

CALIFORNIA OCEAN  
PROTECTION COUNCIL

Staff Recommendation  
June 10, 2005

**California Derelict Fishing Gear Removal Pilot Project**

Developed By: Sheila Semans

**RECOMMENDED ACTION:** Consideration of the California Derelict Fishing Gear Removal Pilot Project, and possible: 1) determination that it is a high priority project, and 2) authorization for the Council's Secretary to take actions needed to provide for its planning or implementation.

**OCEAN or COASTAL LOCATION:** Derelict fishing gear is likely found in the water along the entire coast of California. However this pilot project will concentrate on four coastal regions: in Humboldt County, from Humboldt Bay to Trinidad Head; in Monterey County, from Elkhorn Slough to Point Lobos; in San Luis Obispo County, from Point Estero to Point Buchon; and in Los Angeles County, at Santa Catalina Island.

**AGENCY OR ENTITY RECOMMENDING PROJECT:** State Coastal Conservancy; Regents of the University of California, Davis Campus, Wildlife Heath Center, SeaDoc Society

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**EXHIBITS**

Exhibit 1: Project Location and Site Maps

Exhibit 2: Letters of Support

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**RESOLUTION:**

“The Ocean Protection Council finds pursuant to Sections 35600 *et seq.* of the Public Resources Code that the California Derelict Fishing Gear Removal Pilot Project, as herein described, is of high priority for ocean conservation and authorizes the Secretary to take actions necessary for its planning or implementation, including the allocation of up to \$300,000 of ocean protection funds reserved by the Coastal Conservancy for use in this project”

**PROJECT DESCRIPTION:**

Derelict fishing gear is defined as lost or abandoned fishing nets, lines, pots, and other commercial and recreational fishing gear that sits on the seafloor, gets caught on rocky reefs, or floats in the water column. The majority of this gear does not decompose in seawater and can remain in the marine environment for years. Derelict gear impacts the marine environment in several ways: it can continue to "catch" marine animals, which become enmeshed or trapped; it

## DERELICT FISHING GEAR REMOVAL PILOT PROJECT

can damage the habitat upon which it becomes entangled or upon which it rests; it can pose an underwater hazard for boaters, entangling boat propellers and anchors; and it can similarly endanger humans, especially divers. It is also a visual blight on the seafloor, diminishing the natural aesthetic quality of the seafloor and rocky reef habitat.

Staff recommends that the Ocean Protection Council find that the California Derelict Fishing Gear Removal Pilot Project is of high priority and authorize the Secretary to the Council to take actions necessary to provide for its planning and implementation. A proposed \$300,000 grant from the Coastal Conservancy to the Regents of the University of California, Davis Campus, Wildlife Health Center, SeaDoc Society, together with \$70,000 in federal and private funds, would provide initial funding of a pilot project for the removal of derelict fishing gear off the coast of California. The SeaDoc Society is a university-based marine science program focused on improving the health of marine wildlife and ecosystems in California and Washington State. For the proposed project, the SeaDoc Society will target portions of four coastal counties in California:

**Humboldt County**, from Humboldt Bay to Trinidad Head  
**Monterey County**, from Elkhorn Slough to Point Lobos  
**San Luis Obispo County**, from Point Estero to Point Buchon  
**Los Angeles County**, Santa Catalina Island

These four coastal areas have been chosen for initial investigation because they offer a wide range of habitats, lost gear circumstances, and weather conditions that will fully test the program. The main objective of this pilot project will be to better determine the extent of the problem off the coast of California, and if warranted, position the project for long-term operation by developing, implementing, testing and refining all facets of the program, including:

- Field-testing standard operating procedures for gear location and removal operations;
- Training personnel, divers and contractors;
- Creating outreach materials, a phone-in hotline and a website;
- Informing and involving a broad range of stakeholders;
- Identifying sources of future funding for long-term support;
- Determining appropriate permission/authorization/approvals needed for future work.

The following types of fishing gear are used commonly in California marine waters and are therefore the types of gear most likely to be encountered as derelict (including gear once used heavily but now either severely limited or no longer allowed in California):

**Gill nets:** Gill nets are curtain-like nets that are suspended in the water with mesh openings large enough to permit only the heads of the targeted species to pass through. Gill nets are now largely restricted for use in deeper water 1 –10 miles from shore, and prohibited for use north of Point Reyes, Marin County. Gill nets are primarily used to catch halibut, herring, nearshore finfish and groundfish (largely historic), sheep crabs, sharks, salmon, and herring.

**Purse seine nets:** Purse seines are nets that are cast in a circle around a school of fish, and then drawn closed at the bottom to prevent escape. Purse seine nets are used to catch coastal pelagic

## DERELICT FISHING GEAR REMOVAL PILOT PROJECT

species like sardines, anchovies, squid, mackerel, some tuna species, white croaker, perch, smelt, and squid.

**Trawl nets:** Trawl nets are nets or mesh bags that are dragged at various depths or along the ocean bottom. They are used to catch halibut, ocean and bay shrimp, nearshore finfish and groundfish, and sea cucumbers. Commercial use of trawl nets is prohibited within 3 miles of shore in California.

**Long lines:** Long lines are comprised of a long main line to which are attached a large number of hooks. They are used for catching salmon, nearshore finfish and groundfish, sharks, tuna, dorado, and striped bass.

**Pots and traps:** Various types of pots, traps and baited hoop nets are used in both the commercial and recreational fisheries to catch shrimp, lobster, crabs, and nearshore finfish.

**Recreational fishing gear:** Lost or abandoned gear from recreational rod and reel and pot/trap fisheries can consist of lines, weights, hooks, flashers, downrigger wire, jugs, and pots.

The presence of derelict gear will be located by conducting sidescan sonar surveys, using remotely operated underwater cameras, initiating SCUBA surveys, or through the opportunistic locating and reporting of lost gear by those who encounter it in the marine environment. Reasonable efforts will be made to coordinate habitat mapping with other efforts going on in the state. Derelict gear will be removed in depths no greater than 100ft, and in such a way as to minimize disturbance of the marine environment. If the process of removing the gear is going to damage the habitat more than the gear itself, the derelict gear will be modified in place (e.g. nets can be cut at their base or bundled in place, or pots/traps can be secured in an open position). These decisions about gear removal and impact to local habitats will be made by the derelict gear removal team, in consultation with local state and federal agency partners knowledgeable about the local habitats. Extensive data on gear, habitats, and marine resources will be kept on all activities of the program, posted on a public website, and distributed to management agencies when warranted.

This proposed project would be a no-fault program that encourages ocean users to report gear without the threat of fines or retribution. Best efforts will be made to return gear that is clearly labeled with an owner name. Gear that cannot be repatriated will be either recycled or disposed.

All divers contracted to perform gear removal will hold commercial diving certification. Washington State's gear removal program has become a source of offseason employment for commercial urchins and sea cucumber divers. Because these divers are already very familiar with the local habitats, California's program will look to employ commercial fisherman in the same way.

The proposed project has benefits to Californians and visitors alike. Anyone who utilizes nearshore waters for boating, fishing and diving will benefit through increased safety provided by removal of underwater hazards. Commercial and recreational fishers will benefit through the potential repatriation of lost gear. Also, non-fishing industries (e.g. the U.S. military, telecommunications companies) will benefit from the removal of gear that entangles equipment and structures or prevents its placement underwater. The state resources agencies will benefit by having a program that reduces the loss of commercially and recreationally valuable marine

## DERELICT FISHING GEAR REMOVAL PILOT PROJECT

organisms from state waters, and provides a higher level of protection for threatened and endangered species. But ultimately, it is the living marine resources and unique underwater habitats of California that will benefit from the removal of derelict gear that injures and kills animals or damages habitats.

### PROJECT FINANCING

#### Possible Funding Sources:

Coastal Conservancy	\$300,000
Laurel Foundation	20,000
NOAA	<u>50,000</u>
<b>Total Project Cost</b>	<b>\$370,000</b>

On May 18, 2005, the State Coastal Conservancy reserved up to \$5,000,000 of its available funds to be expended in concert with the Council for programs and projects that the Council finds to be of high priority, and that are also consistent with the Coastal Conservancy's project criteria, priorities, and funding sources. Conservancy staff is recommending a grant of \$300,000 to the SeaDoc Society for consideration at the Conservancy's next public meeting on June 16. The Laurel Foundation awarded two grants, totaling \$20,000, to the SeaDoc Society for this project, and NOAA has also committed funding for the project.

**CONSISTENCY WITH CALIFORNIA'S OCEAN ACTION STRATEGY:** The proposed project is consistent with action item 13 in that it addresses restoration of threatened habitats, water quality and other impacts from development (see Action Strategy pg. 32). Furthermore, the proposed project seeks to maximize funding opportunities for projects that restore important intertidal and subtidal habitats (*id.* pg. 35).

### CONSISTENCY WITH OCEAN PROTECTION COUNCIL'S INTERIM PROJECT SELECTION CRITERIA & GUIDELINES:

#### Mandatory Criteria

- 1. Furthers the following statutory purposes and policies of the Ocean Protection Act:**
  - **Improves management, conservation, and protection of coastal waters and ocean ecosystems:** Derelict gear left in the marine environment can continue to "catch" marine animals, including endangered species, and/or damage the habitat upon which they rely for survival. By removing derelict gear, the proposed project seeks to eliminate an ongoing threat to marine life, thereby improving the health and diversity of important marine ecosystems.
  - **Encourages those activities and uses that are consistent with sustainable, long-term protection and conservation of ocean and coastal resources:** Working with fishers and other ocean users to obtain information on lost gear through a no-fault reporting system will result in faster gear retrieval and fewer impacts to the marine environment.

## DERELICT FISHING GEAR REMOVAL PILOT PROJECT

- **Promotes aesthetic, educational and recreational uses of the coast and ocean:** By removing lost nets, pots, traps and long lines, and any animals caught in them, the proposed project will improve the aesthetic quality of marine habitats for recreational divers, as well as improve safety conditions. Derelict gear can also become an underwater hazard for boaters, entangling boat propellers and anchors, or can endanger humans, especially recreational and commercial divers.
  - **Improves monitoring, data gathering, and advances in scientific understanding of the ocean and coastal environment:** All data on underwater habitats gathered during the operation of this program will be made available through a public website, unless considered confidential by resource agencies (e.g. discovery of new cultural artifacts). Any mapping needed to find lost gear will be carried out in coordination with other mapping efforts going on around the state to ensure the integration of data.
  - **Improves the health of fish and fosters sustainable fisheries in ocean and coastal waters:** Removing lost gear that continues to “fish” will cut down on the unintended take of commercially important species and allow for better run commercial fisheries.
  - **Helps to integrate and coordinate the state’s laws and institutions responsible for protecting and conserving ocean and coastal resources:** The main objective of this pilot project will be to better determine the extent of the problem off the coast of California, and if warranted, position the project for long-term operation by developing, implementing, testing and refining all facets of the program. This will require the involvement and cooperation of all the state and federal agencies responsible for ocean resource protection. The SeaDoc Society has formed strong relationships with gear removal programs in other states, and has already coordinated closely with the Department of Fish and Game, the California Coastal Commission, the National Marine Sanctuaries, and many other agencies with management responsibilities in the marine environment.
  - **Helps to coordinate the collection and sharing of scientific data:** As stated above, all data collected during the operation of the pilot project will be shared with the appropriate agencies and/or institutions. Agency input and feedback will be especially critical for the formation of sound program protocols. Additionally, any underwater mapping needed to find lost gear will be carried out in coordination with other mapping efforts going on around the state to ensure data integration.
2. **Consistent with the purposes of the funding source:** See Project Financing Section above.
  3. **Has demonstrable support from the public:** The project is supported by state legislators, research institutions, non-governmental organizations, and federal and state government agencies. Letters of support are attached as Exhibit 2.
  4. **Relates directly to the ocean, coast, associated estuaries, and coastal-draining watersheds:** This project will take place entirely within California’s nearshore coastal waters out to a depth of 100 feet.
  5. **Has greater-than-local interest:** The citizens of California and the many tourists who visit the California coast to recreate (e.g. divers, boaters, surfers) will benefit from this project through the increased safety provided by the removal of underwater hazards. Commercial and recreational fishers will benefit through the potential repatriation of lost gear. Non-fishing industries (e.g. the U.S. military, telecommunications companies) will benefit from the removal of gear that entangles equipment and structures or prevents its placement

