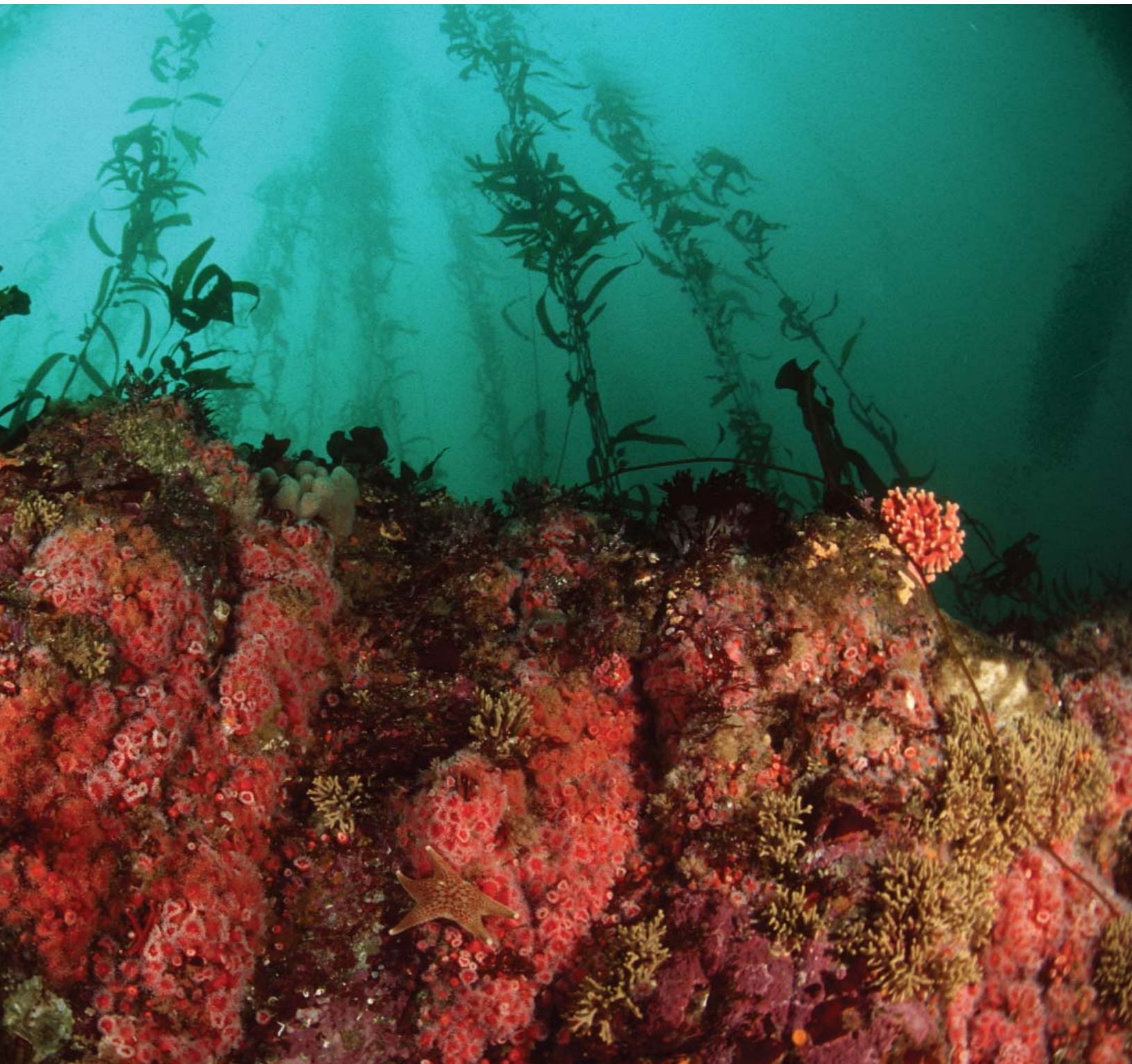


THE CALIFORNIA OCEAN PROTECTION COUNCIL

A Vision for Our Ocean and Coast

FIVE-YEAR STRATEGIC PLAN ■ 2006



THE CALIFORNIA
OCEAN PROTECTION
COUNCIL

A Vision for Our Ocean and Coast

FIVE-YEAR
STRATEGIC PLAN
2006

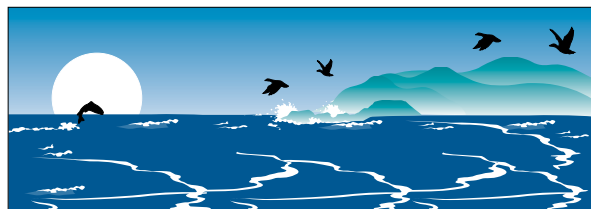
Mike Chrisman, Council Chair
Secretary for Resources

Steve Westly
State Controller
State Lands Commission Chair

Linda Adams
Secretary for Environmental Protection

Sheila Kuehl
State Senator

Pedro Nava
State Assemblymember



OCEAN PROTECTION COUNCIL



CALIFORNIA OCEAN PROTECTION COUNCIL

Mike Chrisman, *Secretary for Resources, Council Chair*
Steve Westly, *State Controller, State Lands Commission Chair*
Linda Adams, *Secretary for Environmental Protection*
Sheila Kuehl, *State Senator, Ex officio Member*
Pedro Nava, *State Assemblymember, Ex officio Member*

September 2006

Fellow Californians,

California's coast and ocean environments are tremendously valuable assets—supporting commerce, tourism, and a special way of life for all Californians. California has an impressive record of taking bold and innovative actions to protect our coastal natural resources and cultural heritage. The accompanying Strategic Plan represents the next important step that will guide the State in protecting these unique resources.

The Ocean Protection Council was established by the California Ocean Protection Act that Governor Arnold Schwarzenegger signed into law in September 2004. The act directs the Ocean Protection Council to work with government agencies to better manage our ocean resources. This Strategic Plan has clear goals and measurable actions which, when implemented, will improve our coastal environments.

We hope you will all join us in embracing the principles and actions included in this Strategic Plan. The members and staff of the Ocean Protection Council look forward to collaborating with the Legislature, the state agencies, and hundreds of other public and private partners to preserve our ocean resources for generations to come.

Sincerely,

Secretary Mike Chrisman, Chair
State Controller Steve Westly
Secretary Linda Adams
Senator Sheila Kuehl
Assemblymember Pedro Nava

Staff

Leah Akins, *Ocean and Coastal Policy Analyst, Resources Agency*

Brian Baird, *Assistant Secretary for Ocean and Coastal Policy, Resources Agency*

Christine Blackburn, *Project Manager, Ocean Protection Council and State Coastal Conservancy*

Drew Bohan, *Executive Policy Officer, Ocean Protection Council*

Marina Cazorla, *Project Manager, Ocean Protection Council and State Coastal Conservancy*

Alice Chiu, *Sea Grant Fellow, Resources Agency*

Neal Fishman, *Deputy Executive Officer and Ocean Program Manager, State Coastal Conservancy*

Rebecca Pollock, *Marine Specialist, NOAA Coastal Services Center and Project Manager, Ocean Protection Council and State Coastal Conservancy*

Samuel Schuchat, *Secretary to the Ocean Protection Council and Executive Officer of the State Coastal Conservancy*

Sheila Semans, *Project Manager, State Coastal Conservancy*

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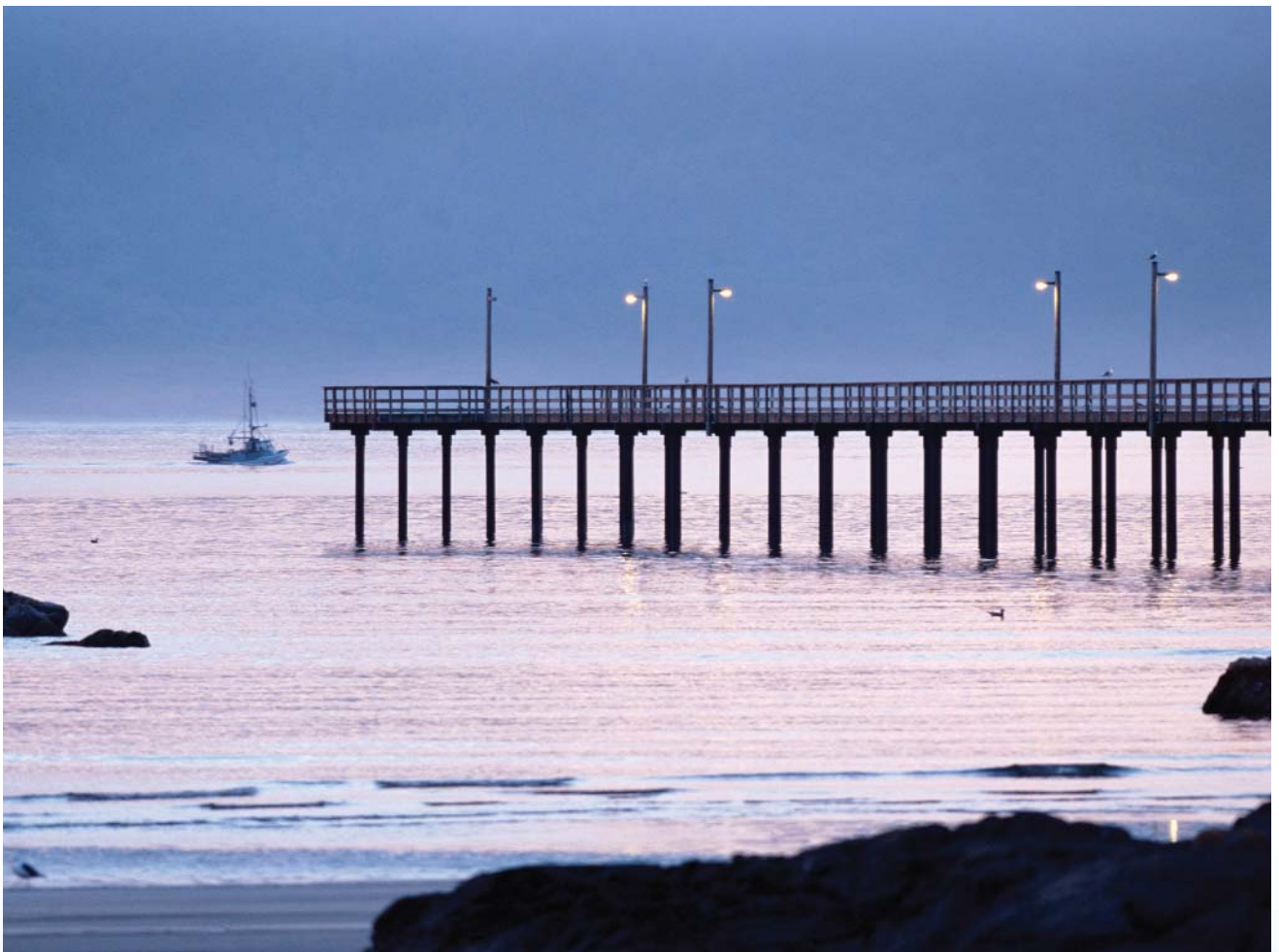
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I. Introduction



CORBIS

Fishing boat off the pier at Crescent City

THE CALIFORNIA OCEAN PROTECTION COUNCIL (OPC) was created on September 23, 2004, when Governor Schwarzenegger signed the California Ocean Protection Act (COPA)¹ into law. This Strategic Plan identifies the goals, objectives, and strategies OPC will implement over the next five years to protect ocean and coastal resources. In some cases, OPC will take a lead role managing an ocean or coastal resource issue of statewide importance; in others, it will provide or identify funding for specific initiatives; in still others, it will recommend needed changes to state or federal laws or regulations.

