395-1138	[Signature]
Steve Barwick	3489 Vanston Dr. LA	CA 92626 (714) 545-2547	[Signature]
Gina Drexler	11355 Dona Lila Dr. (213)	(656) 3037	[Signature]
JACOB L. L...	4175 Loma Ave. Rte 150	91200	[Signature]
Suzanne Koussek	Box 503, San. Plencille, CA	92674 952-8170	[Signature]
Thomas K. Hill	1273 Mitchell Ave. #414, Cul	90244	[Signature]
Nancy M. M...	6653 Carnegie Ave. Carlsbad	CA 92003	[Signature]
Ali Alami	4355 Richmond Ave	CA 91732	[Signature]
Richard Kilgus	5616 Las V. Racines Rd #66	CHABAS, CA 91301	[Signature]
Andrew Pitt	5907 Catull Ave. Tarzana	91356	[Signature]
Steve M...	23118 Ketchikan Ave. Ketchikan	City CA 99901	[Signature]
Bill L. Nilson	Box N. Brand Blvd. Glendale	CA 91202	[Signature]
Ed Williams	1166 N Edgemont #1	LA CA 90029	[Signature]
Kim Hoss	10452 Seville Ave. San Diego	CA 92146	[Signature]
Dee Chamian	5407 Fullbright av	CP CA 41306	[Signature]
William K...	12607 Bickel Ave	LA CA 91063	[Signature]
Denise Beck	117-28 Wilshire Blvd	BH 7A CA 90025	[Signature]
Marcelo M...	11728 Wilshire Blvd	BH 7A CA 90025	[Signature]
Harold Williams	4944 115th Pl	441-8355 LA CA	[Signature]
Al...	575 West Hollywood Blvd.	West Hollywood 91361	[Signature]

[illegible]

EXHIBIT NO. 2
CCC-00-CD-02
51 of 58

Sacramento Office
STATE CAPITOL
P.O. BOX 942948
SACRAMENTO, CA 94249-0001
(916) 445-7448

District Office
305 NORTH HARBOR BLVD.
SUITE 303
FULLERTON, CA 92632
(714) 525-0175

Assembly
California Legislature



DICK ACKERMAN
ASSEMBLYMAN, SEVENTY-SECOND DISTRICT
Serving the cities of
Anaheim Hills, Brea, Fullerton, La Habra, Placentia, Yorba Linda

VICE CHAIRMAN:
NATURAL RESOURCES

MEMBER:
APPROPRIATIONS
EDUCATION
ELECTIONS, REAPPORTIONMENT
CONSTITUTIONAL AMENDMENT
ENVIRONMENTAL SAFETY &
TOXIC MATERIALS
LOCAL GOVERNMENT
PUBLIC EMPLOYEES, RETIREMENT &
SOCIAL SECURITY

March 13, 1997

RECEIVED
MAR 20 1997

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105

CALIFORNIA
COASTAL COMMISSION

Attention: Rusty Areias, Chairman

Dear Mr. Areias,

I am writing in support of the Marine Forests Society in their application process to obtain a permit to continue building sustainable marine habitats along California's coastline to encourage marine wildlife in areas that have experienced a decrease in the number of fish, marine mammals and marine flora.

It is my understanding that Marine Forests Society is sustained through voluntary contributions, grants from foundations and other organizations. The non-profit organization was founded in 1986 and hundreds of volunteers have given many hours over the past eleven years to carry out the organization's mission.

The Marine Forests Society is committed to helping preserve California's coastline through commitment of volunteers and the utilization of private resources.

Please help this organization to continue their good works on behalf of the citizens of California by granting them a permit.

Sincerely,

DICK ACKERMAN
Assemblyman, 72nd District

DA:wI

EXHIBIT NO.
CCCL-00-CD-02
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Application No. E-95-5
Marine Forests Society
Exhibit 7



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, Maryland 20910

Dec. 9, 1996

RECEIVED
DEC 19 1996

California Coastal Commission
45 Fremont St., Suite 2000
San Francisco, Calif. 94105-2219

CALIFORNIA
COASTAL COMMISSION

To whom it may concern:

I am writing in response to a request from the Marine Forests Society to address the potential for toxic impacts due to the construction of artificial reefs using scrap tires. My primary field of expertise is ecotoxicology. Therefore, I shall not address concerns relating to the success or suitability of scrap tires as a marine reef habitat substrate, nor their biological productivity. Our research was performed while I was with the Maryland Department of Natural Resources (DNR). Currently, I am on a temporary assignment from DNR to the National Marine Fisheries Service.

In Chesapeake Bay, considerable effort has been devoted to preserving and enhancing habitat for oysters. Over-exploitation and the widespread occurrence of oyster diseases have devastated the oyster populations throughout the Bay, with consequent ecological and commercial ramifications. Extensive programs to provide suitable oyster settling habitat in areas of historical oyster reefs and in refuges have been undertaken in both Maryland and Virginia. Scrap tires have been placed in a variety of locations in the Bay, which have proven to be a suitable substrate for oyster settlement, and reef community development. In response to a proposal to use scrap tires as artificial reef substrate over extensive areas, we performed a series of experiments to assess the potential for scrap tires to leach unacceptable materials into the environment. Our concern was that we didn't want to find out 10 years down the road that it was a bad idea, we had harmed the environment, and we would then have to locate, remove and dispose of them. Our approach was to look at a worst case scenario to determine if further studies were warranted prior to implementation of a large scale program.

Our experiments were designed to assess toxic contaminants which may leach from tires over an extended (multi-year) period. In an effort to 'age' the tires in a very short time, we used a modified TCLP extraction procedure. This is a very vigorous process, which provided material suitable for laboratory testing, however the results require extrapolation to real world situations. We also collaborated with scientists at Environment Canada who performed detailed chemical analyses on our samples. Briefly, our general findings include:

1. Toxicity was inversely related to salinity increases in all species tested.

EXHIBIT NO. 2
CCC-00-CO-02
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Application No. E-95-5
Marine Forests Society



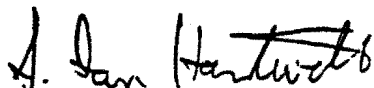
2. Toxic chemicals appear to leach off the surface of the tires, rather than from within the rubber matrix. Thus, once the tires have been in the water for an extended period of time, toxic leachates are no longer present. Observations consistent with this conclusion have been made by Canadian researchers in the field, in fresh water. We did not address exposure to burrowing organisms or surface feeders.
3. Extrapolation to real world mixing and dilution scenarios yields estimated concentrations of toxic materials far below the most sensitive NOEL.
4. The chemical nature of the leachable toxic substance(s) is unknown, and there is some evidence from Canadian studies that different fractions may be responsible for observed toxicity to different test species. The short-term rate of chemical release from tires was not addressed.

As with all research projects, we were left with answers to some questions, and a series of new questions. Our hesitation over the wide-spread use of scrap tires in Chesapeake Bay stems from the unknowns associated with the chemical nature of the toxicants and their apparent persistence in the weeks to months time-frame, not their acute toxicity risk. Our situation is somewhat different than yours, in that we are dealing with a shallow, semi-enclosed body of water, with several already severely contaminated areas. Further experiments, using whole tires in large tanks, confirmed our extrapolations of no acute toxic effects in a more realistic leaching environment. These latter experiments were never included in our draft report due to time limitations.

In my opinion, the potential harm to the environment from scrap tire reefs is very much smaller than the potential harm due to road runoff, especially in freshwater environments. Every rain storm has the potential to wash materials from millions of vehicle tires into rivers. Also, new, leachable tire surface is exposed constantly as those tires wear during normal use. The constant discharge of toxic chemicals to coastal waters from stormwater runoff in the watersheds is probably a far greater source of tire-derived contaminants than the low level, short term release from a tire reef, which may provide other environmental benefits.

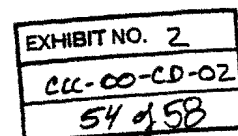
If you would like further details, I will be pleased to send a copy of our final report.

Sincerely,



S. Ian Hartwell, Ph.D.

cc: R. Streichenberger
P. Massicot



P. O. Box 728
Ocean Springs, MS 39564
(601) 875-5912
(FAX) 875-6604

Gulf States Marine Fisheries Commission

Larry E. Simpson
Executive Director

POSITION STATEMENT ON THE USE OF AUTOMOBILE TIRES AS ARTIFICIAL REEF MATERIAL

Historically, construction of artificial reefs in the marine and estuarine environment in the United States has been accomplished using materials of opportunity, ranging from refrigerators to scuttled ships. A material that has been used rather consistently over time is automobile tires. Use of tires as artificial reef material has been variously motivated by the need for low cost, readily available materials to a mechanism to dispose of a significant source of landside solid waste. Methods of using tires have varied, ranging from the use of single, unballasted tires to the construction of sophisticated units with tires embedded in concrete.

Since most artificial reef programs in the United States still rely upon the use of materials of opportunity for continued construction of artificial reefs, the issue of tire use recurs periodically. Some programs are pressured by local and state governments to use tires toward fulfilling waste disposal goals. Regardless of the underlying motivations for use of tires in artificial reef construction, the practice continues.

Recognizing that automobile tires as artificial reef material in the Gulf of Mexico region are not generally accepted as an optimum material, either physically, environmentally, or biologically, the Gulf States Marine Fisheries Commission establishes that if automobile tires must be used as artificial reef material in the Gulf of Mexico region, including both state territorial and federal jurisdictions, they should be chipped and incorporated as aggregate in concrete units or properly ballasted in units of multiple tires following the concept established by the State of New Jersey, Department of Environmental Protection and Energy, Division of Fish, Game, and Wildlife. Specific standards for design and ballast may vary depending primarily on bottom sediments, bottom slope, and current velocities; however, artificial reef program should adhere to the basic concept of using established engineering principles to determine appropriate design and ballast weight to assure stability under predictable storm and other events.


Leroy Kiffe, Chairman

CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-6200

**MEMORANDUM**

April 4, 1997

TO: Commissioners and all Interested Parties

FROM: Susan Hansch, Deputy Director

SUBJECT: Position of the Orange County Sanitation District Concerning Coastal Development Permit Application No. E-95-5 (Marine Forests Society)

By telephone conversation with Chris Kern of the Commission's staff on April 4, 1997, Charles McGee of the Orange County Sanitation District clarified that the purpose of the attached letter concerning the staff recommendation for the above referenced coastal development permit application is to document for the Commission's record that the subject Orange County Sanitation District ocean outfall discharge is in full compliance with all applicable waste discharge standards.

However, Mr. McGee stated that the District agrees with the position contained in the staff recommendation that the Marine Forests Society project is inappropriately sited due to its location within a designated shellfish harvesting exclusion zone and that, as sited, the project may pose a risk of human exposure to pathogens.



COUNTY SANITATION DISTRICTS OF ORANGE COUNTY, CALIFORNIA

RECEIVED
APR 04 1997

April 1, 1997

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

CALIFORNIA
COASTAL COMMISSION

SUBJECT: Marine Forests Society; Application No. E-95-5

The purpose of this letter is to respond to the California Coastal Commission (CCC) Staff's recommendation regarding the Marine Forests Society's (MFS) project, application no. E-95-5. The CCC staff recommends against the MFS project for numerous reasons. One of the reasons cited is the proximity of the project to the County Sanitation Districts of Orange County's (Districts) ocean outfall. Specifically, in Table 1 of the staff recommendation under the issue of Sewage Outfall, the analysis notes that the project is "located within a shellfish harvesting exclusion zone." The recommendation identifies the project location as "an area of degraded water quality, increasing the risk of harm to marine organisms and of human exposure to contaminants."

The Districts' staff takes exception to the above characterization. Notably, the Districts' 1996 Marine Monitoring Annual Report (enclosure) states:

Nearshore Monitoring

Criterion 6 of the Districts' permit states that "the discharge shall not cause the following bacteriological limitations to be exceeded as specified in the nearshore zone (extending from Bolsa Chica (Station 39N) to Crystal Cove (Station 39S)): the median most probable number (MPN) of total coliform organisms over any 30-day period shall not exceed 70 per 100 mL and not more than 10 percent of the samples shall exceed an MPN of 230 per 100 mL for a 5-tube decimal dilution test." Concentrations of total coliform bacteria at 17 surfzone stations (Figure 2.1.1-1) were analyzed for compliance with these criteria. Due to the important contributions of runoff to bacterial concentrations, rain days are excluded from these evaluations, consistent with previous years (Appendix A.3).

Year 11 results indicated a continued very high level of overall compliance with both standards: 99% for the 30-day median and 99.5% for the 10% standard (Appendix A.3 and CSDOC 1996b). However, even the few out-of-compliance events appear to be caused by contamination from river runoff and onshore sources, not the Districts' offshore wastewater discharges. Specifically, 15 of 19 samples that exceeded the 10% standard and 37 of 57 samples that

EXHIBIT NO. 2
CCC-00-CD-02
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phone:
714) 962-2411

mailing address:
P.O. Box 8127
Fountain Valley, CA
92728-8127

street address:
344 Ellis Avenue
Fountain Valley, CA
92708-7018

Member Agencies

Cities

Anaheim
Brea
Fullerton
Cypress

Fountain Valley
Fullerton
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda

County of Orange

Sanitary Districts

Costa Mesa
Garden Grove
Midway City

Water Districts

Irvine Ranch



exceeded the 30-day median were from Stations 33N and 39N, located at Bolsa Chica State Beach in Huntington Beach.¹

The Districts' extensive ocean monitoring program includes daily monitoring along the shoreline for pathogen indicator organisms. The empirical data generated during the past 12 years demonstrate a very high level of compliance with the shellfish harvesting water quality standards in the nearshore zone. Note that this standard is considerably more stringent than the water quality standard for water contact recreation.

Finally, the Districts is not taking a position on the MFS project. Indeed, there are water quality concerns from rain, river and other non-point source pollution runoff in the project area. But the Districts' staff emphasizes the point that the ocean outfall does not contribute to water quality degradation within the nearshore zone. The Districts remain committed to the protection of human health and the environment through excellence in wastewater treatment. If you have any questions, please contact Charles McGee at extension 3714.

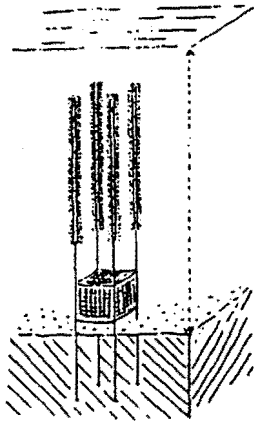
Michael D. Moore
Environmental Compliance and Monitoring Manager

Enclosure: 1996 Marine Monitoring Annual Report

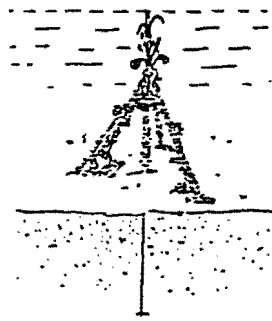
JC:MDM:rm
J:\WP\3550\COLSTON\READ\750127.LTR

c: B. P. Anderson
N. J. Wheatley
ECM File

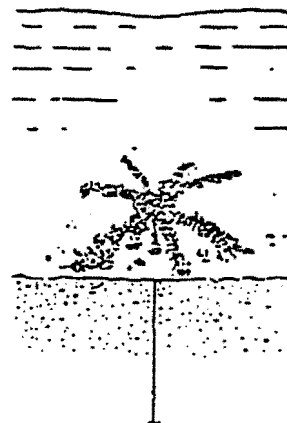
¹County Sanitation Districts of Orange County 1996 Marine Monitoring Annual Report, pp. 2.42, 2.45.



