

**Public Comment to the California Ocean Protection Council
California Ocean and Coastal Information, Research, and Outreach Draft Strategy**

Date	Name	Affiliation	Subject of Communication
07-11-2005	Betty Olson		Ocean Protection Council: new developments including research strategy, project priorities, and upcoming economic summit
07-11-2005	Brock Rosenthal	Ocean Innovations	The Ocean Protection Council
07-17-2005	Ted Grosholz	University of California at Davis	comments on COPC draft strategy
07-18-2005	Dean Pasko	San Diego Metropolitan Wastewater Department	Comments on Ocean Protection Council's draft strategy for research due July 25, 2005
07-21-2005	Cheryl McGovern	United States Environmental Protection Agency	Comments on Ocean Protection Council's draft strategy for research due July 25, 2005
07-21-2005	Gail Osherenko	University of California at Santa Barbara	COMMENTS ON California Ocean and Coastal Information, Research, and Outreach Draft Strategy dated June 10, 2005
07-22-2005	Eric Endersby	California Association of Harbor Masters & Port Captains	California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-23-2005	Janet M. Moore	University of California at Davis, Bodega Marine Laboratory	Comments on Draft California Ocean and Coastal Information, Research, and Outreach Strategy
07-25-2005	Rick Algert	Port San Luis	Comments on the Draft California Ocean and Coastal info, research and outreach strategy
07-25-2005	Michael Sutton	Monterey Bay Aquarium	California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-25-2005	Linda Sheehan/Burr Heneman/Jim Curland/Tim Eichenberg/Rod Fujita	California Coastkeeper Alliance/ Ocean Policy Commonweal/Defenders of Wildlife/ The Ocean Conservancy/Environmental Defense	California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-25-2005	Stephen R. Palumbi	Stanford University	California Ocean and Coastal Information, Research, and Outreach Draft Strategy

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California Ocean and Coastal Information, Research, and Outreach Draft Strategy**

07-25-2005	Astrid Scholz	Ecotrust	Comments on the Draft California Ocean and Coastal info, research and outreach strategy
07-25-2005	William James		California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-25-2005	Alfred Wanger	California Coastal Commission	Comments on California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-25-2005	Vern Goehring	California Sea Urchin Commission	Comments on the California Ocean Protection Council's California Ocean and Coastal Information, Research, and Outreach Draft Strategy
07-25-2005	William J. Douros	Monterey Bay National Marine Sanctuary	Comments on California Ocean Protection Council's Draft California Ocean and Coastal Information, Research, and Outreach Strategy
07-25-2005	David Johnson	CA Dept. Boating & Waterways	Comments on Ocean Protection Council's draft strategy for research due July 25, 2005
07-25-2005	Paul Olin	University of California at Davis	Draft Report
07-29-2005	Terence O'Brien	California Energy Commission	Comments on the California Ocean and Coastal Information, Research and Outreach Draft Strategy
07-29-2005	Justin Malan	California Ocean Science Trust	Comments on Ocean Protection Council's Draft California Ocean and Coastal Information, Research and Outreach Strategy

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: Betty Olson [<mailto:bholson@uci.edu>]

Sent: Monday, July 11, 2005 3:29 PM

To: Amber Mace

Subject: Re: Ocean Protection Council: new developments including research strategy, project priorities, and upcoming economic summit

I have read the materials associated with the May and June meetings. I wonder if the funding level is adequate to address all the issues the council plans/hopes to encompass. It would seem to me that it is a good idea that several areas are identified as high priorities and that they be followed in an intensive manner with an evaluation at the appropriate time period, 2, 3 or 5 years.

While a little of everything from law, to education, to research pleases everyone; being able to show a good outcome is problematic, if your funds get spread too thin; on the other hand too much money in one area is problematic because some will be wasted. I think going to NOAA with several areas that you want to support might yield a better return than a vague statement about getting additional funding. I realize a policy document must be broad in its terminology. However, as an elected official and as a University Professor with an active research program; balancing budget, goals and the best achievements in science are difficult. It might be good if the council considered several immediate policy issues facing the state.

One in my area which could be used to think through such an approach: Developing a better understanding of frank or opportunistic pathogens that enter our coastal waters from rivers/urban runoff/agricultural runoff. I think that there are some basic questions that might be of interest to EPA looking at virulence factor occurrence and expression in the marine environment. Why? Because the USEPA is putting together a book and may form the basis of a proposal in its future regulations on drinking water that indicator be virulence factors. Thus, if they are going in that direction the agency might be willing to take a broader look at question. In the same manner (virulence factors) fish populations can be affected by bacterial pathogens and the same basic research questions relate to those species as well as humans. Two organisms in our coastal waters come to mind: Vibrios and Aeromonads. While the former appears to have a passive association with shellfish, species in the latter group can be pathogens of fish or humans. Basic research on the development baseline indicators of health of the environment or people also have partnerships that can be built between state and federal funding that could be leveraged with USEPA or the like.

I hope these comments are useful. bholson

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: Brock Rosenthal [<mailto:brock@o-ventions.com>]
Sent: Mon Jul 11 21:00:00 2005
To: Brian Baird
Subject: The Ocean Protection Council

Brian:

I sat in on your meeting the other day at Scripps.

After I left it occurred to me that many of the same data base concerns raised in the meeting are also being examined by the Ocean Observatory groups. Since one of the more active players (MBARI) exploring this is in California, it would certainly make sense to look at what they are doing.

Keep up the good work.

Regards,

Brock J. Rosenthal
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CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: Grosholz, Ted [<mailto:tedgrosholz@ucdavis.edu>]

Sent: Sunday, July 17, 2005 10:11 PM

To: Brian Baird; Leah Akins; Tim Corrigan (tcorrigan@scc.ca.gov); Amber Mace

Subject: comments on COPC draft strategy

The strategy needs to include the following additions:

Under V. Information and Research Needs

Under Invasive Species, two of the four bulleted items deal with eradication and control, although eradication has proved very expensive and been successful in a small handful of introductions world-wide (less than six). Control has not been used effectively at all. These are very difficult items. Much more emphasis needs to be put on control and it needs to go beyond ballast water. Non-ballast water mechanisms or vectors of introduction include hull fouling and introductions likely related to live bait (European green crabs), live seafood (Chinese mitten crabs), aquarium introductions (*Caulerpa taxifolia*). These non-ballast vectors have brought in some of our most damaging invaders. There should be a bullet that expressly addresses new research to quantify the risk posed by all vectors of invasive marine species

Under III. Regarding Recommendation 7 - Build a joint public outreach strategy. The emphasis in bullet that focuses on the Sea Grant Extension Program ignores many other Cooperative Extension Specialists and Advisors that are NOT part of Sea Grant but that regularly and routinely deal with coastal and ocean issues. The wording should include DANR (Division of Agriculture and Natural Resources) Specialists and Advisors which are also a well developed statewide network and not be limited to the Sea Grant Extension Program.

Edwin Grosholz

Associate Specialist in Cooperative Extension Coastal Resource

Specialist Department of Environmental Science and Policy University of California, Davis

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

From: Dean Pasko [<mailto:DPasko@sandiego.gov>]
Sent: Monday, July 18, 2005 10:38 AM
To: Brian Baird; Leah Akins; Tim Corrigan (tcorrigan@scc.ca.gov); Amber Mace
Subject: Re: Comments on Ocean Protection Council's draft strategy for
research due July 25, 2005

Dear Drs. Baird and Mace, I've made a couple of suggestions about the draft strategy below. I hope they are helpful.

Best of luck to you.

Respectfully,

Dean

Dean Pasko, M.A.
Marine Biologist III - Data Management & Reporting
Environmental Monitoring & Technical Services Laboratory
EMTS Division - Metropolitan Wastewater Department
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Recommendation #3:

This suggested action does not address how to improve access to information (i.e., data) currently residing with federal agencies (e.g., Cal-EPA or EPA).