OPC staff has developed this final Plan in cooperation with the council members, relevant agencies, and stakeholders. The process has been an iterative one, with staff holding workshops and conducting interviews to solicit comments on previous drafts. The result is a comprehensive document that sets priority actions for the next several years. The document includes three main sections: Section I provides an introduction and overview, Section II identifies priority goals and objectives, and Section III describes the principal tools OPC will employ to achieve those goals. Appendix A is a comprehensive list of potential projects that OPC may support or consider funding. Appendix B is a glossary of acronyms. Appendix C is a list of workshop attendees and other individuals who were consulted during the strategic planning process.

1. Public Resources Code Section 35500 *et seq.*

CALIFORNIA'S OCEAN AND COASTAL RESOURCES

California is rich with diverse and productive ocean and coastal ecosystems that benefit Californians and people across the nation in numerous ways. California's coast and ocean support abundant wildlife, commercial fishing industries, and vibrant coastal communities. They provide a broad range of recreational opportunities and a variety of goods and services that are economically valuable to the State and essential to its citizens' quality of life. Some coastal ecosystems, such as wetlands and kelp forests, absorb nutrients or capture sediments from the land, thereby improving water quality and protecting important habitats. These ecosystems serve as nurseries and habitat for marine life and help to protect shoreside communities from floods and storms.

A recent study by the National Ocean Economics Program valued California's "ocean economy" at \$43 billion.² Our ocean economy supports a vibrant and growing tourism industry, a diverse fishing industry, and other businesses. And of course, California's 1,100 miles of coastline provide other benefits, many of which cannot be measured in dollars and cents. The Legislature acknowledged the important contributions of our ocean and coastal resources in the first legislative finding of the California Ocean Protection Act, which states "California's coastal and ocean resources are critical to the State's environmental and economic security, and integral to the State's high quality of life and culture."³

2. According to the National Ocean Economics Program's *California's Ocean Economy, 2005*, of the \$43 billion of gross state product attributed to coastal industries, tourism and recreation accounted for 58 percent, and transportation, including ports, for 34.5 percent. Construction, minerals, ship and boat building, and harvesting of marine life accounted for the remaining activity. Tourism and recreation accounted for 76.8 percent of all coastal employment.

3. Public Resources Code Section 35505(a).

KIP EVANS



Coastal cleanup near Monterey Bay



Container ships at the Port of Oakland

PORT OF OAKLAND

During the last three decades, agencies responsible for protecting California's ocean and coastal resources have had some notable successes. Point source pollution has been significantly reduced. Valuable coastal assets have been purchased and placed in the public trust. Coastal development has been guided by one of the most

progressive coastal management programs in the country, and our understanding of the way natural systems work together has greatly improved.

Despite these successes, significant challenges remain. California has world-class beaches, but continues to suffer beach closures as a result of bacterial pollution. More than 90 percent of the State's coastal wetlands—among the State's most valuable and productive resources—have been lost to diking, draining, and filling. Further, declining fish stocks have forced the federal government to impose significant restrictions on salmon and other types of fishing.

These problems are not unique to California. In 2000, recognizing the threats to the nation's ocean and coastal resources, Congress established the U.S. Commission on Ocean Policy. The Pew Charitable Trusts also created the Pew Oceans Commission to examine the range of issues facing our oceans and coasts. Both commissions were composed of some of the world's top scientists and policy experts and each commission released a comprehensive report on the condition of our oceans. The two reports⁴ reached strikingly similar conclusions. The U.S. Ocean Commission's September 2004 final report to President Bush summarized the Commission's findings as follows:

Human ingenuity and ever-improving technologies have enabled us to exploit—and significantly alter—the ocean's bounty to meet society's escalating needs. Pollution runs off the land, degrading coastal waters and harming marine life. Fish populations are declining and some of our ocean's most majestic creatures have nearly disappeared. Along our coasts, habitats that are essential to fish and wildlife and provide valuable services to humanity continue to suffer significant losses. Non-native species are being introduced, both intentionally

4. The U.S. Commission on Ocean Policy. 2004. *An Ocean Blueprint for the 21st Century*. Available at <http://www.oceancommission.gov/>.

Pew Oceans Commission. 2003. *America's Living Oceans: Charting a Course for Sea Change*. Available at http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf.



Recreational fishing at Redondo Beach

and accidentally, into distant areas, and the results are often damaging and costly. With these impacts come significant economic costs, risks to human health, and ecological consequences that we are only beginning to comprehend.

It has been thirty-five years since this nation's management of the oceans, coasts, and Great Lakes was comprehensively reviewed. In that time, significant changes have occurred in how we use marine assets and in our understanding of the consequences of our actions.

The good news is that Californians care about their coastal environment and consistently support the protection of these unique and essential resources. Acknowledging this strong support for ocean protection, the Legislature and the Governor passed the California Ocean Protection Act (COPA) in 2004. A statewide poll, published in February 2006, has reiterated this support, reporting that 91 percent of Californians believe that the condition of the ocean and beaches in California is important to them personally.⁵

Our challenge today is to recognize the problems we face, to ensure that we have the tools we need to address them, and to use those tools appropriately. Much of the burden for developing and implementing solutions falls on state government agencies. The Governor and Legislature created the Ocean Protection Council to examine all the work that has been done to date to protect our precious ocean and coastal resources and to determine what's working and what's not.

State agencies responsible for protecting our oceans perform a variety of functions. These include acquisition and preservation of wetlands, beaches, and other important coast-related assets; enforcement of environmental laws; and regulation of the use of coastal resources or the activities that impact them.

5. Public Policy Institute of California Statewide Survey, February 2006.

OPC will coordinate the efforts of state agencies to protect ocean and coastal resources and maximize the efficiency with which limited public funds are expended to perform this critical task. Californians demand that their tax dollars be spent efficiently. OPC will work with all stakeholders to determine how best to fund both state agency operations and specific projects. OPC will recommend statutory changes to ensure the most efficient use of funds for operations, and will develop clear criteria by which projects will be selected for funding. OPC's Science Advisory Team will make sure that all OPC decisions—including funding decisions—are based on the best science available.

MISSION OF THE CALIFORNIA OCEAN PROTECTION COUNCIL

The mission of the California Ocean Protection Council is to ensure that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations.

In carrying out this mission, OPC will rely upon the provisions of COPA, which requires that OPC:

- Coordinate activities of state agencies to improve the effectiveness of state efforts to protect ocean and coastal resources
- Establish policies to coordinate the collection and sharing of scientific data related to ocean and coastal resources
- Identify and recommend to the Legislature changes in state law and policy needed to achieve the goals of COPA
- Recommend to the Governor and the Legislature actions the State should take to encourage needed changes in federal law and policy

GUIDING PRINCIPLES OF THE CALIFORNIA OCEAN PROTECTION ACT

COPA includes guiding principles that California state agencies must follow and that OPC must promote. These guiding principles provide the foundation for all OPC initiatives described in this five-year Strategic Plan. These principles include:

- Recognizing the interconnectedness of the land and the sea, supporting sustainable uses of the coast, and ensuring the health of ecosystems

The phrase “ocean and coastal ecosystems” includes the area from the tops of coastal watersheds through the US exclusive economic zone extending 200 miles offshore.

- Improving the protection, conservation, restoration, and management of coastal and ocean ecosystems through enhanced scientific understanding, including monitoring and data gathering
- Recognizing the “precautionary principle”: where the possibility of serious harm exists, lack of scientific certainty should not preclude action to prevent the harm
- Identifying the most effective and efficient use of public funds by identifying funding gaps and creating new and innovative processes for achieving success
- Making aesthetic, educational, and recreational uses of the coast and ocean a priority
- Involving the public in all aspects of OPC process through public meetings, workshops, public conferences, and other symposia

VISION

OPC believes that identifying what success might look like is an important element of developing an effective strategy for meeting the goals of COPA. With this in mind, OPC has adapted the vision statement of the U.S. Commission on Ocean Policy to reflect COPA:

In the future, the oceans and coasts are clean, safe, prospering, and sustainably managed. A high level of biodiversity and a wide range of critical natural habitats are maintained and in turn support a thriving economy built on multiple beneficial uses, including fishing, energy development, recreation, and transportation. In this future, the coasts are attractive places to live, work, and play, with clean water and beaches; easy public access; safe, bustling harbors and ports; and special protection for sensitive habitats and threatened species. Beach closings, toxic algal blooms, proliferation of invasive species, and vanishing native species are rare. Better land-use planning and improved predictions of severe weather and other natural hazards save lives and money.

In this future, the management of our impacts on the ocean and coast has changed. Management boundaries correspond with ecosystem regions, and policies consider interactions among all ecosystem components. In the face of scientific uncertainty, managers balance competing considerations and proceed with caution. Ocean governance is effective, participatory, and well-coordinated among government agencies, the private sector, and the public.



*Surfer on Crescent Beach,
Del Norte County*

OPC envisions a time when the importance of reliable data and sound science is widely recognized and strong support is provided for physical, biological, social, and economic research, as well as ocean exploration. The State and Nation invest in the necessary scientific tools and technologies. A widespread network of observing and monitoring stations provides a steady stream of useful data.

In this future, better education is a cornerstone of California's ocean and coastal policy. Scientific findings are translated into practical information and products for decision makers, vessel operators, educators, and the public. Improved knowledge and exploration of the ocean inspires and engages people of all ages, and citizens are motivated to help protect these important public resources.

II. Priority Goals and Objectives



CORDELL EXPEDITIONS

Diver at Cordell Bank National Marine Sanctuary

THE INTENT OF THIS STRATEGIC PLAN is to identify clear long-term goals for California and short-term actions for OPC to pursue to reach these goals. The major goals that will guide OPC’s activities over the next five years are described in this section. However, OPC will remain flexible in order to address important issues as they arise. As OPC implements its goals and objectives, it will seek the advice of its State Agency Steering Committee and its Science Advisory Team (see Section III).

Funding is one of the tools OPC will use to protect and restore California’s ocean and coastal resources. The demand for funding for ocean resource protection and conservation far exceeds available supply. Accordingly, one of OPC’s principal tasks identified in this section will be to inventory those needs and determine how best to spend both operational funds and programmatic funds. As COPA states, “Good governance and stewardship of ocean resources necessitate more efficient and effective use of public funds.” OPC plans to fulfill this mandate.

The five-member Council will meet throughout the year. These meetings provide a forum to receive public input and to highlight important issues. They also provide a forum in which OPC can hold state agencies accountable. Most of the state ocean and coastal resource departments are housed within the Resources Agency, CalEPA, and at the State Lands Commission. The two board members from the Legislature provide legislative oversight.

The first organization that OPC will hold accountable is itself. This Strategic Plan sets forth ambitious goals with clear deliverables and deadlines. OPC will hold itself to the same high standards that COPA demands of other governmental units. In the discussion below, OPC identifies goals for each of six themes, together with objectives and priority action items that will move the State toward achieving each goal. A complete list of candidate actions is included in Appendix A.

The themes of the Plan are:

- Governance
- Research and Monitoring
- Ocean and Coastal Water Quality
- Physical Processes and Habitat Structure
- Ocean and Coastal Ecosystems
- Education and Outreach

This Strategic Plan identifies measurable outputs and outcomes (included in this section as “performance measures”). OPC will regularly revisit these measurable outputs and outcomes as more information becomes available, and may revise them as necessary.

Outputs are the direct products of program activities and may include reports, regulatory or legislative actions, conferences, databases, etc. Some of the actions described in this Plan have specific outputs, while others do not. Outputs are an initial measure of effectiveness but are not ends in and of themselves. Rather, outputs are a means of producing outcomes.