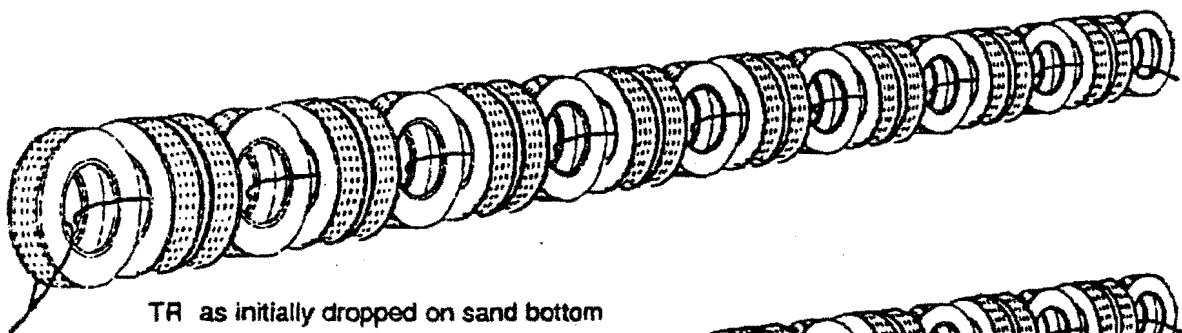
Net and Tube Habitat



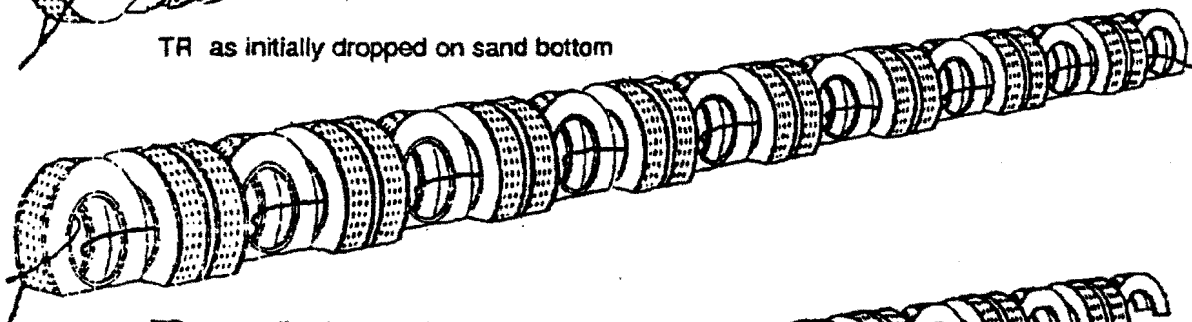
Pyramid Habitat



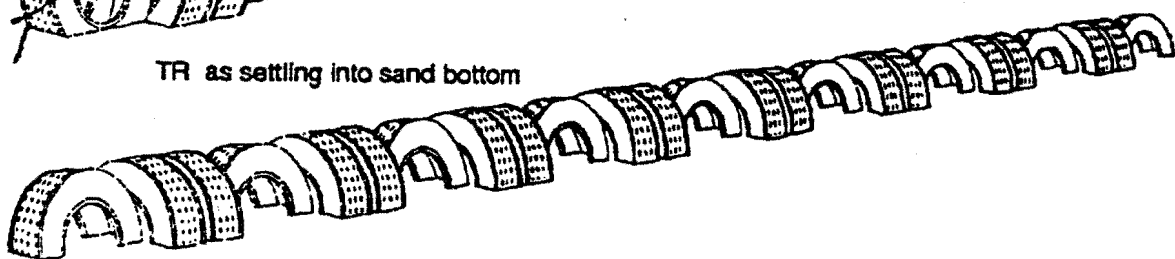
Bundle Habitat



TR as initially dropped on sand bottom



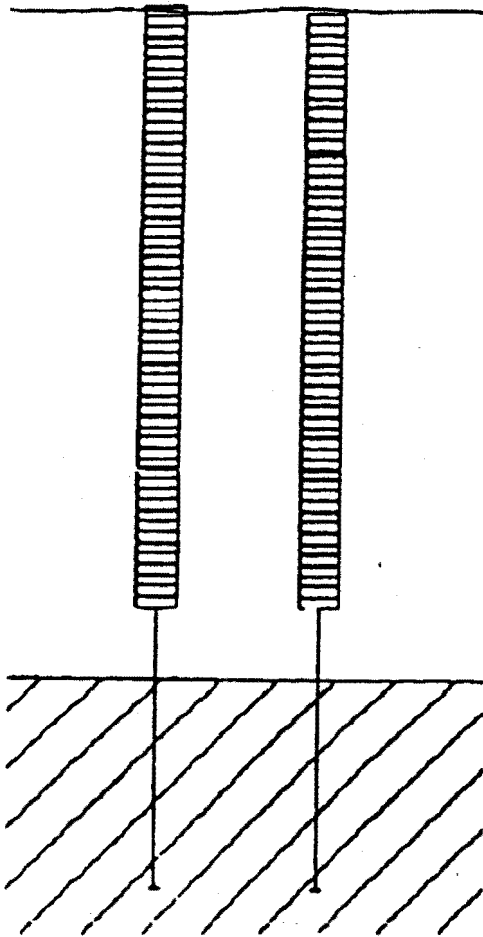
TR as settling into sand bottom



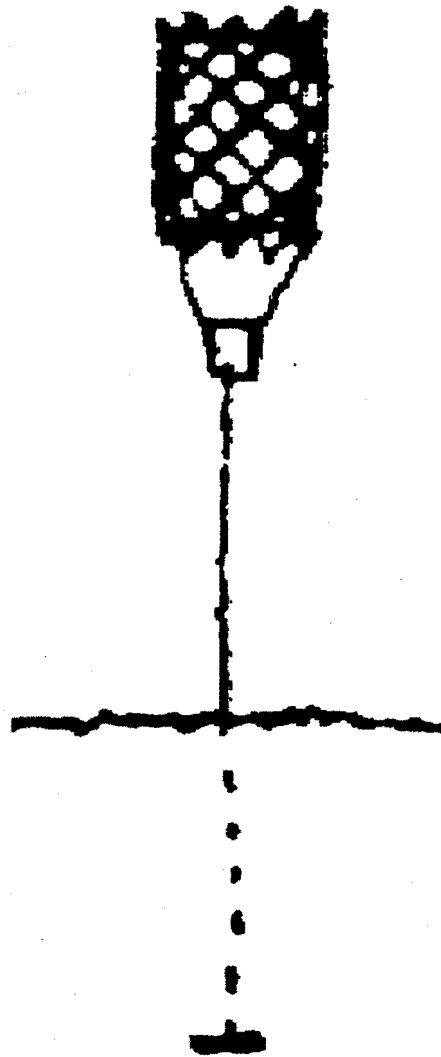
TR as stabilized in sand bottom

Tire Mussel Ribbons

EXHIBIT NO. 3
CCC-00-CD-02
1 of 2



Tire Columns



Kelp Bio-structure

April 01, 1987

M-738-01

INDENTURE OF LEASE

Made this 1st day of April, 1987 at Sacramento, California, by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Marine Forests Corporation, hereinafter referred to as "Lessee".

W I T N E S S E T H:

WHEREAS, Lessee is presently a registered aquaculturist authorized to grow marine life for profit in the waters of the state of California as provided in Fish and Game Code Section 15101, and

WHEREAS, Lessee has heretofore filed an application with the Fish and Game Commission for the exclusive privilege of experimentally cultivating kelp, abalone, mussels, oysters, sea urchins and scallops in the hereinafter described waters of the state of California, and has accompanied said application with the required filing fee of one hundred dollars (\$100) as required by law, and

WHEREAS, the Fish and Game Commission has heretofore published notice to the hearing of said application, has been advised by the State Lands Commission of the State of California that the area applied for lies on water bottoms granted to the City of Newport Beach by Chapter 494, Statutes of 1919 as amended, and by definition is not classified as state water bottoms, and

WHEREAS, the City of Newport Beach, by endorsement attached hereto, has approved the leasing of the hereinafter described water bottoms in recognition of the State policy supporting aquaculture development contained in Sections 825-833 of the State Public Resources Code, and

WHEREAS, it has been determined by the Fish and Game Commission that it is in the best interests of the State of California that such a lease be made, and

WHEREAS, Lessor has heretofore determined that kelp, abalone, mussels, oysters, sea urchins and scallops do not occur naturally in the biota of the lease area.

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That, in accordance with the bid made by Lessee and accepted at a duly called and noticed hearing of the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15406.5, the Fish and Game Commission does hereby lease to lessee for such consideration, specific purposes and subject to the covenants, terms, conditions, reservations, restrictions and limitations as are set forth herein, and does hereby grant to lessee the exclusive privilege to cultivate kelp and shellfish thereon, and in those certain waters of the State of California, described as follows:

In the Pacific Ocean offshore of the City of Newport Beach, Orange County, State of California, starting from the day mark on the seaward end of the Balboa Beach Pier, located at approximately Latitude 33°35'54" N., and Longitude 117°54'0.5" W., on the Newport Bay Navigation Chart No. 18754 published by the National Oceanic and Atmospheric Administration; Southwesterly on a bearing of 201° true,

350 yards to the beginning point, located at approximately Latitude 33°36'44" N., Longitude 117°54'5" W.; then southwesterly 201° true 220 yards; then northwesterly 291° true 220 yards; then northeasterly 21° true 220 yards; then southeasterly 111° true 220 yards back to the beginning point.

This parcel of water bottoms, containing an area of 10 acres more or less, comprises aquaculture lease No. M-738-01.

This lease, in accordance with provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating giant kelp (Macrocystis pyrifera), feather boa kelp (Egregia laevigata), green abalone (Haliotis fulgens), bay mussels (Mytilus edulis), scallop (Hinnites giganteus), European oysters (Ostrea edulis), Pacific oysters (Crassostrea gigas), giant red urchin (Strongylocentrotus franciscanus) and purple urchin (S. purpuratus) in the previously designated area. Seed stock must be certified before planting in compliance with Fish and Game Code Section 15201, and must be planted by Lessee in a manner and at a size approved by the Lessor. A request for certification of seed stock will be submitted by Lessee to the Lessor at least ten (10) days prior to the proposed date of inspection.

All kelp, abalone, mussels, sea urchins, scallops, and oysters shall be planted on biostructures anchored in the sea floor and on support buoys submerged no less than 30 feet beneath the water surface in the lease area. No other mode of operation or culture method is authorized, unless Lessee shall first obtain approval thereof from the Fish and Game Commission. The designated species planted only in the specified lease area may be taken.

The notice of intent to plant kelp, abalone, mussels, sea urchins, scallops and oysters on the lease area shall be given to Resources Manager, John Sunada, Department of Fish and Game, Marine Resources Division, 245 W. Broadway, Long Beach, CA 90802, telephone (213) 590-5169. In addition to the required ten (10) day notice, at least a 24-hour notice shall be given to the Resource Manager or his designee, providing directions to the location where the observer can meet the Lessee to provide the required certification.

This lease is for a term of five (5) years commencing on the 1st day of April, 1987 and ending on March 31, 1992, for the total rental of one hundred dollars (\$100) per year and a privilege tax on all products harvested as provided by Fish and Game Code Sections 8045 and 15406.7, and Section 237(f) of the Fish and Game Commission regulations. Said annual rental will be payable to the Lessor within thirty (30) days of the commencement of the lease, or after receipt of the consummated lease agreement, and within thirty (30) days of the anniversary thereof. If said rental is not paid within sixty (60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period, although such abandonment shall not relieve Lessee of the obligation to pay such rental and penalties which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the provisions of this lease. Lessee agrees to pay said rent to Lessor at its office in the City of Sacramento, State of California, or at such other place as Lessor may from time to time designate.

Lessee expressly recognizes and acknowledges that any payments by Lessee as provided for herein is subject to the provisions of the Fish and Game Code, which reads as follows:

"All leases shall be subject to the power of the Legislature to increase or decrease the rents, fees, taxes, and other charges relating to the lease, but no increase in rent shall be applicable to an existing lease until it is renewed."

This lease is made upon the following additional terms, conditions and covenants, to wit:

A. This lease may, at the option of Lessee, be extended for two (2) successive 10-year terms at a rental to be fixed as hereinafter provided, and otherwise upon the terms and conditions herein specified. In order to exercise such options, Lessee shall give notice in writing to the Lessor at least one hundred and twenty (120) days prior to the termination of the then five-year term, of its exercise of said option for the ensuing 10-year term. The rental rate during each of such ensuing 10-year term shall be no less than the accepted bid price of twenty dollars (\$20) per year and the privilege tax on all shellfish harvested from the lease as provided by Fish and Game Code Sections 8045 and 15406.7, and Section 237(f) of the Fish and Game Commission regulations.

Lessee shall keep records as required in accordance with Fish and Game Code Section 15414 on forms to be supplied by Lessor, and shall maintain adequate accounting records sufficient to determine monies due to the Lessor by the 10th day of each month, commencing July 1, 1988, for all shellfish harvested during the preceding calendar month. Lessor reserves the right to inspect Lessee's premises, equipment and all books at any time, and Lessee's records pertaining to the cultivation of kelp on the leased premises and all shellfish taken from the leased premises.

B. If Lessee desires to enter into a new lease for a period commencing after the expiration of said second ten (10) year term, Lessee shall notify Lessor one (1) year prior to termination of the lease. The lease may be renewed if during the notification period terms for a new lease are agreed upon by Lessee and the Fish and Game Commission.

C. In order to provide assurance to Lessor that this aquaculture lease is utilized for the purpose stated in the lease application shown as Exhibit "A" attached hereto and made a part hereof. Lessee shall report the research activities conducted each year in the Annual Proof of Use Statement, required in Section J of this agreement.

A minimum rate of planting shall be negotiated for option periods. A record of seed catching activity for mussels and rock scallops will be reported in the Annual Proof of Use Statement required in Section J. The Lessor may declare this lease terminated if Lessee fails to meet these specified requirements and if Lessee, at any time, is proven to be failing in good faith, to pursue the purpose of this lease.

EXHIBIT NO. 4
CCC-00-CB-02
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D. Lessee is authorized to construct and install biostructures and floating buoyed equipment as described in Exhibit "A" during the initial five-year period of this lease. All structures shall be constructed and installed in such a manner as to prevent them from being carried away from the designated lease area.

E. The lease area shall be clearly marked at all times with spar buoys on the surface of the water to prevent interference with commercial or sport fishing or boating activities that may take place in the area. Minimum marking of the lease area shall include: One (1) spar buoy anchored on each of the four corners of the lease area and one (1) spar buoy possessing radar reflecting capabilities, anchored in the center of the lease area. All spar buoys used to define the boundaries of the lease area shall be marked in alternate horizontal bands of red and white. Spar buoys located within the boundaries of the lease area shall be marked in alternating bands of black and white. Each spar buoy shall be set and maintained to extend at least three (3) feet above the water surface. All spar buoys shall bear the aquaculture lease number M-738-01. If the required spar buoys are lost, displaced or are otherwise removed from the lease area, they must be replaced within a two-week period, weather conditions permitting, or the lease may be subject to abandonment.

F. If at any time, subsequent to the beginning date of this lease, the improvements authorized herein shall fall into a state of disrepair or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with the written notice shall be grounds for termination of this lease and Lessee shall, at the option of the Lessor, remove all structures located on lands covered by this lease. All such improvements to be removed shall be salvaged and removed by Lessee at Lessee's sole expense and risk within ninety (90) days after the expiration or sooner termination of this lease. If Lessee fails to remove such improvements or portion thereof designated by Lessor, and restore the leased water bottoms as hereinafter provided, within ninety (90) days after expiration date or sooner termination of the lease or notice by Lessor, Lessor may remove or have removed all of the improvements and charge the expense of such removal to Lessee. In making such removals, Lessee shall restore said leased water bottoms as nearly as possible to the condition existing prior to erection or placement of the improvements thereupon.

G. Lessee shall observe and comply with all rules and regulations now or hereinafter promulgated by any governmental agency having authority by law, including but not limited to State Water Resources Control Board, State Coastal Commission, State Lands Commission, U.S. Department of Commerce and U.S. Army Corps of Engineers. Any other permits or licenses required by such agencies will be obtained by Lessee at his own sole cost and expense.

H. Lessee agrees to pay any other charges or assignments imposed by law accruing or payable during the term of this lease including, but not limited to, taxes levied upon Lessee's possessory interest in the leasehold.

EXHIBIT NO. 4
CCC-00-CD-02
4 of 7

I. Any modification of natural or existing features of the real property described in this lease, including but not limited to the removal of marine artifacts, which are not consistent with the authorized uses under this lease are expressly prohibited without prior written consent of the Lessor.

J. As evidence of progress in aquaculture, Lessee shall submit each year to the Lessor at its Marine Resources Division Office, 245 W. Broadway, Long Beach, CA 90802, a written declaration, under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated species comprising each planting, including a diagram showing area, amounts and dates planted. Such declaration shall be submitted on or before July 15 of each year, for the previous year, July 1-June 30, inclusive.

K. This lease will be cancelled at any time Lessee fails to possess a valid aquaculture registration issued pursuant to Fish and Game Code Section 15101. Lessee agrees not to commit, suffer, or permit any waste on said premises or any act to be done thereon in violation of any laws or ordinances. This lease shall be subject to termination by Lessee at any time during the term hereof, by giving Lessor notice in writing at least ninety (90) days prior to the date when such termination shall become effective. In the event of such termination by Lessee, any unearned annual rental shall be forfeited.

L. This lease of water bottoms only grants Lessee the exclusive right to cultivate marine life as described in Exhibit "A".

M. As a further condition of this lease, Lessee recognizes that this lease is located within the boundary of an area granted to the City of Newport Beach by the State Lands Commission. Permission is given by the City to utilize the area described in this lease agreement only for aquaculture purposes in accordance with the approved uses, described in Exhibit "A". That permission was given to Lessee with the understanding that operation of this lease will in no way interfere with other legitimate uses of the area not in conflict with the permitted aquaculture use now and in the future. The City agrees to the aquaculture activity described herein, with the further clear understanding that any proposed change to the original plan of development submitted by Lessee must first be submitted to the Fish and Game Commission for review and concurrence prior to its initiation.

N. In addition to the conditions and restrictions herein provided for in this lease, and any right or privilege granted, conveyed or leased hereunder, shall be subject to, and Lessee agrees to comply with, all applicable provisions of the California Fish and Game Code and regulations of the Fish and Game Commission, in particular Fish and Game Code Sections 15400-15415, and expressly recognizes the right of the Legislature and the Fish and Game Commission to enact new laws and regulations. In the event of any conflict between the provisions of this lease and any law or regulation enacted in the future, the latter will control. This lease shall be deemed amended automatically upon the effective date of such conflicting law or regulation.

EXHIBIT NO. 4
CCC-00-CD-02
5 of 7

O. Lessee shall not assign or transfer this agreement without prior written approval. Such written approval of the assignment or transfer shall be subject to any and all conditions required by the Fish and Game Commission including, without limitation by reason of specification herein, the altering, changing or amending of this agreement as deemed by the Commission to be in the best interests of the state.

P. The waiver by the Lessor of any default or breach of any term, covenant or condition shall not constitute a waiver of any other default or breach whether of the same or any other term, covenant or condition, regardless of the Lessor's knowledge of such other defaults or breaches. The subsequent acceptance of monies hereunder by the Lessor shall not constitute a waiver of any preceding default or breach of any term, covenant or condition; other than the failure of Lessee to pay the particular monies so accepted, regardless of the Lessor's knowledge of such preceding default or breach at the time of acceptance of such monies, nor shall acceptance of monies after termination constitute a reinstatement, extension or renewal of the agreement or revocation of any notice or other act by the Lessor.

Q. Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents, and employees against any and all claims and demands of every kind and nature whatsoever arising out of or in any way connected with the use by the Lessee of said lease or the exercise of the privilege granted herein.

R. The terms, provisions and conditions hereof shall be binding upon and inure to the benefit of the parties and the successors and assigns of the parties hereto.

S. The attached Nondiscrimination Clause (OCP-1) is hereby made a part of this agreement.

T. All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

To the Lessee

Rodolphe Streichenberger
Marine Forests Corporation
101 Dahlia Avenue
Corona Del Mar, CA 92625

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed, as aforesaid to either party, may be changed by written notice given by such party to the other, as hereinbefore provided.

EXHIBIT NO. 4
CLL-00-CD-02
6 of 7

INDENTURE OF LEASE

-7-

M-738-01

IN WITNESS WHEREOF, the parties hereto have caused this lease to be duly executed as of the day and year first above written.

APPROVED:

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

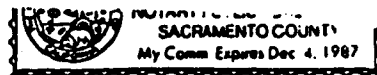
FISH AND GAME COMMISSION

By Harold C. Cribbs

By James L. Christy
MARINE FORESTS CORPORATION



By Richard H. Steichen
Director



State of California)
County of Sacramento) ss.

On this 15th day of June, in the 1987, before me, personally appeared Harold Cribbs, known to me on the basis of personal knowledge to be the person who executed the within instrument as Executive Secretary on behalf of the Department therein named and acknowledged to me that the Department executed it.



Tracy M. Moreno
Notary Public

EXHIBIT NO. 4
CCC-00-CD-02
7 of 7

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000

SAN FRANCISCO, CA 94105-2219

VOICE AND TDD (415) 904-5200



APPLICATION FOR COASTAL DEVELOPMENT PERMIT

RECEIVED

AUG 07 1995

CALIFORNIA
COASTAL COMMISSION

SECTION I. APPLICANT

1. Name, mailing address, and telephone number of all applicants.

MARINE FORESTS SOCIETY

P.O. BOX - BALBOA ISLAND .CA 92662

714 721 9006

(Area code/daytime phone number)

Note: All applicants for the development must complete Appendix A, the declaration of campaign contributions.

2. Name, mailing address and telephone number of applicant's representatives, if any. Please include all representatives who will communicate on behalf of the applicant or the applicant's business partners, for compensation, with the Commission or the staff. (It is the applicant's responsibility to update this list, as appropriate, including after the application is accepted for filing. Failure to provide this information prior to communication with the Commission or staff may result in denial of the permit or criminal penalties.)

Rodolphe STREICHENBERGER

75 Sea ISLAND Dr. NEWPORT BEACH .CA 92660

714 721 9006

(Area code/daytime phone number)

SECTION II. PROPOSED DEVELOPMENT

Please answer all questions. Where questions do not apply to your project (for instance, project height for a land division), indicate Not Applicable or N.A..

1. Project Location. Include street address, city, and/or county. If there is no street address, include other description such as nearest cross streets.

Offshore in 30 to 60 feet of water in between

number street
the Newport Jetty and the BALBOA Pier. Newport Beach CA
city county

Assessor's Parcel Number(s) (obtainable from tax bill or County Assessor): OPEN SPACE

FOR OFFICE USE ONLY

RECEIVED 8-7-95

FILED

FEE

APPLICATION NUMBER

DATE PAID

EXHIBIT NO. 5

CCC-00-CD-02

1 of 14

2. Describe the proposed development in detail. Include secondary improvements such as grading, septic tanks, water wells, roads, driveways, outbuildings, fences, etc. (Attach additional sheets as necessary.)

SEE ATTACHMENT I

- a. If multi-family residential, state: N. A.