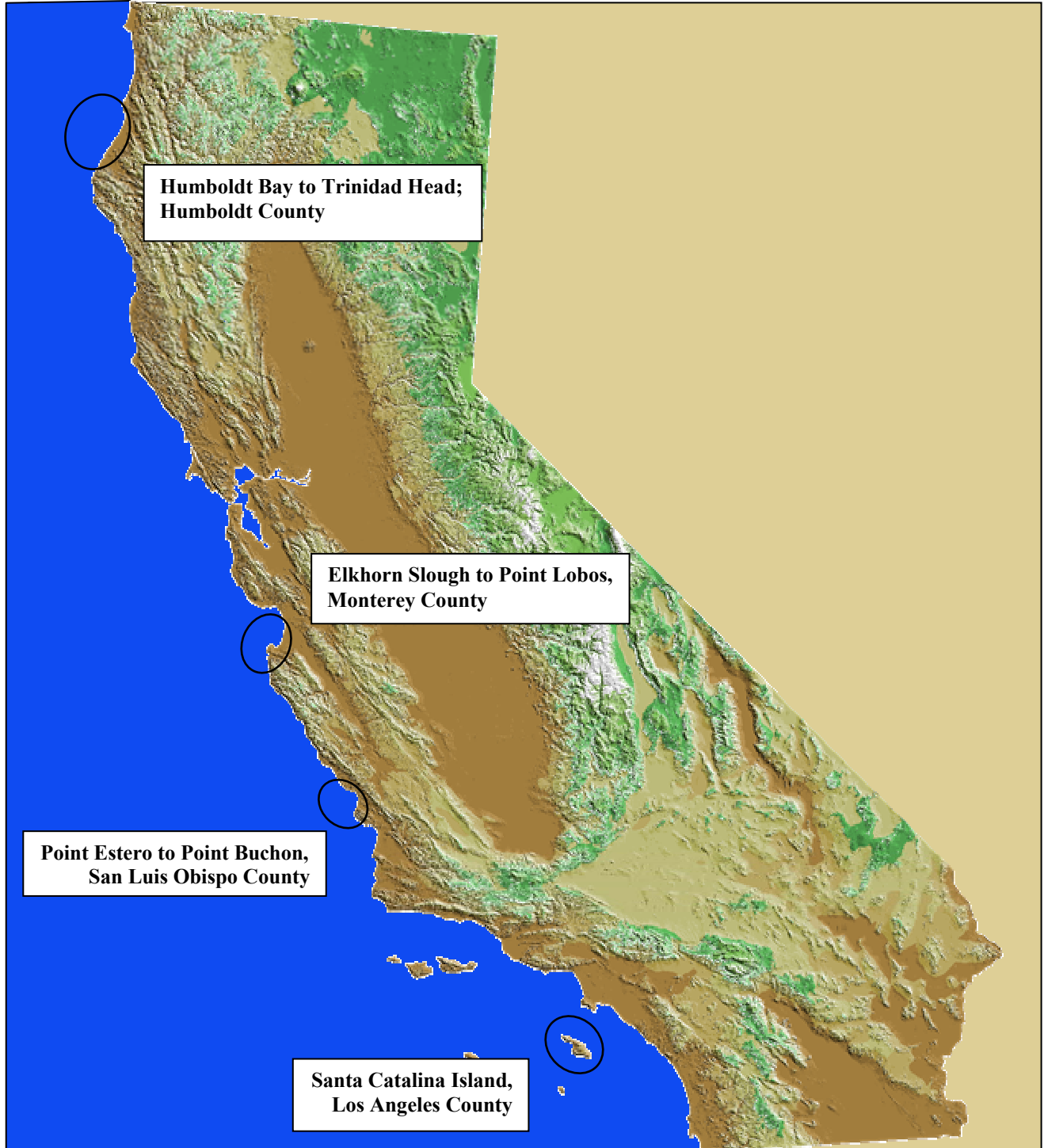
## DERELICT FISHING GEAR REMOVAL PILOT PROJECT

underwater, and state resources agencies will benefit by having a program that reduces the loss of commercially and recreationally valuable marine organisms from state waters, provides a higher level of protection for threatened and endangered species, and provides more information on critical coastal habitats.

### Additional Criteria

1. **Helps implement the California Ocean and Coastal Information, Research, and Outreach Strategy and other priorities of local, state or federal advisory groups, or scientific or policy reports, adopted by the council:** See Consistency with California's Ocean Action Strategy above.
2. **The project has an element of urgency (there is an immediate threat to a coastal/ ocean resource from development or natural or economic conditions, a pressing need, or a fleeting opportunity):** Derelict gear continues to "fish" passively even though abandoned. Removal of this gear increases the security and recovery of many of California's marine species.
3. **The project helps resolve more than one issue:** Gear is often lost in the marine environment when lines get cut by boat propellers or get dragged away by large vessels or strong currents. The proposed project will return any lost gear that is clearly labeled, thereby relieving the need to replace expensive gear. The proposed project therefore has potential economic as well as resource benefits.
4. **The project involves innovation (e.g. environmental or economic demonstration):** It may be necessary to locate lost gear through side scan sonar surveys, but at a frequency not commonly used in the marine environment for habitat mapping. This technology will provide much more detail about hard structures on the sea floor and highlight any other marine debris that may be of concern. The proposed project will also develop protocols for gear removal unique to a variety of marine ecosystems.
5. **The project is ready to implement (grantee or contractor will start and finish the project in a timely manner):** The SeaDoc Society has done a great deal of research on this problem in California and in other states with similar programs, and has made a compelling case for the need of this program. By talking to researchers, resource managers, commercial divers and others who frequent these nearshore environments, enough evidence has been produced to warrant a pilot investigation. By coordinating with gear removal programs already underway in other states, the SeaDoc Society has prepared a one year pilot program for California that is well thought-out and ready to be implemented.
6. **The project involves a combination of local, state, or federal agencies or is a public/private partnership:** The SeaDoc Society has worked closely with the Department of Fish and Game, the Coastal Commission, The State and Regional Water Boards, the State Lands Commission and the Department of Parks and Recreation on the state level, as well as the National Marine Sanctuaries and the US Army Corps of Engineers on the federal level for both programmatic support and in securing the appropriate permits. They also intend on employing off-season commercial divers to participate in gear removal operations.

Exhibit 1: Project Location Map. Circled areas indicate focus areas for the project, offshore to a maximum depth of 100 feet.



## Exhibit 2: Letters of Support

BARBARA BOXER  
CALIFORNIA

COMMERCE, SCIENCE,  
AND TRANSPORTATION  
ENVIRONMENT  
AND PUBLIC WORKS  
FOREIGN RELATIONS

### United States Senate

HART SENATE OFFICE BUILDING  
SUITE 112  
WASHINGTON, DC 20510-0505  
(202) 224-3553  
<http://boxer.senate.gov/contact>

June 3, 2005

SHAILA

The Honorable Douglas Bosco  
Chair, State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, California 94612

Dear Mr. Bosco:

I am writing to express my strong support for the grant proposal from the University of California, Davis Wildlife Health Center SeaDoc Society to fund the California Derelict Fishing Gear Removal Pilot Project. If awarded, this grant will allow experienced and certified divers to remove tons of derelict fishing gear from coastal regions in the counties of Humboldt, Monterey, San Luis Obispo and Los Angeles in a safe and environmentally-sensitive manner.

Derelict fishing gear, such as lost or abandoned commercial fishing nets, lines, pots, traps, and other recreational equipment, sits on the seafloor, gets caught on rocky reefs, or floats in the water column. This equipment has a negative impact the environment and can be dangerous to humans, as well as sea creatures. Such gear can "catch" marine animals, which become entangled or trapped; it can pose an underwater hazard for boaters, entangling propellers and anchors, and endangering divers; and it can also diminish the natural aesthetic quality of the seafloor and reef habitat.

The California Derelict Fishing Gear Removal Pilot Project is an important step in an effort to help restore ocean health. While this project benefits the citizens and economy of California, ultimately it is the living marine resources and unique underwater habitats of the Pacific Ocean that will benefit from the removal of derelict gear that injures and kills animals or enshrouds and damages habitat.

In advance, I thank you for your consideration of this request. If you or your staff have any questions, please contact my Deputy State Director, Stacey Lybeck, at (916) 448-2787.

Sincerely,

Barbara Boxer  
United States Senator

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JUN 06 2005

COASTAL CONSERVANCY  
OAKLAND, CALIF.

BB:sr1

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SUITE 240  
SAN FRANCISCO, CA 94111  
(415) 403-0100

312 NORTH SPRING STREET  
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LOS ANGELES, CA 90012  
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501 'I' STREET  
SUITE 7-600  
SACRAMENTO, CA 95814  
(916) 448-2787

1130 'O' STREET  
SUITE 2450  
FRESNO, CA 93721  
(559) 497-5109

600 'B' STREET  
SUITE 2240  
SAN DIEGO, CA 92101  
(619) 239-3884

201 NORTH 'E' STREET  
SUITE 210  
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**Website**  
<http://democrats.assembly.ca.gov/members/a08>

## Assembly California Legislature



**LOIS WOLK**  
ASSEMBLYMEMBER, EIGHTH DISTRICT

**Chair**  
Water, Parks and Wildlife  
**Committees**  
Budget  
Natural Resources  
Local Government  
**Subcommittee**  
Budget Subcommittee on  
Information Technology and Transportation  
**Select Committee**  
Water, Infrastructure and the Economy  
**Boards**  
California Public Library Construction  
and Renovation Board  
Wildlife Conservation Board

June 2, 2005

SHEILA

The Honorable Douglas Bosco  
Chair, State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

### RE: Support for California Derelict Fishing Gear Removal Pilot Project

Dear Mr. Bosco:

I am writing to express my strong support for the grant proposal from the UC Davis Wildlife Health Center SeaDoc Society to fund the *California Derelict Fishing Gear Removal Pilot Project*. This will employ experienced and certified divers to remove tons of gear from near-shore waters in a safe and environmentally sensitive manner.

Derelict fishing gear, such as lost or abandoned commercial fishing nets, lines, pots, traps, and other recreational gear, sits on the seafloor, gets caught on rocky reefs, or floats in the water column. This equipment has a negative impact to the environment and can be dangerous to humans and sea creatures alike. Such gear can continue to "catch" marine animals, which become entangled or trapped; it can pose an underwater hazard for boaters, entangling propellers and anchors, and endangering divers. Derelict fishing gear can also diminish the natural aesthetic quality of the seafloor and rocky reef habitat.

