

Public Comments
on the U.S. Commission on Ocean Policy's Preliminary Report

Topic Area: Multiple Topics - Continued

Comments Submitted by:

- Mandy Hill Cook, USF College of Marine Science
- Marcia K. McNutt, Monterey Bay Aquarium Research Institute
- Jennifer McDonnell, Association of National Estuary Programs
- Mary P. Marsh, President, Maryland Conservation Council
- Rebecca D. Crane, HSUS United Nations, Treaties, and Trade
- Tom Rossby, Rhode Island
- Louis (Sandy) Sage, Bigelow Laboratory
- Emily Wakeman, Santa Rosa, California
- Robert G. Fleagle, University of Washington
- Dale Beasley, Columbia River Crab Fisherman's Association
- James Heirtzler, NASA/Goddard Space Flight Center
- Kenneth D. Johnson, Bristol, Vermont
- Mel Rader
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- Beverly Lynch, Newark, Maryland
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- Mitchel W. Eisenstein, Stony Brook, New York
- CDR John W. Koster, USCG Activities/Marine Inspection Office Europe
- John Dohrmann, Olympia, Washington
- William A. Nurthen, Port Authority of New York and New Jersey
- Charles Kennel, California Ocean Science Trust
- Elizabeth Brusati, Davis Chapter of the Society for Conservation Biology
- Robert B. Abel, Shrewsbury, New Jersey
- Andy Kerr, The Larch Company; Peter Huhtala, Pacific Marine Conservation
Council; Susan Ash & Samantha Murray, Audubon Society of Portland; Robin
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Estuary Study Task Force; Markus Mead, Surfrider Foundation; Mark Systma &
Robin Waldeck, Portland State University; and Paul Englemeyer
- Robert R. Stickney, Sea Grant Association
- Government Relations Department, The American Society of Civil Engineers
- Gail Achterman, Oregon State University
- Steven J. McCormick, The Nature Conservancy
- Sarah Chasis, Kate Wing, Karen Garrison, and Michael Jasny, The Natural
Resources Defense Council

Comment Submitted by Mandy Hill Cook, USF College of Marine Science

June 1, 2004

I'll be in the field tomorrow, but I did want to comment on the COP report chapter on marine mammals (20). Overall, I thought they did a very thorough job of covering the main issues. The only thing I would add would be some detail on mass stranding events linked to *K. brevis* blooms (perhaps on the top of pg. 252). Official reports link the 1997-1998 Atlantic coast bottlenose dolphin mass stranding (740 animals), and the March 2004 Florida panhandle bottlenose dolphin mass stranding (107 animals) to *K. brevis*. Florida manatee mass strandings have also been linked to *K. brevis*: 98 deaths in 2003 and 149 deaths in 1996. All of the specific details are available through FMRI.

Also in Chapter 16 dealing with vessel pollution, there was no mention of noise pollution caused by vessel engines and whether or not it should be monitored, controlled, regulated, etc. I know noise pollution was mentioned in other chapters, but I feel it should be addressed as part of this chapter as well.

Good luck with the discussion tomorrow. I'm sorry I'm going to miss it!

Comment Submitted by Dr. Marcia K. McNutt, President and CEO, Monterey Bay Aquarium Research Institute (MBARI)

May 28, 2004

The Central and Northern California Ocean Observing System (CeNCOOS), one of the developing regional ocean observing systems in the Integrated Ocean Observing System (IOOS), applauds the efforts of the U.S. Commission on Ocean Policy to set a proactive course for managing and protecting our nation's ocean resources.

In particular, we support the development of a user-driven IOOS, with component regional ocean observing systems. We also support the sustained funding allocations recommended for developing and maintaining the IOOS.

We would like to make the following comments on the sections directly pertaining to the geographic scope and governing structure of CeNCOOS:

1. The recommended Regional Ocean Information Programs (ROIP) roughly mirror the developing Regional Associations (RAs), but are distinct in two very important ways:
 - a. The proposed ROIPs include a heavier emphasis on coordinating research, including implementing ecosystem assessments, than we believe the emerging RAs and regional coastal ocean observing systems should. The intended role of CeNCOOS is to coordinate operational ocean systems in the region to meet the broad needs of a variety of federal, state, local, and private users. Research will be an important component of CeNCOOS, but additional research in the area will still be accomplished beyond the RAs. This distinction between the proposed functions of the ROIPs and the RAs and regional coastal ocean observing systems needs to be reconciled.
 - b. The geographic scope defined in the U.S. Ocean Commission Report for the Central California ROIP does not match the geographic scope for CeNCOOS. In particular, the geographic scope defined for the Central California ROIP is from Point Conception north to Point Arena. However, the geographic scope for CeNCOOS is from Point Conception north to the California-Oregon border. The spatial extent of CeNCOOS is based on the strong upwelling feature along the entire California coast north of Point Conception. In addition, CeNCOOS has strong partnerships with our members in Northern California. As a result, we think the geographic scope for Central California, regardless of whether it becomes a ROIP or not, should include Point Conception north to the California-Oregon border.