Outcomes are the anticipated or actual effects of program activities and outputs. They constitute changes or improvements in target populations being served or the target systems being affected. An increased abundance of specific populations of wildlife is an outcome; acres of wetlands preserved is another.

LAWRENCE ROBBIN



*Santa Cruz beach
and boardwalk*

A. GOVERNANCE

One of OPC's principal goals is to evaluate the way California protects and conserves its ocean and coastal ecosystem resources and to recommend legislative or administrative changes where needed. COPA states that California "needs to coordinate governance and stewardship of the State's ocean, to identify priorities, bridge existing gaps, and ensure effective and scientifically sound approaches to protecting and conserving the most important ocean resources."

OPC GOAL

Enhance the capacity and performance of agency programs to meet the goals of COPA.

PERFORMANCE MEASURES

By 2011, ecosystem-based management approaches guide government policies and programs that affect ocean and coastal ecosystems.

Objective 1: Funding

Maximize the effectiveness of funds spent to protect and conserve coastal resources.

Numerous state agencies receive public funds to protect ocean and coastal resources. These agencies regulate how these resources are used, regulate activities that impact these resources, and purchase coastal resources and place them in the public trust. Some agencies perform more than one of these functions. To date, no attempt has been made to identify all the ocean-related functions performed by state agencies and the ways in which public funds are expended to perform those functions. COPA directs OPC to undertake this task so as to maximize the efficiency of public fund expenditures.

ACTION

By February 2007, complete a comprehensive study of all state agency budgets for ocean and coastal protection activities. The study shall include an assessment of existing special funds and whether those funds have been fully expended in existing operating budgets, an assessment of the range of existing and potential uses for any identified funds, and an assessment of whether there is a duplication of funding efforts.

ACTION By February 2007, complete a comprehensive study of all potential new funding sources for ocean and coastal protection.

ACTION By May 2007, work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve the way ocean-related activities are funded.

Objective 2: Interagency Collaboration

Maximize the effectiveness of state agency efforts to protect and conserve ocean and coastal resources.

A patchwork of state and federal statutes and accompanying regulations governs the management of California's ocean and coastal resources. These laws were drafted over the last several decades, during which time no concerted effort was made to evaluate how well each agency discharged its duties. COPA directs OPC to "improve coordination and management of state efforts to protect and conserve the ocean" and to "identify changes in federal law and policy" necessary to protect ocean resources better.

ACTION By December 2006, inventory laws and identify gaps or overlaps between jurisdictions affecting priority ocean and coastal issues.

ACTION By May 2007, work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve ocean governance.

Objective 3: Enforcement

Improve the enforcement efforts of California's state agencies concerning ocean and coastal protection laws.

California's environmental laws are enforced by a number of federal, state, and local regulatory authorities, each of which may have its own enforcement unit. While it would be impractical and unwise to try to repose all enforcement authority in one agency, enforcement efforts can and should be better coordinated between agencies. Enforcement officials from one agency could be equipped with the skills and authority to enforce laws from agencies with similar responsibilities. The ocean environment, the public, and the regulated community—business owners, municipalities, and others—will all benefit from more efficient enforcement efforts.

ACTION By December 2006, identify all ocean and coastal protection enforcement authorities, programs, and budgets and convene a task force to provide recommendations to OPC on more efficient ways of conducting and coordinating enforcement, including integrating enforcement actions across agencies.

ACTION By May 2007, work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve the enforcement of ocean and coastal protection laws.

Objective 4: Ecosystem-based Management

Develop practical approaches to implementing ecosystem-based management and encourage their implementation throughout the State.

Ecosystem-based management (EBM) is an integrated approach that considers the entire ecosystem, including humans.⁶ The goal of ecosystem-based management is to maintain an ecosystem in a healthy, productive, and resilient condition so that it can provide the services humans want and need. Ecosystem-based management differs from current approaches that focus on a single species, sector, activity, or concern. It considers the connections between species, and how a change in one part of the system affects the whole. OPC will support the development of ecosystem-based management pilot programs in several regions throughout California. Lessons learned from the pilot programs will be evaluated and integrated into future ecosystem-based management programs.

6. COMPASS. Scientific consensus statement on marine ecosystem-based management. Released March 21, 2005. Available at <http://compassonline.org/?q=EBM>.

Aerial view of the Tijuana River National Estuarine Research Reserve

TRNERR



ACTION By May 2007, work with all relevant state agencies to develop proposed legislation, regulations, or other tools to integrate EBM principles into agency operations.

ACTION Support the development of ecosystem-based management pilot programs in several regions throughout California.

Objective 5: Federal Influence

Engage federal government support for California's priorities.

COPA requires that OPC “encourage cooperative management with federal agencies, to protect and conserve representative coastal and ocean habitats and the ecological processes that support those habitats.” California has called for implementation of the major recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission. OPC will continue to advocate for federal support for California initiatives, and for the implementation of key recommendations from the reports of both ocean commissions.

ACTION Actively engage on the following issues by working with the President, Congress, Council on Environmental Quality, National and Western Governors' Associations, and Coastal States Organization to:

- Maintain California's moratorium on offshore oil and gas leasing
- Support California's nonpoint source pollution program
- Call for the ratification of the Law of the Sea Treaty
- Support California's ocean observing systems
- Reauthorize a strong Coastal Zone Management Act
- Support adequate funding for state and federal coastal programs

Objective 6: Regional Coordination

Pursue regional governance approaches to improve coordination of ocean management along the west coast.

OPC will support increased regional coordination between California, Oregon, and Washington, focusing on measures to improve ocean and coastal management.

ACTION By September 2006, adopt a tri-state agreement between California, Oregon, and Washington that focuses on initiatives by all three states to improve ocean and coastal management.

B. RESEARCH AND MONITORING

Solving complex ocean resource problems will require a better scientific understanding of the underlying functioning of ocean and coastal ecosystems. COPA requires OPC to “establish policies to coordinate the collection and sharing of scientific data related to coast and ocean resources between agencies.”

OPC GOAL

Improve understanding of ocean and coastal ecosystems.

PERFORMANCE MEASURES

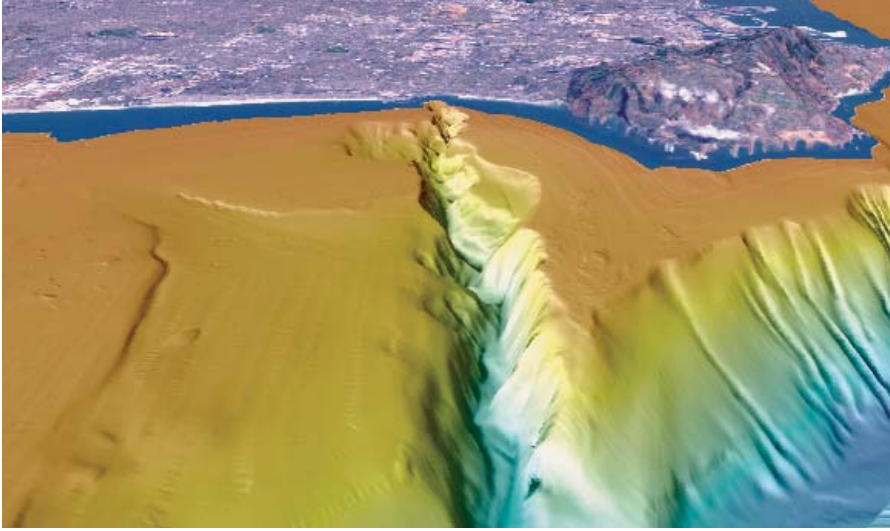
By 2011, the State has sufficient scientific understanding of biological, physical, and socioeconomic processes to implement ecosystem-based management statewide.

By 2011, consistent monitoring data is accessible to resource managers and the public.

Remotely operated underwater vehicle (ROV)



KIP EVANS



Seafloor map of the Redondo submarine canyon

Objective 1: Research

Improve scientific understanding of our ocean and coastal ecosystems.

Science should be the foundation of ocean and coastal policy, but often it is not, sometimes because research and monitoring activities are underfunded and sometimes because results of scientific work are not communicated effectively to decision makers and the public. To begin to close gaps between knowledge and policy, the OPC adopted the Information, Research, and Outreach (IRO) Strategy.⁷

ACTION Implement the IRO Strategy recommendations related to information and research, including:

- Make research part of OPC's funding strategy
- Make California's ocean observing system a national model
- Seek federal support for California's research needs

Objective 2: Monitoring

Monitor and map the ocean environment to provide data about conditions and trends.

Increased and improved data acquisition, analysis, and monitoring provide critical baselines for measuring future changes in ocean and coastal ecosystems. They also provide metrics to assess future success or failure of management measures.

7. Available at http://resources.ca.gov/copc/InfoResOut_Strategy_final.pdf.

ACTION Create a state-sponsored ocean observing program that will work with the federal Integrated Ocean Observing System (IOOS), the Regional Associations (RAs), and other entities to plan and build an integrated ocean observing system in California.

ACTION Pursue funding and partnerships to complete seafloor maps of all state waters. Ensure the distribution of marine habitat and substrate maps to promote effective management of fisheries, design of marine protected areas, and other management efforts.

ACTION Support the establishment of a comprehensive monitoring program focused on Marine Protected Areas established under the Marine Life Protection Act and structured to be beneficial to other programs, including the Marine Life Management Act. Ensure that this monitoring effort is integrated with other state and federal monitoring programs.

C. OCEAN AND COASTAL WATER QUALITY

California's ocean and coastal ecosystems extend from the top of watersheds, down rivers and into bays, estuaries, and lagoons, into the nearshore ocean, and ultimately to deep waters off the coast. The ocean is usually the end point of land-based pollutants that flow from coastal watersheds. Nearshore impairment of water quality can result from municipal sewage discharges, industrial waste discharges, dredge spoils, and agricultural and urban runoff. Impaired water quality undermines the ability of coastal ecosystems to support healthy fisheries, recreational opportunities, and other beneficial uses.

OPC GOAL

**Significantly improve ocean
and coastal water quality.**

PERFORMANCE MEASURES

By 2011, water quality is improved such that the number of beach closures is decreased by 75 percent from 1999.

By 2011, tonnage of debris along the coastline and in coastal waters is decreased by 50 percent from 1999.

Objective 1: Enforce Pollution Controls

Coordinate and support the personnel and programs needed to enforce existing water quality standards.

COPA states that “terrestrial sources of ocean pollution in the State contribute to significant water quality degradation, causing deleterious impacts to public health and marine ecosystems, as well as coastal and recreational economics that are essential to the State’s future.” To reduce pollution, we must improve the way California enforces water quality laws.

ACTION By December 2006, evaluate the efforts of all agencies that enforce water quality laws.

ACTION By May 2007, work with all relevant agencies to develop legislation, regulations, or other tools to improve and streamline enforcement efforts.

ACTION Support funding for additional enforcement personnel as warranted.

Objective 2: Innovation

Support the development of new technologies and approaches to reduce nonpoint source pollution.

Since the passage of the Clean Water Act in 1972, California and the rest of the country have made great strides in reducing point source pollution from industrial and other operations. However, regulators have had a more difficult time reducing pollutants from nonpoint sources, such as storm water that flows from heavily paved urban environments, construction sites, and agricultural operations. Innovative approaches are needed to continue to clean up our waterways.

ACTION Work with the Coastal Nonpoint Pollution Control Program to develop and implement innovative approaches to address nonpoint source pollution. Encourage innovative approaches to improve storm water management (such as increased permeable surfaces that allow storm water and urban runoff to percolate into the soil rather than flow to the ocean).