Number of units			Number of bedrooms per unit (both existing and proposed)	Type of ownership proposed
Existing units	Proposed new units	Net number of units on completion of project		
				<input type="checkbox"/> rental <input type="checkbox"/> condominium <input type="checkbox"/> stock cooperative <input type="checkbox"/> time share <input type="checkbox"/> other _____

- b. If land division or lot line adjustment, indicate:

Number of lots			Size of lots to be created (indicate net or gross acreage)	
Existing lots	Proposed new lots	Net number of lots on completion of project	Existing	Proposed

3. Estimated cost of development (not including cost of land) \$ DEVELOPMENT WAS AT NO COST
4. Project height: Maximum height of structure (ft.) made by volunteers with donated material.
- above existing (natural) grade Above sea floor - 3 feet for tines
 - above finished grade 15 feet below water surface for
 - as measured from centerline of frontage road mussel columns.
5. Total number of floors in structure, including subterranean floors, lofts, and mezzanines N. A.

EXHIBIT NO. 5

CCC-00-CD-02

2 of 14

6. Gross floor area excluding parking (sq.ft.) N.A.
- Gross floor area including covered parking and accessory buildings (sq.ft.) N.A.
7. Lot area (within property lines) (sq.ft. or acre) 10 acres

Lot coverage	Existing (sq.ft. or acre)	New proposed (sq.ft. or acre)	Total (sq.ft. or acre)
Building			
Paved area			
Landscaped area			
Unimproved area			
Grand Total (should equal lot area as shown in #7 above)			

8. Is any grading proposed?..... ☐ Yes ☒ No

If yes, complete the following:			
a) Amount of cut	cu. yds.	d) Maximum height of cut slope	ft.
b) Amount of fill	cu. yds.	e) Maximum height of fill slope	ft.
c) Amount of import or export (circle which)	cu. yds.	f) Location of borrow or disposal site	

Grading and drainage plans must be included with this application. In certain areas, an engineering geology report must also be included. See Section IV, paragraph 11 for the specifics of these requirements.

Please list any geologic or other technical reports of which you are aware that apply to this property NONE

9. Parking: N.A.

Number of parking spaces (indicate whether standard or compact)		
Existing spaces	Proposed new spaces	Net number of spaces on completion of project

Is any existing parking being removed? ☐ Yes ☐ No

If yes, how many spaces? _____ size _____

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Is tandem parking existing and/or proposed? N A. ☐ Yes ☐ No
If yes, how many tandem sets? _____ size _____

10. Are utility extensions for the following needed to serve the project? (Please check yes or no)

a) water b) gas c) sewer d) electric e) telephone

☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes

☒ No ☒ No ☒ No ☒ No ☒ No

Will electric or telephone extensions be above-ground? ☐ Yes ☒ No

11. Does project include removal of trees or other vegetation? ☐ Yes ☒ No

If yes, indicate number, type and size of trees _____

or type and area of other vegetation _____

SECTION III. ADDITIONAL INFORMATION

The relationship of the development to the applicable items below must be explained fully. Attach additional sheets if necessary.

1. Present use of property.

a. Are there existing structures on the property? ☒ Yes ☐ No

If yes, describe

See Attachments 10 & 11.

b. Will any existing structures be demolished? ☐ Yes ☒ No

Will any existing structures be removed? ☐ Yes ☒ No

If yes to either question, describe the type of development to be demolished or removed, including the relocation site, if applicable.

2. Is the proposed development to be governed by any Development Agreement? ☐ Yes ☒ No

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3. Has any application for development on this site including any subdivision been submitted previously to the California Coastal Zone Conservation Commission or the Coastal Commission? ☒ Yes ☐ No

If yes, state previous application number(s) E-95-2

4. Is the development between the first public road and the sea (including lagoons, bays, and other bodies of water connected to the sea) ☐ Yes ☒ No

If yes, is public access to the shoreline and along the coast currently available on the site or near the site? ☐ Yes ☐ No

If yes, indicate the location and nature of the access, including the distance from the project site, if applicable.

5. Does the development involve diking, filling, draining, dredging or placing structures in open coastal waters, wetlands, estuaries, or lakes? (Please check yes or no)

a) diking b) filling c) dredging d) placement of structures

☐ Yes ☐ Yes ☐ Yes ☒ Yes

☒ No ☒ No ☒ No ☐ No

Amount of material to be dredged or filled (indicate which) None cu. yds.

Location of dredged material disposal site N.A.

Has a U.S. Army Corps of Engineers' permit been applied for? ☒ Yes ☐ No

6. Will the development extend onto or adjoin any beach, tidelands, submerged lands or public trust lands? ☐ Yes ☒ No

For projects on State-owned lands, additional information may be required as set forth in Section IV, paragraph 10.

7. Will the development protect existing lower-cost visitor and recreational facilities? N.A. ☐ Yes ☐ No

Will the development provide public or private recreational opportunities? ☐ Yes ☒ No

If yes, explain.

8. Will the proposed development convert land currently or previously used for agriculture to another use? ☐ Yes ☒ No
If yes, how many acres will be converted? _____

9. Is the proposed development in or near:
- a. Sensitive habitat areas (Biological survey may be required) ☒ Yes ☐ No
 - b. Areas of state or federally listed rare, threatened, or endangered species ... ☐ Yes ☒ No
 - c. 100-year floodplain (Hydrologic mapping may be required) ☐ Yes ☒ No
 - d. Park or recreation area ☐ Yes ☒ No

10. Is the proposed development visible from:
- a. State Highway 1 or other scenic route ☐ Yes ☒ No
 - b. Park, beach, or recreation area ☐ Yes ☒ No
 - c. Harbor area ☐ Yes ☒ No

11. Does the site contain any: (If yes to any of the following, please explain on an attached sheet.)
- a. Historic resources ☐ Yes ☒ No
 - b. Archaeological resources ☐ Yes ☒ No
 - c. Paleontological resources ☐ Yes ☒ No

12. Where a stream or spring is to be diverted, provide the following information:

Estimated streamflow or spring yield (gpm) N.A.

If well is to be used, existing yield (gpm) _____

If water source is on adjacent property, attach Division of Water Rights approval and property owner's approval.

SECTION IV. REQUIRED ATTACHMENTS

The following items must be submitted with this form as part of the application.

1. Proof of the applicant's legal interest in the property. A copy of any of the following will be acceptable: current tax bill, recorded deed, lease, easement, or current policy of title insurance. Preliminary title reports will not be accepted for this purpose. Documentation reflecting intent to purchase such as a signed Offer to Purchase along with a receipt of deposit or signed final escrow document is also acceptable, but in such a case, issuance of the permit may be contingent on submission of evidence satisfactory to the Executive Director that the sale has been completed.

The identity of all persons or entities which have an ownership interest in the property superior to that of the applicant must be provided.

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2. Assessor's parcel map(s) showing the page number, the applicant's property, and all other properties within 100 feet (excluding roads) of the property lines of the project site. (Available from the County Assessor.)
3. Copies of required local approvals for the proposed project, including zoning variances, use permits, etc., as noted on Local Agency Review Form, Appendix B. Appendix B must be completed and signed by the local government in whose jurisdiction the project site is located.
4. Stamped envelopes addressed to each property owner and occupant of property situated within 100 feet of the property lines of the project site (excluding roads), along with a list containing the names, addresses and assessor's parcel numbers of same. The envelopes must be plain (i.e., no return address), and regular business size (9 1/2" x 4 1/8"). Include first class postage on each one. **Metered postage is not acceptable.** Use Appendix C, attached, for the listing of names and addresses. (Alternate notice provisions may be employed at the discretion of the District Director under extraordinary circumstances.)
5. Stamped, addressed envelopes (**no metered postage, please**) and a list of names and addresses of all other parties known to the applicant to be interested in the proposed development (such as persons expressing interest at a local government hearing, etc.).
6. A vicinity or location map (copy of Thomas Bros. or other road map or USGS quad map) with the project site clearly marked.
7. Copy(s) of project plans, drawn to scale, including site plans, floor plans, elevations, grading and drainage plans, landscape plans, and septic system plans. Trees to be removed must be marked on the site plan. In addition, a reduced site plan, 8 1/2" x 11" in size, must be submitted. Reduced copies of complete project plans will be required for large projects. NOTE: See instruction page for number of sets of plans required.
8. Where septic systems are proposed, evidence of County approval or Regional Water Quality Control Board approval. Where water wells are proposed, evidence of County review and approval.
9. A copy of any Draft or Final Negative Declaration, Environmental Impact Report (EIR) or Environmental Impact Statement (EIS) prepared for the project. If available, comments of all reviewing agencies and responses to comments must be included.
10. Verification of all other permits, permissions or approvals applied for or granted by public agencies (e.g., Department of Fish and Game, State Lands Commission, U.S. Army Corps of Engineers, U.S. Coast Guard). For projects such as seawalls located on or near state tidelands or public trust lands, the Coastal Commission must have a written determination from the State Lands Commission whether the project would encroach onto such lands and, if so, whether the State Lands Commission has approved such encroachment. See memo to "Applicants for shoreline development" dated December 13, 1993.
11. For development on a bluff face, bluff top, or in any area of high geologic risk, a comprehensive, site-specific geology and soils report (including maps) prepared in accordance with the Coastal Commission's Interpretive Guidelines. Copies of the guidelines are available from the District Office.

SECTION V. NOTICE TO APPLICANTS

Under certain circumstances, additional material may be required prior to issuance of a coastal development permit. For example, where offers of access or open space dedication are required, preliminary title reports,

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land surveys, legal descriptions, subordination agreements, and other outside agreements will be required prior to issuance of the permit.

In addition, the Commission may adopt or amend regulations affecting the issuance of coastal development permits. If you would like notice of such proposals during the pendency of this application, if such proposals are reasonably related to this application, indicate that desire.....


☐ Yes ☐ No

SECTION VI. COMMUNICATION WITH COMMISSIONERS

Decisions of the Coastal Commission must be made on the basis of information available to all commissioners and the public. Therefore, permit applicants and interested parties and their representatives are advised not to discuss with commissioners any matters relating to a permit outside the public hearing. Such contacts may jeopardize the fairness of the hearing and result in invalidation of the Commission's decision by court. Any written material sent to a commissioner should also be sent to the commission office for inclusion in the public record and distribution to other Commissioners.

SECTION VII. CERTIFICATION

1. I hereby certify that I, or my authorized representative, have completed and posted or will post the **Notice of Pending Permit** card in a conspicuous place on the property within three days of submitting the application to the Commission office.
2. I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attached appendices and exhibits is complete and correct. I understand that the failure to provide any requested information or any misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Commission.
3. I hereby authorize representatives of the California Coastal Commission to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 A.M. and 5:00 P.M.



Signature of Authorized Agent(s) or if no agent, signature of Applicant

NOTE: IF SIGNED ABOVE BY AGENT, APPLICANT MUST SIGN BELOW.

SECTION VIII. AUTHORIZATION OF AGENT

I hereby authorize _____ to act as my representative and to bind me in all matters concerning this application.

Signature of Applicant(s)
(Only the applicant(s) may sign here to authorize an agent)

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APPLICATION FOR COASTAL DEVELOPMENT PERMIT

APPENDIX A

DECLARATION OF CAMPAIGN CONTRIBUTIONS

Government Code Section 84308 prohibits any Commissioner from voting on a project if he or she has received campaign contributions in excess of \$250 within the past year from project proponents or opponents, their agents, employees or family, or any person with a financial interest in the project.

In the event of such contributions, a Commissioner must disqualify himself or herself from voting on the project.

Each applicant must declare below whether any such contributions have been made to any of the listed Commissioners or Alternates (see last page).

CHECK ONE

☒

The applicants, their agents, employees, family and/or any person with a financial interest in the project have not contributed over \$250 to any Commissioner(s) or Alternate(s) within the past year.

☐

The applicants, their agents, employees, family, and/or any person with a financial interest in the project have contributed over \$250 to the Commissioner(s) or Alternate(s) listed below within the past year.

Commissioner or Alternate _____

Commissioner or Alternate _____

Commissioner or Alternate _____

Rodolphe Streichenberger
Signature of Applicant or Authorized Agent

August 3, 1995
Date

Please print your name

RODOLPHE STREICHENBERGER

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APPLICATION FOR COASTAL DEVELOPMENT PERMIT

APPENDIX B

LOCAL AGENCY REVIEW FORM

SECTION A (TO BE COMPLETED BY APPLICANT)

Applicant MARINE FORESTS SOCIETY

Project Description Experimental site for the creation of marine habitats by the means of seaweed and shellfish aquaculture

Location Offshore from Newport Beach, CA, between the Newport Jetty and the Balboa Pier

Assessor's Parcel Number _____

SECTION B (TO BE COMPLETED BY LOCAL PLANNING OR BUILDING INSPECTION DEPARTMENT)

Zoning Designation _____ du/ac

General or Community Plan Designation _____ du/ac

Local Discretionary Approvals

☐ Proposed development meets all zoning requirements and needs no local permits other than building permits.

☐ Proposed development needs local discretionary approvals noted below.

Needed Received

<input type="checkbox"/>	<input type="checkbox"/>	Design/Architectural review
<input type="checkbox"/>	<input type="checkbox"/>	Variance for _____
<input type="checkbox"/>	<input type="checkbox"/>	Rezone from _____
<input type="checkbox"/>	<input type="checkbox"/>	Tentative Subdivision/Parcel Map No. _____
<input type="checkbox"/>	<input type="checkbox"/>	Grading/Land Development Permit No. _____
<input type="checkbox"/>	<input type="checkbox"/>	Planned Residential/Commercial Development Approval
<input type="checkbox"/>	<input type="checkbox"/>	Site Plan Review
<input type="checkbox"/>	<input type="checkbox"/>	Condominium Conversion Permit
<input type="checkbox"/>	<input type="checkbox"/>	Conditional, Special, or Major Use Permit No. _____
<input type="checkbox"/>	<input type="checkbox"/>	Other _____

CEQA Status

☐ Categorically Exempt Class _____ Item _____

☐ Negative Declaration Granted (Date) _____

☐ Environmental Impact Report Required, Final Report Certified (Date) _____

☐ Other _____

Prepared for the City/County of _____ by _____

Date _____ Title _____

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Application No. _____

APPLICATION FOR COASTAL DEVELOPMENT PERMIT

APPENDIX C

LIST OF PROPERTY OWNERS AND OCCUPANTS WITHIN 100 FEET AND THEIR ADDRESSES
(MAKE ADDITIONAL COPIES OF THIS SHEET AS NECESSARY)

N.A.		

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APPENDIX D

DECLARATION OF POSTING

Prior to or at the time the application is submitted for filing, the applicant must post, at a conspicuous place, easily read by the public and as close as possible to the site of the proposed development, notice that an application for the proposed development has been submitted to the Commission. Such notice shall contain a general description of the nature of the proposed development. The Commission furnishes the applicant with a standardized form to be used for such posting. If the applicant fails to post the completed notice form and sign the Declaration of Posting, the Executive Director of the Commission shall refuse to file the application, or shall withdraw the application from filing if it has already been filed when he or she learns of such failure. 14 Cal. Admin. Code Section 13054(b).

Please sign and date this Declaration of Posting form when the site is posted; it serves as proof of posting. It should be returned to our office with the application.

Pursuant to the requirements of California Administrative Code Section 13054(b), I hereby certify that on <u>August 3, 1995</u> , I or my authorized representative posted the Notice	
<small>(date of posting)</small>	
of Pending Permit for application to obtain a coastal development permit for the development of <u>an underwater experimental site for the creation of marine habitats.</u>	
<small>(description of development)</small>	
Located at <u>Between the Newport ferry and the BALBOA Pier</u>	
<small>(address of development or assessor's parcel number)</small>	
The public notice was posted at <u>the BALBOA Pier</u>	
<small>(a conspicuous place, easily seen by the public and as close as possible to the site of the proposed development)</small>	
<u>Madoff Strickland</u>	
<small>(signature)</small>	
<u>August 3, 1995</u>	
<small>(date)</small>	

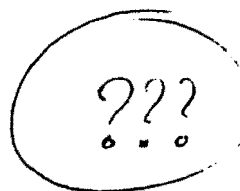
NOTE: Your application cannot be processed until this Declaration of Posting is signed and returned to this office.

FOR OFFICE USE ONLY	
PERMIT NUMBER	_____
RECEIVED	_____
DECLARATION COMPLETE	_____

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APPENDIX E

COASTAL COMMISSION FEE SCHEDULE



Single Family Residence

On Administrative or Consent Calendar	\$ 250.00
On Public Hearing Calendar	
1,500 sq.ft. or less	\$ 250.00
1,501 sq.ft. to 5,000 sq.ft.	500.00
5,000 sq.ft. or more	1,000.00

Multiple Residential (Including residential subdivisions or condo conversions)

2 - 4 units	\$ 600.00
5 - 16 units	2,000.00
17 - 166 units (per unit)	120.00
167 units or more	20,000.00

Residential projects which involve more than 75 cubic yards of grading (including residential land divisions and mixed-use projects which have a residential component) shall be subject to an additional fee of \$200.00 plus \$5.00 per 1,000 cubic yards in excess of 75 cubic yards.

Land Divisions

Lot Line Adjustment/Existing unit(s) with only one new lot created	\$ \$600.00
--	-------------

Office, Commercial, Convention, Industrial

Less than 10,000 sq.ft. (gross)	\$ 2,000.00
Less than 25,000 sq.ft. (gross)	4,000.00
Less than 50,000 sq.ft. (gross)	8,000.00
Less than 100,000 sq.ft. (gross)	12,000.00
More than 100,000 sq.ft. (gross)	20,000.00
Any major energy production or fuel processing facility	\$ 20,000.00

Other Fees

Administrative or Emergency Permit (Except Single Family Residences)	\$ 200.00
--	-----------

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Consent Calendar Item	\$ 250.00
Amendments	
Immaterial Amendments	\$ 200.00
Material Amendments	(based on current fee schedule) 1/2 of full permit fee
Extensions and Reconsiderations	
Single Family Residences	\$ 200.00
All Other Developments	400.00
Assignments	\$ 200.00
Request for Continuance	
1st request	No charge
2nd and subsequent request (Where staff report is unchanged)	\$ 100.00
Waivers	\$ 200.00

Other Developments not otherwise covered herein

If cost under \$100,000	\$ 600.00
\$100,000 to \$500,000	2,000.00
\$500,000 to \$1,250,000	4,000.00
\$1,250,000 to \$2,500,000	8,000.00
\$2,500,000 to \$5,000,000	12,000.00
cost more than \$5,000,000	20,000.00

Fees for after-the-fact permits shall normally be double the regular permit fee cost.

In addition to the above fee, the Commission may require the applicant to reimburse it for any additional reasonable expenses incurred in its consideration of the permit application, including the cost of providing public notice. This schedule has been developed to assist permit applicants in calculating the necessary processing fees. The full text of the fee schedule may be found in section 13055 of the Commission's Administrative Regulations.

*Note: Permits shall not be issued without full payment of all applicable fees.
If final action by the Commission results in a lower fee than initially
submitted by the applicant, then a refund is due.*

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ALIFORNIA COASTAL COMMISSION

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

**W12**

August 4, 1999

TO: Coastal Commissioners, and Interested Parties

FROM: Susan Hansch, Chief Deputy Director
John Dixon, Ph.D., Staff Ecologist
Chris Kern, Analyst, Energy and Ocean Resources Division

SUBJECT: The Use of Artificial Structures for Enhancing Living Marine Resources
and the Marine Forests Society's Research Program at Newport Beach

Background to the Workshop

From 1988 to 1993, the Marine Forests Society placed a variety of structures on the seafloor offshore from Newport Beach in Orange County. This project was intended to examine the technical feasibility of large-scale marine habitat enhancement. Structures included approximately 2000 plastic jugs wrapped with plastic mesh, 100 20-foot long air-filled 6-inch PVC pipes, 1500 automobile tires tied together in several configurations and various other structures. Since 1993, some structures have been abandoned in place, others have been maintained, and a few new ones have been added.