2. The regional board recommended in the U.S. Ocean Commission Report as the governing body of each ROIP is prescriptive, in that it dictates the governing structure as well as the composition of the governing body. Different regions will have different needs and stakeholder interests. We believe the appropriate structure (e.g., regional boards or something else) and the composition of the regional governing body should be left to the regional community to determine.

3. The Regional Ocean Councils appear to introduce an additional level of complexity into the management and protection of ocean resources. We believe the framework provided by IOOS and its coordination with complementary efforts, such as the Ocean Research Interactive Observatory Networks (ORION), and regional resource management agencies, such as the Fisheries Management Councils, provide sufficient expertise on the regional level to promote sound, coordinated regional resource management. Indeed, coordination of such efforts within regions is one of the goals of the Regional Associations within IOOS.

We commend the U.S. Commission on Ocean Policy and the Commission staff for developing a comprehensive and thoughtful report. Thank you for the opportunity to comment. If you have any questions regarding our comments, please contact me at mcnutt@mbari.org.

On behalf of the Central and Northern California Ocean Observing System (CeNCOOS), specifically:

Dr. Dale Robinson, San Francisco State University, Romberg Tiburon Center for Environmental Studies

Dr. Toby Garfield, San Francisco State University, Romberg Tiburon Center for Environmental Studies

Dr. Mike Clancy, Fleet Numerical Meteorology and Oceanography Center
Dr. Gary Griggs, University of California Santa Cruz, Institute of Marine Science
Dr. Don Croll, University of California Santa Cruz, Institute of Marine Science
Dr. Susan Williams, University of California Davis, Bodega Marine Laboratories
Dr. Vic Chow, University of California Davis, Bodega Marine Laboratories
Ms. Rondi Robison, University of California Santa Cruz, Center for Integrated Marine Technologies
Ms. Stephanie Watson, CeNCOOS

Ms. Lora Lee Martin, Monterey Bay Education, Science and Technology Center
Ms. Deidre Sullivan, Marine Advanced Technology Education Center

Comment Submitted by Jennifer McDonnell, Association of National Estuary Programs

May 28, 2004

The Association of National Estuary Programs (ANEP) is a not-for-profit organization whose purpose is to promote a common vision for the preservation and responsible stewardship of our nation's estuaries and bays. Our Board of Directors represents citizens, representatives of state and local governments and federal agencies, and businesspeople, all of whom are active in the 28 National Estuary Program (NEP) sites throughout the United States. These diverse interest groups maximize the benefit of the National Estuary Program by sharing technical information and "lessons learned" with other watershed-based programs.

ANEP submits the following recommendations in response to the *Preliminary Report of the U.S. Commission on Ocean Policy*. ANEP thanks the Commission for this opportunity to comment on the preliminary Report and looks forward to the opportunity to assist in the implementation of many of the Commission's recommendations.

ANEP supports the recommendations for the creation of regional information programs and encourages further reliance upon the existing NEP watershed-based management model without duplicating existing structures that are implementing successful programs. ANEP enthusiastically supports the recommendations for addressing coastal water pollution, particularly the recommendations addressing point and nonpoint source pollutants. ANEP supports the Commission's recommendation to amend the CZMA to create a Coastal Estuarine Land Conservation Program and to develop national and regional goals for ocean and coastal habitat conservation and restoration efforts. ANEP encourages the Commission to recommend increased funding for habitat restoration and to include the 28 individual NEPs in the creation of the regional goals and needs.

ANEP does not support the recommendation to consolidate coastal programs under a strengthened NOAA. This move will have a disruptive effect on many of the NEPs' ongoing programs and technical research; although we believe there is a need to strengthen the connection between the NEPs and NOAA.

Consolidation of Area-Based Coastal Management Programs
Recommendation 9-2

ANEP does not endorse recommendation 9-2 and would like to offer the alternative proposal of strengthening coordination between NOAA and the NEPs. The report notes that NEPs, which are authorized by the Clean Water Act, are among the most successful (despite being underfunded) coastal management programs and serve as an excellent model for other ecosystem-based management efforts. Each of the 28 individual NEPs have built considerable momentum in addressing a host of environmental concerns including: the compilation of environmental indicators, water monitoring, TMDLs, best management practice implementations, air deposition monitoring and contaminated

shellfish and sediment research. EPA offers the NEPs support in the collaborative development of site-specific solutions to these concerns through their technical assistance, training, technology transfer and Nonpoint Source Management Program. Additionally, their solid and hazardous waste management, toxics control and other programs support many of the NEPs' programs and their ability to address their watershed's environmental concerns in the specific context of local, state and regional regulatory and socioeconomic conditions. The NEP's connection to EPA resources and expertise has enabled the NEPs to be very effective at addressing problems across watershed, coasts and nearshore areas.