The pilot project will position the program for long-term operation within the State of California by developing, implementing, testing and refining all facets of the program. The work will initially be focused in the following four areas of the coast:

- Humboldt County: from Humboldt Bay north to Trinidad Head
- Monterey County: from Elkhorn Slough to Point Lobos
- San Luis Obispo County: from Point Estero to Point Buchon
- Los Angeles County: around Santa Catalina Island

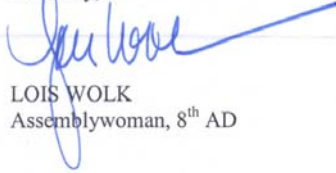
These field sites were selected because of known presence of derelict gear, historical and current fishing activities (which confer a high likelihood of gear presence), and/or because of the potential for entanglement of wildlife species of concern, divers, and/or vessels.

The citizens of California will benefit from this project through the increased safety provided by removal of underwater hazards. Individual fishermen will benefit from any gear that is returned

to them and through safer navigation and decreased potential for entanglement. As well, non-fishing industries will benefit from the removal of gear that entangles equipment and structures or prevents its placement underwater. The state resources agencies will benefit by having a permanent program in place that reduces the loss of commercially and recreationally valuable marine organisms from state waters, and provides a higher level of protection for threatened and endangered species. Ultimately, it is the living marine resources and unique underwater habitats of California that will benefit from the removal of derelict gear that injures and kills animals or enshrouds and damages habitat.

I urge you to give this program your utmost consideration for support.

Sincerely,



LOIS WOLK  
Assemblywoman, 8<sup>th</sup> AD

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JUN 06 2005

COASTAL CONSERVANCY  
OAKLAND, CALIF.



Alan C. Lloyd, Ph.D.  
Agency Secretary

## State Water Resources Control Board

### Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5455  
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100  
FAX (916) 341-5463 • Internet Address: <http://www.waterboards.ca.gov>



Arnold Schwarzenegger  
Governor

JUN 3 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Dear Mr. Bosco:

I am writing to express my support for the SeaDoc Society's proposal to the State Coastal Conservancy for funding to conduct a pilot derelict fishing gear removal program in California. I am not speaking officially on behalf of the State Water Resources Control Board (State Board), but rather as an individual working as a Senior Environmental Scientist with the Ocean Standards Unit, Division of Water Quality, at the State Board.

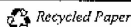
At the State Board my mission is to protect the quality of our state's coastal marine waters. I have had discussions with the Executive Director of SeaDoc, Kirsten Gilardi, to ensure that the proposed project activities will not degrade marine water quality. I have given Ms. Gilardi information regarding the California Ocean Plan and the State Board's relevant regulatory programs, so that the subject project may be performed in compliance with the State's water quality laws and regulations. I have further recommended that Ms. Gilardi contact the applicable Regional Water Quality Control Boards to ensure that water quality will be protected during the extraction of derelict gear.

Derelict fishing gear degrades marine habitats and is a known hazard to marine life. The removal of derelict gear will be highly beneficial, thereby restoring natural conditions to marine habitat and protecting marine life, navigation, and recreational uses. I urge you to give this program your utmost consideration for support.

Sincerely,

Dominic Gregorio, Chief  
Ocean Unit

*California Environmental Protection Agency*



Chuck Wise  
President  
David Birtz  
Vice-President  
Larry Miyamura  
Secretary  
Marlyse Barristella  
Treasurer  
In Memoriam:  
Nathaniel S. Bingham  
Harold C. Christensen

### PACIFIC COAST FEDERATION of FISHERMEN'S ASSOCIATIONS

W. "Zeke" Grader, Jr.  
Executive Director  
Glen H. Spain  
Northwest Regional Director  
Mitch Farno  
Fishery Enhancement Director  
Vicinn Bolin  
Watershed Conservation Director  
Duncan MacLean  
Salmon Advisor

Please Respond to:  
California Office  
P.O. Box 29370  
San Francisco, CA 94129-0370  
Tel: (415) 561-5080  
Fax: (415) 561-5464

<http://www.pcffa.org>

Northwest Office  
P.O. Box 11170  
Eugene, OR 97440-3370  
Tel: (541) 689-2000  
Fax: (541) 689-2500

26 May 2005

The Honorable Douglas H. Bosco, Chairman  
California Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612


RE: California Derelict Fishing Gear Removal Program - Support

Dear Chairman Bosco:

The Pacific Coast Federation of Fishermen's Associations (PCFFA), representing working men and women in the West Coast commercial fishing fleet, requests your support for the SeaDoc Society's proposal to the Conservancy to develop the California Derelict Fishing Gear Removal program. The prevention of fishing gear loss and the retrieval of lost gear has long been a concern of PCFFA. We have supported legislation/regulations to encourage removal of lost gear and sponsored measures to prevent gear loss, such as Mr. Leno's AB 749 aimed at reducing the number of Dungeness crab traps lost each year in that fishery.

Derelict fishing gear is problematic for our members, because it can obstruct deployment of gear. Moreover, our members are always pleased to receive back any gear they have lost unintentionally - all too often lines attaching gear to buoys get cut by boat propellers, or gear is dragged away by large vessels or by strong currents and waves. Fishing gear is costly and getting it back helps, but it also helps to get rid of old gear off the seafloor which sometimes will keep fishing or, in some instances, entangle other fishing gear or wildlife.

The proposed derelict fishing gear removal program, which initially will deploy divers to remove gear, should be a huge benefit to California's fishing men and women, both commercial and recreational, as well as the marine environment. We look forward to working with your Commission and the SeaDoc Society in implementing the pilot year of this program in California.

Sincerely,  
  
W. F. "Zeke" Grader, Jr.  
Executive Director

## CALIFORNIA COASTAL COMMISSION

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



May 16, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, California 94612

RE: **SeaDoc Society's Pilot Derelict Fishing Gear Removal Program**

Dear Mr. Bosco:

I am writing to express our support for the University of California at Davis's SeaDoc Society proposal to the State Coastal Conservancy to fund a pilot derelict fishing gear removal program. The Coastal Commission is concerned with the presence of derelict fishing gear (e.g., "ghost" nets) in California marine waters, and we have encouraged and now are pleased that the SeaDoc Society has developed a program for its removal.

The executive director of the SeaDoc Society, Kirsten Gilardi, is consulting with my staff to ensure that the fishing gear removal program itself is designed in a manner that avoids or minimizes potential adverse impacts to coastal resources and uses. On a case-by-case basis, Coastal Commission staff will determine if a coastal development permit is needed for a specific derelict fishing gear removal activity. We are confident that the program will be highly beneficial to the health and integrity of California's marine waters, making it a safer environment for boaters, divers, swimmers, and marine life. I strongly urge you to support this program.

Sincerely,

PETER M. DOUGLAS  
Executive Director

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MAY 17 2005

COASTAL CONSERVANCY  
OAKLAND, CALIF.



State of California - The Resources Agency

ARNOLD SCHWARZENEGGER, Governor

**DEPARTMENT OF FISH AND GAME**

Office of Spill Prevention and Response  
Marine Wildlife Veterinary Care and Research Center  
1451 Shaffer Road  
Santa Cruz, CA 95060  
(831) 469-1744  
(831) 469-1723 fax



Douglas Bosco, Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Dear Mr. Bosco:

I am writing to express my strong support for the UC Davis Wildlife Health Center's SeaDoc Society's proposal to the State Coastal Conservancy to develop a California Derelict Fishing Gear Removal program. I am Supervisor of the California Department of Fish and Game's Marine Wildlife Veterinary Care and Research Center (in Santa Cruz), and oversee several southern sea otter research and management activities in state marine waters. As you probably know, the southern sea otter population has failed to recover at an expected rate. A significant factor in the failure of the population to grow is infectious disease, but we are also concerned about fisheries interactions. Sea otters are vulnerable to entanglement and entrapment in fishing gear, including commercial and recreational crab pots. As you may know experiments at the Monterey Bay Aquarium suggest that sea otters can enter live fish traps and crab pots and are unlikely to get out easily. We have provided the Fish and Game Commission with measurements for excluder devices that may reduce sea otter by catch in live fish traps. Currently we are working with crab fishers to develop excluder devices that might greatly limit potential for sea otter entry into commercial crab pots but which will not significantly reduce catch. We also conduct post-mortem examinations on all dead sea otters that wash up on California beaches. Several of them have died from entanglement in derelict fishing gear.

For these reasons, I am very supportive of a program that will work with the fishing industry and systematically remove derelict fishing gear from the state's marine waters, especially from parts of the coast where we are trying to help recover threatened and endangered species like the southern sea otter. Please feel free to call me at 831-469-1726 if you have any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "David A. Jessup".

David A. Jessup  
Senior Wildlife Veterinarian/Supervisor

*Conserving California's Wildlife Since 1870*



**NORTHWEST STRAITS**  
marine conservation initiative

May 13, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Dear Mr. Bosco:

I am writing to express my strong support for the SeaDoc Society's proposal to the State Coastal Conservancy for funding to conduct a pilot derelict fishing gear removal program in California. While I am a member of the SeaDoc Society's Advisory Board, the hat I wear in writing this letter to you is as Director of the Northwest Straits Commission (Mt. Vernon, Washington).

In 2002, the Northwest Straits Commission developed and implemented a derelict fishing gear removal program here in Washington, which we conduct in close partnership with NOAA, the Washington Department of Fish and Wildlife, and other partners. Our program has successfully removed nearly 1000 nets, pots and traps since 2002. In this recovered derelict fishing gear, we have counted nearly 500 entangled fish—including endangered salmon and rockfish species—and over 1000 live and dead crabs, 90 dead birds, and 4 drowned marine mammals.

Over the last several months, I have provided assistance and guidance to the SeaDoc's Executive Director, Dr. Kirsten Gilardi, in her development of a program plan for California. The Northwest Straits Commission looks forward to continuing to work with Gilardi and SeaDoc on the pilot year of this program, and we remain eager and willing to share information, policies and procedures, and expertise.

As well, we are receiving a new grant from NOAA in July to replicate our program in other areas around the United States. In our application, we specifically identified California as one of those areas, and are looking forward to spending a portion of the new federal funding to support SeaDoc Society's efforts in California.

Sincerely,

Tom Cowan

Northwest Straits Commission  
10441 Bayview-Edison Road  
Mount Vernon, WA 98273-9668  
phone: 360.428.1084  
fax: 360.428.1491  
e-mail: [commission@nwstraits.org](mailto:commission@nwstraits.org)  
web: [www.nwstraits.org](http://www.nwstraits.org)

County Marine  
Resource Committees:

Clallam

Island

Jefferson

San Juan

Skagit

Snohomish

Whatcom

In Cooperation with  
Participating Tribal  
Co-Managers

## DEPARTMENT OF FISH AND GAME

MARINE REGION

619 Second Street

EUREKA, CA 95501

May 11<sup>th</sup>, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Dear Mr. Bosco:

I am writing to express my support for the SeaDoc Society's proposal to the State Coastal Conservancy to develop the California Derelict Fishing Gear Removal program. I am a fisheries enforcement officer with the California Department of Fish and Game. I am assigned to a patrol vessel at our Eureka regional office. Every year I receive several complaints from licensed commercial fishermen, recreational fishermen, and the boating community about the presence of derelict crab pots in the waters off the North Coast.

Although required by law to be removed (F&G Code 9004), these traps are left in the waters of the state beyond the legal season. Efforts by commercial fishermen and our agency are ineffective at removing all the gear that is out there. These derelict traps present numerous hazards to fishermen and boaters. In addition to the safety hazards, the traps may also be having a negative effect on the fishery. The traps are required to be outfitted with a destruct device (F&G Code 9003). This device causes portions of the trap to degrade and prevent further capture of marine life. Unfortunately, many traps have been outfitted improperly, illegally, or the device does not function. These lost traps continue to catch crabs and invertebrates for many years.