The Marine Forests Society corporation is a non-profit organization, mainly staffed by volunteers, whose stated purpose is to demonstrate new possibilities in marine sciences, techniques, and economics to develop life in the sea. Their project at Newport Beach is intended to demonstrate how scrap tires and other readily available discarded materials can be formed into productive artificial marine habitats and how using tires as an artificial reef substrate can help alleviate solid waste disposal problems. In recent years, the emphasis has shifted from the tire reefs to mussel mariculture on man-made structures floating in the water column (see Attachments 1 & 2: print-outs of the 1998 and 1999 Marine Forests Society web page).

In April 1987, the Marine Forests Society applied for and received a conditionally approved aquaculture lease from the California Fish and Game Commission. The lease specified that the applicant must either enter into a production agreement with the Fish and Game Commission and meet minimum planting and production requirements after five years of operation in order to renew the lease, or abandon the lease site and remove the development. The lease agreement also required the lessee to obtain Coastal Commission regulatory approval prior to proceeding with the project. Nevertheless, the Marine Forests Society undertook the project without notifying the Coastal Commission or obtaining a coastal development permit.

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The lessee had no production (sales of products) from the lease and, therefore, did not fulfill the minimum aquaculture production requirements. In October 1994, the Fish and Game Commission declared Lease No. M-738-02 abandoned by mutual agreement between Rodolphe Streichenberger and the Department of Fish and Game.

Condition "F" of Aquaculture Lease M-738-02 required that all project-related improvements be salvaged and removed within 90-days of the termination of the lease. The Marine Forests Society has not removed any project-related materials. The Department of Fish and Game took no action to enforce the removal requirement of the aquaculture lease while the applicant pursued an after-the-fact coastal development permit for the project. All project related materials remain on the site today or have been carried away by ocean currents.

On April 9, 1997, the Coastal Commission denied an after-the-fact application for a coastal development permit for the Marine Forests Society's development offshore from Newport Beach (Attachment 3: Adopted Findings). However, several Commissioners expressed support of the goals of the Marine Forests Society and wanted to facilitate a process by which the Society could study resource enhancement issues in an acceptable way which would include a well-defined research program that would produce useful data. Commission staff were charged with working with the President of the Marine Forests Society, Mr. Rodolphe Streichenberger, to define what constitutes a proper research program and to organize a workshop for the Commission which would include presentations by scientists knowledgeable about artificial reefs, but which would focus on the Newport Beach project.

This came at a time when the Coastal Commission had no staff biologist. Dr. John Dixon was hired in December 1997. After he moved to San Francisco in summer 1998, he was given responsibility for working with Mr. Streichenberger to organize the workshop. First tentatively scheduled for October, 1998, the workshop was delayed until December due to other staff commitments. The scheduled December workshop was cancelled at the request of Mr. Streichenberger and tentatively re-scheduled for April 1999 (see attachment 4). In the interim, Mr. Streichenberger planned on conducting a "pre-workshop" on the internet to obtain input from interested scientists. This did not take place. Staff postponed the workshop until summer for scheduling convenience. August was selected because the hearing was in southern California and hence would be near the site of the project and convenient for the interested public. Staff has communicated frequently with Mr. Streichenberger over the last year, however no consensus has been reached concerning the basic elements of a scientific research program or concerning the resource value of the enhancement activities of the Marine Forests Society (see Attachment 5 for a summary of Dr. Dixon's conclusions regarding these matters).

On July 14, 1999, Dr. Dixon discussed the workshop with Mr. Streichenberger by telephone. Mr. Streichenberger agreed that the August hearing in Los Angeles would be an appropriate time and place for the workshop, and said that he would present the Marine Forests Society's research program. On July 22, Dr. Dixon called Mr. Streichenberger again and informed him of the scheduled date of the workshop and briefed him on the speakers and their topics. On the following day, Mr. Streichenberger called Dr. Dixon to object to the participation of one of the speakers and to lay out three criteria that Coastal Commission staff would have to meet before he would participate in any workshop (a summary of these conversations are contained in the letter included here as Attachment 6). On July 26, a letter was mailed to Mr. Streichenberger that informed him that the workshop would be held as scheduled (Attachment 7). Mr. Streichenberger's presentation of the chronology and comments on the workshop process are contained in a letter (with 2 enclosures) included in this packet as Attachment 8.

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Following the workshop, the staff will prepare a recommendation to the Commission concerning the disposition of the unpermitted Marine Forests Society development.

The Workshop

The resource issues raised by the Marine Forests Society's small project offshore from Newport Beach are the same issues that are raised by proposals to convert oil rigs to artificial reefs or to construct artificial reefs as mitigation for the environmental impacts of coastal development. Attachment 9 is a document prepared by Dr. John Dixon and his colleague, Dr. Stephen Schroeter, for the Damage Assessment Division of the National Oceanic and Atmospheric Administration. It is included because it contains useful background information for considering enhancement projects. Although the first part of the document is a technical summary of measures of secondary productivity, the second half (Sections 4 & 5) contains a review of the important issues raised by any proposals for enhancing resources using artificial reefs and can be read alone.

For the workshop, staff has invited two marine scientists to address general issues of resource enhancement that apply to all projects that might come before the Commission, including the Marine Forests Society's project. They will be also be available to answer specific questions Commissioners may have. A short video of some of the Marine Forests Society structures will be shown and time has been allotted for a presentation by Mr. Streichenberger.

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CCC-00-CD-02
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CALIFORNIA COASTAL COMMISSION

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



THE USE OF ARTIFICIAL STRUCTURES FOR ENHANCING RESOURCES IN THE MARINE ENVIRONMENT

Wednesday Afternoon, August 11, 1999

Approximately 1 hour at the Completion of the Regular Agenda

Wyndham Hotel at LAX
6225 West Century Blvd
Los Angeles, CA 90045

Workshop Purpose: To identify and discuss the major issues raised by the question: "Does the placement of hard-surfaced materials in the ocean result in a real increase in California's living marine resources?" The first portion of the workshop is intended as a brief introduction to the complex issues of resource enhancement. In the context of resource enhancement, the second portion of the workshop will focus on the placement of man-made materials in the ocean offshore from Newport Beach, Orange County by the Marine Forests Society. No Commission action will be taken. The Commission will receive an information packet for reference.

WORKSHOP AGENDA

- I. **Introduction**
John Dixon, Ph.D.
CCC Staff Ecologist
- II. **Marine Resource Enhancement: Meaning and Measurement**
Mark Carr, Ph.D.
Associate Professor of Biology, University of California at Santa Cruz
- III. **Materials and Design Considerations for Artificial Reefs**
Dennis Bedford
Artificial Reef Program, California Department of Fish and Game
- IV. **Underwater Video of the Marine Forests Society Reef**
John Dixon, Ph.D.
CCC Staff Ecologist
- V. **The Marine Forests Society Research Program**
Rodolphe Streichenberger, President of the Marine Forests Society, has been invited to describe the Society's research program and present their results.
- VI. **Public Comment at the Discretion of the Chair**
- VII **Commission Discussion**

EXHIBIT NO. 6

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CALIFORNIA COASTAL COMMISSION

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

**REGULAR AND CERTIFIED MAIL (Article No. Z 778 712 010)**

October 28, 1999

Marine Forests Society
C/o Rodolphe Streichenberger
P.O. Box 5843
Balboa Island, CA 92662

SUBJECT: Notice of intent to commence Cease and Desist Order proceedings; Coastal Act Violation File No. V-7-93-001

Dear Mr. Streichenberger:

This letter is to notify you of the intent of the California Coastal Commission to commence Cease and Desist Order proceedings as a result of your unauthorized development activities on submerged lands, 300 yards offshore of the Balboa Peninsula in the City of Newport Beach.

History of the Violation Investigation

The above-referenced violation investigation concerns development (as that term is defined in section 30106 of the California Coastal Act) that has been undertaken in a manner that is inconsistent with the permitting requirements set forth in section 30600 of the Coastal Act. This development consists of the placement on the seafloor of an artificial reef made of a variety of materials, including, but not limited to: (1) used automobile tires; (2) PVC pipe; (3) plastic mesh; (4) netting; (5) plastic jugs; (6) nylon rope; (7) polyurethane foam; (8) iron rod; and (9) concrete blocks. These activities began in 1988 and have continued to the present without the California Coastal Commission's regulatory approval.

On April 9, 1997, the California Coastal Commission denied your application for an after-the-fact permit for the subject development activities by a vote of 0 in favor and 12 opposed.

Steps in the Cease and Desist Order Process

Pursuant to Coastal Act section 30810, the Commission has the authority to issue an order directing any person to cease and desist if the Commission, after a public hearing, determines that such person has engaged in "any activity that requires a permit from the commission without securing one." Additionally, pursuant to section 30810(b), the cease and desist order may be subject to such terms and conditions as the Commission may determine are necessary to ensure compliance with the Coastal Act, including immediate removal of any development or material.

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An order issued pursuant to section 30810 would require that you: 1) refrain from engaging in any further unauthorized development activity at the property, and 2) submit a complete coastal development permit application for the removal of unpermitted development structures within a specified time period.

Please be advised that if the Commission issues a cease and desist order section 30821.6(a) of the Coastal Act authorizes the Commission to seek monetary daily penalties for any intentional or negligent violation of the order for each day in which the violation persists.

The Commission is prepared to take formal enforcement action to resolve this matter and has tentatively scheduled a hearing on the issuance of a cease and desist order in this matter at its January Commission hearing.

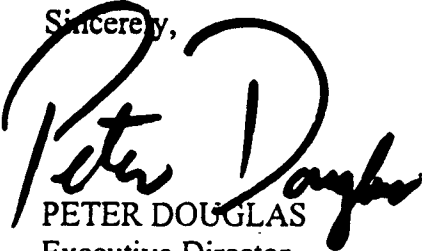
In accordance with the California Code of Regulations, Title 14, section 13181(a), you have the opportunity to respond to the Commission staff's allegations as set forth in this notice by completing the enclosed Statement of Defense form. The completed Notice of Defense form must be returned to this office no later than November 22, 1999.

Options for Resolving this Violation

You can prevent this hearing from taking place by filing a complete CDP application with our Energy, Ocean Resources, and Water Quality Division to remove the unpermitted materials prior to the scheduled date of cease and desist order action. A CDP is required because removal constitutes "development" as defined in section 30106 of the Coastal Act. The Commission must review any proposed removal project to ensure that it is consistent with the resource protection policies contained in the Coastal Act. For CDP filing requirements, please contact Alison Dettmer in our Energy and Ocean Resources Division at (415) 904-5240.

Should you have any questions regarding this enforcement action or procedures, please contact Jan Perez at (415) 904-5294.

Sincerely,


PETER DOUGLAS
Executive Director

cc: Nancy L. Cave, Manager, Statewide Enforcement Program
Jan Perez, Statewide Enforcement Program
Alison Dettmer, Manager, Energy, Ocean Resources and Water Quality Division
Jamie Kooser, Deputy Director, Energy, Ocean Resources and Water Quality Division

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Marine Forests Society
to
California Coastal Commission

December 16, 1999

RESPONSE TO THE CEASE AND DESIST ORDER INTENT
OF OCTOBER 28, 1999

FORWORD

We claim that the present Cease and Desist proceeding against the Marine Forests Society is the machination of agents of the California Coastal Commission, unlawfully active in the business of environmental mitigation.

As requested in the October 28, 1999 letter from the California Coastal Commission (CCC), we respond to standard questions 1, 2, 3, 4, 5, and 6 as follows:

QUESTION 1: *Facts or allegations contained in the Cease and Desist Order Notice of intent that you admit:*

ANSWER: We do not admit the facts or allegations contained in the Cease and Desist Notice of Intent.

QUESTION 2: *Facts or allegations contained in the Cease and Desist Order Notice of intent that you deny:*

ANSWER: (a) We deny the alleged violation of the permitting requirements set forth in section 30600 of the Coastal Act of 1973.
(b) We deny the alleged development of an artificial reef.

QUESTION 3. *Facts or allegations contained in the Cease and Desist Order Notice of intent of which you have no personal knowledge:*

ANSWER: I have personal knowledge of the activities of the Marine Forests Society.

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QUESTION 4: *Other facts which may exonerate your possible responsibility or otherwise explain your relationship to the possible violation (be as specific as you can; if you have or know of any document(s), map(s), letter(s), or other evidence that you believe is/are relevant, please identify it/them by name, date, type, and any other identifying information and provide the original(s) or (a) copy(ies) if you can:*

ANSWER: OUR RELATIONSHIONSHIP TO THE "POSSIBLE VIOLATION".

In November 25, 1986 the newly founded Marine Forests Society (MFS) wrote to E.J. Smith, Supervisor of the Marine Resources Division of the California Department of Fish and Game (CDFG), requesting an aquaculture lease for *"the experimentation of Sea Bio-Structuring, a key process to implement enhancement of the sea, kelp field restoration, and mitigation programs"*. See attachment (ATT. I).

On February 23, 1987, the City of Newport Beach endorsed the MFS *"aquaculture research project"* on the submerged lands which have been legislatively granted to the City in a public trust. See ATT. II

On April 1, 1987 the CDFG granted the MFS an aquaculture lease in order to cultivate kelp, abalone, mussels, sea urchins, scallops, and oysters *"planted on bio-structures anchored on the seafloor... No other mode of operation or culture method is authorized, unless Lessee shall first obtain approval thereof from the F&G Commission"*. See ATT. III

From 1986 to 1993 the MFS conducted experimentation of such above-mentioned bio-structures. This Project 1 consisted of 2,000 seafloor-anchored 2 gallon plastic jugs for kelp, 150 seafloor-anchored 20ft. long plastic tubes, and 1500 seafloor-anchored used tires grouped in 15 tire ribbons.

In 1993, and at the request of the California Integrated Waste Management Board (CIWMB), the MFS planned for demonstrating the possibility of the recycling of used tires in marine habitats. This Project 2, which consisted of a 4.5 acre "Tire Mussel Ribbon (TMR)" made of 30,000 used tires. On April 28, 1993 the MFS's Project 2 was granted \$100,000 by the CIWMB.

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Project 2 was never implemented. The project was attacked and destroyed by (1) Susan Hansch, the CCC's Deputy Director promoting the use of a quarry rock-made artificial reef for an environmental mitigation of the Edison Nuclear Plant at San Onofre, and by (2) Dennis Bedford, an agent of the Artificial Reef Unit at the CDFG. Mr. Bedford and Ms. Susan Hansch were promoting the same quarry rock project for the Edison Company.

The "Quarry Rock Lobby" of CCC Hansch and CDFG Bedford proclaimed that Project 2 will never be authorized by the CCC. So, they forced the CIWMB and the MFS to abandon Project 2, in spite of the fact that the project had been approved by the CIWMB State Agency (June 30 1993), the City of Newport Beach (March 27, 1995), and the CDFG Commission (August 26, 1993). See ATT. IV, VI, and V.

Having destroyed the MFS's Project 2, the "Quarry Rock Lobby" wanted to go further and destroy also the MFS's Project 1.

After having obstructed for 4 years the Commission's hearing for the June 4, 1993 after-the-fact application permit for Project 1 (MFS's Appeal on April 29, 1995), the commission's staff presented false "Findings" and recommended the denial of the permit for Project 1. On April 9 1997 the Commission denied the granting of a permit for Project 1, but ordered the CCC's staff to hold a workshop in order to review the project of the MFS within 2 months. In spite of the MFS protest, the CCC's after-hearing report omitted to report the objections of the MFS at the hearing and the workshop decision of the Commission. See ATT. VIII, XI, and XVI

On August 11, 1999, after 2 years of delaying a workshop which could have changed the Commission's misruling of April 9, 1997, the CCC's staff held a biased workshop without the participation of the MFS. Once again, D. Bedford and S. Hansch organized this other sabotage of the MFS existing development.

On October 28, 1999, and as a result of 6 years of machination by the "Quarry Rock Lobby", the staff of the CCC is now presenting to the MFS a Cease and Desist Notice.

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B. OUR REFUTATION OF PERMIT VIOLATION NO. V-E-93-001

- a) The CCC text "California's Coastal Act of 1976 Questions and Answers", which is a guide to California developers, contains the question: "*What types of development require a coastal permit?*". The CCC has answered this question as follows: "*Under the Coastal Act, most structures or activities that modify land or water use in the coastal zone require a coastal development permit*". Therefore, it makes sense to believe that submerged structures which do not modify the water use in the coastal waters are exempt from a CCC permit. This is particularly true when underwater structures are experimental and removable as the bio-structures of MFS Project 1 are .
- b) The MFS has inquired with the Marine Resources Division of the CDFG about the necessity to ask for a CCC permit for Project 1. The CDFG answer was negative.
- c) Several years before sending the June 1993 Violation notice V-E-93-001 the CCC's staff knew and had been informed of the MFS's activity. During several years the CCC's staff did not require the MFS to file for a permit for Project 1. See ATT. X.
- d) On June 18, 1993 Susan Hansch wrote that the CCC's staff had not yet determined if "*a coastal development permit was required for the existing experimental bio-structures*". This undecidedness, after several years of acceptance of the fact, suggests that the CCC's staff is today arbitrarily accusing the MFS of a violation of the CEQA law.

C. OUR REFUTATION OF THE ACCUSATION OF HAVING DEVELOPED WITHOUT A PERMIT AN "ARTIFICIAL REEF".

In 1988 the MFS did not begin the development of an "artificial reef" as stated in the October 28, 1999 Cease and Desist letter.

During 6 years, the MFS development was described by the CCC's staff as follows: "structures", "existing structures", "existing experimental bio-

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structures", "unpermitted structures", "kelp bio-structures", "mussel columns", "used tires", "diverse little units", "materials", "various experimental structures", "fill in open waters", "artificial marine habitat experiment".

It is only on October 28, 1999 that for the first time the CCC's staff gave the label of "Artificial Reef" to the MFS bio-structures of Project 1. In so doing the CCC's staff are denying the novelty and originality of the MFS structures and comparing them with the artificial reefs they promote .

Having created the above-mentioned confusion the CCC's staff argue that according to CEQA Section 21080.5 (d)(2)(i) they must not permit the MFS bio-structures because they are "artificial reefs" of greater environmental impact than the rock or concrete-made available artificial reefs that they recommend. See: W-12a Staff Recommendation, Page 30 , 2.5.

Our answer to the argument of the CCC's staff is:

1. The MFS bio-structures cannot be compared to the CCC's artificial reefs. The MFS bio-structures are different from any other structures ever built in the world. The proof lies in the fact that the MFS bio-structures have been granted US patents of invention.
2. The MFS bio-structures do not cause the adverse environmental impact that the rock or concrete artificial reefs of the CCC do to the environment. All the contrary, it is the CCC's artificial reefs which cause "significant and unavoidable" adverse impacts to the environment, as reported in the May 1999 Environmental Impact Report (EIR) of Resources Insights Inc.
3. The MFS bio-structures have never been found actually doing adverse environmental impacts.

Therefore, the "Artificial Reef" accusation is a false accusation.

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QUESTION 5. *Any other information, statement, etc. that you want to offer or make:*

ANSWER: During 4 years, from 1995 to 1999, the CCC has ignored the MFS's warnings and complaints about the wrongdoings of the CCC's staff. Communications from the MFS signaled fraudulent reports and extortion. Not one of these warnings was answered. The CCC was completely unresponsive to the allegation of very serious transgressions. See ATT. XI, VII, XII, IX, XIII, XIV, XVII, XV, XVII, XIII, and XX.