Recommendation #5:

This effort should include the managers (IT personnel) from the major NPDES ocean discharging laboratories (i.e., San Diego, San Francisco, LA County, LA City, Orange County and SCCWRP) to develop a data structure that would make

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data from the largest oceanographic and ecological monitoring programs accessible, compatible, and easy to load.

Inclusion of these discharging agencies would address several of the items listed in item V (Information and Research Needs). For example, the agencies listed above regularly collect data on the abundances of demersal fish, megabenthic invertebrates, macrobenthic (infauna) communities, as well as discrete data on various oceanographic parameters (chlorophyll concentrations, temperature, DO, etc.). Although the data does not represent synoptic sampling efforts, an analysis of the whole might provide insight into general patterns or trends. The individual agencies do not have the staff, expertise, or mandate to perform such analyses, but most (if not all) of these data are public (I should think) and should be available to the research community. The issue is accessibility and compatibility (I believe) of the data, which could potentially be solved by getting input from the appropriate managers (i.e., not dictating an unwieldy data structure such as what happened with EPA and the NODC codes and macrobenthic data submission, etc.). SCCWRP (Southern California Coastal Water Research Project) has worked with the agencies operating in the Southern California Bight to develop compatible (and comparable) data from the monitoring programs as part of the EPA-initiated Bight-wide regional surveys (initiated through E-map). Consequently, some of the toughest work may have already been completed.

Item VI (See above)

<mailto:dpasko@sandiego.gov>

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: McGovern.Cheryl@epamail.epa.gov
[mailto:McGovern.Cheryl@epamail.epa.gov]
Sent: Thursday, July 21, 2005 3:02 PM
To: Amber Mace
Cc: Michel.Paul@epamail.epa.gov; Pingaro.Daniel@epamail.epa.gov
Subject: Re: Comments on Ocean Protection Council's draft strategy for research due July 25, 2005

Hi there. I was unable to send comments to the site:
COPCpublic@resources.ca.gov .
So I hope you might forward these comments on the Council.

1. I commend the Council on developing a strategy to address ocean and coastal information, research and outreach needs. I look forward to the opportunity to review the Trustees assessment of priority needs and to comment. This work should be made available outside the forum of Council meetings because the location and venue does not encourage public involvement and citizens need time to review and consider the work done to date. The public needs time to review and comment on priorities and the Council will benefit from the input of the greater public at large.

2. Recommendation 2 does not identify the components or parameters of CA's ocean observation system except to say that it was established as part of the CA Cooperative Oceanic Fisheries Investigations. The recommendation should be expanded to explain the purpose of the system and its main objectives, what parameters are observed, why it is still needed, how it should be improved, what environmental indicators are included and how it system measures whether it is meeting system objectives.

3. Recommendation 3. The Council should specifically include the involvement of the National Estuary Programs (San Francisco Estuary Project, Morro Bay National Estuary Program, and Santa Monica Bay Restoration Commission) that are authorized under the U.S. Clean Water Act, as amended. The Council would be better served through the direct involvement of specific federal agency representatives rather than relying on one federal representative to provide the perspective on all federal agencies.

4. Recommendation 4. This recommendation could be expanded to establish a research program(s). Each program would be charged with answering certain research questions and would be provided a research budget and technical support committee.

5. V. Information and Research Needs.

Where do sea otters, birds, sea lions, sea elephants, whales, etc. fit in to the categories of information and research needs?

Thank you for the opportunity to comment.

Cheryl A. McGovern
Environmental Protection Specialist
U.S. Environmental Protection Agency
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415-972-3415
415-947-3537 Fax

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

From: Gail Osherenko [gailo@starband.net]
Sent: Thursday, July 21, 2005 8:37 AM
To: Brian Baird; Leah Akins; Tim Corrigan; Amber Mace;
Penny Harding
Subject: Comments on draft strategy

Dear Ocean Protection Council:

COMMENTS ON California Ocean and Coastal Information, Research, and Outreach Draft Strategy dated June 10, 2005.

I am a Research Scientist in law and policy at the Marine Science Institute, UCSB. The Draft Strategy is an excellent beginning toward a more coherent and effective program of information, research and outreach; however it does not yet reflect the best scientific thinking and research on ocean and coastal management.

The Strategy misses two related and essential elements:

1. It does not reflect the shift in scientific work away from fragmented, disciplinary science to study of "coupled human/environment systems."

2. Its treatment of social science appears restricted to economics and some amorphous other social science and does not make clear the vital research needs on the broad spectrum of social science including political science, anthropology, and law. More specifically, we now understand that the health of ocean and coastal systems is dependent on understanding not only complex human/environment relationships but social institutions as drivers of system change. Research needs should include study of institutions or management arrangements including the institutional dimensions of sustainable ocean and coastal management. For example, current research on institutions focuses particularly on fit (of the institutions or governance system to the ecological system), interplay (among different levels of government), and scale (fitting institutions to fine scale environmental problems or to macro-scale problems).

My specific recommendations for improvement of the Strategy follow.

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Information:

Obtaining information as called for under section II. Strategy Goal and Objectives, the structure of the governing institutions and the individual and group rights of access to ocean resources (especially fish) must be structured to create incentives for information sharing. At present, fisheries management arrangements discourage rather than encourage sharing of accurate and detailed data on catch (and by-catch). Economists like Dr. James Wilson working in the Gulf of Maine have given this problem considerable attention and are beginning to design management systems that restructure incentives to enhance information sharing. The simple instruction to "provide improved access to available information..." is inadequate and does not recognize the underlying obstacles to obtaining adequate information.

K-12 curriculum (added language in bold):

The recommendations for K-12 education should reflect bio-complexity - the human/environment connection. An understanding of human behavior (social science) is as vital to ocean education as bio-physical science.

Recommended change in first sentence of Recommendation 6.
"Teaching children about the ocean and coast and about the links between human systems and ecological systems is critical to fostering good stewards of our ocean and coastal resources. Students should be taught not only about the bio-physical elements of ocean and coastal environments but about the systems of governance operating in these environments. They should have a basic understanding of the rights, rules, and principles by which society governs ocean and coastal space. Incorporating these principles into K-12..."

Information and Research Needs:

1. "Cross-cutting needs" should include institutional dimensions and an understanding of coupled human/environment systems. (See general comments above.)
2. None of the 5 categories for research address the need for ocean spatial planning, particularly planning for new ocean uses. As aquaculture, renewable energy (tidal energy, wind energy), and LNG terminals vie for offshore ocean space, new conflicts arise with existing ocean uses. New uses also increase identified threats. A vital goal for research is to determine the need for such new uses and identify a set of criteria for their location that will minimize risks to the environment and

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reduce conflicts with other uses. Development of networks of marine protected areas is a useful first step in ocean spatial planning (identifying the conservation units in a larger spatial plan), but they fall short of addressing the pressing needs for California's coast and ocean in an era of globalized trade and increased demand to "privatize" ocean space to produce food and energy.

3. Under Fisheries and Aquaculture, add a new bullet for "ocean planning including planning for new uses"

4. Under Ecosystems and Habitats, add

* Improve understanding of coupled human/environment systems

* Improve understanding of institutions and management systems

5. Under Cross-cutting needs, add

* Diagnose underlying obstacles to ecosystem-based management

* Support studies that foster understanding of the connection between human systems and environmental systems

* Support science that links understanding of biophysical systems with human or social system

Gail Osherenko

Research Scientist (law and policy)

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summer (July/Aug. tel. 802 888-2298)

CALIFORNIA ASSOCIATION OF

HARBOR MASTERS & PORT CAPTAINS

INCORPORATED

July 22, 2005

Dear Mr. Baird:

On behalf of the California Association of Harbor Masters and Port Captains, a 57 year old organization representing harbors and marinas throughout the state, we applaud California's efforts in gathering ocean protection information, and conducting research and outreach. In reviewing the California Ocean and Coastal Information, Research, and Outreach Draft Strategy we have the following comments:

- In Section V, "Information and Research Needs," under "Fisheries and Aquaculture" the statement, "Information and research in the following areas are needed to help managers address the declines in many of California's fisheries, to preserve marine biodiversity, and to promote sustainable and efficient aquaculture practices" is overly broad and fails to mention success stories in many of California's fisheries. Examples are white seabass, lobster, halibut, crab and the increasing abundance of many rockfish.