The proposed derelict fishing gear removal program will benefit area fishermen and aid their compliance with state regulations. We look forward to working with the SeaDoc Society in implementing the pilot year of this program off our North Coast.

Please feel free to contact me for any additional information concerning state fishery regulations.

Sincerely,

A handwritten signature in cursive script that reads "R. Farrell".

Warden Robert Farrell  
Patrol Boat ALBACORE  
619 2<sup>nd</sup> St.  
Eureka, CA 95501  
(707) 268-8824



**DEPARTMENT OF FISH AND GAME**

Marine Region  
213 Beach Street  
Morro Bay, CA 93442  
(805) 772-0114

May 12, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Dear Mr. Bosco:

I am writing to encourage you to consider supporting the SeaDoc Society's proposal to the State Coastal Conservancy to develop the California Derelict Fishing Gear Removal program. I am an Associate Biologist (Marine/Fisheries) in the Marine Region of the California Department of Fish and Game, in Morro Bay. Throughout my 24 year career I have participated in many underwater surveys (remotely operated vehicle and scuba diving) along the California coast and the Channel Islands. Unfortunately, I have observed an increase in the amount of derelict fishing gear in our state marine waters over the years. Not only is this a concern because of the potential hazard the derelict gear pose to boaters and divers, but also the potential impact this gear has on the marine habitat and resources. In addition, the derelict gear is a form of trash and does not belong in our ocean.

The proposed derelict fishing gear removal program will benefit our coastal marine environment. I look forward to working with the SeaDoc Society in implementing the pilot year of this program in the Morro Bay Area.

If you have questions or need additional information, please contact Ms. Christine Pattison, Associate Biologist in the Department's Marine Region, at (805) 772-0114.

Sincerely,



Christine Pattison



The Marine Mammal Center  
Marin Headlands  
1065 Fort Cronkhite  
Sausalito, California 94965-2697  
Fax 415.289.7333

Tel 415.289.5EAL  
[www.tmmc.org](http://www.tmmc.org)

May 12, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

Monterey Bay Operations  
P.O. Box 778  
Moss Landing, California 95039

San Luis Obispo Operations  
P.O. Box 696  
Morro Bay, California 93443

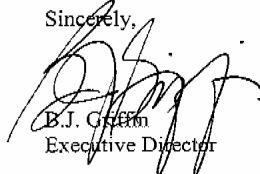
Anchor Bay Operations  
P.O. Box 381  
Gualala, California 95445

Dear Mr. Bosco:

I am writing to express my strong support for the SeaDoc Society's plan to develop a derelict fishing gear removal program in California. I am Executive Director of The Marine Mammal Center, the largest marine mammal rehabilitation organization on the North American west coast. Every year, we care for hundreds of seals and sea lions that strand up and down the California coast; and every year, we care for several animals that come in to our center with severe injuries due to entanglement in fishing gear. Some of them have pieces of net or line wrapped around their necks, while others have swallowed hooks and monofilament which have perforated their gastrointestinal tracts.

The proposed derelict fishing gear removal program would significantly improve the quality of the coastal marine environment we share with our native wildlife, making it a safer place for them to forage and migrate. We are very pleased that the SeaDoc Society is implementing a program for derelict fishing gear removal off our coast, and look forward to documenting fewer and fewer cases of gear-related injuries in our wildlife patients as a result.

Sincerely,



B.J. Goslin  
Executive Director



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE

Cordell Bank  
National Marine Sanctuary  
P.O. Box 159  
Olema, CA 94950  
Ph: (415) 663-0314  
Fax: (415) 663-0315

June 7, 2005

Douglas Bosco  
Chairman  
State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

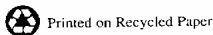
Dear Mr. Bosco:

As Manager of the Cordell Bank National Marine Sanctuary, I wish to commend the State Coastal Conservancy for considering a proposal from the SeaDoc Society at UC Davis to develop a derelict fishing gear removal program in California. As you may know, we have documented a significant amount of derelict fishing gear on Cordell Bank in the course of conducting surveys of the Bank using manned submersibles: in 2002, we observed derelict gear on 66% of the transects surveyed. Most of it is long line gear that negatively impacts the unique habitat of the Bank by damaging the fragile bottom community and creating artificial substrates upon which organisms attach. Some of the larger hydrocorals living on the Bank are estimated to be at least 40 years old.

We have identified the presence of derelict fishing gear as a stressor on the Cordell Bank ecosystem, and are looking forward to working with UC Davis' SeaDoc Society to remove it, once their pilot project has been completed and they are well-positioned to expand their operations offshore and into deeper water.

Sincerely,

Dan Howard  
Manager, Cordell Bank NMS



CALIFORNIA OCEAN  
PROTECTION COUNCIL

Staff Recommendation  
June 10, 2005

**SOUTHERN CALIFORNIA BIGHT MARINE LIFE ENHANCEMENT PROGRAM:  
CHANNEL ISLANDS MARINE PROTECTED AREAS MONITORING PROGRAM-  
ROV SURVEY PROJECT**

Developed By: Kara Kemmler

**RECOMMENDED ACTION:** Consideration of the Channel Islands Marine Protected Areas Monitoring Program Remotely Operated Vehicle (ROV) Survey Project, and possible: 1) determination that it is a high priority project, and 2) authorization for the Council's Secretary to take actions needed to provide for its implementation.

**OCEAN or COASTAL LOCATION:** Channel Islands National Marine Sanctuary Marine Protected Areas, off the Southern California Coast within the Southern California Bight, Santa Barbara and Ventura Counties. The sanctuary encompasses the waters that surround Anacapa, Santa Cruz, Santa Rosa, San Miguel and Santa Barbara Islands, extending from mean high tide to six nautical miles offshore around each of the five islands. The sanctuary's primary goal is the protection of the natural and cultural resources contained within its boundaries. The ROV Survey Project targets areas in and adjacent to the MPAs within the Sanctuary. (Exhibit 1).

**AGENCY OR ENTITY RECOMMENDING PROJECT:** State Coastal Conservancy Department of Fish and Game, National Oceanic and Atmospheric Administration.

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**EXHIBITS**

Exhibit 1: Project Location and Site Maps

Exhibit 2: Letters of Support

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**RESOLUTION:**

“The Ocean Protection Council finds pursuant to Sections 35600 *et seq.* of the Public Resources Code that the Channel Islands Marine Protected Areas Monitoring Program Remotely Operated Vehicle (ROV) Survey Project, as herein described, is of high priority for ocean conservation and authorizes its Secretary to take actions necessary for its planning or implementation, including the allocation of up to \$765,000 of ocean protection funds reserved by the Coastal Conservancy for use in this project.”

**PROJECT DESCRIPTION:**

The Nature Conservancy (TNC), Marine Applied Research and Exploration (MARE), California Department of Fish and Game (DFG) and the National Oceanic and Atmospheric Administration (NOAA) are engaged in a collaborative partnership to monitor habitat and species conditions within the Channel Islands Marine Protected Areas (MPAs) off Southern California's shores.

Staff recommends that the Ocean Protection Council find that the Channel Islands Marine Protected Areas Monitoring Program Remotely Operated Vehicle (ROV) Survey Project is of high priority and authorize the Secretary to the Council to take actions necessary to provide for its planning and implementation. A proposed \$765,000 grant from the Coastal Conservancy to The Nature Conservancy would provide funding for capital equipment to support the ROV survey project, which will provide vital nearshore marine monitoring in this critical coastal ocean area of the Southern California Bight. The coastal ocean of Southern California, and particularly the northern Channel Islands, supports a diverse array of consumptive and non-consumptive industrial, commercial uses as well as recreational and tourism activities.

This project is part of a larger program developed by regional staff of the Coastal Conservancy to create a program to address regional marine resource conservation needs. The Southern California Bight Marine Life Enhancement Program is intended to address the ecological health, as well as restoration, enhancement and stewardship of the Southern California Bight. The initial part of the program seeks to clarify goals for improving nearshore marine habitats and related coastal-draining watershed resources. This project will provide important information on the location and fecundity of areas adjacent to the Channel Islands Marine Sanctuary.

The Channel Islands MPAs Monitoring Program, dated February 2004, identifies shallow and deep subtidal habitat monitoring as high priorities and further identifies the ROV Survey Project as a key part of that monitoring program. The ROV scans the depths of the new Channel Islands MPAs, the largest system of reserves off the West Coast, to measure how fish populations are responding to the new sanctuaries. The ROV Survey Project team is coordinated by MARE, a non-profit organization formed in 2003 in part to help fund and support efforts to obtain baseline data in California's new MPA system. The team includes staff from the California Department of Fish and Game (DFG) and the Channel Islands National Marine Sanctuary (CINMS)/ National Oceanic and Atmospheric Administration (NOAA).

Shallow and deep subtidal monitoring (from 0 to ~100 feet/31m and >33m, respectively) are identified as the highest priorities in the Channel Islands MPAs Monitoring Program. The shallow subtidal region includes the primary areas for consumptive uses at the islands and provides information not only on MPAs but the entire nearshore ecosystem. The suite of monitoring efforts for the shallow subtidal area includes use of a remotely operated vehicle (ROV) as a quantitative survey tool for biologic and habitat surveys on an annual basis. For shallow subtidal monitoring, ROV surveys fill in the depth range from 20-33m where SCUBA diver observation times are severely limited. SCUBA surveys are excellent for relatively shallow habitat such as kelp beds, where fish are concentrated and can be easily counted. ROVs, in contrast, are able to cover the vast expanse of deeper habitat where fish aggregations are more patchy. Considerably less sampling has occurred in deeper subtidal areas than in shallow subtidal habitats.

The ROV is a non-extractive tool to archivally video the seafloor, and ground truth the habitat, species and biodiversity. Continuous video from 2 cameras allow baseline MPA video documentation to be gathered and archived for future analysis and comparisons. With measurement lasers, depth, altitude, camera range to bottom and temperature are digitally recorded along with exact ROV position in DGPS coordinates. The ROV surveys obtain information on type of habitat, abundance and sizes of all non-cryptic fishes, and abundance of focal invertebrate species within and outside MPAs. Exact location and precise area (in square meters) of bottom surveyed allow this data to be input and used in a GIS database, used increasingly as a resource management tool, and permits the ROV to return to the exact same sites year after year for monitoring purposes, to detect any population changes over time.

The ROV survey work is the most rapidly developing, high-tech portion of the MPAs monitoring process. Other important survey methods use submersibles, scuba divers, and other fishery-independent investigations, such as mark-and-recapture studies. All of these studies work in conjunction with one another, and are necessary to assess whether MPAs are effective. DFG biologists work closely with researchers at CSU Monterey Bay's Seafloor Mapping Lab, which produced multibeam sonar maps of the Channel Islands seafloor topography. The maps helped to identify key reef areas for exploration. Consulting the maps, survey paths (called "transects") are planned for each ROV survey.

The core group of sites consists of at least one site within and outside one MPA at each of the four northern Channel Islands. The core sites were chosen primarily because they extend into deeper water from the shallow water, historical data that continues to be collected by existing programs, and they have enough rocky reef to make quantitative assessment possible.

The ROV video is recorded digitally, using two cameras (forward and downward) along with GPS location, depth, temperature, date and time. This real-time marking of individual animals at known locations will be valuable for scientists studying aggregations and changing species distributions. Post-processing which consists of archiving and creating maps from the video, will allow the data to be further fine-tuned. Over time, monitoring fish and invertebrate populations in the MPAs may provide evidence of whether bottom-dwelling species such as rockfish, lingcod, and abalone respond to the no-fishing zones by repopulating areas both inside and outside of the MPAs. Going back every year and resurveying the same transects, seeing if numbers change, we will learn more about the MPAs and their viability as havens for valuable fish species. The videotape of the transects taken by the ROV serve as permanent records of the area, which can be reviewed multiple times to provide information on the habitat types, animals, and plants at the site.