A summary of the wrongdoings and motivations of the CCC's staff can be read in the July 29, 1999 letter (ATT. XIX) that the MFS addressed to Ms. Sara Wan, Chairwoman of the Commission. It reads as follows:

"For many years the CCC's staff has sabotaged the MFS permit application; then they have sabotaged the MFS workshop whose purpose was to show that the permit could be granted.

The sabotage of the MFS project by the CCC's staff is a scheme to prevent the development of the MFS technique which is able to successfully compete with the CCC's projects of rock-made artificial reefs.

Rock-made artificial reefs are environmentally and economically counter-productive. The CCC's staff is using this defective technique to extort mitigation contracts from the Edison Company.

The initial cause of the present wrongdoings by the CCC's employees is the policy of the CCC Executive Director, Peter Douglas, who mistakenly extended the regulatory function of the California Coastal Commission to the business of environmental mitigation".

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QUESTION: 6. *Documents, exhibits, declarations under penalty or perjury or other materials that you have attached to this form to support your answers or that you want to be made part of the administrative record for this enforcement proceeding. (Please list in chronological order by date, author, and title, and enclose a copy with this completed form):*

ANSWER:

Listing of Attachments

- I November 25, 1986 MFS letter to E.J. Smith
- II February 24, 1987 letter from City of Newport Beach to E.J. Smith
- III April 01, 1987 Indenture of Lease
- IV June 4, 1993 letter from CIWMB to MFS
- V August 26, 1993 letter from Fish and Game to MFS
- VI March 27, 1995 Minutes of City of Newport Beach
- VII March 8, 1996 MFS letter to Peter Douglas, CEO
- VIII August 28, 1996 letter from R.A. Higbie to Coastal Commission
- IX November 26, 1996 MFS letter to Peter Douglas, CEO
- X April 9, 1997 "CCC staff awareness" MFS Note
- XI April 9, 1997 "Deceptive Statements" MFS Note
- XII April 9, 1997 "Unacceptable Recommendations" MFS Note
- XIII January 7, 1997 MFS letter to Peter Douglas, CEO
- XIV February 5, 1997 MFS letter to Peter Douglas, CEO
- XV February 20, 1997 MFS letter to Coastal Commissioners
- XVI September 05, 1997 MFS FAX to Susan Hansch, Director
- XVII June 23, 1998 MFS letter to Rusty Areiras, Chairman
- XVIII July 29, 1999 MFS letter to Sara Wan, Chairwoman
- XIX August 11, 1999 "Will You Continue" letter to Coastal Commissioners
- XX October 14, 1999 MFS letter to Sara Wan, Chairwoman

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MARINE FORESTS

California scientific non-profit public benefit corporation

Mr. Emil J. Smith, Jr.
Marine Ressources Supervisor
DEPARTMENT OF FISH AND GAME
Marine Ressources Division
1416 Ninth Street
Sacramento, CA 95814

Copy

~~Attachment E.~~

November 25 1986

Dear Mr. Smith,

Please find herein additional information about the proposed use of our requested sea bottom lease, offshore Balboa, in San Pedro Channel.

The main purpose of the project is experimentation of Sea Bio-Structuring, a key process to implement enhancement of the sea, kelp field restoration, and mitigation programs.

Experiments will carry on various faces of the technique,

- a. Setting of artificial substrates
(rope moorings and light structures)
- b. Settlement and maintenance of selected bio-structure species
(spores/larvae undersea mass artificial fixing)
- c. Bio-structure field monitoring
(new habitat criteria)
- d. Study of bio-structure economics through automation
(Robotics) (A first target is to demonstrate the ten times cost reduction, compared with previously known processes).

Will act as scientific advisers

Dr. Wheeler J. North, California Institute of Technology
(for kelp)

Dr. David L. Leighton, San Diego State University
(for shellfish)

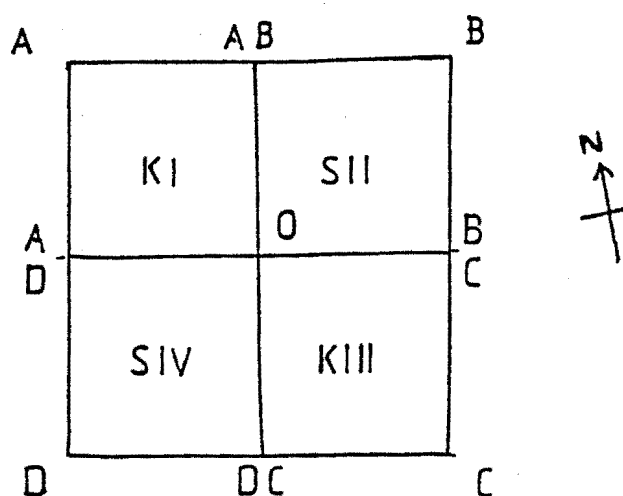
A technical and financial Fish and Game cooperation is expected.

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A. LEASE AREA FIGURE



B. PLAN OF DEVELOPMENT OF THE LEASE AREA

TIMING

Phase I

a. Undersea lines building

The lease area is marked as follows,
 point O, center. point ABCD corners.
 point AB, BC, DC, AD, line middles.

These undersea lines divide the 10 acres lease area in
 four 2.5 acres subareas: Sections K I, S II, K III, S IV.

The external square lines ABCD totalize 800 meters (875 yds).
 The internal cross lines OAB, OBC, OCD, OAD, totalize 400 m.
 (437 yds).

Along these 1.200 m. lines (1.323 yds), a single row of
 algae and shellfish bio-structures is planted. Every 12 m.
 (13 yds) 3 algae bio-str. and 1 shellfish bio-str.

The setting of the bio-structure undersea lines occurs
 in first phase, in order to help fish fixing in the new
 habitat. As a matter of fact, an endless line system
 maintains on the spot many fishes caught by their well-known
 line following instinct.

b. One-acre kelp field building

In the angle A of Section K I, 400 kelp Macrocystis will
 be planted, 1 each 10 sq. meters.

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III DESCRIPTION OF THE PARCEL TO BE LEASED

- a. The average depth of water is 60 feet
The sea bottom substrate is sand
- b. The lease operation will have no effect on boat traffic in the area. Only the kelp structures shown in fig. 2 will reach the sea surface. All other structures will be kept below 15 feet under sea surface, also the structures shown in fig. 7 and 8.

Boats are not permitted to put into Balboa pier. A boat could eventually cross the lease area without any damage.
- c. The potential effect on sport and commercial fishing activity is utmost, as sea bio-structures have been invented for the enhancement of the sea.

We believe the technique is a unique means for coastal biomass development.

Sincerely



Rodolphe Streichenberger

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= EXHIBIT "B" =

Map of State of California water bottoms
requested for biomass research and developme.

For : Marine Forests
101 Dahlia Avenue
Corona del Mar, CA 92625

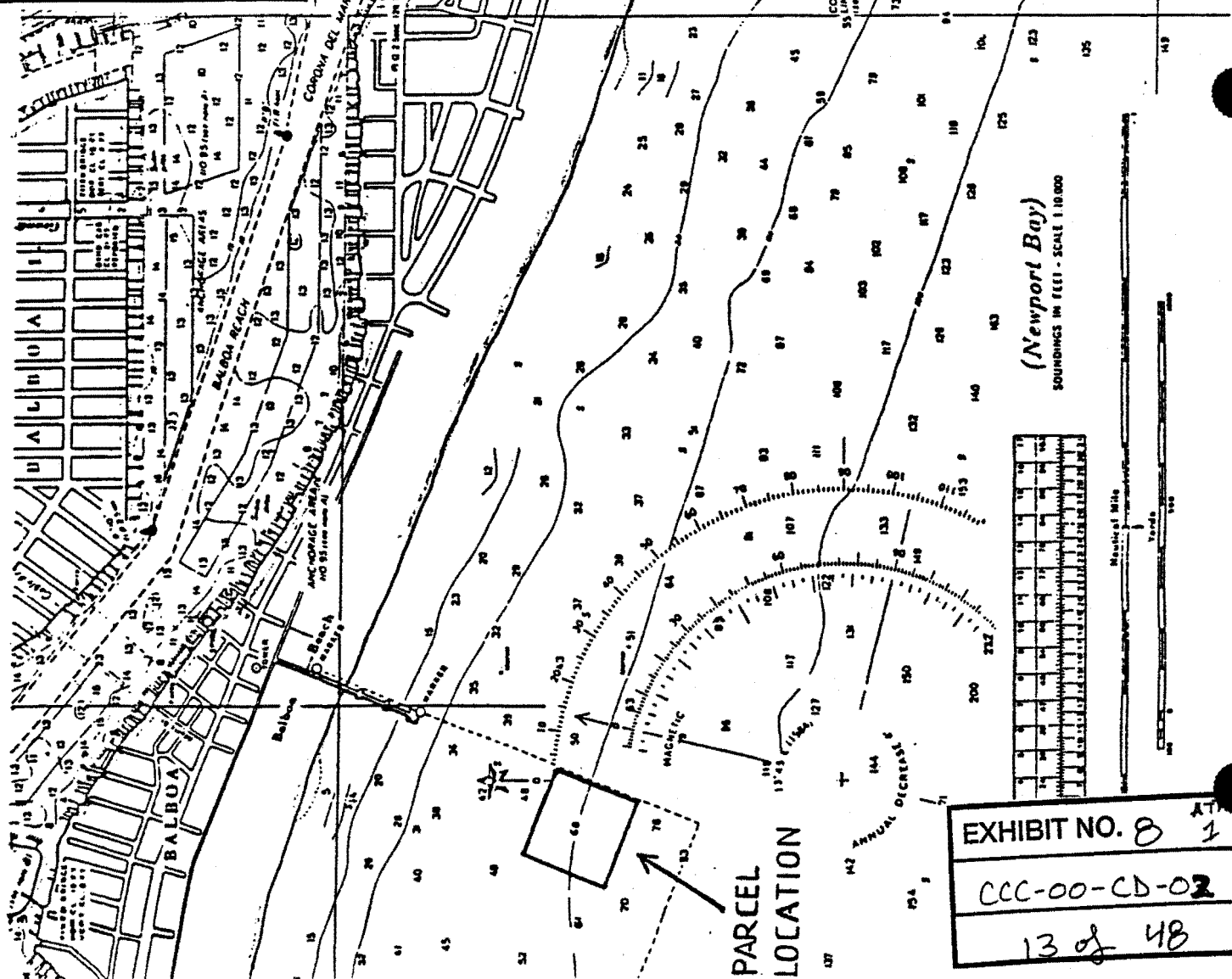


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CITY OF NEWPORT BEACH

P.O. BOX 1768, NEWPORT BEACH, CA 92658-8915
MARINE DEPARTMENT

February 24, 1987

Attachment D.

Mr. Emil Smith
Marine Resources Division
Department of Fish and Game
1416 Ninth Street
Sacramento, California 95814

Dear Mr. Smith:

The Newport Beach City Council reviewed Mr. Streichenberger's application on behalf of Marine Forests Corporation for an aquaculture research project lease within the City of Newport Beach's granted tidelands. The City Council authorized the Marine Director to send a letter to the State Fish and Game Commission endorsing this aquaculture research project.

Attached is a copy of the staff report that the City Council approved on the evening of February 23, 1987.

If I can be of further assistance, please feel free to give me a call. I can be reached at (714) 644-3044.

Sincerely,

David Harshbarger
Marine Director

DH:la

Attachment

cc: City Clerk

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CITY OF NEWPORT BEACH

Marine Department

February 23, 1987

TO: MAYOR AND CITY COUNCIL

FROM: Marine Director

SUBJECT: ENDORSEMENT FOR AQUACULTURE RESEARCH PROJECT

Recommendation: If desired, authorize the Marine Director to send a letter to the State Fish and Game Commission endorsing an aquaculture research project over City Tidelands.

Discussion: Mr. Rodolphe Streichenberger, Marine Forests Corporation, has applied to the Department of Fish and Game for a aquaculture lease lying within the City's grant line boundaries. The State Fish and Game Commission needs authorization from the City to approve the proposed lease because the site is within the City's granted tidelands. Mr. Streichenberger, Marine Forest Corporation, is affiliated with the California Institute of Technology Marine Laboratory at Corona del Mar.

Marine Forests Corporation is a California scientific nonprofit public benefit corporation. The proposed aquaculture lease site encompasses an area of approximately ten acres and is located in the Pacific Ocean 375 yards southwesterly from the end of the Balboa Ocean Pier. The depth of the water in the proposed lease area is approximately 60 feet over a sandy bottom.

The applicant proposes to establish an undersea experimental station where bio-structures (nine foot lengths of one quarter to one half inch diameter rope anchored in the sea floor with plastic anchors) will be tested as artificial substrates for attachment of algae and shellfish. Juvenile algae and shellfish will be implanted on various types of attachment surfaces (iron bars and polyethylene tubing) affixed to the ends of the mooring ropes before and after immersion.

The main purpose of the lease is to conduct experiments to determine if bio-structuring may be utilized as a method to restore kelp beds, cultivate shellfish, and mitigate the loss of marine habitat. The proposed location was chosen because of its close proximity to the California Institute of Technology laboratory at Corona del Mar.

The cultural equipment proposed for use on the lease will be deployed on the bottom of the ocean and will not interfere with navigation in the lease area. Surface buoys marking the lease will be the only visible structures.

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M-738-01

Mar

April 01. 1987

M-738-01

INDENTURE OF LEASE

Made this 1st day of April, 1987 at Sacramento, California, by and between the State of California, acting by and through its Department of Fish and Game, hereinafter referred to as "Lessor", and Marine Forests Corporation, hereinafter referred to as "Lessee".

W I T N E S S E T H:

WHEREAS, Lessee is presently a registered aquaculturist authorized to grow marine life for profit in the waters of the state of California as provided in Fish and Game Code Section 15101, and

WHEREAS, Lessee has heretofore filed an application with the Fish and Game Commission for the exclusive privilege of experimentally cultivating kelp, abalone, mussels, oysters, sea urchins and scallops in the hereinafter described waters of the state of California, and has accompanied said application with the required filing fee of one hundred dollars (\$100) as required by law, and

WHEREAS, the Fish and Game Commission has heretofore published notice to the hearing of said application, has been advised by the State Lands Commission of the State of California that the area applied for lies on water bottoms granted to the City of Newport Beach by Chapter 494, Statutes of 1919 as amended, and by definition is not classified as state water bottoms, and

WHEREAS, the City of Newport Beach, by endorsement attached hereto, has approved the leasing of the hereinafter described water bottoms in recognition of the State policy supporting aquaculture development contained in Sections 825-833 of the State Public Resources Code, and

WHEREAS, it has been determined by the Fish and Game Commission that it is in the best interests of the State of California that such a lease be made, and

WHEREAS, Lessor has heretofore determined that kelp, abalone, mussels, oysters, sea urchins and scallops do not occur naturally in the biota of the lease area.

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That, in accordance with the bid made by Lessee and accepted at a duly called and noticed hearing of the Fish and Game Commission of the State of California, pursuant to Fish and Game Code Section 15406.5, the Fish and Game Commission does hereby lease to lessee for such consideration, specific purposes and subject to the covenants, terms, conditions, reservations, restrictions and limitations as are set forth herein, and does hereby grant to lessee the exclusive privilege to cultivate kelp and shellfish thereon, and in those certain waters of the State of California, described as follows:

In the Pacific Ocean offshore of the City of Newport Beach, Orange County, State of California, starting from the day mark on the seaward end of the Balboa Beach Pier, located at approximately Latitude 33°35'54" N., and Longitude 117°54'0.5" W., on the Newport Bay Navigation Chart No. 18754 published by the National Oceanic and Atmospheric Administration; Southwesterly on a bearing of 201° true,

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350 yards to the beginning point, located at approximately Latitude 33°36'44" N., Longitude 117°54'5" W.; then southwesterly 201° true 220 yards; then northwesterly 291° true 220 yards; then northeasterly 21° true 220 yards; then southeasterly 111° true 220 yards back to the beginning point.

This parcel of water bottoms, containing an area of 10 acres more or less, comprises aquaculture lease No. M-738-01.

This lease, in accordance with provisions of Fish and Game Code Section 15400, as may from time to time be amended or changed by the State Legislature, is for the sole purpose of cultivating giant kelp (Macrocystis pyrifera), feather boa kelp (Egregia laevigata), green abalone (Haliotis fulgens), bay mussels (Mytilus edulis), scallop (Hinnites giganteus), European oysters (Ostrea edulis), Pacific oysters (Crassostrea gigas), giant red urchin (Strongylocentrotus franciscanus) and purple urchin (S. purpuratus) in the previously designated area. Seed stock must be certified before planting in compliance with Fish and Game Code Section 15201, and must be planted by Lessee in a manner and at a size approved by the Lessor. A request for certification of seed stock will be submitted by Lessee to the Lessor at least ten (10) days prior to the proposed date of inspection.

All kelp, abalone, mussels, sea urchins, scallops, and oysters shall be planted on biostructures anchored in the sea floor and on support buoys submerged no less than 30 feet beneath the water surface in the lease area. No other mode of operation or culture method is authorized, unless Lessee shall first obtain approval thereof from the Fish and Game Commission. The designated species planted only in the specified lease area may be taken.

The notice of intent to plant kelp, abalone, mussels, sea urchins, scallops and oysters on the lease area shall be given to Resources Manager, John Sunada, Department of Fish and Game, Marine Resources Division, 245 W. Broadway, Long Beach, CA 90802, telephone (213) 590-5169. In addition to the required ten (10) day notice, at least a 24-hour notice shall be given to the Resource Manager or his designee, providing directions to the location where the observer can meet the Lessee to provide the required certification.

This lease is for a term of five (5) years commencing on the 1st day of April, 1987 and ending on March 31, 1992, for the total rental of one hundred dollars (\$100) per year and a privilege tax on all products harvested as provided by Fish and Game Code Sections 8045 and 15406.7, and Section 237(f) of the Fish and Game Commission regulations. Said annual rental will be payable to the Lessor within thirty (30) days of the commencement of the lease, or after receipt of the consummated lease agreement, and within thirty (30) days of the anniversary thereof. If said rental is not paid within sixty (60) days after the close of the month in which it is due, an additional 10 percent penalty shall be paid. Lessor, at its option, may declare the lease abandoned for failure to pay such rental fees within 90 days from the beginning of the rental period, although such abandonment shall not relieve Lessee of the obligation to pay such rental and penalties which are due and owing. Lessee agrees to pay Lessor reasonable attorney fees and costs incurred in collecting any amounts and/or penalties due and owing from Lessee under the provisions of this lease. Lessee agrees to pay said rent to Lessor at its office in the City of Sacramento, State of California, or at such other place as Lessor may from time to time designate.

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Lessee expressly recognizes and acknowledges that any payments by Lessee as provided for herein is subject to the provisions of the Fish and Game Code, which reads as follows:

"All leases shall be subject to the power of the Legislature to increase or decrease the rents, fees, taxes, and other charges relating to the lease, but no increase in rent shall be applicable to an existing lease until it is renewed."

This lease is made upon the following additional terms, conditions and covenants, to wit:

A. This lease may, at the option of Lessee, be extended for two (2) successive 10-year terms at a rental to be fixed as hereinafter provided, and otherwise upon the terms and conditions herein specified. In order to exercise such options, Lessee shall give notice in writing to the Lessor at least one hundred and twenty (120) days prior to the termination of the then five-year term, of its exercise of said option for the ensuing 10-year term. The rental rate during each of such ensuing 10-year term shall be no less than the accepted bid price of twenty dollars (\$20) per year and the privilege tax on all shellfish harvested from the lease as provided by Fish and Game Code Sections 8045 and 15406.7, and Section 237(f) of the Fish and Game Commission regulations.