In addition, this statement and its following bullet points are completely devoid of the promotion of existing sustainable fishery management and practices. There are successes in fishery management that should be acknowledged and built upon, and to not include them does a disservice to the hard work that fishery managers and fishing communities have undertaken over the years.

- The bullet point, "Develop networks of marine protected areas" has no place in an "information and research needs" effort. Simply put, marine protected areas are a potential fishery management tool, not a means of gathering information. This bullet should be removed.
- At no place in the draft document is the issue of traditional public access as mandated by the Coastal Act addressed. Only by the bullet, "Conduct legal and public policy analyses" under the "Coastal Hazards and Shoreline Processes" section is public access only vaguely alluded to. Public access, retention of coastal dependent industries, and maintenance of boating infrastructure should be primary concerns of any ocean protection measures.

Thank you for the opportunity to comment on this document. While it has many laudable points, it also has some shortcomings that need to be addressed, and we look forward to working with the California Ocean Protection Council on the future of this document.

Sincerely,

Eric Endersby
Acting President

P. O. Box 2098, Seal Beach, CA 90740-2098

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: Janet Moore [<mailto:jkmoore@ucdavis.edu>]

Sent: Saturday, July 23, 2005 4:17 PM

To: Brian Baird; Leah Akins; Tim Corrigan (tcorrigan@scc.ca.gov); Amber Mace; Penny Harding

Subject: Comments on Draft California Ocean and Coastal Information, Research, and Outreach Strategy

Importance: High

Outreach Goals and Objectives:

"Coordinate outreach efforts with federal, state and local agencies, academia, industry and the non-governmental community to engage all Californians in the protection of California's ocean and coast."

VI. OUTREACH NEEDS

Outreach efforts in the following areas are needed to engage all Californians in the protection of California's ocean and coastal resources.

- Improve communication between scientists, managers, stakeholders, and policy-makers.
- Incorporate ocean and coastal education and science literacy into K-12 curriculum.
- Support informal educational opportunities to connect with underserved groups.
- Promote ocean and coastal stewardship.
- Support web-based information centers.
- Support programs that promote future ocean leaders and their professional development.

Comments:

1. The outreach strategy should recognize and respond to current demographic trends in coastal areas by specifically targeting older citizens for education, outreach and volunteer projects. The "graying" of the California demands that we target older citizens for outreach programs.

As the average age of the population continues to increase, along with overall population numbers, the demand for property ownership and access to public parks in coastal areas will continue to grow. Increases in general affluence, the desire for second homes, vacation destinations, growing number of retirees seeking amenity areas all result in a "graying" of California coastal communities.

California has a burgeoning number of retiring baby-boomers, with diverse skill sets, gravitating to the coasts to live and recreate. Tapping into this community, educating them and empowering them to spearhead projects, both outreach and restoration is the most effective way to quickly and dramatically increase ocean literacy. Highly trained citizens, including coastal residents, could act as information resources (speak at schools, meetings, events) and also act as project managers for restoration projects including recruitment of other volunteers. The California Department of Fish and Game Senior Volunteer Program is a good example of how this approach can be effective for both citizens and public agencies.

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2. The outreach strategy should draw on successes of watershed outreach programs by specifically targeting coastal landowner outreach and restoration in addition to general citizen outreach.

It is essential that all citizens recognize that they are attached to the ocean. However, drawing from successes of the large watershed outreach movement of the last 10 years, coastal outreach should address both the immediate impacts of private landowners on the coast, as well as general education for all California citizens. Driven largely by the dramatic drop in salmonid populations, watershed restoration and outreach programs have focused on educating riparian landowners to address both acute and chronic impacts through changes in land use practices and implementation of restoration projects. Likewise, any outreach designed to increase ocean literacy should also include specifically targeting coastal landowner outreach and restoration. While it is clear that the population density of California coastal areas is (by design) lower than inland urban corridors, there are still increasing numbers of citizens seeking residence in coastal communities. The unique environment of coastal zones is analogous to the fragile riparian zones of rivers and streams, as these are both primary areas of productivity, at the interface of land and water. As such, special attention should be given to educating coastal residents along with structured programs to encourage stewardship of both private and public coastal lands.

Thank you for accepting these comments.

Janet M. Moore
Program Coordinator
UC Davis/Sea Grant Program
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Bodega Marine Lab Home Page: <http://www.bml.ucdavis.edu/>

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

From: Rick Algert [<mailto:RALGERT@morro-bay.ca.us>]
Sent: Monday, July 25, 2005 11:22 AM
To: Brian Baird
Cc: Cman2@aol.com; astrid@ecotrust.org; John Kirlin
Subject: Comments on the Draft California Ocean and Coastal
info, research and outreach strategy

good morning Brian. As I understand it today is the final day to comment on the Research and Outreach strategy. The MLPAI process which is currently underway has generated a fair amount of discussion on needs for socio-economic research in coastal communities, such as my comments attached. I would hope that some of the deficiencies that have been noted in the MLPA process could be incorporated in your Draft and would encourage you to review the issues with John Kirlin, and or whichever SAT or RSG member he might refer you to. If you have already done so, sorry bout wasting your time. .

[see June 2005 Public Comments - 2005-06-15_Algert]

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

July 25, 2005

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

RE: California Ocean and Coastal Information, Research, and Outreach Draft Strategy

Dear Secretary Chrisman:

The California Ocean Protection Council will play an increasingly important role in supporting ocean science and technology efforts by disbursing funds from the Ocean Protection Trust Fund. If the proposed 2006 resources bond act is enacted and ultimately adopted by the electorate, the Trust Fund could ultimately have a very significant amount to work with. This raises the welcome prospect of a vast increase in our ocean science and technology capacity in California over the next five years.

The Draft Strategy for Information, Research and Outreach represents an important step towards strengthening ocean and coastal management in California through improved scientific information gathering and dissemination. However, coordination among scientific programs supported by the Council will be vital, along with the synthesis of these efforts, and the communication of results to policy makers and the public. Currently, there is no mechanism to accomplish this either in the academic community or among state agencies. Without such a coordination, synthesis, and communication body, the ocean research and technology programs supported by the Council could become fragmented and disconnected.

Ideally, the ocean science and technology efforts of the Council would add up to more than the sum of their parts. This will require a sophisticated mechanism to accomplish the necessary coordination, synthesis, and communication of research findings. A strategically designed mechanism would not only reduce duplication and fill gaps among programs, it would also communicate meaningful messages about the health of the ocean and coast to the people of California and their decision makers. In addition, this mechanism would allow the various research and monitoring groups to identify priorities based on management needs.

The enactment of COPA and the creation of the Ocean Protection Council will undoubtedly improve the way in which California manages its unique and celebrated ocean and coastal resources, as well as serve as a model for other states and the nation as a whole. By including a coordinating mechanism, the Ocean Protection Council will ensure efficient and effective management of California's marine resources. We commend you for your efforts thus far and look forward to your continued leadership in protecting California's ocean and coastline.

Sincerely,

Michael Sutton
Vice President and Director
Center for the Future of the Oceans, Monterey Bay Aquarium

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments



July 25, 2005

Mike Chrisman, Chair and Members
California Ocean Protection Council
California Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

VIA EMAIL: COPCpublic@resources.ca.gov

Dear Chair Chrisman and Members of the Council:

On behalf of the California Coastkeeper Alliance, Commonweal, Defenders of Wildlife, Environmental Defense and The Ocean Conservancy, we thank you for the opportunity to submit these comments on the “Draft California Ocean and Coastal Information, Research, and Outreach Strategy” (Strategy). Our primary comment is that any research strategy that is intended to implement the California Ocean Protection Act (COPA) must be built around the concept of research and analysis of ocean ecosystems as a whole. The fundamental concern with the Strategy as proposed is that its research proposals (pages 6-8) continue to take a single-threat focus, which will fail to support the Council’s goal of developing ecosystem-based governance of these critical resources and habitats. While there is some discussion of “cross-cutting needs” on page 8, those are focused on tracking effects, rather than coming to a more mature understanding of how those effects arise and develop in a common environment. Instead of being a brief add-on to the original draft, we recommend that the entire strategy be built on such comprehensive approaches.