Although, the team is currently able to conduct ROV project operations with existing equipment provided by DFG, additional equipment is necessary in order to continue to implement the scope of monitoring work for multiple years,. The ROV and associated equipment used in the ROV surveys conducted thus far has been provided by DFG, however, it is not dedicated for this purpose and will be needed for other activities throughout the year. In addition, the DFG system, while competent, is aging, and any system is subject to loss or damage in the unpredictable marine environment. Without a backup ROV system in place, a machine failure or loss could

result in the loss of an entire cruise, with enormous costs in time, opportunity, money and momentum. Consequently, a new, highly integrated and portable ROV system is proposed to serve as the primary survey unit going forward, with the DFG system remaining as a backup as needed. The new equipment will be compatible with the existing system. Should any major failures occur, this specification will allow the team to continue work until equipment is repaired or replaced. The useful life of an ROV is approximately eight to 10 years as a conservative estimate. For purposes of comparison, the California Department of Fish and Game ROV was purchased in 1994, has been well maintained, and is still going strong after 10 years and hundreds of dives.

This project will help carry out Conservancy goals relating to coastal and marine resource protection by providing the necessary data and coordination to help restore fish and wildlife habitat within coastal and marine waters, reduce threats to coastal and marine fish and wildlife, and diminish the impact of economic pressures on coastal and marine resources.

**PROJECT FINANCING**

**Possible Funding Sources:**

Coastal Conservancy	\$765,000
NOAA, DFG: In-kind Donations (July 2005-June 2006 commitment)	\$414,800
TBD	<u>\$1,819,690</u>
<b>Total Project Cost (Capital + 3 Years Operation)</b>	<b>\$2,999,490</b>

On May 18, 2005, the State Coastal Conservancy reserved up to \$5,000,000 of its available funds to be expended in concert with the Council for programs and projects that the Council finds to be of high priority, and that are also consistent with the Coastal Conservancy’s project criteria, priorities, and funding sources. Conservancy staff is recommending a grant of \$765,000 to The Nature Conservancy for consideration at the Conservancy’s next public meeting on June 16. NOAA and DFG have also committed substantial in-kind support for the project.

**CONSISTENCY WITH CALIFORNIA’S OCEAN ACTION STRATEGY:** The proposed project is consistent with action item 13 in that it addresses restoration of threatened habitats, water quality and other impacts from development (see Action Strategy pg. 32).

**CONSISTENCY WITH OCEAN PROTECTION COUNCIL’S INTERIM PROJECT SELECTION CRITERIA & GUIDELINES:**

**Mandatory Criteria**

- 1. Furthers the following statutory purposes and policies of the Ocean Protection Act:**
  - **Improves management, conservation, and protection of coastal waters and ocean ecosystems:** An important part of the long term management of MPAs is establishing programs to monitor biological, social, and economic changes in areas that are within, nearby, and distant from the MPAs. Together, these monitoring programs will help

managers determine the impacts and effectiveness of the MPA network. CINMS, DFG and NOAA convened a Channel Islands MPA monitoring workshop where over 100 representatives from recreational and commercial fisheries, the scientific community, businesses, conservation groups, government agencies, and the general public developed preliminary biological and socioeconomic monitoring recommendations and monitoring of the shallow subtidal area was identified as the highest priority. The ROV Survey Project fills a niche where other methods fail to be as cost-effective or provide enhanced data.

- **Encourages those activities and uses that are consistent with sustainable, long-term protection and conservation of ocean and coastal resources:** The proposed project will provide for monitoring and mapping of marine habitats and marine wildlife in order to inform the management of the Channel Islands MPAs and facilitate protection and enhancement of coastal and ocean resources.
- **Promotes aesthetic, educational and recreational uses of the coast and ocean:** The Channel Islands National Marine Sanctuary was established as an area of national significance because of its exceptional natural beauty and resources. The Sanctuary is a very important nearshore coastal marine environment, home to important commercial and recreational fishery resources, as well as non-consumptive recreational and educational resources of regional and national importance, which the MPAs were created to protect and restore. Sport and commercial fishing provides an important social and economic benefit to the State of California, and contributes nearly \$6 billion to the State economy annually.
- **Improve monitoring, data gathering, and advances in scientific understanding of the ocean and coastal environment:** The ROV work is the most rapidly developing, high-tech portion of the MPAs monitoring process. The baseline, archival video and data collected during ROV surveys are analyzed for locational tracking accuracy, and post-processed into habitat characterization maps. The fish species of commercial/recreational significance are post-processed into species maps. Perhaps most importantly, these surveys began an archival record in areas where fishing was banned, for comparison with future studies.
- **Improves the health of fish and fosters sustainable fisheries in ocean and coastal waters:** More than 70% of U.S. commercial stocks are considered fully exploited, overfished or collapsed. In September 2003 the Pacific Fishery Management Council closed most of the West Coast groundfish fishery because four rockfish were declared overfished. As a result commercial and recreational fishing have been severely curtailed. Accurate fish stock assessment and habitat information are essential. The Pew Oceans Commission report, published in May 2003, recommended establishing a network of MPAs and recommended using advanced mapping and remote sensing technologies to expand the ability of policy makers and the public to compare alternative uses of these areas. (Pew Oceans Commission, America's Living Oceans: Charting a Course for Change, p. 31). Proper management and monitoring of the Channel Islands MPAs will ensure sustainable, long-term ocean resources that in turn will promote a sustainable commercial fishing industry in California.
- **Helps to integrate and coordinate the state's laws and institutions responsible for protecting and conserving ocean and coastal resources:** The main objective of this project will be to determine the effectiveness of the MPA off the coast of Southern



California, and if warranted, inform future selection of MPAs off the coast of California. This data will be of interest to multiple State agencies and the fishing industry and will require the involvement and cooperation of all the state and federal agencies responsible for ocean resource protection. The Nature Conservancy has already coordinated closely with the Department of Fish and Game, the Channel Islands National Marine Sanctuary, NOAA, scientists, non-profit organizations and other agencies concerned with management of the marine environment.

- **Helps to integrate and coordinate the state’s laws and institutions responsible for protecting and conserving ocean and coastal resources:** As described, the ROV survey project is one component of the Channel Islands MPA Monitoring Program. Other important survey methods use submersibles, scuba divers, and other fishery-independent investigations, such as mark-and-recapture studies. All of these studies work in conjunction with one another, and are necessary to assess whether MPAs are effective.
2. **Consistent with the purposes of the funding source:** See Project Financing Section above.
  3. **Has demonstrable support from the public:** Implementation of the Channel Islands MPAs Monitoring Program and specifically, the ROV Survey Project enjoys widespread support from elected officials, public state and federal agencies, environmental organizations, universities, and the general public. Letters of support are included in Exhibit 2.
  4. **Relates directly to the ocean, coast, associated estuaries, and coastal-draining watersheds:** The proposed project is located in the subtidal area within the Channel Islands National Marine Sanctuary, which is an important coastal and ocean resource area of regional, statewide and national ecological and economical significance.
  5. **Has greater-than-local interest:** The Channel Islands National Marine Sanctuary was established as an area of national significance because of its exceptional natural beauty and resources. The Sanctuary is a very important nearshore coastal marine environment, home to important commercial and recreational fishery resources, as well as non-consumptive recreational and educational resources of regional and national importance, which the MPAs were created to protect and restore. Information developed with this ROV will have statewide importance in developing, monitoring and managing other MPAs.

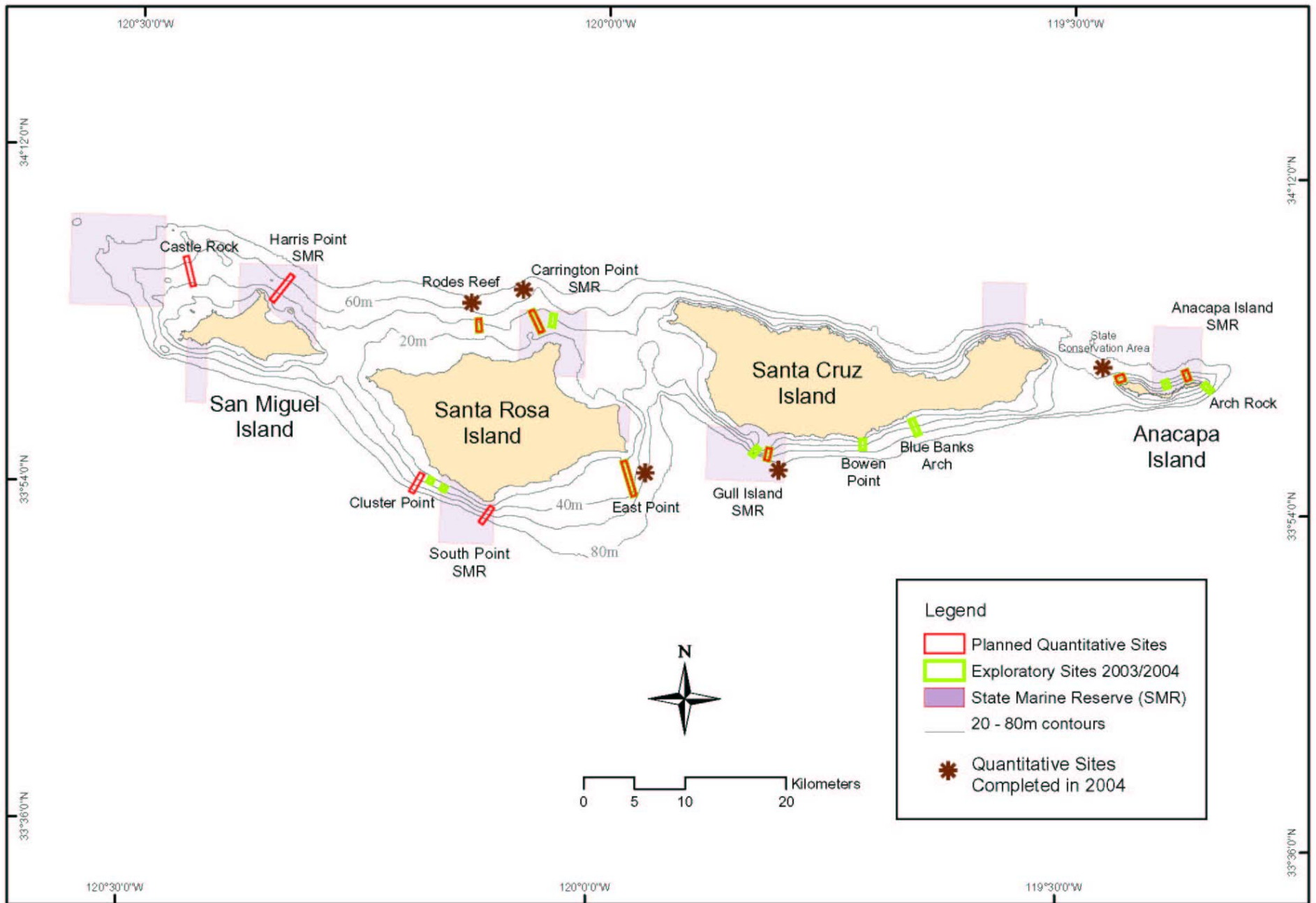
**Additional Criteria**

1. **Helps implement the California Ocean and Coastal Information, Research, and Outreach Strategy and other priorities of local, state or federal advisory groups, or scientific or policy reports, adopted by the council:** See Consistency with California’s Ocean Action Strategy, above.
2. **The project has an element of urgency (there is an immediate threat to a coastal/ ocean resource from development or natural or economic conditions, a pressing need, or a fleeting opportunity):** Because fishing was restricted within MPAs in April 2003, time is of the essence in gathering baseline data and sustaining surveys in order to illustrate any changes over time, which is key to evaluating the effectiveness of the MPAs.
3. **The project helps resolve more than one issue:** The ROV Survey Project will serve to inform a variety of management issues, including resource needs, commercial fishing industry concerns, and recreational uses of ocean resources and selection of future MPAs.