Lessee shall keep records as required in accordance with Fish and Game Code Section 15414 on forms to be supplied by Lessor, and shall maintain adequate accounting records sufficient to determine monies due to the Lessor by the 10th day of each month, commencing July 1, 1988, for all shellfish harvested during the preceding calendar month. Lessor reserves the right to inspect Lessee's premises, equipment and all books at any time, and Lessee's records pertaining to the cultivation of kelp on the leased premises and all shellfish taken from the leased premises.

B. If Lessee desires to enter into a new lease for a period commencing after the expiration of said second ten (10) year term, Lessee shall notify Lessor one (1) year prior to termination of the lease. The lease may be renewed if during the notification period terms for a new lease are agreed upon by Lessee and the Fish and Game Commission.

C. In order to provide assurance to Lessor that this aquaculture lease is utilized for the purpose stated in the lease application shown as Exhibit "A" attached hereto and made a part hereof. Lessee shall report the research activities conducted each year in the Annual Proof of Use Statement, required in Section J of this agreement.

A minimum rate of planting shall be negotiated for option periods. A record of seed catching activity for mussels and rock scallops will be reported in the Annual Proof of Use Statement required in Section J. The Lessor may declare this lease terminated if Lessee fails to meet these specified requirements and if Lessee, at any time, is proven to be failing in good faith, to pursue the purpose of this lease.

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D. Lessee is authorized to construct and install biostructures and floating buoyed equipment as described in Exhibit "A" during the initial five-year period of this lease. All structures shall be constructed and installed in such a manner as to prevent them from being carried away from the designated lease area.

E. The lease area shall be clearly marked at all times with spar buoys on the surface of the water to prevent interference with commercial or sport fishing or boating activities that may take place in the area. Minimum marking of the lease area shall include: One (1) spar buoy anchored on each of the four corners of the lease area and one (1) spar buoy possessing radar reflecting capabilities, anchored in the center of the lease area. All spar buoys used to define the boundaries of the lease area shall be marked in alternate horizontal bands of red and white. Spar buoys located within the boundaries of the lease area shall be marked in alternating bands of black and white. Each spar buoy shall be set and maintained to extend at least three (3) feet above the water surface. All spar buoys shall bear the aquaculture lease number M-738-01. If the required spar buoys are lost, displaced or are otherwise removed from the lease area, they must be replaced within a two-week period, weather conditions permitting, or the lease may be subject to abandonment.

F. If at any time, subsequent to the beginning date of this lease, the improvements authorized herein shall fall into a state of disrepair or otherwise become an environmental or aesthetic degradation, as determined by Lessor, then upon written notice by Lessor, Lessee shall have sixty (60) days to repair and correct conditions cited by Lessor. Failure to comply with the written notice shall be grounds for termination of this lease and Lessee shall, at the option of the Lessor, remove all structures located on lands covered by this lease. All such improvements to be removed shall be salvaged and removed by Lessee at Lessee's sole expense and risk within ninety (90) days after the expiration or sooner termination of this lease. If Lessee fails to remove such improvements or portion thereof designated by Lessor, and restore the leased water bottoms as hereinafter provided, within ninety (90) days after expiration date or sooner termination of the lease or notice by Lessor, Lessor may remove or have removed all of the improvements and charge the expense of such removal to Lessee. In making such removals, Lessee shall restore said leased water bottoms as nearly as possible to the condition existing prior to erection or placement of the improvements thereupon.

G. Lessee shall observe and comply with all rules and regulations now or hereinafter promulgated by any governmental agency having authority by law, including but not limited to State Water Resources Control Board, State Coastal Commission, State Lands Commission, U.S. Department of Commerce and U.S. Army Corps of Engineers. Any other permits or licenses required by such agencies will be obtained by Lessee at his own sole cost and expense.

H. Lessee agrees to pay any other charges or assignments imposed by law accruing or payable during the term of this lease including, but not limited to, taxes levied upon Lessee's possessory interest in the leasehold.

EXHIBIT NO. 8
CCC-00-CD-02
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I. Any modification of natural or existing features of the real property described in this lease, including but not limited to the removal of marine artifacts, which are not consistent with the authorized uses under this lease are expressly prohibited without prior written consent of the Lessor.

J. As evidence of progress in aquaculture, Lessee shall submit each year to the Lessor at its Marine Resources Division Office, 245 W. Broadway, Long Beach, CA 90802, a written declaration, under penalty of perjury, showing the date and amount of each type of aquaculture development and date and amount of designated species comprising each planting, including a diagram showing area, amounts and dates planted. Such declaration shall be submitted on or before July 15 of each year, for the previous year, July 1-June 30, inclusive.

K. This lease will be cancelled at any time Lessee fails to possess a valid aquaculture registration issued pursuant to Fish and Game Code Section 15101. Lessee agrees not to commit, suffer, or permit any waste on said premises or any act to be done thereon in violation of any laws or ordinances. This lease shall be subject to termination by Lessee at any time during the term hereof, by giving Lessor notice in writing at least ninety (90) days prior to the date when such termination shall become effective. In the event of such termination by Lessee, any unearned annual rental shall be forfeited.

L. This lease of water bottoms only grants Lessee the exclusive right to cultivate marine life as described in Exhibit "A".

M. As a further condition of this lease, Lessee recognizes that this lease is located within the boundary of an area granted to the City of Newport Beach by the State Lands Commission. Permission is given by the City to utilize the area described in this lease agreement only for aquaculture purposes in accordance with the approved uses, described in Exhibit "A". That permission was given to Lessee with the understanding that operation of this lease will in no way interfere with other legitimate uses of the area not in conflict with the permitted aquaculture use now and in the future. The City agrees to the aquaculture activity described herein, with the further clear understanding that any proposed change to the original plan of development submitted by Lessee must first be submitted to the Fish and Game Commission for review and concurrence prior to its initiation.

N. In addition to the conditions and restrictions herein provided for in this lease, and any right or privilege granted, conveyed or leased hereunder, shall be subject to, and Lessee agrees to comply with, all applicable provisions of the California Fish and Game Code and regulations of the Fish and Game Commission, in particular Fish and Game Code Sections 15400-15415, and expressly recognizes the right of the Legislature and the Fish and Game Commission to enact new laws and regulations. In the event of any conflict between the provisions of this lease and any law or regulation enacted in the future, the latter will control. This lease shall be deemed amended automatically upon the effective date of such conflicting law or regulation.

EXHIBIT NO. 8	ATT 111
CLL-00-CD-02	
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O. Lessee shall not assign or transfer this agreement without prior written approval. Such written approval of the assignment or transfer shall be subject to any and all conditions required by the Fish and Game Commission including, without limitation by reason of specification herein, the altering, changing or amending of this agreement as deemed by the Commission to be in the best interests of the state.

P. The waiver by the Lessor of any default or breach of any term, covenant or condition shall not constitute a waiver of any other default or breach whether of the same or any other term, covenant or condition, regardless of the Lessor's knowledge of such other defaults or breaches. The subsequent acceptance of monies hereunder by the Lessor shall not constitute a waiver of any preceding default or breach of any term, covenant or condition; other than the failure of Lessee to pay the particular monies so accepted, regardless of the Lessor's knowledge of such preceding default or breach at the time of acceptance of such monies, nor shall acceptance of monies after termination constitute a reinstatement, extension or renewal of the agreement or revocation of any notice or other act by the Lessor.

Q. Lessee hereby indemnifies and holds harmless the Lessor, its officers, agents, and employees against any and all claims and demands of every kind and nature whatsoever arising out of or in any way connected with the use by the Lessee of said lease or the exercise of the privilege granted herein.

R. The terms, provisions and conditions hereof shall be binding upon and inure to the benefit of the parties and the successors and assigns of the parties hereto.

S. The attached Nondiscrimination Clause (OCP-1) is hereby made a part of this agreement.

T. All notices herein provided to be given or which may be given by either party to the other, shall be deemed to have been fully given when made in writing and deposited in the United States Mail, certified and postage prepaid and addressed as follows:

To the Lessor

DEPARTMENT OF FISH AND GAME
1416 Ninth Street
Sacramento, CA 95814

To the Lessee

Rodolphe Streichenberger
Marine Forests Corporation
101 Dahlia Avenue
Corona Del Mar, CA 92625

Nothing herein contained shall preclude the giving of any such written notice by personal service. The address to which notices shall be mailed, as aforesaid to either party, may be changed by written notice given by such party to the other, as hereinbefore provided.

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CC-00-CD-02	
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INDENTURE OF LEASE

-7-

M-738-01

IN WITNESS WHEREOF, the parties hereto have caused this lease to be duly executed as of the day and year first above written.

APPROVED:

FISH AND GAME COMMISSION

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME

By

Harold Cribbs

By

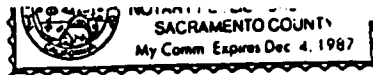
James T. Christy

MARINE FORESTS CORPORATION

By

Nedley H. Steiden

Director

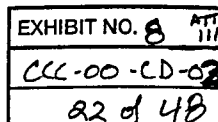


State of California)
County of Sacramento) ss.

On this 15th day of June, in the 1987, before me, personally appeared Harold Cribbs, known to me on the basis of personal knowledge to be the person who executed the within instrument as Executive Secretary on behalf of the Department therein named and acknowledged to me that the Department executed it.



Tracey M. Moreno
Notary Public



CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

8800 Cal Center Drive
Sacramento, California 95826



Research and Technology Development Division

June 4, 1993

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

STANDARD Agreement

Dear Mr. Streichenberger :

Congratulations on your selection for grant funding. Enclosed is an executed Standard Agreement (contract) for grant funding for your tire-related project.

The term of this agreement officially begins June 30, 1993 and continues until completion of the project and satisfaction of all terms and conditions agreed to. Although you may have begun work prior to this date, the payment requests and quarterly reports nevertheless will be based on the June 30 start date. The first payment request form and quarterly report should not be submitted prior to September 30, 1993, and then no more frequently than quarterly thereafter.

We will send you a copy of the CIWMB Writing Guide for your use in preparing the required reports as soon as it becomes available. We will also send you the payment request form at the same time.

Sincerely,

A handwritten signature in cursive script, appearing to read "Michael Contreras".

Michael Contreras
Tire Grant Program Manager

EXHIBIT NO. 8
CLL-00-CD-02
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STANDARD AGREEMENT

APPROVED BY THE
ATTORNEY GENERAL

STD. 2 (REV. 5-91)

CONTRACT NUMBER <u>TR-92-0084-30</u>	AM. NO.
TAXPAYER'S FEDERAL EMPLOYER IDENTIFICATION NUMBER	

THIS AGREEMENT, made and entered into this 30 day of June, 19 93,
in the State of California, by and between State of California, through its duly elected or appointed, qualified and acting

TITLE OF OFFICER ACTING FOR STATE <u>Executive Director</u>	AGENCY <u>California Integrated Waste Management Board</u>	, hereafter called the State, and
CONTRACTOR'S NAME <u>Marine Forests Society</u>		, hereafter called the Contractor.

WITNESSETH: That the Contractor for and in consideration of the covenants, conditions, agreements, and stipulations of the State hereinafter expressed, does hereby agree to furnish to the State services and materials as follows: (Set forth service to be rendered by Contractor, amounts to be paid Contractor, time for performance or completion, and attach plans and specifications, if any.)

Project Description [TR-92-0084-30]:

Contractor agrees to undertake and complete all necessary tasks to construct and install the Artificial Marine Habitat using waste tires, as more fully described in Exhibit A, Scope of Work.

Contractor will be paid in accordance with Exhibit B. The total amount of this contract will not exceed \$100,000.

The term of this agreement will be approximately 24 months, commencing on June 30, 1993, and terminating on June 30, 1995.

The following exhibits are attached to this agreement and are incorporated by reference:

Exhibit A	Scope of Work
Exhibit B	Budget

CONTINUED ON _____ SHEETS, EACH BEARING NAME OF CONTRACTOR AND CONTRACT NUMBER.

The provisions on the reverse side hereof constitute a part of this agreement.

IN WITNESS WHEREOF, this agreement has been executed by the parties hereto, upon the date first above written.

STATE OF CALIFORNIA

CONTRACTOR

AGENCY <u>California Integrated Waste Management Board</u>		CONTRACTOR (If other than an individual, state whether a corporation, partnership, etc.) <u>Marine Forests Society</u>	
BY (AUTHORIZED SIGNATURE) <u>[Signature]</u>		BY (AUTHORIZED SIGNATURE) <u>[Signature]</u>	
PRINTED NAME OF PERSON SIGNING <u>Ralph E. Chandler</u>		PRINTED NAME AND TITLE OF PERSON SIGNING <u>Rodolphe Streichenberger</u>	
TITLE <u>Executive Director</u>		ADDRESS <u>P.O. Box 5843, Balboa Island, CA 92662</u>	
AMOUNT ENCUMBERED BY THIS DOCUMENT \$ <u>100,000</u>	PROGRAM/CATEGORY (CODE AND TITLE) <u>Recycling Management</u>		FUND TITLE <u>Line</u>
PRIOR AMOUNT ENCUMBERED FOR THIS CONTRACT \$ <u>0</u>	(OPTIONAL USE)		Department of General Services Use Only
TOTAL AMOUNT ENCUMBERED TO DATE \$ <u>100,000</u>	ITEM <u>3910-502-226</u>	CHAPTER <u>974</u>	STATUTE <u>89</u>
OBJECT OF EXPENDITURE (CODE AND TITLE) <u>2100-25974-702</u>		FISCAL YEAR <u>1992-93</u>	
I hereby certify upon my own personal knowledge that budgeted funds are available for the period and purpose of the expenditure stated above.		T.B.A. NO.	B.R. NO.
SIGNATURE OF ACCOUNTING OFFICER <u>[Signature]</u>		DATE <u>6-3-93</u>	

EXHIBIT NO. B ATT IV

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COMMISSIONERS
Benjamin F. Biaggini, President
San Francisco
Albert C. Taucher Vice President
Long Beach
Frank D. Boren
Carpinteria
Gus A. Owen
Dana Point
Douglas B. McGeoghegan
Colusa

PETE WILSON
Governor



ROBERT R. TREANOR
EXECUTIVE DIRECTOR
1416 Ninth Street
Box 944209
Sacramento, CA 94244-2090
(916) 653-4899

STATE OF CALIFORNIA

Fish and Game Commission

August 26, 1993

Mr. Rodolphe Streichenberger
Marine Forests Society
Post Office Box 5843
Balboa Island, CA 92662

Dear Mr. Streichenberger:

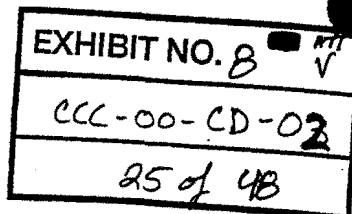
The Commission, at its August 5, 1993 meeting in Crescent City, approved your request for Marine Forests Society to amend Aquaculture Lease No. M-738-03, off Balboa Pier, to include the tire mussel ribbon technique, subject to the terms and conditions recommended by the Department and approved by the Commission. The Commission's approval was contingent upon your securing a bond for the clean-up requirement as well as development of an environmental document concerning your proposed project which the Commission could then certify as addressing the environmental impacts of your project.

It is my understanding that the Department has already provided a copy of a draft environmental document, an environmental checklist, as well as the California Environmental Quality Act guidelines. If you have any questions concerning this matter, please feel free to contact me or Mr. Rob Collins, Marine Resources Division, Department of Fish and Game, at the above address. Mr. Collins' telephone number is (916) 653-4669.

Sincerely,

Robert R. Treanor
Executive Director

cc: Deputy Director Petrovich
Marine Resources Division
Region 5
Ms. Susan Hansch, CA Coastal Commission
Mr. Cy Oggins, CA Coastal Commission
Mr. Eric Stein, U. S. Army Corps of Engineers
Bob Hulbrook, Aquaculture Coordinator





CITY OF NEWPORT BEACH

P.O. BOX 1768, NEWPORT BEACH, CA 92658-8915

June 18, 1996

Marine Forests Society
Attn: Mr. Rudolphe Streichenberger
P. O. Box 5843
Balboa Island, CA 92662

Re: Endorsement of Aquaculture Research Project

Dear Mr. Streichenberger:

On February 23, 1987, the then Marine Director, Dave Harshburger presented a request to the City Council of the City of Newport Beach for an endorsement of an Aquaculture Research Project by Marine Forest Society for an Aquaculture lease site, approximately 375 yards southwesterly from the end of the Newport pier. The main purpose of the lease was to conduct experiments to determine if bio-structuring may be utilized as a method to restore kelp beds, cultivate shellfish and mitigate the loss of marine habitat. The City Council authorized the Marine Director to send a letter to the State Fish and Game Commission, endorsing the aquacultural research project as proposed.

On March 27, 1995, Newport Beach City Council adopted a Negative Declaration and approved a Harbor Permit Application for the Construction of Tire Reef Demonstration project by the Marine Forest Society to determine the feasibility of using scrap tires to create artificial reefs.

Both of these actions remain in effect as originally approved.

Sincerely,

Tony Melum
Deputy Chief Marine Division

TM/la

EXHIBIT NO. 8	ATT VI
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EXCERPT OF THE MINUTES OF THE CITY COUNCIL
CITY OF NEWPORT BEACH
MARCH 27, 1995

The meeting was called to order at 7:00 p.m. with all Council Members present.

PUBLIC HEARINGS:

21. Mayor Hedges opened the public hearing regarding request to consider the HARBOR PERMIT APPLICATION OF MARINE FORESTS SOCIETY.

The City Clerk advised that after the agenda was printed, four letters were received regarding the proposed application from the following: Robert Clarke, Newport Beach, California Coastal Commission, Russ Izor, Torrance, and Maryland Department of National Resources.

The Report from the Marine Department was summarized by Tony Melum, Acting Marine Director.

The following persons addressed the Council in support of the proposed project:

Richard A. Higbie, 108 33rd Street, representing the Applicant
David Kulcinski, P.O. Box 314, Santa Ana
Bob Clarke, 215 Tustin Avenue
Sid Soffer, 900 Arbor Street, Costa Mesa
Greg Schwenk, Member, Environmental Quality Committee
Bob Boston, 58 Beacon Bay

Hearing no others wishing to address the Council, the public hearing was closed.

Motion was made by Mayor Pro Tem Debay to adopt the Negative Declaration and approve the Harbor Permit Application for the Marine Forests Society Tire Reef Demonstration Project, subject to the findings and conditions contained in Exhibit A, with the following two additional Conditions of Approval:

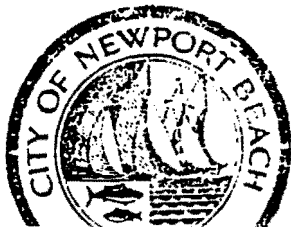
1) Permittee shall agree in writing to defend, indemnify and hold harmless the City and its officers, employees and agents with respect to any claim, cause of action, damage or injury that arises out of, or is in anyway related to the project, and

2) Permittee shall agree in writing, to grant City the right to remove some or all of the project upon a determination by the City Council that there is substantial evidence the project is having a significant adverse impact on water quality, public safety, marine organisms or beach erosion.

It was indicated by Mr. Higbie that they had no objections to the above two conditions.

There being no further comments, the motion was voted on and unanimously carried.

I, WANDA E. RAGGIO, City Clerk of the City of Newport Beach, do hereby certify that the above is a true and correct excerpt of the Minutes of the City Council of the City of Newport Beach held Monday, March 27, 1995 at 3300 Newport Boulevard, Newport Beach, California.



WANDA E. RAGGIO
CITY CLERK

EXHIBIT NO. 8	AT VI
CCC-00-CD-02	
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MARINE FORESTS SOCIETY

Mr. Peter Douglas, CEO
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

March 8, 1996

Copy

Subject: MARINE HABITATS

Dear Mr. Douglas

Please find enclosed a graph of the innovative marine habitat "Mussel Reef" which we specially conceived for the restoration and enhancement of California marine resources.