The Pew and National Ocean Commission reports both recommend that federal and state agencies move toward greater integration of what are all too commonly compartmentalized ocean policies, management approaches, and science. COPA was enacted to implement this vision. Yet if COPA’s vision is to become a reality, we need more and better information on the synergistic and other effects that different anthropogenic and natural stressors have, separately and together, in setting marine changes in motion. Agencies continue with single species and single stressor management because there is no compelling information to force a real change in decades of process. The ocean suffers as a result.

We ask that the Strategy be revised to ensure that research builds upon the premise that the ocean is an ecosystem with many variables affecting its health, and that few if any of these variables operate alone. For example, rather than “Gather more information on single [fish] species,” the research strategy should call for projects that will contribute to ecosystem-based

fishery management such as, for ecologically and economically important species, information on demographics, life history, trophic relationships, genetic shifts cause by fishing, and co-existing pollution problems and natural stressors (*e.g.* El Nino events). The results of such research initiatives would direct scientifically supported, integrated responses; that is, not only reducing overfishing but also using MPAs, pollution reduction, wetlands restoration (for nurseries), and taking other actions.

As another example of the need for more integrated research, about 80% of the kelp canopy in the Southern California Bight has disappeared in the last 35 years. There have been some significant El Nino events in that time, but the kelp has not rebounded as expected, probably due to a combination of pollution, sedimentation that covers available rocky reefs, and predation by sea urchins unchecked by overfished (sheephead and spiny lobster) and diseased (sea otters) predators. Without more information about the relative effects of the anthropogenic and natural forces at play, respected scientists – and regulatory agencies – will continue to disagree on how to what to do about the failure of these once-thriving kelp forests to rebound.

Finally, researchers have shown that infectious diseases and parasites consistently account for 40-50% of southern sea otter deaths. Many of these diseases appear to be newly introduced and are related to human activities and pollution that originate on land. Unfortunately, existing monitoring programs do not test for disease-causing pathogens, and there is scant funding available to pay for these efforts, or even for these efforts as well as current water quality programs such as SWAMP and Mussel Watch. Until we better understand avenues for disease transmission and the root cause of the previous declines, the prognosis for recovery of southern sea otters is poor. In addition, while disease-related impact are significant, the belief is that a variety of other impacts, such as habitat degradation, entrapment in fishing gear, and (to a lesser degree) illegal shootings and boat strikes, all contribute to the current lack of a viable and growing population. Research needs to address these threats comprehensively in order to direct appropriate action to protect these important members of California's marine habitats.

The state needs research that will help build models of how to act in an ocean ecosystem. The proposed Strategy fails to provide the necessary blueprint for obtaining that kind of information. We ask that the Council focus research efforts in the Strategy on the type of integrated ocean ecosystem analysis that will drive the state to the forefront of marine science, and provide much-needed information that will guide Council members in setting integrated, ecosystem-based ocean policy for the future.

We also ask that the final Strategy contain additional details on how at least the initial phase of the Strategy could move forward. The draft version is missing some key details, such as recommendations for funding sources. For example, while calling for more cross-cutting monitoring, the Strategy could call on the state to secure critically-needed funding for water quality monitoring, funds that were added to but cut from this year's state budget. In addition, the Strategy would benefit greatly from a discussion on ways to provide incentives for universities to seek and obtain grants for integrated research projects. These types of details are necessary to ensure that the state begins to implement the Strategy swiftly and effectively.

* * *

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

Thank you for the opportunity to provide these comments on the need for a detailed, ecosystem-based research strategy that will serve the goals of COPA. If you have any questions, please do not hesitate to call.

Sincerely,



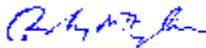
Linda Sheehan
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July 25, 2005

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

RE: Comments for the California Ocean and Coastal Information, Research, and Outreach Draft Strategy

Dear Council Members,

The Draft Strategy for Information, Research and Outreach (IRO) is an ambitious and timely plan, for which the California Ocean Protection Council deserves much credit. However, there is a significant gap in the strategy that will impact the effectiveness of future ocean management. The goal of this letter is to suggest an overall remedy to be added to the Council's strategy.

Currently, the Council's strategy provides for the development of Information, Research and Outreach products, but there is no mechanism for coordinating these efforts, or for communicating their results. The development of a new California Oceans Synthesis Center would accomplish this purpose by coordinating the myriad monitoring and evaluation activities included in the strategy, synthesizing data results, and packaging information for use by policy makers, educators, researchers, and the general public.

The center would be built specifically to absorb scientific results from coastal projects supported by the Council, synthesize them with other state and national efforts, and produce products for diverse scientific, public and policy audiences. It would receive data and reports from MPA monitoring efforts already underway (such as CRANE), remote operated vehicle surveys, satellite or sea floor imagery, ecological and biological coastal surveys, CA Sea Grant products, Agency research efforts, etc.

The proposed center would have a large outreach mission, a crucial feature of the systems ability to respond to changing management needs, and the changing nature of how Californians use the

oceans. The outreach first allows the value of California's investment in marine ecosystem management to be available widely. Modeled after the successful Communication Partnership for Science and the Sea, this outreach arm would help package scientific and policy advances for the press, general public, staff of state agencies, legislators and marine management stakeholders such as recreational or commercial fishers.

This type of coordination would accomplish several purposes. It would ensure minimal overlap in monitoring efforts, minimize redundant costs, and assist the state in identifying critical gaps in research needed to answer policymaking and management questions. The Center's data synthesis function would package raw data into understandable and applicable conclusions, a critical step in ensuring useful, effective outreach of important information. The Center would also serve as a technology clearinghouse for monitoring and evaluation efforts throughout the state. An additional feature would be a two-way flow of information. Instead of only a one-way flow from science to the public, this part of the California Oceans Synthesis Center would alert the Center to concerns and questions by state management agencies, policymakers, stakeholders, and the general public.

Proposed structure of the California Ocean Synthesis Center

Coordination: The center's mission would include maintaining active links to all the groups monitoring or evaluating all the MPAs in the State (e.g., CRANE)--including those funded from sources other than State agencies (e.g., PISCO). It would point out gaps in data collection and seek funds to fill them. It would reduce duplication, and promote data sharing. It would establish a statewide information exchange for coastal marine habitats that would be the repository of MPA monitoring and evaluation data.

Technology: The center would serve as a clearing house and central source for information about new technologies to monitor and evaluate MPAs, including underwater Remote Operated Vehicles, Biosensors, microsensors, chemical trace atlases, genetic tools, satellite imagery, ocean sensing arrays developed by other agencies, acoustic tracking technology, and open ocean tracking efforts (such as TOPP). In some cases, the center could own and loan out hardware for monitoring use. In others cases, it could provide advice about best-practice protocols and coordination.

Synthesis: The Center would use the data coming in from various sources to create a timely view of the status of near marine ecosystems and resources in MPAs throughout the state. Temporal trends, geographic comparisons, unusual changes, novel threats and recovery statistics would be synthesized from the data collected by monitoring groups and from other agencies, and the scientific community.

Dissemination: The output from these syntheses would be packaged for several different audiences. *Policy makers* would receive updates about local issues of concern to their districts, as well as statewide progress updates in ocean health and marine ecosystems. The *general public* would receive updates about ocean related changes, recreational uses, commercial opportunities and important policy changes through the printed press, radio, and video releases. The *scientific community* and other agencies would receive updates of published papers and technical reports.

Educators would receive tools for using updated information in classroom settings, and ways to involve students in the process of science.