Debris on Venice Beach after a storm

Objective 3: Once-through Cooling

Work to eliminate the harmful environmental impacts of once-through cooling at coastal power plants.⁸

In California, twenty-one coastal power plants use once-through cooling, a process whereby large volumes of seawater are drawn into the power plant to condense steam created during the generation process. As this occurs, small organisms such as plankton and larvae are also drawn into the cooling system and killed, and larger fish are pinned against the water intake screens. Warm water is also discharged back into the ocean, causing harm to sea life.

ACTION Implement OPC's "Resolution Regarding the Use of Once-Through Cooling Technologies in Coastal Waters" as follows:

- By December 2007, complete an engineering study of the existing coastal power plants to assess the possibility of implementing alternative technologies and operational changes

8. OPC adopted a resolution entitled "Resolution of the California Ocean Protection Council Regarding the Use of Once-through Cooling Technologies in Coastal Waters," available at http://resources.ca.gov/copc/docs/060418_OTC_resolution_LH2_adopted_2006-4-20.pdf.

- Urge the State Water Resources Control Board to implement the most protective controls to achieve a 90–95 percent reduction in impacts of entrainment and impingement
- Establish an interagency coordinating committee to coordinate the activities of regulatory authorities that address once-through cooling
- Investigate possible non-regulatory incentives that can accelerate desirable conversions away from once-through cooling

Objective 4: Water Quality Testing

Improve water quality testing programs and warning systems.

ACTION Develop and implement rapid indicators of pathogen contamination to provide for more timely notice of beach closures and openings.

D. PHYSICAL PROCESSES AND HABITAT STRUCTURE

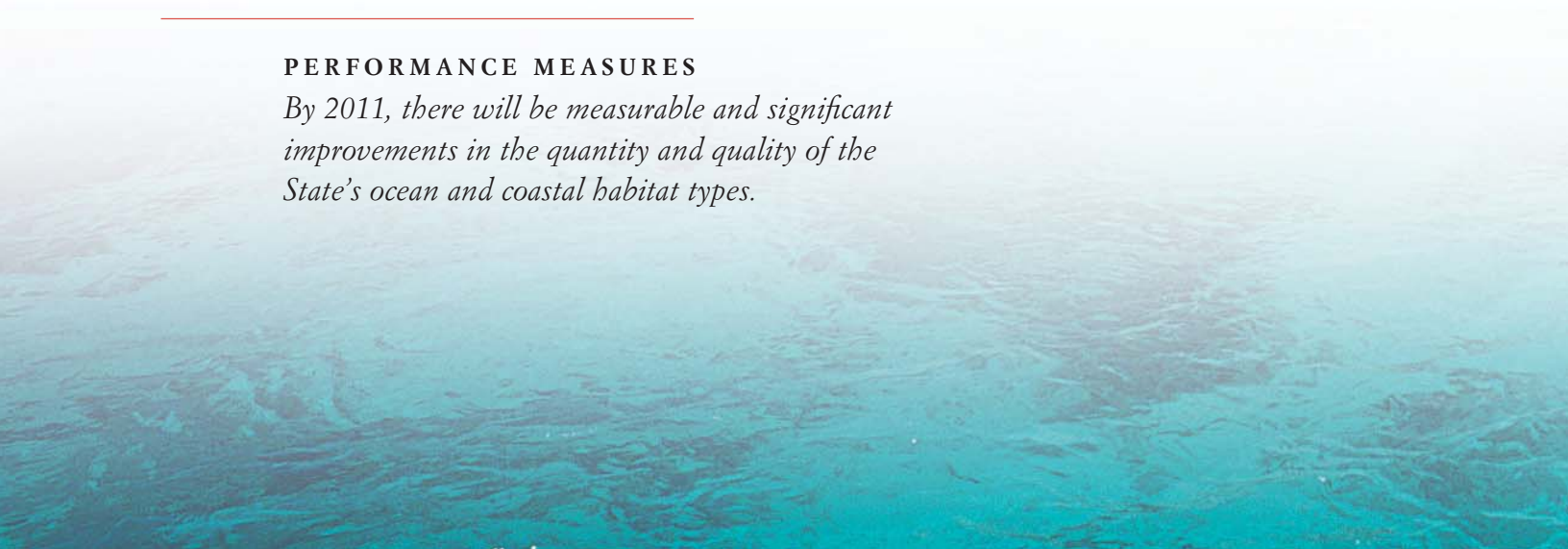
California’s ocean and coastal ecosystems reflect a diverse array of physical habitats, including coastal rivers and wetlands, sandy and rocky beaches, nearshore and offshore rocky reefs and plains, and submarine canyons. These habitats are affected by natural and human-caused factors, including sea level rise, complex oceanographic processes, dredging, river impoundments and diversions, and certain types of fishing gear. Habitats must be maintained and restored to support fisheries, the diversity of California’s coastal wildlife, and recreational and commercial opportunities.

OPC GOAL

Significantly improve the quantity and quality of ocean and coastal habitat in California.

PERFORMANCE MEASURES

By 2011, there will be measurable and significant improvements in the quantity and quality of the State’s ocean and coastal habitat types.



Objective 1: Habitat Restoration

Restore and maintain valuable ocean and coastal habitats and resources.

For many decades, virtually all habitat types and natural systems within California's varied coastal and ocean ecosystems have been impacted by human activities. Coastal wetlands have been diked and filled for development or polluted by urban runoff. Coastal lagoons and nearshore waters have been choked with sediment and other pollutants, thereby damaging eelgrass and kelp beds. Tidepools and rocky habitats have been damaged by intense recreational use. Stream alterations such as diversions, dams, and channels have reduced the ability of some streams to support salmon and other species.

ACTION Fund priority habitat restoration projects, including those involving wetlands, eelgrass, kelp, and native oysters.

ACTION Implement actions to remove barriers to fish passage identified in the CalFish database and work toward measuring and monitoring stream flows on key coastal streams.

ACTION Support efforts to restore riparian corridors, including the Ventura River, Klamath River, and the San Francisco Bay-Delta.

Objective 2: Regional Sediment Management

Support the implementation of regional sediment management throughout California as a means of protecting, restoring, and enhancing California's coastal sediment and beach resources.

Many shoreline problems caused by human modifications to the coast can be solved by implementing a new approach known as regional sediment management. The California Coastal Sediment Management Workgroup (CSMW), a partnership of state and federal agencies, is currently developing the California Coastal Sediment Master Plan. This plan will provide a strategy for implementing regional sediment management solutions to the many shoreline problems along the California coast.

ACTION Work with the CSMW and local partners to complete and implement the California Coastal Sediment Master Plan.

Objective 3: Understand Impacts of Climate Change

Support state efforts to detect the impacts of climate change and to develop strategies to respond to them.

Climate change will affect ocean and coastal habitats in a variety of ways, including alteration of river flows, sea level rise and consequent drowning of shallow-water wetland habitats, increased storm surges, and damage to coastal property.

ACTION Work with the Climate Action Team to investigate the long-term impacts of sea level rise and develop statewide adaptive management policies that will help agencies deal with these impacts.

E. OCEAN AND COASTAL ECOSYSTEMS

California's ocean and coastal ecosystems have supported human use for many centuries. Although management of activities that exploit or affect California's wildlife and plants has improved, unsustainable uses have reduced the capacity of ecosystems to provide goods and services that range from the enjoyment of viewing wild creatures to the production of food and industrial materials. California can benefit from several laws that provide tools that support human use of wild plants and wildlife consistent with long-term economic and ecological values, including the Marine Life Management Act (MLMA) and the Marine Life Protection Act (MLPA). Meeting the challenges of the future will require understanding both the potential and the limits of our ocean resources.

OPC GOAL

Significantly increase healthy ocean and coastal wildlife populations and communities in California.

PERFORMANCE MEASURES

By 2011, California will have significantly reduced the number of species considered to be over-exploited.



GULF OF THE FARALLONES NMS, NOAA



NOAA

NOAA, COURTESY OF UN
FOOD AND AGRICULTURE ORGANIZATION

(Top) A swirling mass of jack mackerel

(Middle) Kelp forest at the Channel Islands

(Bottom) Schooling tuna

Objective 1: Marine Life Protection Act

Help complete and implement a statewide network of Marine Protected Areas (MPAs).

Marine Protected Areas are areas of the ocean where some types of human activity are restricted. They protect habitat, maintain and restore biological diversity and commercially valuable species, provide recreational opportunities, and allow for scientific research. In 2004, the Schwarzenegger administration launched the MLPA Initiative, with the goal of completing the statewide network of MPAs by 2011.

ACTION Identify and fill critical needs in executing the MLPA initiative. Support the Department of Fish and Game (DFG) and the Fish and Game Commission in implementation of the MLPA beyond the Central Coast region to include other areas in the State, and help secure funds that DFG will need to manage a statewide network of MPAs.

ACTION Make resources available to design and implement a comprehensive MPA monitoring program that can be implemented statewide, and that will measure changes in these ecosystems and inform future management decisions.

Objective 2: Marine Life Management Act

Help to establish ecologically and economically sustainable fisheries.

The Marine Life Management Act (MLMA) mandates several significant changes in the way California's marine fisheries are managed and regulated. The primary goals of this legislation are to ensure the conservation, restoration, and sustainable use of California's living marine resources. The MLMA requires that fishery management plans (FMPs) form the primary basis for managing the State's marine fisheries. OPC will support DFG in the development, implementation, and enforcement of essential FMPs.

ACTION Support implementation of FMPs adopted under the MLMA and the development of new FMPs for priority fisheries.

ACTION Make resources available to support DFG's work on the MLMA.

Objective 3: Control Invasive Species

Significantly increase the capacity of public agencies and the private sector to respond to and reduce invasive species.

Invasive species of plants and animals can swiftly undermine efforts to maintain the diversity and productivity of ocean and coastal ecosystems. The invasive alga *Caulerpa taxifolia* made a virtual desert out of much of the Mediterranean Sea and threatened to do the same in Southern California lagoons before it was stopped by concerted efforts by federal, state, and local government, in cooperation with private organizations. In San Francisco Bay a host of foreign organisms have displaced native flora and fauna. Native cordgrass *Spartina foliosa* is being replaced by an eastern invader, *Spartina alterniflora*, and has begun to destroy many of the region's mudflats, critical foraging areas for many bird species. This invasion has been arrested, for now, by a multi-agency task force, but to preserve native species and habitats, many more battles will have to be fought.

ACTION By November 2006, complete the California Aquatic Invasive Species (AIS) Management Plan and the State Rapid Response Plan. Support the full implementation of these plans and the California Noxious and Invasive Weed Action Plan.

Objective 4: Market-based Fisheries

Support market-based approaches to fishery management.

Commercial fishing is an important part of California's history, economy, and culture; however, overall commercial fishing in California has suffered a severe decline in the last 30 years. This decline has made it difficult for many fishermen to make a living and discourages new investment and new business initiatives. OPC will support innovative approaches to fisheries management by working cooperatively with fishermen and their communities and applying market-based approaches. OPC will examine other strategies such as promoting limited entry, quota-based fishery management systems, or vessel buy-backs.



ACTION Develop a California Fisheries Fund or similar strategy that will facilitate a transition to improved fisheries management and sustainable fishing practices, including new fishing techniques to reduce bycatch.

Objective 5: Encourage Sustainable Economic Activity

Encourage emerging coastal and ocean activities that will provide new economic opportunities for the State, can be conducted in a sustainable manner, and are consistent with the goals and objectives of the California Ocean Protection Act.

According to a 2005 National Ocean Economics Program report, California's ocean economy contributed \$43 billion to the State's economy in 2002 through a variety of activities, including coastal tourism, port operations, commercial fishing, and other activities. Dozens of large and small harbors along California's 1,100-mile coast have come under increasing pressure as past patterns of resource exploitation have negatively impacted local economies. Shifting fisheries that once depended on high-volume, low-value exploitation to low-volume, high-value fisheries will require new kinds of port and harbor infrastructure. OPC will encourage new and emerging economic activities or technologies that can boost California's ocean economy in a sustainable manner.