4. **The project involves innovation (e.g. environmental or economic demonstration):** The ROV introduces an innovative approach with many advantages over traditional survey and sampling methodologies, such as, the non-extractive nature of the survey eliminates the risk of accidental take of protected species or damage to habitats; the ROV system works for extended periods beyond diver depths; digital, archival video imagery is produced, which is geospatially indexed, thereby reducing or eliminating several sources of error inherent in other approaches; and it is a highly cost-effective method. Additionally, the collaborative effort among NOAA, DFG, TNC, MARE and others to coordinate management and policy decisions based upon sound science is an innovative approach to resolving historic problems that have contributed to the degradation of ocean resources.
5. **The project is ready to implement (grantee or contractor will start and finish the project in a timely manner):** The ROV Survey Project team is formed and presently conducts surveys. The project team is ready to continue its efforts with additional equipment and funding.
6. **The project involves a combination of local, state, or federal agencies or is a public/private partnership:** The Channel Islands MPA Monitoring Program ROV Project is a cooperative venture involving university scientists, non-profit organizations, private groups, and state and federal agencies. MARE brought the various collaborators together for this project, raised funding and support, and supplied ROV technical advice and operational supervision. The Nature Conservancy is a major supporter of the project along with Commonwealth, KingFisher, CINMS/NOAA, DFG and National Resources Defense Council who have all supplied keystone funding.



Exhibit 1: Project location map and site map



CALIFORNIA OCEAN  
PROTECTION COUNCIL

Staff Recommendation  
June 10, 2005

**Klamath River Sediment Study**

Developed By: Michael Bowen

**RECOMMENDED ACTION:** Consideration of the Klamath River Sediment Study, and possible: 1) determination that it is a high priority project, and 2) authorization for the Council's Secretary to take actions needed to provide for its implementation.

**OCEAN or COASTAL LOCATION:** The Klamath-Trinity River system is the second largest river system in California, and enters the Pacific Ocean at the town of Klamath, located along the border of Humboldt and Del Norte Counties.

The Klamath River Hydroelectric Project, subject of this proposal, is located on the Upper Klamath River in north-central California. The purpose of the study is to provide information essential to the development of management recommendations for the Klamath River that are consistent with the recovery of habitat for anadromous fish and other aquatic species found in the watershed.

**AGENCY OR ENTITY RECOMMENDING PROJECT:** State Coastal Conservancy; National Marine Fisheries Service, California Department of Fish and Game, State Water Resources Control Board, County of Humboldt, American Rivers, and others.

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**EXHIBITS**

Exhibit 1: Project Location and Site Maps

Exhibit 2: Letters of Support

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**RESOLUTION:**

“The Ocean Protection Council finds pursuant to Sections 35600 *et seq.* of the Public Resources Code that the Klamath River Sediment Study, as herein described, is of high priority for ocean conservation and authorizes its Secretary to take actions necessary for its planning or implementation, including the allocation of up to \$350,000 of ocean protection funds reserved by the Coastal Conservancy for use in this study.”

## KLAMATH RIVER SEDIMENT STUDY

### **PROJECT DESCRIPTION:**

The purpose of the proposed sediment study is to assist with current efforts to thoroughly assess the risks and benefits of various habitat enhancement efforts associated with the relicensing of the Klamath River Project, a hydroelectric development comprised of seven mainstem Klamath dams and one tributary dam, all of which are located on the upper Klamath River.

The Klamath River used to be one of the most productive salmon rivers in the Pacific Northwest. The historic range of salmon abundance for the Klamath-Trinity River system is estimated at 650,000 to one million fish. This fishery sustained thousands of fishing jobs in northern California and southern Oregon, and supported the health, culture and livelihoods of Native American tribes from the coast to the upper Klamath basin, some 250 miles inland. Because Klamath salmon spend up to three years in the ocean, they are also part of a healthy ocean ecosystem. Today, Klamath salmon populations have fallen to less than 10 percent of historic numbers, with devastating consequences for tribes and coastal fishing communities. In fact, while the Sacramento River is expected to see a record number of salmon return this year, the Pacific Fishery Management Council recently cut harvest levels for all salmon by up to 50 percent in ports from Half Moon Bay, California to Coos Bay, Oregon because of the precarious state of Klamath salmon stocks. These cuts could cause a loss of more than \$100 million to the commercial fishing industry, and the National Oceanic and Atmospheric Administration is considering declaring an economic disaster as a result.

The Klamath River Project dams, owned by PacifiCorp, block salmon, steelhead and other anadromous fish from reaching more than 300 miles of historic habitat in the upper basin. The possibility of removing Klamath River dams as a means of restoring Klamath salmon populations has been a topic of consideration in the Federal Energy Regulatory Commission (FERC) relicensing proceeding for these dams since 2000. FERC has completed scoping for its Environmental Impact Statement for the project, which will assess retiring some or all hydro developments and potential operational changes, and expects to issue a relicensing decision in December 2006.

The environmental review will take into consideration a variety of project alternatives including ranging from no action to the addition of fishways at the dams and likely full decommissioning of the project altogether. As part of the relicensing process, Pacificorp has hosted a stakeholders forum to discuss project management alternatives, including the installation of fishways and decommissioning of the project.

However, the consideration of alternatives is hampered by the lack of a clear understanding of the nature of the sediment found behind the dams, or of alternatives to the current operating regime of the Klamath River Project. While the quantity of sediment is generally known, the particle size and composition of the sediment is not as well understood. These factors would significantly affect possible water quality impacts of various alternatives, as well as costs associated with alterations to the existing infrastructure of the Klamath River Project.

The proposed sediment study would expedite the collection of information essential to the development of management recommendations for the Klamath River that are consistent with the recovery of habitat for anadromous fish and other aquatic species found in coastal watersheds. The State Coastal Conservancy would fund and manage the study to provide information to the stakeholder forum that is essential to the consideration of management alternatives for the Klamath River dams.

## KLAMATH RIVER SEDIMENT STUDY

### PROJECT FINANCING

#### Possible Funding Sources:

Coastal Conservancy	\$350,000
NOAA (in kind)	<u>50,000</u>
<b>Total Project Cost</b>	<b>\$400,000</b>

On May 18, 2005, the State Coastal Conservancy reserved up to \$5,000,000 of its available funds to be expended in concert with the Council for programs and projects that the Council finds to be of high priority, and that are also consistent with the Coastal Conservancy's project criteria, priorities, and funding sources. Conservancy staff is recommending consideration at the Conservancy's next public meeting on June 16 of funding authorization that would provide for professional consulting services to study deposits behind Klamath River dams, and to obtain additional information needed to evaluate relicensing alternatives for the Klamath River Project. NOAA has also committed substantial in-kind support for the project.

**CONSISTENCY WITH CALIFORNIA'S OCEAN ACTION STRATEGY:** The proposed project is consistent with action item 13 in that it addresses restoration of threatened habitats, water quality and other impacts from development (see Action Strategy pg. 32).

### CONSISTENCY WITH OCEAN PROTECTION COUNCIL'S INTERIM PROJECT SELECTION CRITERIA & GUIDELINES:

#### Mandatory Criteria

#### 1. **Furtheres the following statutory purposes and policies of the Ocean Protection Act:**

- **Improves management, conservation, and protection of coastal waters and ocean ecosystems:** The Klamath basin is 10,040,354 acres, approximately half of which flows through California to its confluence with the Pacific Ocean at the town of Klamath. The aquatic resources and habitat quality of river and stream channels within the basin are inextricably linked. Barriers to fish passage affect coastal resources such as salmon regardless of barrier location within the watershed. The anadromous fish populations that spend part of their life history at sea, and part within the upper watershed reside for extended periods outside of the coastal zone, and therefore depend upon free passage within a watershed to fulfill their life history. Just as these resources could be enhanced by project modifications, such as the provision of fishways or decommissioning, so, too, could aquatic resources be threatened by the unanalyzed or unplanned release of sediments into the aquatic environment.
- **Encourages those activities and uses that are consistent with sustainable, long-term protection and conservation of ocean and coastal resources:** The collapse of the Klamath River salmon fishery has devastated tribal fisheries and coastal dependent industries, such as commercial fishing fleets. The recovery of Klamath River salmon populations will provide a sustainable, long-term ocean resource that in turn supports a

## KLAMATH RIVER SEDIMENT STUDY

sustainable, coastal dependent commercial fishing industry in California, as well as Tribal fisheries throughout the Klamath watershed.

- **Promotes aesthetic, educational and recreational uses of the coast and ocean:** Sport and commercial fishing provides an important social and economic benefit to the State of California, and contributes nearly \$6 billion to the State economy annually.
  - **Improve monitoring, data gathering, and advances in scientific understanding of the ocean and coastal environment:** The very purpose of this proposal is to improve our understanding of possible water quality effects on the riverine, estuarine, and ocean environments resulting from a variety of enhancement measures at the Klamath River dams.
  - **Improves the health of fish and fosters sustainable fisheries in ocean and coastal waters:** Providing salmon access to high quality, but previously truncated habitat is the most effective way to recolonize lost habitat and restore healthy populations. Investigating the sediment located behind the Klamath dams will help determine the feasibility of providing access to quality habitat located above the dams, now inaccessible to salmon and steelhead.
  - **Helps to integrate and coordinate the state's laws and institutions responsible for protecting and conserving ocean and coastal resources:** The widespread support for this study is the best indication that the overall health of the watershed is the domain and concern of many agencies, institutions, and organizations. Providing this basic information will assist all of these entities in their efforts to participate more effectively in the Federal Energy Regulatory Commission proceeding, thereby coordinating their foundation for exercising their respective authorities.
  - **Helps to coordinate the collection and sharing of scientific data:** Many State interests have expressed the desire to obtain this information. By leading the effort to collect the data, the Conservancy will ensure a coordinated and unbiased data collection effort on behalf of the Klamath River Project Stakeholders Process.
2. **Consistent with the purposes of the funding source:** See Project Financing Section above.
  3. **Has demonstrable support from the public:** The project is broadly supported by elected officials, local government, State and federal agencies, non-governmental organizations, and others. Letters of support are attached as Exhibit 2.
  4. **Relates directly to the ocean, coast, associated estuaries, and coastal-draining watersheds:** This project will take place in the upper portions of California's second-largest coastal draining watershed, and will concern the study of sediment deposits that have a high potential to affect California's nearshore coastal waters, depending on the outcome of the current FERC proceeding
  5. **Has greater-than-local interest:** The public trust value of California's salmon and steelhead populations is of international interest, and is a natural legacy too precious to lose.