Costs: These will depend strongly on the Council's decisions about the scope of goals and missions of an Ocean Synthesis Center. Given the costs of coastal science synthesis already known from PISCO, the costs of press liaisons, legislative outreach and other activities by COMPASS, and the coordination activities and agency links provided by the MLPA staff, an initial setup budget of \$1,000,000 and an annual payroll of about \$1,000,000 is a reasonable starting point. A 2-3% cost increase per year produces a 10-year cost estimate of \$13 million. These figures are placeholders pending a more detailed discussion with the Council.

Key application for the New Center : Future MPAs

The need for this central system is especially true of the anticipated network of Marine Protected Areas (MPAs), which will need to be monitored and evaluated as a whole. The result of the California Marine Life Protection Act will be the establishment of a statewide network of MPAs, and a permanent need to monitor their functioning. Such monitoring is required for understanding our impact on the marine environment, to allow for adaptive management of the network, and to provide for better decision-making during the initial phases of establishing the network in different parts of the state. The inherent bargain of the MLPA process is that sacrifices made by stakeholders in setting up MPAs will be matched by a state commitment to monitor, evaluate and understand the health of California's marine ecosystems.

The Ocean Protection Council, in its *California Ocean and Coastal Information, Research, and Outreach Draft Strategy*, has acknowledged the great need for establishing highly technical and highly reliable monitoring efforts in California MPAs and along the coast. The strategy states "COPA requires the council to establish policies to coordinate the collection and sharing of scientific data related to coastal and ocean resources." Further, it "is to encourage and support information, research, monitoring, and outreach programs that are of clear benefit to the people of the state of California and that address key ocean and coastal resource management, policy, science and engineering issues that face the state." This effort is crucial, however, there is a need for an extra synthetic element in the protection system.

Building On Existing Efforts

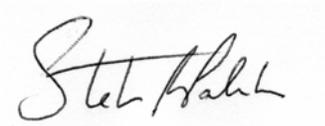
This Center would draw basic funding from the Council's bond effort, but also be able to apply for federal, state and foundation grants. It could be housed at Stanford University's Institute for the Environment, or other academic home, and fill a broad need for research synthesis. PISCO (research and monitoring), COMPASS (scientific outreach to the public and to policy-makers), and the Stanford Institute for the Environment (institutional framework) have the expertise to create a successful center to carry out a program for marine synthesis and understanding.

California's coastline is an international center for marine management action and marine environmental understanding. As such, we have great responsibility to lead the nation, and the world, in managing our marine resources. We feel this center is critical to achieving the goals set forth by COPA (§35510(4); §35615(2); §35650(b)(2)(e-f)). The Ocean Protection Council has

the capacity to provide this leadership and has expressed a strong interest in moving forward by taking advantage of the best marine science, and by providing a way for scientific understanding to continually improve and inform management.

I would be happy to continue a dialogue with you about this idea.

Sincerely

A handwritten signature in black ink, appearing to read "Stephen R. Palumbi". The signature is written in a cursive, flowing style.

Stephen R. Palumbi
Professor of Biological Sciences, Stanford University
Co-PI, Partnership for Interdisciplinary Studies for the Coastal Oceans (PISCO)
Executive Council and Senior Scientist, Communications Partnership for Science and the Sea (COMPASS)
Communications Committee co-chair, Stanford Institute for the Environment
Member, MLPA Science Advisory Team

-----Original Message-----

From: Astrid Scholz [<mailto:astrid@ecotrust.org>]

Sent: Monday, July 25, 2005 7:36 PM

To: Brian Baird; Leah Akins; Tim Corrigan (tcorrigan@scc.ca.gov); Amber Mace; Penny Harding

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

Subject: Re: Comments on the Draft California Ocean and Coastal info, research and outreach strategy

Dear Brian -- I wholeheartedly endorse Rick Algert's suggestion, and encourage you to incorporate into section V of the draft "Information, Research, and Outreach Strategy" a suite of socioeconomic research priorities such as the ones outlined in Mr. Algert's letter to Mr. Kirlin. The tone of suspicion and distrust notwithstanding, the letter quite eloquently illustrates that coastal communities and industries in California have long suffered from the lack of systematic and detailed social, economic and cultural research. This lack is acutely felt with every new policy issue, which -- like the example of marine protected areas illustrates -- cannot help but be controversial whenever economic interests are potentially impacted by conservation measures, development pressures, and hazards such as oil spills, all of which are a staple of the California marine environment and will remain so for the foreseeable future.

I further encourage you to build on and coordinate your efforts with the socioeconomic research needs identified by the MLPA Initiative and other entities on the California coast, notably the socioeconomic monitoring strategy for the Channel Islands National Marine Sanctuary, the socioeconomic research plan being implemented at NOAA Fisheries, and the regional strategy being developed by NOAA Ocean's Marine Protected Area Center. Please don't hesitate to contact me for references to any of these documents.

Best regards,
Astrid Scholz

----- Original Message -----

Subject: Comments on the Draft California Ocean and Coastal info, research and outreach strategy
Date: Mon, 25 Jul 2005 11:22:08 -0700
From: Rick Algert <RALGERT@morro-bay.ca.us>
To: <brian@resources.ca.gov>
CC: <Cmanc2@aol.com>, "Astrid Scholz" <astrid@ecotrust.org>, <john.kirlin@resources.ca.gov>

good morning Brian. As I understand it today is the final day to comment on the Research and Outreach strategy. The MLPAI process which is currently underway has generated a fair amount of discussion on needs for socioeconomic research in coastal communities, such as my comments attached. I would hope that some of the deficiencies that have been noted in the MLPA process could be incorporated in your Draft and would encourage you to review the issues with John Kirlin, and or whichever SAT or RSG member he might refer you to. If you have already done so, sorry about wasting your time. .