ACTION Encourage and support new and innovative economic activities that can be conducted in a sustainable manner along or off the California coast.

ACTION Preserve working harbors through investments in infrastructure such as small-scale fish processing facilities.

F. EDUCATION AND OUTREACH

A strong link exists between the public's understanding of the natural environment and their willingness to protect and preserve natural resources. Statewide, a lack of public knowledge exists about the ocean and its problems. However, recent surveys indicate that Californians support efforts to protect the oceans and are interested in learning more about them. Ocean stewardship could be dramatically improved through statewide outreach programs.

OPC GOAL

Promote ocean and coastal awareness and stewardship.

PERFORMANCE MEASURES

By 2011, as measured by polling data, most Californians are aware of their individual impact on the coast and ocean, and most also practice conservation principles in their home, work, and recreational activities.

Objective 1: Public Awareness

Increase public awareness of ocean and coastal issues and encourage individual stewardship.

OPC made public outreach a priority in adopting the California Ocean and Coastal Information, Research, and Outreach (IRO) Strategy. This strategy sets forth actions for the State to increase public awareness and stewardship of the ocean and the coast.



ACTION Implement the IRO Strategy recommendations related to outreach, including:

- Improve access to and coordination of ocean and coastal information through a comprehensive ocean and coastal web portal
- Incorporate ocean and coastal science into K–12 and adult education programs by supporting CalEPA’s Education and the Environment Initiative
- Build a public media campaign with the National Marine Sanctuary Program and the Ocean Communicators Alliance



III. Tools for Implementing COPA



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Point Reyes Lighthouse

THE OCEAN PROTECTION COUNCIL will implement the California Ocean Protection Act by using the tools outlined in this section. These tools will be used by OPC and staff to achieve the major goals, priorities, and actions identified in Section II.

FUNDING: ENSURING OUR GOALS CAN BE ATTAINED

As discussed above, California’s ocean and coastal resources are valuable assets, and California must continue to make sound investments to protect these assets. In 2005, a study by the National Ocean Economics Program valued California’s “ocean economy” at \$43 billion. This sector of the economy supports over 400,000 jobs directly, and almost 700,000 jobs indirectly.⁹ The ocean also provides innumerable other benefits to Californians and the nation.

The California Ocean Protection Act explicitly recognizes this value: “California’s coastal and ocean resources are critical to the State’s environmental and economic security, and integral to the State’s high quality of life and culture.” California’s population has more than doubled in just the last four decades, from under 16 million in 1960 to more than 37 million today. With an increase in population comes an increase in pressure on our coastal and ocean resources.

9. These figures represent a concerted effort to determine the economic value of those goods and services that are traded in the market. They do not represent the value of a whole range of other benefits. For example, as discussed above, wetlands filter pollutants from streams before they enter the ocean. They also act like a sponge and absorb storm surges, protecting oceanfront property from flooding. Further, they act as nurseries for fish and other marine life. Attempts have been made to assign an economic value to these services, but no consensus has been reached on how to do so.

COPA requires “a more efficient and effective use of public funds” to protect California’s valuable coastal and ocean resources. OPC’s role will be to make sure that wise investments are made. OPC will complete two studies, one that examines how state government agencies currently spend public funds on ocean and coastal protection, and one that examines all potential new sources of funding for this purpose.

Appendix A provides a list of candidate projects that OPC may support or help fund. OPC’s current project funding guidelines can be found at the following web address: <http://resources.ca.gov/copc>. OPC will work with state agencies and public stakeholders to further refine these guidelines.

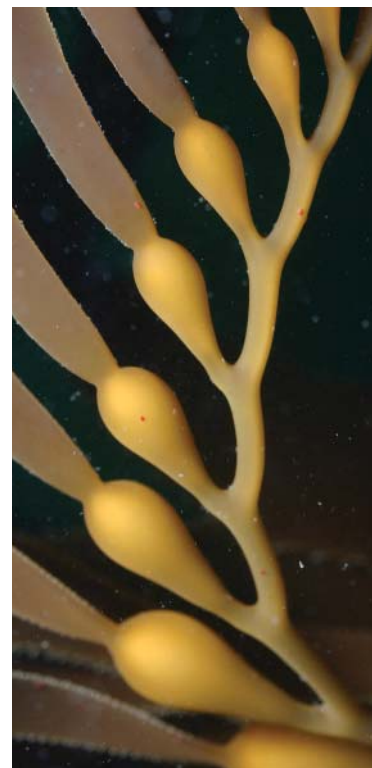
COORDINATION, COLLABORATION, AND INTEGRATION: MAKING GOVERNMENT WORK BETTER

An important function of OPC is to coordinate the activities of a number of state agencies with ocean protection responsibilities and to make sure that those decisions are made in a transparent, public manner. OPC will also work to make sure that the best science available is used to make those decisions.

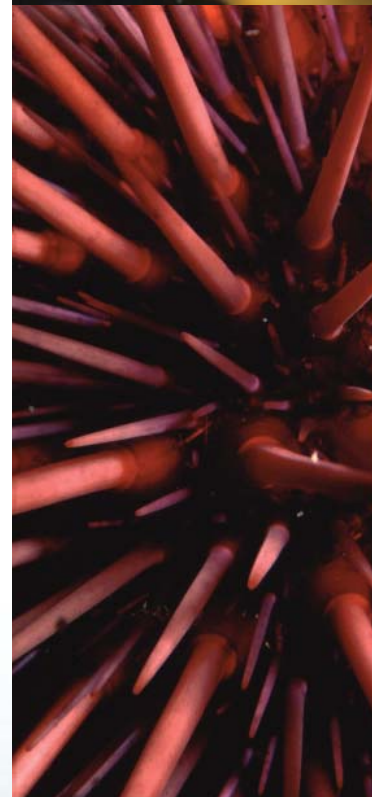
Create a State Agency Steering Committee. OPC will establish a State Agency Steering Committee composed of senior representatives of state departments, boards, and commissions that have ocean and coastal protection responsibilities. OPC’s Executive Policy Officer will chair the Steering Committee, coordinate its activities with the Science Advisory Team, and report to OPC. The Steering Committee will meet with the Science Advisory Team to vet its priorities and to generate a list of questions that can serve as the basis for scientific investigation.

The Steering Committee will:

- Identify top priorities for each fiscal year
- Identify strategies and projects within and across agencies to address these top priorities



STEVE LONHART/MONTEREY BAY NMS



GULF OF THE FARALLONES NMS, NOAA

(Top) Giant kelp (*Macrocystis pyrifera*)

(Bottom) Red sea urchin
(*Strongylocentrotus franciscanus*)

- Assess the capabilities of agencies to carry out their ocean and coastal protection responsibilities
- Identify necessary funding for priority actions—either through re-deploying existing funds, developing cross-cutting budgets, or identifying new funding
- Recommend any necessary legislative action or regulatory changes to implement priority actions and strategies

Create a Science Advisory Team. To ensure that the best available science is applied to OPC policy decisions, a Science Advisory Team will be established, composed of leading scientists from all major ocean and coastal scientific disciplines, including the social and human sciences. The OPC Science Advisor will chair the Science Advisory Team, coordinate with the State Agency Steering Committee, and report to OPC.

The Science Advisory Team will:

- Develop recommendations on scientific issues identified by OPC
- Work with OPC staff to ensure that all staff recommendations and projects proposed to OPC are based on the best available science
- Convene technical working groups and scientific forums to address critical management problems

Encourage Stakeholder Participation. To ensure that the ocean and coastal community is involved in OPC activities, OPC will encourage stakeholder participation. OPC will:

- Continue to encourage public involvement at OPC meetings through open public comment and webcasting of meetings
- Convene public workshops before OPC meetings to encourage informal dialogue about OPC actions
- Host the California and the World Ocean Conference 2006 (CWO '06), September 17–20, in Long Beach, California

Appendices



CHAD KING/MONTEREY BAY NMS

Strawberry anemone (*Corynactis californica*)

Detailed List of Actions Potential OPC and Partner Roles

OPC WILL ASSUME DIFFERENT ROLES in implementing the priorities identified in Section II and in each of the specific actions that are detailed in this appendix. The various OPC and partner agency roles are defined below and then listed for each of the actions.

COORDINATION, COLLABORATION, AND INTEGRATION

Lead: OPC will take a lead role in the development and operation of standing advisory committees or processes through the State Agency Steering Committee. OPC may take the lead in developing other committees or processes to bring about sharing of information, coordinated and integrated action, law and policy development, and public participation in decision-making.

Support: OPC will participate in committees or processes. OPC may appoint one or more of its members to, or its staff will participate in, committees, workgroups, or task forces created by other entities. This will bring OPC's broad perspective, network of organizations, and the possibility of OPC funding to these ventures.

POLICY GUIDANCE

Lead: OPC will assist agencies and others by developing policy guidance on key issues. OPC may engage the Steering Committee and Science Advisory Team, as well as outside experts and the public, in identifying needs for and in developing policy guidance.

Support: OPC will provide support to the development of policy by agencies and the Legislature by providing the results of research that it sponsors or conducts. OPC may make recommendations to agencies and the Legislature regarding desirable policy changes.

FUNDING

Direct: OPC will make direct expenditures. OPC has received funds for a wide range of purposes through appropriations from the Resources Agency, State Coastal Conservancy, and State Water Resources Control Board. Other departments are considering making funds available for OPC purposes. To the extent available, OPC will provide such funds to public agencies, NGOs, and other parties, through grants, contracts, and interagency agreements.

Indirect: OPC will provide support for other parties to receive funds. Using this and other plans as a guide, OPC will help develop and support budget proposals for other state agencies and departments and will assist in negotiating such proposals through the Resources Agency, CalEPA, the Department of Finance, and the Legislature. It will investigate new funding sources, develop cross-cutting budgets, and promote efficient and effective use of existing funds. It may propose reallocation of existing funds administratively or through changes in law or regulation. It will work to increase federal contributions and funds from foundations.

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

A. GOVERNANCE

OPC Goal: Enhance the capacity and performance of agency programs to meet the goals of COPA.

Objective 1: Funding

Maximize the effectiveness of funds spent to protect and conserve coastal resources.

1a	Complete a comprehensive study of all state agency budgets for ocean protection activities.	Lead	Lead	Direct	OPC	All relevant state agencies
1b	Complete a comprehensive study of all potential new funding sources for ocean and coastal protection.	Lead	Lead	Direct	OPC	RA, CCC, BCDC
1c	Work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve the way ocean-related activities are funded.	Lead	Lead	Direct	OPC	All relevant state agencies, RI

Objective 2: Interagency Collaboration

Maximize the effectiveness of state agency efforts to protect and conserve ocean resources.

2a	Inventory laws and identify gaps or overlaps between jurisdictions affecting priority ocean issues.	Lead	Lead	Direct	OPC	All relevant state agencies, RI
2b	Work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve ocean governance. Identify and promote administrative, regulatory, and legislative measures that will enhance the effectiveness of state coastal and ocean programs by reducing gaps and conflicts in policies and programs.	Lead	Lead	Direct	OPC	All relevant state agencies, RI

Objective 3: Enforcement

Improve the enforcement efforts of California’s state agencies concerning ocean protection laws.

3a	Identify all ocean protection enforcement authorities, programs, and budgets, and convene a task force to provide recommendations to OPC on more efficient ways of conducting and coordinating enforcement, including integrating enforcement actions across agencies.	Lead	Lead	Support	OPC	All relevant state agencies
3b	Work with all relevant state agencies to develop necessary legislation, regulations, or other tools to improve the enforcement of ocean protection laws.	Lead	Lead	Direct	OPC	All relevant state agencies

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

Objective 4: Ecosystem-based Management

Develop practical approaches to implementing ecosystem-based management and encourage their implementation throughout the State.