### Additional Criteria

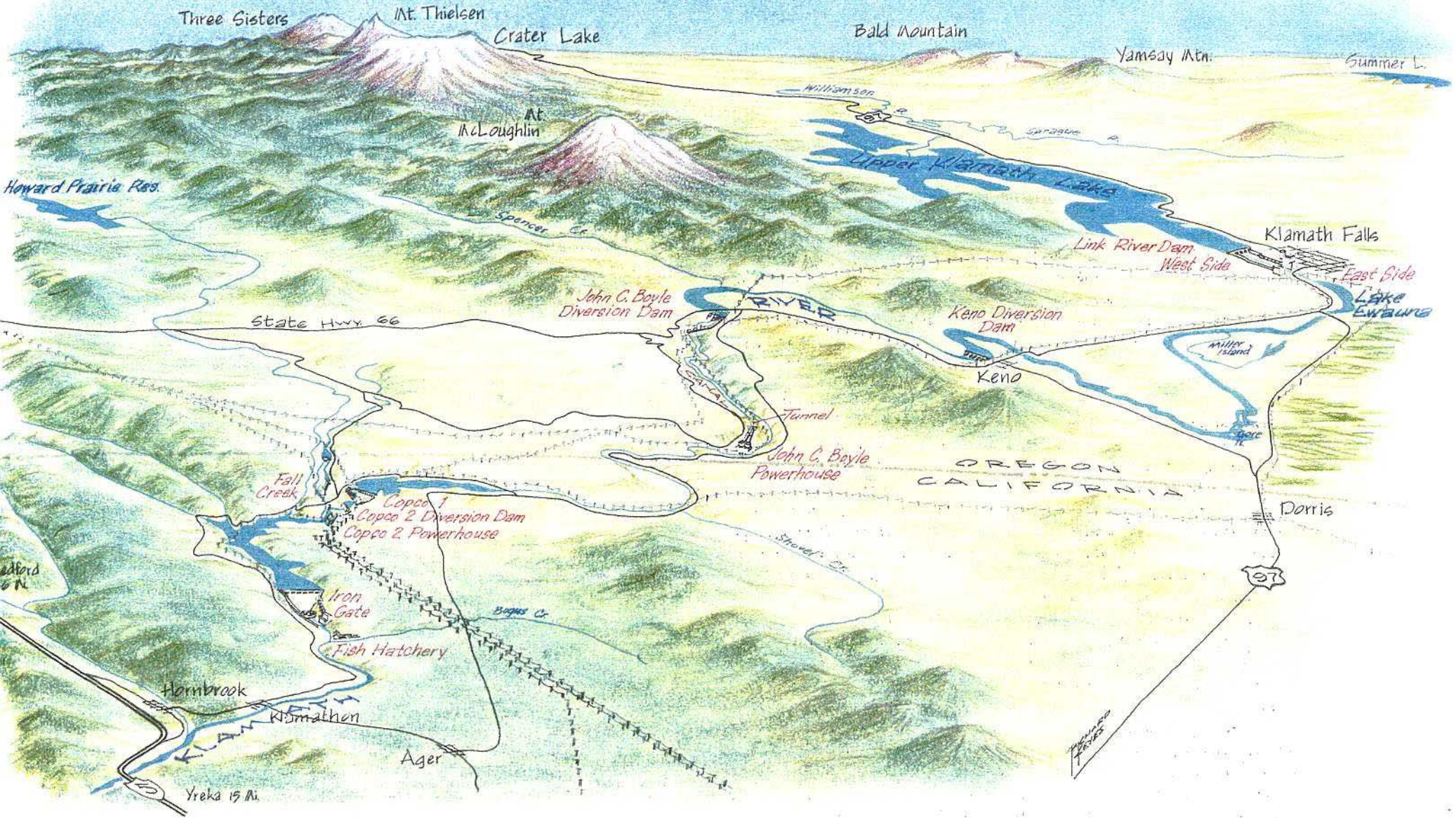


## KLAMATH RIVER SEDIMENT STUDY

1. **Helps implement the California Ocean and Coastal Information, Research, and Outreach Strategy and other priorities of local, state or federal advisory groups, or scientific or policy reports, adopted by the council:** See Consistency with California's Ocean Action Strategy, above.
2. **The project has an element of urgency (there is an immediate threat to a coastal/ ocean resource from development or natural or economic conditions, a pressing need, or a fleeting opportunity):** The future health of the coastal-draining Klamath River depends upon the outcome of the current FERC relicensing proceeding. Similarly, the ongoing FERC proceeding, and development of an adequate Environmental Impact Statement, depends upon the thorough collection of information and consideration of possible project management alternatives. Since this proceeding is expected to be completed within one year, and since no sediment study has been conducted, the provision of such information will fulfill an urgent need in the proceeding.
3. **The project helps resolve more than one issue:** The development of any preferred alternative in the FERC proceeding depends on the results of the sediment study. In addition, the protection of the lower Klamath Basin water quality and the nearshore waters from massive and potentially catastrophic sediment inputs also depends on this information.
4. **The project is ready to implement (grantee or contractor will start and finish the project in a timely manner):** Conservancy staff expects that contractor selection and completion of work can occur prior to 2006.
5. **The project involves a combination of local, state, or federal agencies or is a public/private partnership:** While the Conservancy is the primary funder, the entire Klamath River Project Stakeholder Group, which includes state and federal agencies, tribes, non-governmental organizations, and others, has contributed to the development of a proposed scope of work now under consideration by Conservancy staff.

# KLAMATH RIVER PROJECTS - PACIFIC POWER & LIGHT COMPANY

VIEW LOOKING NORTHEASTERLY



CALIFORNIA OCEAN  
PROTECTION COUNCIL

Staff Recommendation  
June 10, 2005

**San Francisco Bay Eelgrass and Native Oyster Restoration**

Developed By: Abe Doherty

**RECOMMENDED ACTION:** Consideration of the San Francisco Bay Eelgrass and Native Oyster Restoration Projects, and possible: 1) determination that they are high priority projects, and 2) authorization for the Council's Secretary to take actions needed to provide for their planning and development.

**OCEAN or COASTAL LOCATION:** Various locations throughout San Francisco Bay.

**AGENCY OR ENTITY RECOMMENDING PROJECT:** State Coastal Conservancy.

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**EXHIBITS**

Exhibit 1: Letters of Support

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**RESOLUTION:**

“The Ocean Protection Council finds pursuant to Sections 35600 *et seq.* of the Public Resources Code that the San Francisco Bay Eelgrass and Native Oyster Restoration Projects, as herein described, are of high priority for ocean conservation and authorizes the Secretary to take actions necessary for project planning and development, including the allocation of up to \$350,000 of ocean protection funds reserved by the Coastal Conservancy for use in these Projects.”

**PROJECT DESCRIPTION:**

Eelgrass and native oysters are foundational species that provide habitat for a diverse assemblage of native species, including economically-significant fisheries such as Pacific herring. Eelgrass and native oysters also improve water quality. These valuable resources have, however, suffered degradation in San Francisco Bay due largely to the impacts of development.

Both the Pew and the U.S. Commission on Ocean Policy reports identify restoration of coastal habitat as integral to ocean and coastal management. Consistent with these recommendations, the proposed Projects consist of planning and development of separate pilot eelgrass and pilot native oyster restoration projects in San Francisco Bay. Eelgrass restoration project tasks will include identifying suitable restoration site locations, and designing and testing appropriate restoration methodologies and techniques via pilot projects. Results will be used to determine

SAN FRANCISCO BAY  
EELGRASS AND NATIVE OYSTER RESTORATION PROJECTS

which restoration techniques and methods are most successful in San Francisco Bay. Native oyster restoration project tasks will include surveying oyster distribution, collecting data on diseases and predators, and developing a baywide restoration plan. Project work will be carried out by the Coastal Conservancy in partnership with the National Oceanic and Atmospheric Administration (NOAA) and San Francisco State University (SFSU), and in collaboration with the numerous organizations already involved in habitat restoration in the Bay.

Staff recommends that the Ocean Protection Council find that the San Francisco Bay Eelgrass and Native Oyster Restoration Projects are of high priority and authorize the Secretary to the Council to take actions necessary to provide up to \$350,000 for project planning and development.

**PROJECT FINANCING**

**Possible Funding Sources:**

Coastal Conservancy	\$350,000
NOAA (cash match)	<u>\$400,000</u>
<b>Total Project Cost</b>	<b>\$750,000</b>

On May 18, 2005, the State Coastal Conservancy reserved up to \$5,000,000 of its available funds to be expended in concert with the Council for programs and projects that the Council finds to be of high priority, and that are also consistent with the Coastal Conservancy's project criteria, priorities, and funding sources. The Conservancy is prepared to encumber up to \$350,000 of these reserved funds for purposes of the Projects under interagency agreements and contracts with environmental services professionals and others, including SFSU, if the Council finds these Projects to be of high priority. In addition, NOAA has provided over \$400,000 toward eelgrass and native oyster pilot restoration projects in San Francisco Bay, and will provide significant in-kind contributions of staff and equipment.

**CONSISTENCY WITH CALIFORNIA'S OCEAN ACTION STRATEGY:** The proposed projects are consistent with Action Item No. 13 in that it addresses water quality and restoration of threatened and degraded habitats in San Francisco Bay, consistent with Sections A and C in Appendix I.

**CONSISTENCY WITH OCEAN PROTECTION COUNCIL'S INTERIM PROJECT SELECTION CRITERIA & GUIDELINES:**

**Mandatory Criteria**

- 1. Furthers the following statutory purposes and policies of the Ocean Protection Act:**
  - **Improves management, conservation, and protection of coastal waters and ocean ecosystems:** The proposed projects will develop and improve techniques to restore eelgrass and develop a comprehensive plan to restore native oysters in San Francisco Bay, thereby improving management, conservation and protection of these resources.
  - **Encourages those activities and uses that are consistent with sustainable, long-term protection and conservation of ocean and coastal resources:** The proposed projects will develop and improve techniques to restore eelgrass and develop a comprehensive

SAN FRANCISCO BAY  
EELGRASS AND NATIVE OYSTER RESTORATION PROJECTS

plan to restore native oysters in San Francisco Bay, thus directly contributing to long-term sustainability, protection, and conservation of these resources.

- **Promotes aesthetic, educational and recreational uses of the coast and ocean:** The proposed projects will develop and improve techniques to restore eelgrass and develop a comprehensive plan to restore native oysters in San Francisco Bay, thus helping to ensure the long-term presence of these resources in San Francisco Bay for aesthetic, educational and recreational pursuits.
  - **Improves monitoring, data gathering, and advances in scientific understanding of the ocean and coastal environment:** The proposed projects will develop and improve techniques to restore eelgrass and develop a comprehensive plan to restore native oysters in San Francisco Bay, thus gathering data about and advancing the collective understanding of these resources and their restoration.
  - **Improves the health of fish and fosters sustainable fisheries in ocean and coastal waters:** Eelgrass and native oysters are foundational species that provide habitat for a diverse assemblage of native species, including economically-significant fisheries such as Pacific herring. The proposed projects will develop and improve techniques to restore eelgrass and develop a comprehensive plan to restore native oysters in San Francisco Bay, thus improving the resources upon which many species of fish rely.
  - **Helps to integrate and coordinate the state's laws and institutions responsible for protecting and conserving ocean and coastal resources:** The proposed projects will be carried out by the Coastal Conservancy in partnership with NOAA and SFSU, and in collaboration with the numerous organizations already involved in habitat restoration in the Bay, including the San Francisco Bay Conservation and Development Commission, the California Department of Fish and Game, the Romberg Tiburon Center, the Bodega Marine Laboratory, the University of California at Davis, Save the Bay, Audubon Center, the Marine Science Institute, and the Marin Rod and Gun Club.
  - **Helps to coordinate the collection and sharing of scientific data:** As stated above, the proposed projects will be conducted in collaboration with the numerous organizations involved in habitat restoration in the Bay, thus helping to coordinate the collection and sharing of scientific data related to eelgrass and native oyster restoration.
2. **Consistent with the purposes of the funding source:** See Project Financing Section above.
  3. **Has demonstrable support from the public:** The proposed projects are supported by state legislators, research institutions, non-governmental organizations, and federal and state government agencies. Letters of support are attached as Exhibit 1.
  4. **Relates directly to the ocean, coast, associated estuaries, and coastal-draining watersheds:** The proposed projects will take place entirely within San Francisco Bay.
  5. **Has greater-than-local interest:** San Francisco Bay is a major California estuary whose ecological health and productivity is of regional, state, and national interest. For example, San Francisco Bay is part of the National Estuarine Research Reserve system.