--

~~~~~  
Astrid Scholz, Ph.D.  
Ecological Economist, Vice President Knowledge Systems

## CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

Ecotrust, 721 NW 9th Avenue, Portland, OR 97209 ajscholz@ecotrust.org Tel 503 467 0758; cell 503 260 9819; fax 503 222 1517

><((((°> Building Salmon Nation <°))))><

[www.ecotrust.org](http://www.ecotrust.org) ---- [www.salmonnation.com](http://www.salmonnation.com) --- [www.inforain.org](http://www.inforain.org)

CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

-----Original Message-----

From: william james [<mailto:halibutbill@msn.com>]

Sent: Monday, July 25, 2005 1:35 PM

To: Brian Baird; Leah Akins; Tim Corrigan (tcorrigan@scc.ca.gov); Amber Mace; Penny Harding

Subject: California Ocean and Coastal Information, Research, and Outreach Draft Strategy

Dear Mr. Baird :1. "To improve monitoring and data gathering". For the state waters of California I recommend using certain indicator single species surveys to quantify changes in species stock abundance , movement, mortality, and stock structure. To be designed correctly these surveys need be designed collaboratively by including individuals as follows: federal and state stock assessment experts, sea grant scientists, commercial and , and / or recreational fishermen, and Department of Fish and Game personnel. I have a model of this kind of project that is in its final stages of completion. It will be available for discussion by your December 2005 Ocean Protection Council Meeting. 2. The understanding of our harbors infrastructure and the local regional fishing communities needs more socio-economic investigation. Also the needs of the Asian community need more research. I hope to offer a more concise list of projects at your December 2005 Ocean Protection Council Meeting. Sincerely, Bill James



applied use of research and other relevant information to improve and update local land use and general plans. Outreach efforts should also be developed to educate local decision makers about ocean and coastal management issues, and the impact that land use decisions, policies and ordinances have on coastal and ocean resources.

*Recommendation 5. Launch a California ocean and coastal web information portal.*

We suggest that the Council evaluate the best available methods for sharing coast and ocean related information prior to the development of a web information portal. An important step in this process would be the development of a strategy for identifying the information needs, the types of information available, and the appropriate mechanisms for gathering and sharing this information. Though a web information portal may be the logical mechanism for most of these tasks, the design of this information system requires both an adequate survey of user needs and thoughtful planning during the development stages of this effort to ensure that the information is both appropriate and accessible to users and the public. We recommend that the suggested Council action for Recommendation 5 be revised to include the development of a strategy for identifying, gathering and distributing coast and ocean related information.

California Sea Urchin Commission  
1621B 13<sup>th</sup> Street  
Sacramento, California 95814

July 25, 2005

The Honorable Mike Chrisman  
Secretary for Resources  
State of California  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Dear Secretary Chrisman:

I am pleased to submit, in behalf of the California Sea Urchin Commission, these comments on the California Ocean Protection Council's "*California Ocean and Coastal Information, Research, and Outreach Draft Strategy*." As you know the sea urchin fishery, including divers and processors, has many years of experience working with the Department of Fish and Game, the Fish and Game Commission, and other agencies and organizations seeking to ensure a healthy sea urchin resource and a profitable sustainable fishery. A major commitment to continuing that collaboration is reflected in the creation of the California Sea Urchin Commission, under authority granted in the Food and Agriculture Code.

We have the following comments on the Draft Strategy:

1. We agree with Recommendation 4, that research and monitoring should be a high priority of the Council and that obtaining partners to fund and carry out these activities is advisable. We feel, however, that funding received for such work must become State money and the work authorized as part of the lead agencies budget. Only in this way does the public have any assurance that high priority work is getting done in ways that support the general public welfare. Funding the implementation of public programs, like the Marine Life Protection Act (MLPA) with millions of private dollars within a format where public information is discretionary, should be unacceptable - especially where the outcome of the work likely will be extensive regulations on private activities, as is the case with the MLPA.

We suggest that the Council adopt the position that all non-government funding for oceans related research and monitoring be accepted as part of the State budget to ensure the public and the Legislature can understand how the work supports public priorities.

2. Regarding the research needs for Fisheries and Aquaculture, we object to the item regarding marine protected areas. First it is not stated as a research or information need but rather as a conclusion. Second, MPAs in California are established under the MLPA and nothing in the MLPA suggests that MPAs are primarily fishery focused. MPAs are to conserve and protect marine ecosystems, biodiversity, habitat, and all marine species. The draft continues the common deception that MPAs are primarily to manage fisheries.

As you know the California Marine Life Management Act (MLMA) has as its purpose the management of fisheries from an ecosystem perspective. Conversely the purpose of the MLPA is to conserve the marine environment from an ecosystem perspective. If the MLPA simply focuses on fished species it will fall far short of the Legislature's intent and will simply be another program to shut down fishing, while ignoring many other human activities that have significant negative impacts on marine resources.

Research regarding MPAs should be undertaken within the context of Ecosystems and Habitats, e.g., how can the prohibitions on injuring, damaging, taking, or possessing marine resources within MPAs further the conservation and protection of species biodiversity and habitats within the oceans?

We appreciate the opportunity to submit these comments on the Draft Strategy and urge the Council to keep in mind, as it establishes priorities, guidelines, and programs, the need to ensure that agencies and programs seeking to conserve and protect the ocean and its resources are integrated, correlated and balanced to ensure the most significant impacts on the ocean are addressed first.

Sincerely,

**Vern Goehring**  
Vern Goehring  
Executive Director  
916-444-8194

## CA Ocean and Coastal Information, Research, and Outreach Draft Strategy: Public Comments

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From: David Johnson [<mailto:DJOHNSON@dbw.ca.gov>]  
Sent: Monday, July 25, 2005 5:22 PM  
To: Brian Baird; Leah Akins  
Cc: Ray Tsuneyoshi; Mike Sotelo; Margarita Sanchez  
Subject: Comments on Ocean Protection Council's draft strategy for research due July 25, 2005

Brian and Leah - Based on my conversation with Brian, the Department of Boating and Waterways recommends that "Recreational Benefits" be added as a bullet to Section "V. Information and Research Needs."

We recommend the following as a possible description of this element:

"Information and research is needed in the following areas to better understand coastal recreational management and benefits.

- \* Identification and examination of the economic and health benefits of coastal recreation.
- \* The development of partnerships between different economic sectors, governmental agencies, and other interested parties, to better protect coastal resources and enable coastal access.

David Johnson

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UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE

**Monterey Bay National Marine Sanctuary**

299 Foam Street  
Monterey, California 93940

July 25, 2005

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

**RE: Comments on California Ocean Protection Council's Draft California Ocean and Coastal Information, Research, and Outreach Strategy**

Dear Secretary Chrisman,

Thank you for the opportunity to comment on the California Ocean Protection Council's Draft Ocean and Coastal Information, Research, and Outreach Strategy. The Office of National Marine Sanctuaries congratulates your council on initiating a research and outreach strategy for the state's ocean and coastal waters. The Office of National Marine Sanctuaries manages four marine sanctuaries along the coast of California; Channel Islands National Marine Sanctuary, Monterey Bay National Marine Sanctuary, Gulf of the Farallones National Marine Sanctuary, and Cordell Bank National Marine Sanctuary. Together these areas encompass some of the most diverse and biologically productive marine areas in California. The Office of National Marine Sanctuaries mission of research, education and conservation is consistent with the Ocean Protection Council's goals of protecting and preserving California's ocean and coastal ecosystems. We look forward to a productive partnership with the state in furthering the goals of marine environmental protection.

The Draft California Ocean and Coastal Information, Research, and Outreach Strategy provides a series of important recommendations for enhancing information, research, monitoring and outreach programs for the state. Our specific comments are provided for select recommendations included in the draft strategy.