4a	Work with all relevant state agencies to develop proposed legislation, regulations, or other tools to integrate EBM principles into agency operations.	Lead	Lead	Direct, Support	OPC	All relevant state agencies, RI, NGO
4b	Support the development of ecosystem-based management pilot programs in several regions throughout California.	Lead, Support	Lead, Support	Direct, Support	OPC, SCC	LG, DFG, NOAA, Sea Grant, PCJV, RC, RI, USFWS

Objective 5: Federal Influence

Engage federal government support for California’s priorities.

5a	<p>Actively engage on the following issues by working with the President, Congress, Council on Environmental Quality, National and Western Governors’ Associations, and Coastal States Organization to:</p> <ul style="list-style-type: none"> ▪ Maintain California’s moratorium on offshore oil and gas leasing ▪ Support California’s nonpoint source pollution program ▪ Call for the ratification of the Law of the Sea Treaty ▪ Support California’s ocean observing systems ▪ Reauthorize a strong Coastal Zone Management Act ▪ Support adequate funding for state and federal coastal programs 	Lead	Lead	Direct	OPC	All relevant state agencies, NOAA
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Objective 6: Regional Coordination

Pursue regional governance approaches to improve coordination of ocean management along the west coast.

6a	Adopt a tri-state agreement between California, Oregon, and Washington that focuses on initiatives by all three states to improve ocean and coastal management.	Support	Support		OPC, RA	
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

Objective 7: Performance Measures

Build the foundation for identifying outputs and outcomes for objectives and actions supported by the OPC.

7a	Identify outputs and outcomes for at least one objective under each goal and evaluate activities in producing that outcome over the next five years.	Lead	Lead	Direct	OPC	All
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B. RESEARCH AND MONITORING

OPC Goal: Improve understanding of ocean and coastal ecosystems.

Objective 1: Research

Improve scientific understanding of our ocean and coastal ecosystems.

1a	Implement the IRO Strategy recommendations related to information and research, including: <ul style="list-style-type: none"> ▪ Make research part of OPC’s funding strategy ▪ Make California’s ocean observing system a national model ▪ Seek federal support for California’s research needs 	Lead	Lead	Direct	OPC	All
1b	Work with the California Sea Grant Programs to review and award grants that meet the OPC guidelines and priorities. Support or collaborate with the research activities by agencies, universities, and programs that seek to provide a better scientific understanding of impacts to ocean and coastal ecosystems.	Support	Support	Support	Sea Grant	UC, CSU, RI

Objective 2: Monitoring

Monitor and map the ocean environment to provide data about conditions and trends.

2a	Create state-sponsored ocean observing programs that will work with the federal Integrated Ocean Observing System (IOOS), the Regional Associations (RAs), and other entities to plan and build an integrated ocean observing system in California.	Support	Lead, Support	Direct, Support	SCC, UC, CSU, NOAA	BCDC, CCC, DFG, DPR, JPAs, NPS, NGO, NERRs, NMS, NOAA, RA, RI, RWQCB, SWRCB, UC, CSU USGS, USFWS, USCG
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		
2b Complete a statewide management information needs assessment that will guide the development of future ocean observing systems. Develop and implement a comprehensive state or regional approach for acquiring, managing, and disseminating observing data in a way that is responsive to management priorities and numerous stakeholders. Work to integrate data collection techniques between the California RAs, and among the Californian systems, the Pacific regional systems, and the national IOOS. Complete installation of the Coastal Ocean Currents Monitoring Program (COCMP) and ensure it is fully maintained and coordinated with other state and regional observing system components.	Support	Lead, Support	Direct	SCC, UC, CSU, NOAA	BCDC, CCC, DFG, DPR, NPS, NGO, NMS, NOAA, JPAs, RA, RI, RWQCB, SWRCB, UC, CSU, USGS, USFWS, USCG
2c Support and expand existing ocean observing and monitoring programs, data management capabilities, and continued operations and necessary improvements. Support monitoring programs such as Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), Cooperative Research and Assessment of Nearshore Ecosystems (CRANE), California Cooperative Oceanic Fisheries Investigation (CalCOFI), the Water Boards' Surface Water Ambient Monitoring Program (SWAMP), the Statewide Wetlands Monitoring Program, and other regional, long-term data collection efforts. Integrate the data generated from these different systems.	Support	Lead, Support	Direct, Support	SCC, UC, CSU, DFG, SWRCB NMFS, NOAA	CCC, BCDC, LG, JPAs, NGO, DPR, NERRs, NPS, RA, USFWS
2d Pursue funding and partnerships to complete sea floor maps of all state waters. Ensure the distribution of marine habitat and substrate maps to promote effective management of fisheries, design of marine protected areas, and other management efforts. Mapping includes data acquisition, interpretation, and creation of habitat maps. Work with the federal government to map essential areas of federal waters. Implement the recommendations from the December 2006 Statewide Marine Mapping Planning Workshop and Report, and require all future mapping projects to use standards identified in the Workshop Report.	Lead, Support	Lead, Support	Direct, Support	OPC	SCC, CSU, NGO, USGS, UC, DFG, RI, NOAA, DOC/CGS
2e Develop and maintain state and federal partnerships to leverage investment in mapping projects.	Lead, Support	Lead, Support	Direct, Support	OPC	NOAA, USGS, DOC/CGS
2f Develop and implement a system for data management and a standardized approach to the format and distribution of mapping products.	Lead, Support	Lead, Support	Direct, Support	OPC, DOC/CGS	NOAA, USGS
2g Support the establishment of a comprehensive monitoring program focused on MPAs established under the MLPA and structured to be beneficial to other programs, including the MLMA. Insure that this monitoring effort is integrated with other state and federal monitoring programs.	Support	Support	Direct, Support	DFG, OPC	SCC, NOAA, NGO

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS	
	Coordination Collaboration Integration	Policy Guidance	Funding			
2h	Develop a set of statewide standardized indicators for biological, physical, social, and economic disciplines.	Support	Lead, Support	Direct, Support	DFG, CalEPA, SWRCB, JPAs, LA	SCC, UC, CSU, NGO, NMS, RWCQB
2i	Establish a mechanism or organization to provide data synthesis services with the goal of assembling scientific results from state and national efforts and producing products for diverse scientific, public, and policy audiences.	Support	Support	Direct, Support	SCC, UC, CSU, NOAA	NGO, RA, RI

C. OCEAN AND COASTAL WATER QUALITY

OPC Goal: Significantly improve ocean and coastal water quality.

Objective 1: Enforce Pollution Controls

Coordinate and support the personnel and programs needed to enforce existing water quality standards.

1a	Evaluate the efforts of all agencies that enforce water quality laws.	Lead	Lead	Direct, Support	OPC	CCC, DFG, CalEPA, RWQCB, SWRCB
1b	Work with all relevant agencies to develop legislation, regulations, or other tools to improve and streamline enforcement efforts.	Lead	Lead	Direct, Support	OPC	CCC, DFG, CalEPA, RWQCB, SWRCB
1c	Support funding for additional enforcement personnel as warranted.	Lead	Lead	Direct, Support	OPC	CCC, DFG, CalEPA, RWQCB, SWRCB
1d	Establish Special Protections to eliminate or limit waste discharges into Areas of Special Biological Significance (ASBS). These Special Protections will require, by 2011: 1) the elimination of dry weather flows from municipal storm drains into ASBS, and 2) that pollutants in municipal storm runoff will be minimized in order to protect beneficial uses in ASBS.	Support	Support	Support	SWRCB	CCC
1e	Support local governments in addressing land use planning issues affecting ocean and coastal water quality, including updating local coastal programs.	Support	Support	Support	CCC, BCDC	SWRCB, RWQCB, SCC, RC, Cons Corps
1f	Prepare policy responses and address conflicts between state and federal authorities as necessary relating to offshore development proposals impacting ocean and coastal water quality. Review proposals for co-locating other offshore industries with existing offshore oil platforms and for decommissioning aging platforms to determine potential impacts to ocean and coastal resources.	Lead, Support	Lead, Support	Direct, Support	OPC	All relevant state agencies

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

Objective 2: Innovation

Support the development of new technologies and approaches to reduce nonpoint source pollution.

2a	Work with the Coastal Nonpoint Pollution Control Program to develop and implement innovative approaches to address nonpoint source pollution. Encourage innovative approaches to improve storm water management (such as increased permeable surfaces that allow storm water and urban runoff to percolate into the soil rather than flow to the ocean). Promote source control through improved public information and low impact development. Support the development of consistent statewide procedures for monitoring emerging pollutants, such as endocrine disrupters and PBDE.	Support	Support	Direct, Support	WRCB, RWQCB	CCC, SCC, BCDC, RC
2b	Reduce sediment, nutrient, and chemical laden runoff due to forestry, viticulture, and agricultural operations through implementation of the State Water Board’s nonpoint source pollution program, and acquisition of property interests, voluntary certification programs, and grant programs to install source controls.	Support	Support	Direct, Support	SWRCB, SCC, WCB	SCWRP, SFBJV, RWQCB, RC

Objective 3: Once-through Cooling

Work to eliminate the harmful environmental impacts of once-through cooling at coastal power plants.

3a	<p>Implement OPC’s “Resolution Regarding the Use of Once-through Cooling Technologies in Coastal Waters” as follows:</p> <ul style="list-style-type: none"> Complete an engineering study of the existing coastal power plants to assess the possibility of implementing alternative technologies and operational changes Urge the State Water Resources Control Board to implement the most protective controls to achieve a 90-95 percent reduction in impacts of entrainment and impingement Establish an interagency coordinating committee to coordinate the activities of regulatory authorities that address once-through cooling Investigate possible non-regulatory incentives that can accelerate desirable conversions away from once-through cooling 	Lead	Lead	Direct	OPC	CEC, CCC, PUC, SWRCB
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

Objective 4: Water Quality Testing

Improve water quality testing programs and warning systems.

4a	Develop and implement rapid indicators of pathogen contamination to provide for more timely notice of beach closures and openings.	Support	Support	Direct, Support	SWRCB	RWQCB, SCC, RC
4b	Investigate options for detection and treatment of pharmaceuticals, pathogens, and endocrine disruptors in wastewater and runoff.	Support	Support	Direct, Support	SWRCB	RWQCB, SCC, RC
4c	Promote improved monitoring and forecasting of harmful algal blooms to provide advance warning of possible beach closures.	Support	Support	Direct, Support	SWRCB	RWQCB, SCC, RC
4d	Investigate solutions to methyl-mercury contamination in the food chain and improve public education on the potential health risks.	Support	Support	Direct, Support	SWRCB	RWQCB, SCC, RC, Cons Corps

Objective 5: Marine Debris

Reduce ocean and coastal debris and its impacts to ocean ecosystems.

5a	Support the implementation of the 2006 California Marine Debris Action Plan—A Plan of Action to Reduce Land-based Discharges of Marine Debris in California—including the creation of a state Inter-agency Task Force on Litter and Marine Debris.	Support	Support	Direct, Support	CCC, DBW	SCC, SLC, SWRCB, RWQCB, BCDC, NOAA
5b	Promote and expand the Adopt-a-Beach program and Coastal Cleanup Day, including expanding these programs inland to include coastal watersheds.	Support	Support	Direct, Support	CCC	SWRCB, DBW, RWQCB, NOAA
5c	Support and expand the California Derelict Fishing Gear Program, in cooperation with the fishing community, to reduce impacts from lost commercial and recreational fishing gear.	Lead	Lead	Direct	SCC	DFG, Cons Corps, NOAA

Objective 6: Vessel Pollution

Reduce or eliminate point source pollution from vessels.