Our ten-year research was conducted to find this new technology, after the flaws of the "Quarry Rock" technology (elaborated by the staff of the California Department of Fish and Game [CDFG]) became evident.

With the "Mussel Reef" technology we found a way to create marine habitats which can be (1) highly productive, (2) financially sustainable, and (3) job promoting. We think such a technology is precisely what has been missing in California for the protection and enhancement of marine resources.

Unfortunately, the "Mussel Reef" development was never "permitted" despite considerable support, notably from the Community and City Council of Newport Beach. We deplore that the governmental opposition always comes from the CDFG and CCC's staff members who have been active in elaborating and recommending the infeasible "Quarry Rock" technique (e.g. the CCC's failing recommendation to SONG).

We ask the CEO of the California Coastal Commission to end the abuse of its staff's power imposing the use of an infeasible technique of governmental fabrication at the expense of other more valuable techniques. We do not want each of our applications for a "Mussel Reef" permit to be arbitrarily declared "incomplete" and rejected.

A few mistaken members of the California State's bureaucracy should not prevent a sound technology to be used for building a great number of marine habitats benefiting the California coastal waters and people.

Sincerely,

R. /

Rodolphe Streichenberger, President

EXHIBIT NO. 8	Art VII
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encl.: 2

cc: Coastal Commissioners

Richard A. Higbie, Attorney at Law

333 Marine Avenue, P.O. Box 328, Balboa Island, CA 92662

Phone (714) 673-7670 Fax

August 28, 1996

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2218

Re: Coastal Development Permit Application E-95-05 (Marine Forests Society);
Coastal Act Violation File No.: V-7-93-001

Dear Sirs:

The staff appears to be determined to discourage the Marine Forest Society's experiment and any similar aquaculture effort ever to be made. These experiments are encouraged in all other civilized countries. Growing under water is a renewable resource, replaces lost wet lands, and provides food without any liability to the environment.

No open space is lost, no access is in issue, and the experiment is invisible to the world. Your demands are a systematic effort to make any development of this kind totally impossible for anyone but the state. Unless there is a complaint which anyone could articulate during the ten years of its existence, the application should be considered complete. The unfilled City requirements mentioned in paragraph 3 of your August 26, 1996 letter were for a second and larger development which has not been applied for and had to be abandoned because of the demands of the commission staff. The amended description recently submitted was all that was requested at our last meeting. All abandoned experiments have now been removed or continue to be closely monitored.

Further amending of the application would be repetitive of what has already been submitted and it appears excessive for a *diminimus* type of experimental project. Please submit our application "as is" or consider this another application for an appeal to the commission.

Very truly yours,

Richard A. Higbie

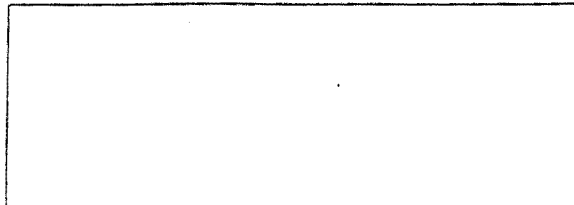
Richard A. Higbie

RAH/lfm

cc: Rodolphe Streichenberger

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MARINE FORESTS SOCIETY



November 26, 1996

TO THE CALIFORNIA COASTAL COMMISSION'S
C.E.O. PETER DOUGLAS

RE: Permit Application E-95-5.
Denial Recommendation of an Experimental Site.
The Newport Beach Mussel Habitat.

Mr. Douglas,

We acknowledge with sadness that you recommended to the Coastal Commissioners to not permit the continuation of our research at the Experimental Site offshore from Newport Beach, California.

Also, we conclude that our project has not been analysed by your staff in an objective manner. One illustration of their misrepresentation is how the original project's description "*....the creation of marine habitats by the means of seaweed and shellfish aquaculture.*" has been changed by your staff into a derogatory description "*...to place used automobile tires, plastic jugs, PVC pipes, plastic mesh, netting, nylon rope, styrofoam, and a variety of other, man-made materials in the ocean for conducting artificial, marine habitat research ...*". By rewriting the original description registered in the August 03, 1996 official Permit Application E-95-5 your staff fabricated a repulsive description, and publicized it on November 11, 1996 in a letter to the Coastal Commissioners and thirty five (35) other interested parties. In your staff's repulsive description of our work one cannot find anymore our original and noble purpose to grow seaweed and mussels to shelter and feed marine life. Among many other misrepresentations, the above-mentioned one illustrates the wrongdoing of your staff.

We respectfully ask for a second analysis of Permit Application E-95-5.

What is truly at stake is the existence of the

"Mussel Marine Habitat Prototype"

which represents an innovative concept providing marine habitats with both environmental and economical sustainability, and which shows a unique plankton-based method to restore our marine resources in California, and in the world.

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)

EXHIBIT NO. 8
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CCC staff awareness of the MFS development

Several years before the June 4, 1993 After-the-Fact Permit Application by the MFS the Commission and staff were aware of the MFS development through:

- a) articles in L.A. Times, Register, Daily Pilot newspapers in 1987, 1988, 1989, 1990, 1991, 1992, 1993 ...,
- b) public hearings and publications of the Fish and Game Commission which permitted the MFS development in January 9, 1987, March 6, 1987, March 4, 1988, October 7, 1988, February 4, 1993, April 1, 1993, and following after June 1993.
- c) communication at the November 3, 1991 workshop attended by the Commission's Deputy Director Susan Hansch.
- D) letter from the honorable Tom Mays to the Coastal Commissioners and CEO Peter Douglas in June 12, 1991.

EXHIBIT NO. 8	X
CCC-00-CD-02	
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377.0359

416 445.0965 58th minute

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CALIFORNIA 95834-2849
TEL: (916) 445-8492

DISTRICT OFFICE
PACIFIC COAST HIGHWAY
SUITE 550
LONG BEACH, CALIFORNIA 90804
TEL: (213) 385-1190

COMMITTEES
BANKING, FINANCE AND
BONDED INDEBTEDNESS
CONSUMER PROTECTION
GOVERNMENTAL EFFICIENCY
AND ECONOMIC DEVELOPMENT
HIGHER EDUCATION
REVENUE AND TAXATION

Assembly California Legislature

TOM MAYS

ASSEMBLYMAN FIFTY-EIGHTH DISTRICT

REPUBLICAN CAUCUS SECRETARY

July 12, 1991



Mr. Thomas Gwyn, Chairman
Members of the California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Re: Item 4-Conditional compliance and further conditioning of
Permit Number 183-73 (Southern California Edison
Company-San Onofre Nuclear Generating Station (SONGS),
San Diego County)

Dear Mr. Gwyn:

I would like to address Item 4 on the July 16 Coastal
Commission Agenda regarding Staff's Recommendation to order
Southern California Edison Company to create a 300-acre
artificial reef to support kelp and other marine life.

A local non-profit corporation, Marine Forests Society, Inc.,
has developed a way to create marine forests which I believe
would provide an excellent alternative to concrete reefs which
have been used in the past. The Marine Forests Society has been
involved over the past four years with a pilot program located on
a 10-acre site off Newport Beach which was leased from the
California Fish and Game Department.

As a former manager of McDonnell Douglas Space Systems
Company in Huntington Beach, I first became familiar with this
project when employees from our company volunteered to help plant
and maintain the red kelp forest. As I understand it, the
process involves implantation of singular anchors or
"biostructures" in the sandy bottom. Each of these anchors
serves as a locus for attachment of kelp and other sea life.

According to the Marine Forests Society, their process would
relieve the project of many of the potential problems associated
with concrete reefs including the sinking of rocks, displacement
of sand and pipeline, avoidance of predator sea urchins and
adherence problems. In addition, this procedure is estimated to
cost one-third to one-fourth less than the \$30 million price tag
associated with a concrete reef of this magnitude.

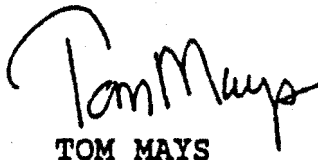
EXHIBIT NO. 8
CC-00-CD-03
321 48

Mr. Thomas Gwyn
July 12, 1991
Page 2

The Newport Beach project appears to clearly demonstrate the stability of the substrates and an increase in marine life. I believe that the method presented by Marine Forests Society, Inc. deserves to be seriously studied by the Coastal Commission as a viable alternative to the proposed concrete artificial reef.

Thank you for your consideration of this important project which affects Coastal Orange County. This new concept could effectively create thriving marine forests both here and along many other parts of California's coast.

Sincerely,


TOM MAYS

cc: Peter Douglas, Executive Director, Coastal Commission
✓ Shelley M. Liberto, Marine Forests Society, Inc.
Robert S. Grove, Southern California Edison Company

TM:kb

EXHIBIT NO. 8	X
CCCL-00-CD-03	2
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THE DECEPTIVE STATEMENTS OF THE COMMISSION'S STAFF

Presented at
APRIL 9, 1997 Hearing

The Commission's staff various recommendations to deny a permit to the Marine Forests Society (MFS)'s project are entirely built on **false statements, counterfeited citations, mutilated quotations, idiotic reasoning, and lies.** The whole of the repetitious false statements show an intentional deception to cause the loss of the MFS's research program and experimental prototype. The Commission's staff recommendations constitute a fraud.

Here below are quotations (in red) of some of the deceptive and malicious statements written and largely publicized by the Commission's staff.

1. Staff's unawareness of the development: *"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". (June 20, 86)*

UNTRUE. [several years before 1993 the Commission was aware of the development through articles in L.A. Times, Register, Daily Pilot newspapers in 1987, 1988, 1989, 1990, 1991, 1992, 1993 ..., communication at the November 3, 1991 workshop attended by the Commission's Deputy Director Susan Hansch, letter to the Coastal Commissioners and CEO Peter Douglas in June 12, 1991....).

2.a. False project descriptions: Exemple #1: *"- application of Marine Forests Society to place used automobile tires, plastic jugs, PVC pipe, plastic mesh, nylon rope, styrofoam, and variety of other, man-made materials in the ocean for conducting artificial, marine habitat research on 10 acre, subtidal site offshore Newport Beach, Orange County-" (November 1996).*

MALICIOUS.

(Descriptions of the MFS's project by the Commission's staff have always been deceptive and derogatory. Not one of their various descriptions has ever mentioned the unique and most significant feature of the project which is the mussel development and its aquaculture. However, the MFS official CDP Application E-95-5 registered in August 03, 1998 said: "Project Description: Experimental site for the creation of marine habitats by means of seaweed and shellfish aquaculture").

2.b. False project descriptions: Exemple #2:

"2.1.4. Project Description

"2.1.4.1 Purpose

The MFS describes the purpose of its project as an attempt to demonstrate the technical feasibility and financial profitability of creating large-scale, artificial marine habitats with used tires and other, man-made materials, stating:

"[t]ires are a major component of solid waste generated through the world with some 28,500,000 used tires produced annually in California. Tire disposal is a major solid waste problem. The MFS project is intended to show how miscellaneous discarded materials and scrap tires can be formed into a productive reef. If the project is an economic success and technical success, the MFS has proposed that large portions of California's sandy bottoms may be used to create habitats composed of waste tires"

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The MFS specifies that tires while it is conducting aquacultural research, the project does not include the harvest of any aquacultural product for human consumption. However, the MFS permit application states that recreational divers may collect shellfish from the project site". (October 24, 1996)

COUNTERFEITED.

(The Commission's staff has counterfeited the MFS description for Application E-95-5 by assembling together and/or putting between quotation marks, separate sentences taken out of separate pages from a March 13, 1995 "Negative Declaration" that the City of Newport Beach had made for a different MFS project in a different location and which has been abandoned.

The citation between quotations marks is a make up. It does not belong to the MFS's August 3, 1995 Permit Application E-95-5 neither do other parts in the statement. The true project's description as written in E-95-5 Application (page 3, in bold character) is as follows: **"The development is an experimental site for the creation of marine habitats by means of seaweed and shellfish aquaculture"**.

The Commission staff's project description was made in imitation of the genuine MFS description with intention to denigrate and to deceive.

3.a. Newport Beach contaminated waters: *"The project is sited in an area of degraded water quality By attracting and congregating fish in this area, the MFS development increases the risk that recreational anglers may catch and consume fish contaminated with E.coli and other pathogens associated with the sewage outfall."* (October 24, 1996)

IDIOTIC.

(The Newport Beach area is a wellknown authorized place for fishing. The Bay is a natural fish habitat. Pilings, docks, piers and jetties attract fish. The MFS tiny development is not the cause of the attraction of fish in the Newport Beach waters. Moreover, water quality data from the O.C. Environmental Health Office (Ph: 714 667 3600) exist. These data show that at the Balboa pier (water sampling station # 215 near MFS site) the water bacteria level is in compliance with the "water contact (for swimmers) and shellfish standard" outside of rainfall events, a proof of the no-impact of the 6 mile-distant sewage outfall.

3.b. Newport Beach contaminated waters: *"The MFS project site liesin an area in which mariculture of shellfish is prohibited due to high concentrations of E.coli bacteria and other contaminants"* (October 24, 1996).

UNTRUE.

(In the MFS site area, the mariculture of shellfish is limited but not prohibited. For example, The MFS is allowed to cultivate and sell mussel seeds, scallops, and abalones. The California Coastal Commissioners do not believe that the Newport Beach waters are degraded since they are granting a permit to United Anglers for the mariculture of Sea Bass).

4. Department of Health Services (CDHS): *".....the CDHS has stated that it could not issue a Shellfish Growing Area certificate for the project site under any conditions".* (March 21, 1997).

UNTRUE.

(The Commission's staff has misinterpreted the CDHS's referenced statement found in a June 22, 1995 CDHS letter to MFS. Actually, the Department of Health Services is studying the conditions in which they could or could not issue a Shellfish Growing

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Area certificate for the MFS's project area. The result of this study will be known before the end of April 1997 (DHS. Don Gonsi Ph: 510 540 3600).

5. The aquaculture project: *the project constitutes "fill" within the meaning of Coastal Act section 30108.2. (a) The diking, filling, or dredging of open waters,.....*

section 17 defines "Aquaculture" in the following manner:

"Aquaculture" means that form of agriculture devoted to the propagation, cultivation, maintenance, and harvesting of aquatic plants and animals(Emphasis added).

The MFS project does not therefore qualify as aquaculture under section 17....

.....
Accordingly, the purpose of the MFS project qualifies as an allowable fill under Coastal act section 30233 (a) (8).

Therefore The MFS project is allowable only if there are no feasible less environmentally damaging alternatives (March 21, 1997)

IDIOTIC REASONING.

(The MFS project is not a "fill". It is an aquaculture research project which, even without the "Selfish Growing Certificate", is allowed by the DHS to cultivate and sell mussel seeds, scallops, abalone, fish etc. ... (DHS. Ph: 510 540 3600). Falsely, the Commission's staff allege the project's aquaculture-non-qualification in order to impose a classification of the project as "fill" and to enforce the alternatives of using quarry rock or concrete blocks of supposedly less damaging effects in spite of the fact that the 10 year-old MFS project has never shown any damaging effect and consequently does not need this alternative.

6. Alternative feasibility: *"...alternatives that meet the objectives of the Marine Forests Society project currently exist." (October 24, 1996).*

UNTRUE.

(no alternatives to a "mussel habitat & aquaculture" research project currently exist. The MFS project is unique in the world. The quarry rock or concrete block alternative do not meet the objectives of the MFS.

7. Recommended quarry rock and concrete blocks: *"the Commission has granted numerous approvals for artificial reef projects using materials that do not contain toxic substances". (March, 1997).*

UNTRUE.

(the Commission has effectively granted numerous approvals for the use of quarry rock and concrete blocks which do contain potentially toxic substances such as wrought metals, calcium oxide, arsenate, etc. For using only 1,500 tires, the scrupulous MFS has made a long inquiry to prove the non toxicity of its material in a marine environment. On the other hand, the Department of Fish and Game which has submerged in the California sea 250,000 used tires, and hundreds of thousand tons of quarry rock and concrete blocks have not researched the potential toxicity of these materials. Surprisingly, the Commission's staff ignore this neglect).

8. Comparison of different materials and techniques: In repetitious lengthy statements the Commission's staff compare the MFS materials and techniques with other different materials and techniques which are said to have failed elsewhere in past experiments. As a rule, one should not compare what is not comparable. The

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MFS's innovative ways are unique. This is specially true for the inventive (patented) processes in which the MFS use tire and tube substrates. The wrong comparisons are obviously an intentional deception by the Commission's staff.
MALICIOUS.

9. Tire potential toxicity, Maryland policy, and Dr. Hartwell: *"Mr. Hartwell's opinion is qualified with the statement that 'the (Maryland) fisheries Division will not use scrap tires in Chesapeake Bay until more information on potential secondary effects is available'". (June 20, 1996)*

DISHONEST

(the statement makes believe that the use of scrap tires in the sea is not yet allowed in Maryland, which is false. In fact, the policy of the Maryland Fishery Division has been to delay a decision for allowing the use of tires in the shallow and closed waters of Chesapeake Bay but to allow it in open sea. The latter applies to the MFS which works in open sea. In the referenced citation the Commission's staff left off an essential information by Dr. Hartwell: "scrap tires are deployed on the ocean side of the Delmarva peninsula however").

10. Toxic substance release: *"...the tires used release toxic substances into the marine environment" (October 24, 1996).*

UNTRUE.

(all scientific studies have concluded that the tire leachate released during approximately 60 days into a marine environment is not toxic. Without any doubt, the 1994 study of Ecotoxicologist Dr. Hartwell allows the conclusion that the Newport Beach tires which have been submerged for 3-4 years release zero leachate into the marine environment. After a few weeks of immersion the tires have become inert).

11. Toxicity of tire leachate on animals or plants: *"... in the Maryland study, rainbow trout are killed (by tire leachate) but flathead minnows and Daphnia are unaffected (March 21, 1997).*

DECEPTIVE

[the Commission's staff did hide the reported fact that in the Maryland laboratory test (1) the tire leachate used was 660 times more concentrated than the tire leachate occurring in a fresh water open field, and (2) the same 660 times leachate concentration did not affect rainbow trout in water salinity of 25 ppt which is a salinity significantly below the sea salinity 34 ppt].

12. Potential bioaccumulation: *"Toxic compounds released from the tires may accumulate in these organisms (fish), increasing the potential for toxins to be passed up the food chain". (October 24, 1996).*

UNTRUE.

(with the MFS tires of Newport Beach, there is no leachate release to cause an accumulation. Zero plus zero makes zero).

13. Substrates' stability: *"... none of the materials used in the project are dense enough to remain in positioned during strong winter storm". (March 21, 1997)*

"... most of the identified materials are not heavy enough to remain on the ocean floor without being anchored.....(june 20, 1996).

UNTRUE.

(It is a fact that in 10 years no winter storms have dislodged the substrates specially

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invented for high sea development. All materials are anchored by rope or by sand. The sand-anchored tires have been given a U.S. Patent in December 6, 1994).

14. Sediment transport: *"The existing development is located within the littoral zone(June 20, 1996).*

UNTRUE.

(The Nov. 7, 1996 letter of Coastal engineer Skelly reports that the development is not within the littoral Zone).

15. Beach erosion: *"The existing MFS development has likely contributed to and exacerbated the existing beach erosion in the project area" (October 24, 1996).*

MALICIOUS.

("This is absolutely wrong" wrote and underlined Coastal engineer Skelly in a November 7, 1996 protest letter).