**Recommendation 1. Refine ocean and coastal information, research, and outreach priorities.** The Office of National Marine Sanctuaries supports the work of the California Ocean Science Trust in completing the work of refining the information, research and outreach priorities and determining implementation mechanisms.

**Recommendation 2. Make California's ocean observation system a national model.** The west coast national marine sanctuaries are engaged in international efforts at creating ocean observation systems throughout the globe. Several of the California national marine sanctuaries have deployed ocean observation stations in their boundaries and information sharing is an obvious partnership between the program and state efforts. Also, we believe an effort should be made to reoccupy the northern CalCOFI lines as part of the ocean observation system.



**Recommendation 3. Seek federal involvement and assistance.** The Office of National Marine Sanctuaries is in the process of creating a regional west coast office that will organize regional efforts for California's four sanctuaries and the Olympic Coast National Marine Sanctuary in Washington state. This regional effort will provide an opportunity to partner on research and monitoring programs that span more than one site along the west coast.

**Recommendation 4. Make research part of the council's funding strategy.** The National Marine Sanctuary Program is founded on active and long term research as the founding driver in providing ecosystem management and protection and fully supports the state's efforts to continue to invest in research and monitoring in order to identify management of sensitive coastal and marine areas. The research programs implemented at the four California sites may well provide opportunities for collaborative research and information sharing in areas such as sea floor mapping, oceanographic data, species and habitat monitoring, and socio-economic research.

**Recommendation 5. Launch a California ocean and coastal web information portal.** The Sanctuary Integrated Monitoring Network (SIMoN) at <http://www.mbnms.simon.org> is a web-based information network about marine research, monitoring and data available for the Monterey Bay National Marine Sanctuary. SIMoN is programmed for expansion to the other California sanctuaries over the next several years. SIMoN could be an excellent source of information and an important link with the California Ocean and Coastal Environmental Access Network (CalOcean).

**Recommendation 6. Incorporate ocean and coastal education into K-12 curriculum.** The California sanctuaries have many program that can further the goals of promoting ocean and coastal education into California's schools, and we would be interested in assisting state staff, or staff from other agencies, in helping to meet this recommendation.

**Recommendation 7. Build a joint public outreach strategy in cooperation with National Oceanic and Atmospheric Administration (NOAA), the Consortium for Oceanographic Research and Education (CORE), Sea Grant Extension, and others.** The California sanctuaries look forward to a productive partnership on increasing public outreach in the state concerning marine ecosystem protection. We suggest that this program, which may occasionally meet at a state-wide level, rely on three smaller regions of northern, central, and southern California to more effectively connect with the public.

**Information and Research Needs.** California's sanctuaries agree with the draft strategy's identification of water and sediment quality as a critical information and research need. The projected increase in population along California's shoreline makes it critical that the state approach water quality in an integrated and coordinated fashion combining monitoring with research to enable managers to respond to existing water quality issues and develop modeling capabilities for assessing management actions and priorities. Water quality protection is key to maintaining California's coastal ecosystems and associated recreational uses of California's beaches and coastal areas.

We recommend that the Ocean Protection Council work closely with the State Water Resources Control Board's Comprehensive Monitoring and Assessment Program developed in association with the Environmental Protection Agency in identifying and developing monitoring and research needs for water quality planning and management in coastal and ocean waters. Additionally, efforts should be made to work closely with the California Department of Health Services to integrate data collected by municipalities throughout the state on bacteria and pathogens affecting beaches and recreational areas. These data comprise an important dataset not only for beach closure notifications and management, but also comprise an important dataset on sources and levels of nutrient input into coastal waters of the state. This information could be further enhanced by supporting research on the pathology of the bacterial indicators, thus providing a better understanding of human health risks.

The Office of National Marine Sanctuaries and NOAA's National Centers for Coastal Ocean Science are working on research and predictive modeling capabilities for enhanced understanding of harmful algal blooms throughout the nation. This work may provide important management information for the Ocean Protection Council in addressing this pressing coastal issue before coastal bays and estuaries in California begin experiencing these events. Two other areas of water quality pollution should also be included in the priorities listed in the draft strategy; water quality impacts from offshore aquaculture facilities; and impacts from marine debris and plastics entering the ocean from watersheds, and boats, ships and vessels.

Finally, the National Marine Sanctuary Program and California's sanctuaries support the Ocean Protection Council's identification of improving non-point source and stormwater pollution control technologies, remediation and mitigation as a priority research and information need. Like all states in the nation, California suffers from aging infrastructure in our communities and cities. Stormwater has been identified as the leading means for pollution in our waterways. It is critical that the state lead in identifying affordable stormwater remediation and mitigation technologies to protect fresh water and ocean waters affected by urban runoff.

On behalf of all four national marine sanctuaries in California, thank you for the opportunity to submit these comments on the draft strategy. California's sanctuary offices look forward to working with the Ocean Protection Council on this important strategy and other efforts to protect the ocean environment.

Sincerely,



WILLIAM J. DOUROS, Superintendent  
Monterey Bay National Marine Sanctuary

-----Original Message-----

From: Paul Olin [<mailto:pgolin@ucdavis.edu>]

Sent: Wednesday, June 29, 2005 12:47 PM

To: Brian Baird

Cc: Amber Mace; Leah Akins; rmoll@ucsd.edu; shauna Oh

Subject: Draft Report

Dear Brian,

I was pleased to see reference to California Sea Grant in the Draft California Ocean and Coastal Information, Research, and Outreach Strategy. I believe there is the potential to further strengthen the partnership between California Sea Grant, the Resources Agency and the Ocean Protection Council and would like to suggest some verbiage that would provide a foundation for future collaborations. In the sections below I have some suggested contributions highlighted in bold italics I would encourage you to consider incorporating into this document.

These are intended to 1) identify California Sea Grant as a research partner in recommendation 4; 2) include adult and continuing education in addition to K-12 education in recommendation 6 which would then cover programs like the Coastal Ambassadors under the broad education umbrella and; 3) refer to the association with the Sea Grant Extension Program as a partnership in the third suggested council action under recommendation 7.

Recommendation 4. Make research part of the council's funding strategy. The council will receive funds from a variety of sources to meet the requirements of the California Ocean Protection Act. Some of these funding sources, such as bond funds, will not be eligible to support research and monitoring activities because bond funds can only be used to support infrastructure. However, other sources of funding such as the Environmental License Plate Fund, State Tidelands Revenues, the General Fund, or support from non-profit groups and philanthropic interests could provide funds applicable to research and monitoring activities.

\*\* Suggested council action. The council should establish a firm commitment to fund research and monitoring activities that support management. The council should also seek to identify partnerships for these investments with entities like California Sea Grant to leverage matching funds and to obtain in-kind services to maximize any investments made in research initiatives.

Recommendation 6. Incorporate ocean and coastal education into K-12 curriculum and adult education programs. Teaching children about the ocean and coast and the fundamentals of science is critical to fostering good stewards of our ocean and coastal resources. Incorporating these principles into K-12 curriculum is essential to connecting with the next generation of ocean stewards. The Governor's ocean action plan calls on the council to ensure that ocean and coastal education is included in the environmental principles and concepts being developed pursuant to the implementation of the Education and the Environmental Initiative (Pavley, Chapter 665, Statutes of 2003, AB 1548). The council will be briefed on the progress

of the Education and the Environment Initiative at their June 10, 2005 meeting.

\*\* Suggested council action. The council should continue to actively participate in the Education and the Environment Initiative process to ensure that the important principles and concepts of ocean and coastal science are included in the K-12 environmental education model curriculum, and in continuing education programs.

The following edits are suggestions to for the council recommendation relating to the Sea Grant Extension Program.

Original :

"The council should use California Sea Grant Extension Program's statewide network of Advisors and Specialists to help facilitate information sharing to apply the best available science to the development of sound policy and resource management".

Revised suggestion:

The council should partner with the California Sea Grant Extension Program's statewide network of Advisors and Specialists to help facilitate information sharing to apply the best available science to the development of sound policy and resource management.

Thank you for your consideration of these suggestions and we look forward to working with you as the California Ocean Strategy unfolds.

Best Regards,

Dr. Paul G. Olin, Director  
University of California Sea Grant Cooperative Extension  
133 Aviation Boulevard, Suite 109  
Santa Rosa, CA 95403  
707-565-2621/Fax 2623  
pgolin@ucdavis.edu

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512



July 29, 2005

Mr. Brian Baird  
Assistant Secretary for Ocean and Coastal Policy  
California Resources Agency  
1416 Ninth Street  
Sacramento, CA 95814

**RE: California Energy Commission Comments on the California Ocean and Coastal Information, Research and Outreach Draft Strategy**

Dear Mr. Baird,

California Energy Commission staff is pleased to offer comment on the California Ocean and Coastal Information, Research and Outreach Draft Strategy (Research Strategy), which was presented at the June 10<sup>th</sup> meeting of the California Ocean Protection Council (Council). We applaud the efforts of the California Resources Agency to convene and coordinate the work of California state agencies to better protect and improve the state's near-shore ecosystems through the Council.

As you are aware, Energy Commission staff has been working through our regulatory power plant licensing program, Public Interest Energy Research program, and our Integrated Energy Policy Report program to identify, understand and mitigate the impacts to marine and estuarine ecosystems from California's 21 coastal power plants. Energy Commission staff believe that impacts from once-through cooling are serious and potentially widespread, and should be included in the list of topics addressed by the Council as it conducts its work to improve the marine ecosystem in accordance with the Ocean Protection Act.