6a	Work with the US EPA and NOAA to prohibit sewage, sewage sludge, graywater, and all other waste disposal from ocean-going ships and large passenger vessels (greater than 300 gross registered tons).	Support	Support	Support	OPC	USEPA, NOAA, SCC, SWRCB, CCC
6b	Promote the development of alternatives to anti-fouling chemicals in hull paints used on vessels that would continue to be effective growth-inhibitors of vessel fouling organisms.	Support	Support	Direct	SWRCB	CCC, BCDC, SCC

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		
6c	Support	Support	Direct, Support	DBW	RWQCB, SCC, SWRCB, CCC, BCDC
6d	Support	Support	Direct, Support	LG, LA	NGO, SCC, CCC, BCDC, RWQCB, SWRCB, USEPA, USFWS, ACOE, NOAA

D. PHYSICAL PROCESSES AND HABITAT STRUCTURE

OPC Goal: Significantly improve the quantity and quality of ocean and coastal habitat in California.

Objective 1: Habitat Restoration

Restore and maintain valuable ocean and coastal habitats and resources.

1a	Fund priority restoration projects, including those involving wetlands, eelgrass, kelp, and native oysters. Implement ten subtidal restoration projects including eelgrass, kelp, native oyster or other subtidal habitats.	Support	Support	Direct	SCC, NOAA, DFG	SCC, NGO, Cons Corps, RI, SFBJV, SCWRP
1b	Implement actions to remove barriers to fish passage identified in the CalFish database and work toward measuring and monitoring stream flows on key coastal streams.	Support	Support	Direct	SCC, NOAA, DFG	DFG, PFMC
1c	Support efforts to restore riparian corridors including the Ventura River, Klamath River, and San Francisco Bay-Delta, focusing on restoration of habitat connectivity and quality within coastal watersheds. Complete planning for the restoration of rivers and stream corridors to promote the recovery of native salmonid species. Support large-scale dam removal and associated watershed restoration projects that require additional funds to complete, such as Matilija Dam, Rindge Dam, and San Clemente Dam. Examine the removal of dams on the Klamath River to determine future state roles, and consider restoring the Klamath River as a keystone project.	Support	Support	Direct, Support	DFG, SCC, WCB, SWRCB, ACOE, LG, DOI, tribes	USFWS, NOAA, BR, RC, USGS, DWR, JPAs, SCWRP, SLC, Cons Corps, RWQCB, SFBJV
1d	Complete planning and begin implementation for restoration of at least 30,000 acres of coastal or San Francisco Bay wetlands. Complete planning and begin ecosystem-scale wetlands restoration projects (e.g., South Bay Salt Ponds), including adaptive management and monitoring.	Support	Support	Direct, Support	SCC	ACOE, BCDC, Cons Corps, DFG, WCB, LG, RI, RWQCB, SCC, SFBJV, USFWS, NOAA

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS	
	Coordination Collaboration Integration	Policy Guidance	Funding			
1e	Test different management regimes for protecting coastal strand ecosystems, including tide pools and rocky intertidal habitat, and establish best management practices based on these investigations.	Support	Support	Direct	DPR	SCC, DFG, RI
1f	Complete the San Francisco Bay Subtidal Habitat Goals Project by June 2008 and support full implementation of its recommendations. Initiate similar restoration planning projects in key bays and estuaries at representative locations along the coast, such as Humboldt Bay or Tomales Bay. Integrate the San Francisco Bay Subtidal, Baylands, and Uplands Habitat Goals projects to develop a comprehensive protection and restoration plan for the Bay Area.	Support	Support	Direct, Support	NOAA, BCDC, SCC	DFG, DWR, DPR, SLC, LA, LG, ACOE, DBW, CCC, NGO, RC, RI, RWQCB, USEPA, USFWS, WCB
1g	Support the work of the Southern California Wetlands Recovery Project, San Francisco Bay Joint Venture, Pacific Coast Joint Venture, and other regional restoration coordination efforts.	Support	Support	Direct, Support	SCWRP, SFBJV, PCJV	SCC, WCB, Cons Corps, DFG, LG, ACOE, BR, BCDC, CCC, NGO, RC, RI, RWQCB, USFWS, USGS, NOAA
1h	Develop rapid assessments or inventory procedures for watersheds to facilitate prioritization of watershed projects where a comprehensive assessment is not feasible. Investigate and recommend future policies to protect streams and watersheds.	Support	Support	Support	SWRCB	CCC, Cons Corps, SCC, RWQCB, SCWRP, SFBJV, NOAA
1i	Install and establish a system for long-term maintenance of stream gauges statewide. Determine flow rates necessary to protect water quality in coastal lagoons and estuaries consistent with the water pollution control policies of the Regional Water Boards.	Support	Support	Direct, Support	SWRCB, DWR	SCC, RWQCB, LG

Objective 2: Regional Sediment Management

Support the implementation of regional sediment management throughout California as a means of protecting, restoring, and enhancing California’s coastal sediment and beach resources.

2a	Work with the CSMW and local partners to complete and implement the California Coastal Sediment Master Plan.	Support	Support	Direct	RA, ACOE	DBW, SCC, USGS, CCC, CGS, DFG, SLC, LG, DPR
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Objective 3: Understand Impacts of Climate Change

Support state efforts to detect the impacts of climate change and to develop strategies to respond to them.

3a	Work with the Climate Action Team to investigate the long-term impacts of sea level rise and develop statewide adaptive management policies that will help agencies deal with these impacts.	Lead	Lead	Direct	OPC	NOAA, CGS, USGS, RI, CCC, DFG, BCDC, LG
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

E. OCEAN AND COASTAL ECOSYSTEMS

OPC Goal: Significantly increase healthy ocean and coastal wildlife populations and communities in California.

Objective 1: Marine Life Protection Act

Help complete and implement a statewide network of Marine Protected Areas (MPAs).

1a	Identify and fill critical needs in executing the MLPA Initiative. Support DFG and the Fish and Game Commission in implementation of the MLPA beyond the Central Coast region to include other areas in the State, and help secure funds that DFG will need to manage a statewide network of MPAs.	Support	Support	Direct	DFG	NGO, NMS, LG
1b	Make resources available to design and implement a comprehensive MPA monitoring program that can be implemented statewide, and that will measure changes in these ecosystems and inform future management decisions.	Support	Support	Direct, Support	DFG	NGO, RI, NOAA, Cons Corps

Objective 2: Marine Life Management Act

Help to establish ecologically and economically sustainable fisheries.

2a	Support implementation of FMPs adopted under the MLMA and the development of new FMPs for priority fisheries. Complete priority stock assessments and FMPs, and promote the enforcement of associated regulations. Support cooperative research and facilitate data sharing among fishers, academics, and agency personnel to enhance DFG stock assessments and other regulatory decisions.	Support	Support	Direct, Support	DFG	NOAA, RI, NGO
2b	Make resources available to support DFG's work on the MLMA.	Support	Support	Support	DFG	NOAA, RI, NGO
2c	Investigate regulatory and legislative changes that may be needed to restructure DFG's fee system.	Lead	Lead	Direct	OPC, DFG	RA
2d	Install new technologies for permitting, such as electronic licensing for commercial and recreational fishermen, and investigate and implement new technologies for enforcing regulations.	Lead, Support	Lead, Support	Direct, Support	DFG	RA, RI, NOAA

ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		

Objective 3: Control Invasive Species

Significantly increase the capacity of public agencies and the private sector to respond to and reduce invasive species.

3a	Complete the California Aquatic Invasive Species (AIS) Management Plan and the State Rapid Response Plan. Support the full implementation of those plans and the California Noxious and Invasive Weed Action Plan.	Support	Support	Direct	DFG, SCC	LG, Cons Corps, SCWRP, SFBJV, DBW, DFA, NGO, RWQCB, SWRCB, RC, RI, SLC, USCG, USDA, USEPA, USFWS
3b	Improve regulatory coordination and enforcement to prevent or quickly respond to invasive species introductions. Establish a rapid response emergency fund for coastal invasive species in areas determined to be a high priority for response.	Lead, Support	Lead, Support	Direct, Support	DFG, SLC, DFA	SCC, RWQCB, SWRCB, USEPA, USFWS, NOAA, Cons Corps, CCC, RC, BCDC, USDA, DBW
3c	Improve research and data collection on invasive species and coordinate information dissemination on coastal invasions.	Support	Support	Direct, Support	DFG	DBW, DFA, SLC, USDA, SCC, RI, NGO, SCWRP, SFBJV, NOAA, USFWS

Objective 4: Market-based Fisheries

Support market-based approaches to fishery management.

4a	Develop a California Fisheries Fund or similar strategy that will facilitate a transition to improved fisheries management and sustainable fishing practices, including new fishing techniques to reduce bycatch.	Lead	Lead	Direct, Support	NGO	DFG, RI, SCC
4b	Investigate the feasibility of various sustainable fishery management approaches, such as vessel buy-backs, different quota systems, and limited entry programs. Encourage the development of sustainable fishing gear.	Lead	Lead	Direct, Support	NGO, DFG	RI, SCC
4c	Investigate the potential for consumer-oriented market approaches, such as a California sustainable seafood certification program or direct-to-consumer sustainable seafood markets.	Lead	Lead	Direct, Support	NGO, DFG	RI, SCC

Objective 5: Encourage Sustainable Economic Activity

Encourage emerging coastal and ocean activities that will provide new economic opportunities for the State, can be conducted in a sustainable manner, and are consistent with the goals and objectives of the California Ocean Protection Act.

5a	Encourage and support new and innovative economic activities that can be conducted in a sustainable manner along or off the California coast.	Lead	Lead	Direct, Support	SCC, NGO	BCDC, CCC, DFG, LG, LA, NGO, RI
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		
5b	Preserve working harbors through investments in infrastructure such as small-scale fish processing facilities.	Support	Lead	Direct, Support	DBW, LG, LA, SCC, NGO CCC, BCDC, LG
5c	Inventory existing commercial leases of state-owned submerged tidelands and assess the adequacy of standards, practices, and resource protection for these areas. Recommend changes as necessary to current laws and regulations that will ensure adequate protection and valuation of these resources.	Lead	Lead	Direct, Support	SLC CCC, DFG, BCDC
5d	Develop and implement strategies to balance increasing recreational beach access with resource protection. Implement three projects to determine the impacts of various management techniques in representative locations.	Support	Support	Direct, Support	DPR SCC, CCC, BCDC, SLC, RC, LG
5e	Complete the San Francisco Bay Area Water Trail Plan by January 2008 and begin construction of associated infrastructure. Investigate options for water trails in other coastal locations.	Support	Support	Direct, Support	BCDC, SCC, DBW, NGO Cons Corps, LG, DPR, NOAA, USCG, DFG

F. EDUCATION AND OUTREACH

OPC Goal: Promote ocean and coastal awareness and stewardship.

Objective 1: Public Awareness

Increase public awareness of ocean and coastal issues and encourage individual stewardship.