**Additional Criteria**

1. **The project has an element of urgency (there is an immediate threat to a coastal/ ocean resource from development or natural or economic conditions, a pressing need, or a fleeting opportunity):** San Francisco Bay is heavily impacted by introduced exotic species.

SAN FRANCISCO BAY  
EELGRASS AND NATIVE OYSTER RESTORATION PROJECTS

The proposed projects to enhance the populations of eelgrass and native oysters will help support the survival of other native species that depend on them.

2. **The project involves innovation (e.g. environmental or economic demonstration):** One of the goals of the proposed projects is to evaluate the effectiveness of new restoration techniques for eelgrass and native oysters.
3. **The project is ready to implement (grantee or contractor will start and finish the project in a timely manner):** The proposed projects are ready to be implemented in the summer and fall of 2005.
4. **The project involves a combination of local, state, or federal agencies or is a public/private partnership:** Numerous organizations have enthusiastically been involved in the development of eelgrass and native oyster restoration projects in San Francisco Bay, including NOAA, the California State Coastal Conservancy, the San Francisco Bay Conservation and Development Commission, the California Department of Fish and Game, SFSU, the Romberg Tiburon Center, the Bodega Marine Laboratory, the University of California at Davis, Save the Bay, Audubon Center, the Marine Science Institute, and the Marin Rod and Gun Club.

SAN FRANCISCO BAY  
EELGRASS AND NATIVE OYSTER RESTORATION PROJECTS  
EXHIBIT 1

DISTRICT OFFICE  
455 GOLDEN GATE AVENUE  
SUITE 14900  
SAN FRANCISCO, CA 94107  
415-557-1200  
FAX 415-557-1254

California State Senate

SENATOR  
CAROLE MIGDEN  
THIRD SENATE DISTRICT



June 7, 2005

Michael Chrisman, Chairman  
Ocean Protection Council  
Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento CA 95814

Dear Mr. Chrisman,

I am writing in strong support of the California Ocean Protection Council designating as a high priority projects to restore eelgrass and native oysters in San Francisco Bay. In my district, there is strong community support for these projects, as demonstrated through the work in the past couple of years by the Audubon Society and the Marin Rod and Gun Club to implement small oyster restoration projects along the Marin shoreline. Eelgrass and native oyster beds provide valuable nearshore habitats for other native species, including economically significant fisheries such as Pacific herring. Although eelgrass and native oyster beds are important in their roles as nurseries, improving water quality and providing shoreline protection, these habitats have been degraded and relatively little money has been invested in efforts to enhance and restore them.

The California Coastal Conservancy has developed projects costing \$350,000 to address the crucial needs for restoration of these habitats at this time. Planning is necessary to collect important data, evaluate sites to identify suitable locations for restoration of these habitats and design appropriate methodologies and techniques. Pilot projects will test various restoration techniques to identify the methods that are most successful in San Francisco Bay. Our investment in these projects will be matched by federal grants of approximately \$400,000, through the National Oceanic and Atmospheric Administration's Community Restoration Center and the Cooperative Institute for Coastal and Estuarine Environmental Technology.

I hope you will give serious consideration to designating projects to restore eelgrass and native oysters in San Francisco Bay as a high priority.

Sincerely,

A handwritten signature in black ink, appearing to read "Carole Migden".

Carole Migden  
Member, State Senate

Cc: Sam Schuchat, Coastal Conservancy, 1330 Broadway, 11<sup>th</sup> Floor, Oakland, CA 94612-2530



DEPARTMENT OF FISH AND GAME

MARINE REGION

20 Lower Ragsdale Drive, Suite 100

Monterey, California 93940

(831) 649-2870

<http://www.dfg.ca.gov>



May 17, 2005

Douglas Bosco, Chairman  
California Coastal Conservancy  
1330 Broadway, 11th Floor  
Oakland, CA 94612-2530

Dear Mr. Bosco:

I am writing to express California Department of Fish and Game's (Department) support for the San Francisco Bay Conservancy (Conservancy) Program's preparation of a native oyster restoration plan for San Francisco Bay. Department staff has been communicating with the Conservancy's Mr. Abe Doherty regarding the project.

The project includes assimilation of existing information, convening a workshop for discussion of issues affecting restoration design, collecting additional data as needed, producing GIS-based figures to graphically display information on crucial factors in native oyster survival in the bay and developing recommendations for locations and techniques to be used for future restoration projects. Native oysters historically performed important ecosystem services in San Francisco Bay and many other bays and estuaries throughout California.

The Department of Fish and Game supports Conservancy efforts to restore native oyster populations and we look forward to working with the Conservancy on this issue. If you have any questions, please contact Mr. Jim Moore, Senior Fish Pathologist in the Department's Marine Region Bodega Field Office at 2099 Westside Road, Bodega Bay, California, 94923, or by phone at (707) 875-2067, or by email at [jimmoore@ucdavis.edu](mailto:jimmoore@ucdavis.edu).

John Ugoretz

Nearshore Ecosystem Coordinator  
Marine Region- Monterey

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cc: See page 2

MAY 18 2005

*Conserving California's Wildlife Since 1870*

COASTAL CONSERVANCY  
OAKLAND, CALIF.





## San Francisco Bay National Estuarine Research Reserve

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*Romberg Tiburon Center, 3152 Paradise Drive, Tiburon, CA 94920-1205  
Tel (415) 338-3703 Fax (415) 435-7120*

I am writing to express my strong support for the **San Francisco Bay Eelgrass and Native Oyster Restoration Projects**. The San Francisco Bay National Estuarine Research Reserve (SF Bay NERR) is a federally-designated Marine Protected Area, and our core mission is advancing science, management, and education related to our regional estuaries. We believe the proposed Eelgrass and Oyster Restoration Projects will fundamentally contribute to the understanding, protection, and restoration of the region's threatened estuaries and coastal habitats.

One of the principal goals of NOAA's National Estuarine Research Reserve System is to facilitate research that will increase our ability to achieve better science-based stewardship of coastal ecosystems. Here at the San Francisco Bay NERR, we are just beginning to establish baseline and reference data with which to both detect habitat changes and assess restoration success. We need the best possible research to help us steer these efforts. The Eelgrass and Oyster Restoration Projects address a critical yet understudied and rarely-targeted component of the ecosystem, subtidal habitats. These subtidal habitats are increasingly being shown to be intimately connected to the health of the more often protected and restored intertidal habitats. I believe that this work will contribute to helping us manage, protect, and restore coastal habitats specifically here in San Francisco Bay, but also more broadly throughout California.

I should add that another important mission of the SF Bay NERR is dissemination of information regarding regional research, and results of the proposed work could be made available to the bay science community and others, leveraging the staff and infrastructure of the reserve. We will be happy to highlight the results of this project in workshops and discussions with a range of audiences.

Again, I would like to voice our strong support for this proposal.

Sincerely,

Dr. Drew Talley  
Research Coordinator



24 The Plaza Drive  
Berkeley, CA 94705  
Tel: 510-601-1082  
www.audubon.org

June 1, 2005

Michael Chrisman  
Secretary  
The Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento CA 95814

Dear Mike,

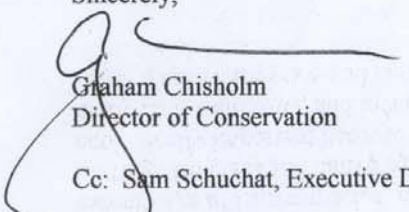
In your capacity as Chairman of the Ocean Protection Council, I am writing on behalf of Audubon California's 60,000 members to express strong support for the Eelgrass and Native Oyster Restoration Project in San Francisco Bay.

Eelgrass and native oysters are foundational species that provide habitat for a diverse assemblage of native species, including economically significant fisheries, such as Pacific herring. Eelgrass and native oyster beds are highly productive communities, and are ecologically important because they act as a nursery, habitat, and feeding ground for many fish, waterfowl, and invertebrates. Both eelgrass and native oysters also improve water quality. Eelgrass and native oyster habitat in San Francisco Bay have been degraded due to development in and around San Francisco Bay. This project will help advance efforts to restore these valuable habitats.

San Francisco Bay is North America's most biologically rich estuary, and to date the bay's sub tidal community has not received sufficient focus. The Eelgrass and Native Oyster Restoration Project is an important step in this direction, and Audubon California looks forward to working with the Coastal Conservancy, the National Oceanic and Atmospheric Administration, and other public agencies to conserve and restore this important cornerstone natural community.

Audubon California appreciates your consideration of this project. Thank you.

Sincerely,

  
Graham Chisholm  
Director of Conservation

Cc: Sam Schuchat, Executive Director of the Coastal Conservancy

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JUN 03 2005

COASTAL CONSERVANCY  
OAKLAND, CALIF.

350 Frank H. Ogawa Plaza, Suite 900  
Oakland, CA 94612-2016

t. 510.452.9261  
f. 510.452.9266

www.saveSFbay.org

May 31, 2005

Michael Chrisman, Chairman  
Ocean Protection Council  
California Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento CA 95814

Dear Mr. Secretary:

I am writing to request the Ocean Protection Council's support for the Eelgrass and Native Oyster Restoration Project in San Francisco Bay. Save The Bay is the largest and oldest organization working exclusively to protect, restore and celebrate San Francisco Bay, with more than 10,000 members. The Bay Area's economy and quality of life depend on a healthy and vibrant Bay, and our work to make the Bay cleaner and healthier has yielded important success. The Bay now provides millions of dollars in economic benefits annually from tourism and commerce, and preserved recreation and beauty for the region.

As you know, extensive efforts over the past decade have significantly advanced planning and restoration of thousands of acres of tidal marsh and related terrestrial habitats around San Francisco Bay and the Sacramento/San Joaquin Delta. Now restoration and enhancement of subtidal habitats, including eelgrass and native oysters, needs a similar concerted effort to improve the health of this important estuarine ecosystem and to benefit key species,

Eelgrass and native oysters are foundational species that provide habitat for a diverse assemblage of native species, including economically significant fisheries, such as Pacific herring. Both eelgrass and native oysters also improve water quality. Eelgrass and native oyster habitat in San Francisco Bay have been degraded from human development, but techniques have been developed to restore these valuable habitats. Save The Bay's own Native Oyster Restoration project has mobilizing community volunteers to monitor native oyster populations in the Bay through water quality testing, habitat assessment, and oyster shell monitoring.

The State Coastal Conservancy has taken a lead role, in consultation with the National Oceanic and Atmospheric Administration and other resource agencies, on planning and implementation of pilot restoration projects in San Francisco Bay for eelgrass and native oysters. We urge the Ocean Protection Council to establish oyster and eelgrass habitat restoration in San Francisco Bay as a high priority. Thank you very much for your consideration.

Sincerely,

  
David Lewis  
Executive Director

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JUN 03 2005

COASTAL CONSERVANCY  
OAKLAND, CALIF.

**SAVE THE BAY**