16. California Regional Water Quality Control Board-Santa Ana Region (RWQCB): *"The RCWCB staff does not recommend approval of the existing MFS development". (March 1997).*

DECEPTIVE.

(In a September 28, 1996 letter to the Commission's Deputy director Susan Hansch, RCWCB Environmental Program Manager Joanne Schneider wrote: "We wish to clarify that while we cannot support the placement of additional tire-ribbons at the experimental site, we do not suggest the removal of the tire-ribbons already in place.". This seems quite an approval of the existing development).

17. Other Agencies: In recommending the denial of a permit for Application E-95-5 the Commission's staff repeatedly quoted adverse comments made by other agencies. These adverse comments did not apply to Application E-95-5 but to a larger project which was abandoned. The existing small experimental project would have received more positive comments. For example, the RWQCB agency has opposed the big project but did not oppose the small project. Other agencies could have acted similarly if the small project had been presented to them. A small experimental project is more easily approved than a full scale development.

MALICIOUS.

18. Nautilus Farms Inc.: Said to be a "MFS Related Project". *"The Nautilus Farms Tire Reef project proposal consists of the construction of a scrap tire reef consisting of three million tires. (March 21, 1997).*

UNTRUE.

(MFS was never involved in this project).

19. Development prior Permit Application: *"The MFS knowingly chose not to pursue regulatory approval from the Coastal Commission" (March 21, 1997).*

UNTRUE.

(The MFS President was advised by the CDFG aquaculture coordinator not to request a Coastal Development Permit because it only concerned an experiment which would not "modify water use in the coastal zone" accordingly to "California Coastal Act of 1976, Questions and Answers, by California Coastal Commission:").

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20.a. Limited Harbor Permit: *"The scope of the harbor permit is limited to a specific project which does not include the subject development". (June 20, 1996).*
UNTRUE.

(On March 27, 1995, the City of Newport Beach Council granted a Harbor permit which does include the subject development as one of the two parcels authorized for development).

20.b. Compliance with the Harbor Permit: *"The MFS has failed to comply with the conditions of the City Harbor Permit which require both a financial security bond or letter of credit" (March 21, 1997)*

DECEPTIVE.

(The conditions of the March 27, 1995 Harbor Permit were written for the approval of the construction of a 30,000 tire demonstration marine habitat project funded by the California Integrated Waste Management Board (CIWMB). The CIWMB state program was cancelled and the 30,000 tire project was never realized. Actually, the City does not require from the MFS a financial security for the 1,500 tires placed before March 27, 1997 with the authorization of the City Council.).

21. The recommendations' basis: *"Reference citations and in-depth analysis are included" (October 24, 1996, March 21, 1997).*

PREPOSTEROUS.

(No comment)

.....

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Presented to the Commission
on April 9, 1997

UNACCEPTABLE RECOMMENDATIONS
from
the Commission's staff

The various recommendations written by the Commission's staff for the Marine Forests Society's project could not possibly be accepted by the Commissioners themselves because of several violations of existing regulations.

A. Violation of the Common Law.

The staff's recommendations are fraudulent because of being "an intentional deception to cause the loss of a property" in this case, the loss of a research program and experimental prototype.

B. Violation of the California Coastal Act of 1976. Art. 2.5, Section 30320

The requirement of the law for "fundamental fairness" is contradicted by the false statements, counterfeited citations, mutilated quotations, idiotic reasoning, and lies contained in the recommendations written by the Commission's staff (see following pages).

C. Violation of the Coastal Commission Administrative Regulations

Violation of Art. 6, Section 13057. "The executive director shall prepare and reproduce a summary of each application The summary shall present a description of the significant features of the proposed development, using the applicant's words wherever appropriate". (underlining added).

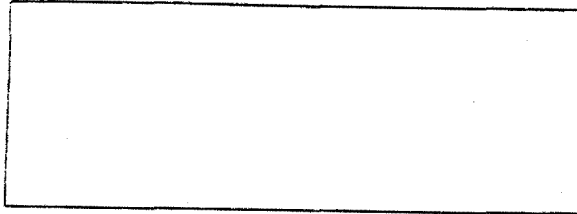
The most significant feature of the project, which is **the mussel development**, has always been hidden by the executive director. In the various summaries of the project by the executive director there is not a word about the "mussel habitat & aquaculture" feature which give the project all its originality and value. In a deceptive manner, the minor feature of the project, the use of a 1,500 tire bottom substrate, is repetitively given first place.

Violation of Art. 12, Section 13073. Staff Analysis. "If further evidence is taken or received by the executive director all affected parties shall be given a reasonable opportunity to respond prior to the deadline for preparation and mailing of the staff recommendation". (underlining added).

The opportunity to answer to a much harmful "evidence" presented by the executive director has not been given to the MFS. A so-called "D.I.V.E.R.S. Club" has addressed to the executive director a petition for permit denial. This petition was hidden from the Marine Forests Society (MFS) during one year and a half of weekly conversations between the staff and MFS. The "evidence" was only uncovered when receiving the Staff's mailing 10 days before the scheduled hearing of November 13, 1996. Said petition (which was not made for the present application E-95-5) was given 8 pages in the staff recommendations. It is a malicious petition organised with the state bureaucracy's support by an irresponsible dive club president. To day this dive club has another president and a different opinion of the MFS's project.

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MARINE FORESTS SOCIETY



California Coastal Commission
Mr. Peter Douglas, CEO
45 Fremont St., Suite 2000
San Francisco, Ca. 94105-2219

copy

January 7, 1997

RE: Permit Application E-95-5. The staff reports.

Mr. Douglas,

This letter is a follow up to our November 26, 1996 letter which asked for a second analysis of Permit Application E-95-5. As solid reasons for our request we indicated some important errors your staff made in reporting on the project. The errors that we highlighted among others are:

1. The changing of our description of the project.
2. The hiding of key acknowledgements by both experts, ecotoxicologist Hartwell and coastal engineer Skelly, that the project has no measurable adverse effects on the environment.

These errors (1) and (2) are well substantiated in our 11.26.96 letter. And, these errors show how gravely your staff have violated the "*principles of fundamental fairness*" established by the California Coastal Act of 1976, Section 30320.

We ask you, Mr. Douglas, to agree with us that a second analysis is due in order that the Coastal Commissioners be objectively informed.

Also, in our November 26, 1996 letter we requested a few months delay for the hearing by the Coastal Commissioners. We now see that we need a delay till April 1997. We need this delay to present our project to more environmental and scientific authorities to enlarge understanding and support.

We ask you to recognize that the delay for the hearing is necessary to undo the damage done by the publicity that your staff gave to their faulty reports.

Sincerely,

Rodolphe Streichenberger

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

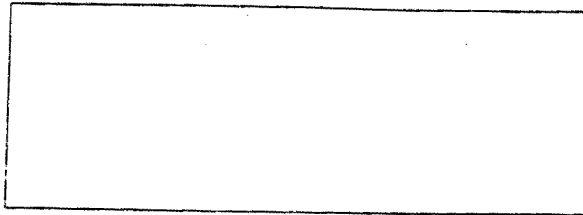
President & Founder
Rodolphe Streichenberger

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

Employer I.D. Number
33-0204342

Federal Tax Exemption
Section 501 (C) (3)

MARINE FORESTS SOCIETY



California Coastal Commission
Mr. Peter Douglas, CEO
45 fremont St. , Suite 2000
San Francisco, Ca 94105-2219

copy

February 5, 1997

Re: REQUEST FOR FAIRNESS.

Mr. Douglas,

We have not yet received your answer to our Nov. 26, 96 and Jan. 07, 97 requests for a second analysis of Permit Application E-95-5.

We asked for the annulment of the report on our Permit Application because the report violates the "*principles of fundamental fairness*" established by the California Coastal Act of 1976, Section 30320.

In a January 21, 1997 letter the CCC's Deputy Director, Susan M. Hansch, has ignored our request. Ms. Hansch misinterpreted the letters addressed to you as if she believed that our claim was about submitting new information for eventual consideration.

The deceptive report that your staff has made up in order to cause the loss of our marine habitat prototype must be rejected. Our demand for fairness is firm. It is the only choice we have to preserve a precious innovation for the betterment of coastal marine resources.

We ask you Mr. Douglas, to recognize the misconduct of your staff, punish it, and correct it.

Sincerely,

R. /

Rodolphe Streichenberger, President
Marine Forests Society

Board of Directors

Roy Lay, Chairman
Richard Higbie
David Kulcinski
Anthony Peresiete
Dale Sarver
Rodolphe Streichenberger

President & Founder

Rodolphe Streichenberger

Honorary Directors

Professor Wheeler J. North
Honorable Bruce W. Sumner

Employer I.D. Number

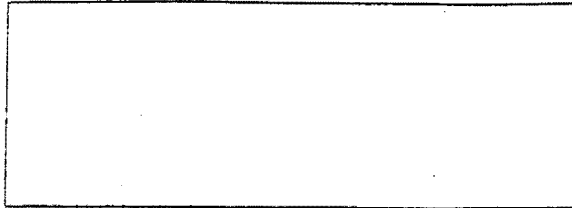
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Federal Tax Exemption

Section 501 (C) (3)

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MARINE FORESTS SOCIETY



(copy)

February 20, 1997

TO THE CALIFORNIA COASTAL COMMISSIONERS

THE COASTAL PERMIT APPLICATION NO. E-95-5
FOR
THE NEWPORT BEACH MARINE HABITAT PROTOTYPE

Commissioners,

In the October 24, 1996 report addressed to the California Coastal Commissioners and to thirty five influential parties, the Commission's staff have recommended the denial of Permit Application No. E-95-5 for the Marine Habitat Prototype of Newport Beach, California.

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

The report is a fraud.

Entirely built on false statements, distorted quotations, lies, and idiotic reasoning the report is an intentional deception to cause the loss of a research program and experimental prototype.

President & Founder
Rodolphe Streichenberger

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

It seems that the report was made in order to destroy an innovative technique which breaks through the unsatisfactory (quarry rock) technique recommended by your staff, and making money for your staff.

Employer I.D. Number
33-0204342

Our 11.26.96, 01.07.97, and 02.05.97 requests to the Commission's CEO Peter Douglas for an annulment of the false report were in vain.

Federal Tax Exemption
Section 501 (C) (3)

If allowed, that kind of abuse of power by a few state agents will make all private and public efforts for the conservation of marine resources in California doomed to fail.

We firmly demand honesty on the part of the Commission's staff, out of respect for the "principles of fundamental fairness" established by the California Coastal Act of 1976, Section 30320.

Sincerely,

Rodolphe Streichenberger, President
Marine Forests Society

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Encl.: 1

*copy
for information
to Dick Hippie*

MARINE FORESTS SOCIETY

FROM: Rodolphe Streichenberger

TO: Susan Hansch, Deputy Director

Marine Forests Society
P.O. Box 5843
Balboa Island, Ca 92662, USA
Phone: USA 714 721 900
Fax: USA 714 721 9509
E: usmfs@marinehabitat.org
URL: <http://www.marinehabitat.org>

California coastal Commission
45 Fromont Suite 2000
S. Francisco, Ca 94105-2219
Phone: 415 904 52 48
Fax : 415 904 5400

Date: Sept. 05, 1997 - Pages including this cover: 1

MESSAGE

Mrs. Hansch

Your "Adopted Findings" report of the April 9, 1997 Commission Meeting

The report is wrong because (1) it reports exclusively the before-meeting findings of your staff, (2) it does not report all the decisions of the Commissioners, and (3) it does not report the findings of fact and reasoning supporting the decision of the Commissioners.

So, the report violates Art. 13096 of the Commission Administrative Rules.

The argument of your staff member, Mr. Kern, is that the action taken (permit denial) is deemed to have been taken on the basis of the reasons set forth in the staff recommendation. This argument is false. Indeed, Art. 13092 of the Commission Administrative Rules says as the above ...only.... if the action is "consistent with the staff recommendation" and it is not the case. Commissioners did not deny the permit in consistence with the staff recommendation which was "on the grounds that feasible alternatives and mitigation measures are available....." (page 5, 1.0 of the March 21, 1997 staff recommendation). In the registered tape of the meeting is the proof that Commissioners denied the permit for other reasons which are certainly not their will to adopt the staff recommended alternatives of quarry rocks and rubble.

In brief, the report violates both Articles 13092 and 13096 of the Commission Administrative Rules.

Moreover, the report contains two documents that we can prove deceptive. These documents are (1) the D.I.V.E.R.S April 19, 1995 Petition fabricated by Kim Wood, and (2) the Susan Hansch April 4, 1997 MEMORANDUM.

Please Mrs Hansch, discuss this matter with CEO Peter Douglas and call me after your discussion, as you promised it to me.

I want to solve this serious problem with you.

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MARINE FORESTS SOCIETY

Rusty Areiras, Chairman
California Coastal Commission
45 fremont Street, Suite 2000. San Francisco, Ca 94105-2219

June 23, 1998

Mr. Chairman,

High Marine Habitats - MARINE FORESTS CDP (Application No. E-95-5).

On April 9, 1997, the California Coastal Commission directed the Executive Director Peter Douglas to organize a workshop on the Marine Forests Society's new concept of planting seaweed and shellfish for the replacement of lost marine habitats.

Surprisingly, your staff did not mention the Commission's decision in its report of the April 9, 1997 Public Hearing, as it should have been.

Also, the Executive Director Peter Douglas did not organize the workshop, as it was ordered.

Eight years ago your staff began to refuse to consider our proposed alternative to the use of the quarry rock of Catalina Island for the restoration of the S. Onofre Kelp Bed. And one year has passed since the Commission in vain ordered a workshop to evaluate the environmental, technical, and economical advantages of our High Marine Habitats (HMHs) vs quarry rock *.

If today the most promising innovation for the restoration of coastal marine resources is not applied in California, it is because of the California Coastal Commission's Executive Director Peter Douglas and his staff.

We are respectfully requesting a fair consideration of our proposed alternative, which is a legal and moral obligation yet to be fulfilled.

Sincerely,

R.I.

Rodolphe Streichenberger, President

* Since 1987, the concept and techniques of high marine habitats (HMHs) made of seaweed and shellfish have been amply presented to the Scientific Community, the California State Agencies, and the Public. The California Coastal Commission is the only governmental agency opposing the grant of a Coastal Development Permit (CDP) to the Marine Forests Society's experimental site, in Newport Beach, Ca.

CC: California Coastal Commissioners.
California Coastal Commission, Executive Director Peter Douglas.
California State Lands Agency, Mary Griggs.
South California Edison, Bob Grove

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MARINE FORESTS SOCIETY

Ms Sara Wan, Chairwoman
California Coastal Commission

July 29, 1999

Chairwoman Sara Wan,

On April 9, 1997 the California Coastal Commission (CCC) directed its Executive Director, Peter Douglas, to hold a workshop on the Marine Forests project. More than two years later the decision of the Commissioners has not been executed.

In the attached letter to the CCC's Deputy Director, Susan Hansch, I explain how the non-execution of the Marine Forests workshop was her omission.

Today, the project of the Marine Forests Society (MFS) remains unpermitted and the Commissioners do not have the findings of a workshop which could have lead to the granting of the MFS permit.

In a second attached letter to Ms. Hansch, I suggest the conditions under which the MFS workshop could be organized and satisfactorily completed. I hope the Commission will find these conditions sound.

I expect that the California Coastal Commissioners will soon recognize the reality of the very serious wrongdoings by their employees, as follows:

For many years the CCC's staff has sabotaged the MFS permit application; then they have sabotaged the MFS workshop whose purpose was to show that the permit could be granted.

The sabotage of the MFS project by the CCC's staff is a scheme to prevent the development of the new MFS technique which is able to successfully compete with the CCC's projects of rock-made artificial reefs.

Rock-made artificial reefs are environmentally and economically counter-productive. The CCC's staff is using this defective technique to extort mitigation contracts from the Edison Company.

The initial cause of the present wrongdoings by the CCC's employees is the policy of the CCC Executive Director, Peter Douglas, who mistakenly extended the regulatory function of the California Coastal Commission to the business of environmental mitigation.

We respectfully ask the California Coastal Commissioners for terminating an ill-conceived policy which leads to environmental failure, state agents misconduct, and violation of the law.

Sincerely,

Rodolphe Streichenberger

Rodolphe Streichenberger
President, Marine Forests Society

Encl.: 2 Documents

CC: Ms. Susan Hansch, Dr. John Dixon

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Board of Directors

Roy Lay, Chairman
Richard Higbie
David Kulcinski
Anthony Peresiete
Sarver
Ruphe 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)

MARINE FORESTS SOCIETY
To
CALIFORNIA COASTAL COMMISSION

August 11, 1999

COPY for Executive Director Peter Douglas

WILL YOU CONTINUE ?

Commissioners,

On April 9, 1997, you ordered the Executive Director of your Commission to organize a workshop with the Marine Forests Society in order to study and evaluate the merits of the research, experimentation, and development of our Society.

Today, August 11, 1999, your staff held a short Marine Forests Workshop without the participation of the Marine Foresters. Your staff has assembled and presented to you a written and visual documentation that we wish would have been different. The study and debate that we requested in 1997 did not occur.

Hopefully, we shall continue with success our research and experiments for the development of new ideas and techniques for the replacement of lost marine habitats.

Also, we shall continue to express our criticism of the present policy which for years has prohibited the people of California to act together to restore or replace lost marine habitats.

Hopefully, the California Coastal Commission will not continue to

*monopolize the marine mitigation business
extort contracts from the industry
design mitigation measures*

*impose the construction of artificial reefs
prohibit alternatives to artificial reefs*

*unpermit the research of the Marine Forests Society
permit S.C. Edison to not-mitigate for damaging the environment*

We would like to see the California Coastal Commission change its policy for the restoration of lost marine habitats, in the interest of all.

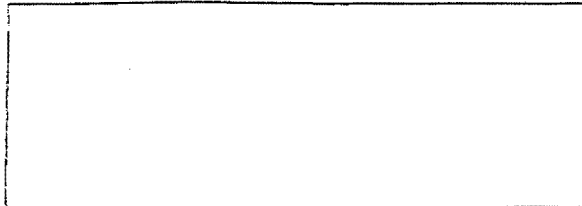
Respectfully,

Rodolphe Streichenberger

www.marinehabitat.org
P.O. Box 5843 Balboa Island, California 92662
Tel. 949 721 9006

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MARINE FORESTS SOCIETY



Ms Sara Wan, Chairwoman
California Coastal Commission
45 Fromont Suite 2000
S. Francisco, Ca 94105-2219

Copy for information

October 14, 1999

Chairwoman Sara Wan,

Following my letter of July 29, 1999 and the Workshop that was held in Los Angeles on August 11, 1999 which you chaired, you advised the Executive Director, Peter Douglas, to have our experimental marine structures offshore from Newport Beach removed from the water.

I am convinced that your judgment was adversely influenced by false information.

It is the "Quarry Rock Lobby", namely your employee Susan Hansch and the employee of the Department of Fish and Game Dennis Bedford who are responsible for the false information. For years, these governmental agents conspired against the Marine Forests' experimental program, because it competes with their own quarry rock program.

In consideration of the present unacceptable situation I respectfully ask the Coastal Commissioners to decide on (1) an investigation of the alleged conspiracy headed by Susan Hansch and Dennis Bedford and (2) a public hearing of the Marine Forests Society and its experimental work offshore from Newport Beach.

I am sure that the California Coastal Commissioners and public want to know the truth about the harmful conduct of a few governmental agents and about our beneficial research for the creation of new marine habitats.

Sincerely,

Rodolphe Streichenberger

Rodolphe Streichenberger

CC: Coastal Commissioners
Executive Director Peter Douglas

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