1a	<p>Implement the IRO Strategy recommendations related to outreach, including:</p> <ul style="list-style-type: none"> Improve access to and coordination of ocean and coastal information through a comprehensive ocean and coastal web portal. Build and maintain a State ocean website that is a comprehensive portal to ocean and coastal related information, including access to beach health and water quality information, a database of non-government organizations and ocean-oriented educational organizations, and a clearinghouse for sharing informational and educational materials. 	Direct	Support	Direct, Support	OPC	RA, SCC, NGO, OCA, NMS
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ACTIONS	OCEAN PROTECTION COUNCIL ROLE			LEAD AGENCY	PARTNERS
	Coordination Collaboration Integration	Policy Guidance	Funding		
<p>1a Implement the IRO Strategy recommendations related to outreach, including (continued):</p> <ul style="list-style-type: none"> ▪ Incorporate ocean and coastal science into K-12 and adult education programs by supporting CalEPA's Education and the Environment Initiative. Work with other state and federal organizations (such as the COSEE centers and the National Ocean Literacy Initiative), to bring ocean and coastal disciplines in the K-12 model curriculum and continuing education programs and to monitor and evaluate the effectiveness of these acts. ▪ Build a public media campaign with the National Marine Sanctuary Program and the Ocean Communicators Alliance 	Support	Support	Direct, Support	CalEPA, CCC NMS, RA, OPC	Cons Corps OCA, NOAA, CCC, SCC, NGO
<p>1b Support targeted outreach to decision-makers and state elected officials on the impacts of stewardship decisions (e.g., impacts of land use on ocean and coastal resources). Coordinate an Oceans Forum to discuss issues and brainstorm solutions to problems, similar to the national Ocean Week held annually in Washington, DC.</p>	Support	Support	Support	OPC	COMPASS, RA, SCC, NGO
<p>1c Support environmental education for children and adults, including docent programs, nature and interpretive centers, bilingual education, live webcasts to schools, and on-the-water ocean experiences.</p>	Support	Support	Support	CCC, DPR, NGO, SCC	DFG, LG, NGO, DPR, NERRs, Cons Corps

APPENDIX B

Agency and Organization Acronyms

ACOE	United States Army Corps of Engineers
BCDC	San Francisco Bay Conservation and Development Commission
BR	United States Bureau of Reclamation
CalEPA	California Environmental Protection Agency
CCC	California Coastal Commission
CCJV	California Current Joint Venture
CEC	California Energy Commission
CGS	California Geological Survey
COMPASS	Communication Partnership for Science and the Sea
Cons Corps	California Conservation Corps
DBW	California Department of Boating and Waterways
DFA	California Department of Food and Agriculture
DFG	California Department of Fish and Game
DOC	California Department of Conservation
DOD	United States Department of Defense
DOF	California Department of Finance
DOI	United States Department of Interior
DPR	California Department of Parks and Recreation
DWR	California Department of Water Resources
JPA's	Joint Powers Authorities
LA	Local Authorities
LG	Local Governments
NERRs	National Estuarine Research Reserves
NGO	Non-governmental Organizations
NMS	National Marine Sanctuaries

NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OCA	Ocean Communicators Alliance
PCJV	Pacific Coast Joint Venture
PUC	Public Utilities Commission
RA	California Resources Agency
RC	Regional Conservancies and Authorities
RI	Public and Private Research Institutions
RWQCB	Regional Water Quality Control Board
SCC	State Coastal Conservancy
SCWRP	Southern California Wetlands Recovery Project
SFBJV	San Francisco Bay Joint Venture
SLC	State Lands Commission
SWRCB	State Water Resources Control Board
Tribes	Sovereign Tribal Nations
UC	University of California
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WCB	California Wildlife Conservation Board

Stakeholder Participants in OPC Workshops and Meetings

January – June 2006

Below are the lists of OPC members, agency personnel, and stakeholders that the staff met with to gather ideas for the draft plan. In addition to speaking with these people directly, OPC received many letters providing written comment on previous drafts of the strategic plan.

NORTHERN CALIFORNIA NGO MEETING San Francisco February 1

Teri Shore, *Bluewater Network*
Mike Connor, *San Francisco Estuary Institute*
Jim Curland, *Defenders of Wildlife*
Rod Fujita, *Environmental Defense*
Marilyn Latta, *Save the Bay*
Mark Massara, *Sierra Club*
Jaime Kooser, *San Francisco Bay National Estuarine Research Reserve*
Tim Eichenberg, *The Ocean Conservancy*
Grant Davis, *The Bay Institute*
Kate Wing, *Natural Resources Defense Council*
Linda Sheehan, *California Coastkeeper Alliance*

SOUTHERN CALIFORNIA NGO MEETING Santa Monica February 9

Mark Gold, *Heal the Bay*
Leslie Mintz, *Heal the Bay*
Chris Knight, *Reef Check*
Edward Cassano, *Aquarium of the Pacific*
Greg Helms, *Ocean Conservancy*
Chuck Cook, *The Nature Conservancy*
Mati Waiya, *Ventura Coastkeeper, Wishtoyo Foundation*
Tracy Egoscue, *Santa Monica Baykeeper*
Aida Navarro, *Wildcoast*
Phyllis Grifman, *USC Sea Grant Program*
Fay Crevoshay, *Wildcoast*

**SCIENCE FOCUS
GROUP MEETING**

San Jose

March 1

Dr. Loo Botsford, *UC Davis*
 Dr. Gary Griggs, *UC Santa Cruz*
 Dr. Rikk Kvitek, *CSU Monterey Bay*
 Shauna Oh, *UC Sea Grant Program*
 Dr. Jeff Paduan, *Naval Postgraduate School*
 Dr. Linwood Pendleton, *UC Los Angeles*

**SOUTHERN
CALIFORNIA
PUBLIC
WORKSHOP**

Los Angeles

March 22

Richard J. Lindemann, *Kapolei High School*
 Scott Lines, *City of Long Beach, Stormwater Management Program*
 Douglas Campbell, *Campbell and Campbell*
 George L. Robertson, *Orange County Sanitation District*
 Gail Osherenko, *UC Santa Barbara*
 Charlie Saylan, *Ocean Conservation Society*
 Dr. Maddalena Bearzi, *Ocean Conservation Society*
 Carole Lee Walsh, R.N., *Aw2 Enterprises, Inc.*
 Chad Nelsen, *Surfrider Foundation*
 David Nelson, *Coastal Alliance on Plant Expansion*
 Dr. Jerry C. Wilson, *Fugro Pelagos*
 Susan M. Brodeur, P.E., *County of Orange*
 Donna Schroeder, *UC Santa Barbara*
 Sarah Dunsford, *NOAA*
 David Jacobs, *UC Los Angeles*
 Joe Geever, *Surfrider Foundation*
 David Kushner, *Channel Islands National Park*
 Kate Faulkner, *Channel Islands National Park*
 Jonathan Phinney, *NOAA Fisheries*
 Sarah Abramson, *Heal the Bay*

**NORTHERN
CALIFORNIA
PUBLIC
WORKSHOP**

Sausalito

March 23

Dave Colpo, *Pacific States Marine Fisheries Commission*
 Mark Hixon, *Oregon State University*
 Jodi L. Cassell, *California Sea Grant Extension*
 Amy Dean, *Farallones Marine Sanctuary Association*
 Claire Thorpe, *National Fish and Wildlife Foundation*
 Carol Keiper, *Oikonos Ecosystem Knowledge*
 Dirk Rosen, *Marine Applied Research & Exploration*
 Miriam Gordon, *California Coastal Commission*
 Michelle Chow, *Ocean Discovery!*
 Vic Chow, *Ocean Discovery!*
 Tina Swanson, Ph.D., *The Bay Institute*
 Bucky Mace, *Bolinas Lagoon Foundation*

**NORTHERN
CALIFORNIA
PUBLIC
WORKSHOP***(Continued)*

Rebecca Verity, *UC Office of the President*
Ted Grosholtz, *UC Davis*
Adrienne Harrison, *NOAA*
Becky Smyth, *NOAA*
Rudy Murillo, *UC San Diego*
Jennifer L. Palmer, M.S., *Marine Conservation Biology Institute*
Melinda Dorin, *California Energy Commission*
Brenna Langabeer Schlagenhaut, *PRBO Conservation Science*
Richard Charter, *National OCS Coalition*
Santi Roberts, *Oceana*
Jennifer Fox, *Energy Solutions*
Tom Lambert, *Cordell Bank National Marine Sanctuary Advisory Council*
Angela Haren, *California Coastkeeper Alliance*
Len Materman, *America's River Commodities*
Conner Everts, *Southern California Watershed Alliance*
Kate Bonzon, *Environmental Defense*
Karen Wolowicz, *Redefining Progress*
Bob Spies, *Applied Marine Sciences*
Jim Haussener, *CMANC (California Marine Affairs and Navigation Conference)*
Robert Ovetz, *Sea Turtle Restoration Project*
Jan Roletto, *Gulf of the Farallones Natural Marine Sanctuary*
Judd Boomhower, *Environmental Defense*
Mike Connor, *San Francisco Estuary Institute*
Dominic Gregorio, *State Water Resources Control Board*
Eleanore Rewerts, *Northern California Oceans Foundation*
Will Travis, *San Francisco Bay Conservation and Development Commission*
Toby Garfield, *CSU San Francisco*
Heather Kerkering, *MBARI*
Grant Davis, *The Bay Institute*
Al Wanger, *California Coastal Commission*
Tom Gandesbery, *State Coastal Conservancy*
Jeff Paduan, *National Park Service*
Paul Siri, *Commonweal Ocean Policy Program*
Maira McEnespy, *State Coastal Conservancy*
Beth Huning, *SF Bay Joint Venture*
Vincent Huning, *Seaman's Training Center*
Warner Chabot, *The Ocean Conservancy*
Vincent Backen, *Seaman's Training Center*

**OCEAN
PROTECTION
COUNCIL
INTERVIEWS
January–March**

State Agency Interviews

Paul Thayer and Dwight Sanders, *State Lands Commission*

Sonke Mastrup and Gary Stacey, *Department of Fish and Game*

Peter Douglas and Al Wanger, *California Coastal Commission*

Dominic Gregorio and Tom Howard, *State Water Resources Control Board*

Jerry Johns, Rick Soehren, Bill Bennett, and Fawzi Karajeh, *Department of Water Resources*

David Johnson and Kim Sterrett, *Department of Boating & Waterways*

Will Travis and Steve McAdam, *San Francisco Bay Conservation and Development Commission*

OPC Members and Representatives Interviews

Assemblymember Pedro Nava and Andrea Graham, *Assembly and OPC Ex-officio member*

Bill Craven, *Office of Senator Sheila Kuehl (Senate and OPC Ex-officio member)*

Secretary Allan Lloyd and Ann Baker, *CalEPA*

Steve Westly, Chair, and Cindy Aronberg, *State Lands Commission*

Secretary Mike Chrisman, *Resources Agency*

Other Interviews

Jim Haussener, *California Marine Affairs and Navigation Conference*

Zeke Grader, *Pacific Coast Federation of Fishermen's Associations*

Geraldine Knatz, *Port of Los Angeles*

Tom Raftican, *United Anglers of Southern California*

Tim Schott, *California Association of Port Authorities*

Michael Mantell, *Resources Law Group*

Catherine Reheis-Boyd, *Western States Petroleum Association*

John Martini, *California Independent Petroleum Association*

Paul Michel, *US Environmental Protection Agency*

**GROUP AGENCY
MEETING
May 8**

David Johnson, *Department of Boating and Waterways*

Rick Rayburn, *Parks and Recreation*

Fawzi Karajeh, *Department of Water Resources*

Caitlin Sweeney, *San Francisco Bay Conservation and Development Commission*

Terry O'Brien, *California Energy Commission*

Rick York, *California Energy Commission*

Melinda Dorin, *California Energy Commission*

Tom Howard, *State Water Resources Control Board*

Dominic Gregorio, *State Water Resources Control Board*

Will Semmes, *Conservation Corps*

Al Wanger, *California Coastal Commission*

CALIFORNIA OCEAN PROTECTION COUNCIL

Website: www.resources.ca.gov/copc
Email: COPCpublic@resources.ca.gov



Arnold Schwarzenegger
Governor of the State of California

Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814
916-653-5656

State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612
510-286-1015

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