Much more research is needed to understand the suite of impacts of once-through cooling systems. Our recent paper, *Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants* (Energy Commission Staff Report No. 700-2005-013, June 2005) summarizes the state of knowledge on once-through cooling and identifies a lack of scientific data as a major obstacle to reducing impacts from this cooling technology. Three of the seven policy options that Energy Commission staff formulated for consideration by the California Energy Commission in the once-through cooling report focused on research and data issues. Accordingly, we offer comment to the Resources Agency with the hope that the scientific issues associated with once-through cooling can be integrated into California's basic research plan and guidance in order to fulfill the Ocean Protection Act directive "to improve monitoring and data gathering and advance scientific understanding to continually improve efforts to protect, conserve, restore, and manage coastal waters and ocean ecosystems."

Office of the Secretary  
July 29, 2005

We also note the State Water Resources Control Board and Regional Water Quality Control Boards will require additional scientific information as they work to implement the new Phase II rules of section 316(b) of the Clean Water Act, which pertain to minimizing entrainment impacts from once-through cooling systems. Power plant operators and other stakeholders will also gain from additional scientific research and data collection on this issue.

***Comments on the California Ocean and Coastal Information, Research and Outreach Draft Strategy***

Energy Commission staff comments on the Research Plan focus on Section V, Information and Research Needs. In general, once-through cooling related research can be summarized as ***a need to better understand the population and community impacts of once-through cooling***. More research is needed on three topical areas:

1. Better understanding of the causal relationship between entrainment mortality to near-shore and estuarine organisms, which tend to be the eggs and larvae of adult fishes, invertebrates such as clams, crabs and abalone, and other zooplankton, and declining populations of these organisms along the coast and in estuaries.
2. Better understanding of baseline conditions for indicator species in areas affected by once-through cooling, along with baseline data on reference cases or control areas not impacted by coastal power plants.
3. Better understanding of the cumulative effects of multiple once-through cooling systems in sensitive bays and estuaries, specifically the San Francisco Bay Delta and Santa Monica Bay, both of which have several large power plants in confined areas. Cumulative effects research can also help better understand the interactive effects between other stressors to the marine ecosystem - such as industrial discharges, wastewater treatment plant discharges, and nonpoint source runoff - and once-through cooling entrainment, impingement and thermal impacts.

Our more specific comments on Section V are as follows:

**Fisheries and Habitats (Change to *Organisms and Habitats?*)**

- **Gather more information on species that could serve as indicators of the overall effects of entrainment and impingement on coastal communities:** This topic is vital in assessing the impacts of once-through cooling on marine environments. In general, there is a paucity of information available on the nearshore communities which are affected by once-through cooling. Basic life history information (e.g., larval duration, growth, and survival) is lacking for many nearshore fishes and invertebrates. Models that examine impacts of power plants on marine environments rely on that information. Life history characteristics are not only important for assessing impacts of power plants, but

also in helping to determine legal size limits, reproductive capacity, and overall health and survival of the fish stocks.

- **Improve communication and collaboration between the state and federal agencies with key regulatory, research and monitoring roles related to once-through cooling and implementation of the new Clean Water Act 316(b) rules.** These agencies include, but are not limited to, the State Water Resources Control Board, Regional Water Quality Control Boards, California Coastal Commission, California Energy Commission, California Department of Fish and Game, U.S. Environmental Protection Agency, and NOAA Fisheries. Academic and private researchers, industry, and other stakeholders also have perspectives and information that need to be incorporated into the collaborative effort to address once-through cooling issues.

### ***Energy Commission Investigations on Once-Through Cooling***

Energy Commission staff is also conducting investigations and sponsoring research on several aspects of once-through cooling that are available to the broader community of agencies and stakeholders working on ocean protection issues through the Council.

- *Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants* (Energy Commission Staff Report No. 700-2005-013, June 2005). <http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF> As noted, this report compiles Energy Commission staff's knowledge on once-through cooling impacts, including the basic science of the issue, policy options to address, reduce and mitigate impacts, alternative cooling systems, and the natural resource economics of the issue. It was prepared this year as a support report to the Energy Commission's Integrated Energy Policy Report.
- *An Assessment of the Studies Used to Detect Impacts to Marine Environments by California's Coastal Power Plants Using Once-Through Cooling*, Appendix A to Staff Report No. 700-2005-013, June 2005, Dr. Michael Foster, Moss Landing Marine Laboratories. <http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013-AP-A.PDF> This report systematically reviews the extant studies at each of the 21 coastal power plants subject to the new EPR 316(b) rule and assesses the adequacy of the studies to accurately determine the effects of this use of seawater on the marine environment.
- *Research Recommendations from the Energy Commission PIER WISER Workshop on April 13, 2005*, Appendix D to Staff Report No. 700-2005-013, June 2005.

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- *Approaches and Methods for Entrainment Impact Assessment*, J. Steinbeck *et al.* This consultant report for the California Energy Commission is in preparation and will provide methodological guidance for sampling and other data collection needed to sufficiently assess baseline conditions and potential impacts from once-through cooling systems.
- Public Interest Energy Research Grant to the Moss Landing Marine Laboratories. The Energy Commission has provided a \$1.5 million grant to the Moss Landing Marine Laboratories on Monterey Bay that will establish a research center for once-through cooling effects.

Thank you for the opportunity to provide comment on the draft Research Strategy. The increasing degradation of California's coastal and marine resources is now understood to be a critical issue for the state. Again, the Energy Commission applauds the efforts of the Resources Agency to create a multi-agency, multi-stakeholder, interdisciplinary forum in which the many complex issues contributing to declining marine ecosystem health can be identified and ameliorated. From our perspective as a lead regulatory and research agency on energy issues, once-through cooling is a subject area that merits inclusion in the primary list of topics to be addressed by the California Ocean Protection Council.

The Energy Commission's staff contacts for once-through cooling issues are Rick York at 654-3945 and Jim McKinney at 654-3999. Please contact them or myself if you have questions about our letter or would like more information about our agency's work on once-through cooling.

Sincerely,

A handwritten signature in blue ink, appearing to read "Terrence O'Brien for".

TERRENCE O'BRIEN, Deputy Director,  
Systems Assessment and Facilities Siting



***Connecting Science to Ocean Management***

3700 Chaney Court  
Carmichael, CA 95608  
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July 29, 2005

Submitted by electronic mail

Secretary Mike Chrisman  
Resources Agency  
1416 9<sup>th</sup> Street #1311  
Sacramento, CA 95814

**SUBJECT: Comments on Ocean Protection Council's Draft California Ocean and Coastal Information, Research and Outreach Strategy**

Dear Secretary Chrisman:

Per your June 6, 2005 request of our Board of Trustees, the California Ocean Science Trust (Trust) sought public comment on the abovereferenced draft strategy at our July 6 Board meeting. We provided two hours on our agenda for consideration and comments from the public and our members. We are pleased to report that overall the draft strategy was well received and all the comments we received were positive and constructive.

Your Ocean Program staff attended the meeting and also took notes on the discussion of this item. We would like to endorse the feedback from the public and Trust summarized as follows:

- The strategy should specifically note the importance of the science community to develop a capacity to monitor and measure *changes* in the physical environment – beaches, sediments, wetlands etc. (Scripps Institution of Oceanography – SIO).
- It was noted that the strategy did not refer specifically to “beaches” – California’s single most important economic coastal resource (SIO).
- Coastal air quality should be considered to be a very important issue and warranted greater attention in the plan (SIO).
- Understanding the integration of air, water and land processes was stressed as vital for effective coastal management (SIO).
- Non-point pollution needed to be defined (CalOST).

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- Specific and general research goals – particularly with respect to non-point pollution - appeared to have been mixed in the strategy (CalOST).
- The difficulty in achieving K-12 education goals was noted (CalOST).
- The inclusion of K-12 curriculum, standards texts and tests was considered important (CalOST).
- The need for a sound data management approach and data framework was stressed by a number of respondents (CalOST).
- Several attendees commented that the document was well drafted, easy to read and succinct (SIO and CalOST).
- There was suggestion that the Trust, UC Marine Council and Sea Grant consider which elements of the strategy each organization could take the lead on for the Council (CalOST).
- In recommendation #2, reference to CalCofi should be replaced with reference to PaCOOS (Wesson, SIO)

Our members and staff are pleased to be working collaboratively with your office on refining and implementing this important task and we will gladly continue to provide assistance where we are able to your Agency and the Council.

Please feel free to contact our Chairman Dr. Charles Kennel at 858.534.2627 or [ckennel@ucsd.edu](mailto:ckennel@ucsd.edu) or me at 916.944.7315 or [jgmalan@aol.com](mailto:jgmalan@aol.com) if you or your staff have any questions regarding these comments or if you wish to discuss additional ways in which the Trust and the Council can work together.

With best wishes for every success of the Council.

A handwritten signature in black ink, appearing to read "J Malan". The signature is written in a cursive style with a large initial "J" and "M".

Justin Malan  
Executive Director

Cc: CalOST Trustees