The National Estuary Program's creation derives from one of the United States' original and most successful watershed-based restoration programs, the Chesapeake Bay Program. EPA's role with the first Chesapeake Bay Agreement, the creation of the Chesapeake Bay Program and their continued role in the restoration of the Chesapeake Bay, provide institutional knowledge as well as cross-program insight that are valuable to the continued success of the NEPs. One of the key factors in the success of the Chesapeake Bay Program has been its continuity and stability of relationships with state and local governments, with community organizations and with financial contributors. Reorganization of the NEP into the NOAA (or any other agency) would inevitably disrupt many effective and growing relationships that have been nourished for many years.

While many of the NEPs have created action-oriented partnerships with NOAA-based programs, a stronger connection between NOAA and the National Estuary Program would be of great value to the NEPs and assist in the Report's proposed goal of increasing funding for the NEPs. NOAA's Community Based-Restoration Program is one example of the potential for a greater coordination and resources. Habitat restoration is a top priority to the NEPs and a closer coordination of NOAA and the NEPs would assist NOAA to reach its goal of restoring one million acres of estuarine habitat per the Estuary Restoration Act while funding NEP programs and their existing, EPA-approved management plans.

The continued success and effectiveness of the NEPs is dependent upon an expansion of funding. Already existing watershed management plans provide the framework for progress, but without the appropriate financial support, our work in enhancing the condition of our estuaries is limited. While the NEPs have one of the strongest program leveraging averages, with a leveraged funding ratio of 11:1, progress in NEP efforts to improve and restore our estuaries is dependent upon continued and elevated federal support.

Regional Ocean Information Programs

Recommendation 5-2, 5-3, 5-5, 5-6

ANEP supports the creation of regional ocean information programs but cautions against the duplication of already existing programs. The report recommends the establishment of regional boards comprised of federal agency representatives, state representatives, a

Sea Grant Director from at least one state in the region in addition to the territorial, tribal, local and other stakeholder representation. NEPs can facilitate the dissemination of such information via connection to the NEP stakeholder-based Management Committees. The existing Management Committees of the NEPs are inclusive of all coastal stakeholders and many have been operating together for over a decade.

The NEPs' existing CCMPs would provide a valuable framework in the creation of the Report's recommended "...comprehensive plan for regional research, data collection, information product development, and outreach based on regional information needs and priorities... (pg. 62)." Through CCMP implementation, many NEPs are already at the forefront of collecting, managing and disseminating data and public products. Created through the inclusion of stakeholders' input, the CCMPs represent years of research and efforts in the creation of a holistic plan to meet the region's environmental needs in a manner that is consistent with other local and regional needs. After receiving approval from EPA, the CCMP is implemented through the coordinated efforts of many stakeholders. The Management Committees guide the implementation and refinement of the site-specific CCMP, prioritizing the NEP's watershed goals and actions.

NEPs and their existing structures should play principle roles in the creation and implementation of the regional ocean information programs through their coordination, facilitation and technical expertise. Where NEPs do not already exist, ANEP encourages the utilization of the NEPs' institutional knowledge in the creation of regional ocean information programs.

Coastal Zone Management Act Authorization and Habitat Conservation and Restoration

Recommendation 11-1, 11-2

ANEP supports the Commission's recommendation to amend the Coastal Zone Management Act to create a Coastal Estuarine Land Conservation Program and to develop national and regional goals for ocean and coastal habitat conservation and restoration efforts.

During the development of the regional goals and priorities, pre-existing, successful programs, like the NEPs, should be included. Their inclusion will not only provide region-specific, institutional knowledge, but will ensure that a duplication of processes and work is avoided.

Sufficient federal funding is critical for the success of habitat and restoration programs. Habitat restoration programs must incorporate the region's land use practices and other region-specific challenges when developing a program, making a "one-size-fits-all" approach not only impractical but counterproductive. ANEP suggests that the Commission recommend clear and strong support for funding the restoration efforts that will be necessary to return our waterways and the surrounding regions to an unimpaired state.

Watershed Collaboration

Recommendation 14-13

ANEP strongly supports the Commission's recommendation 14-13. The progress and positive impacts of the NEPs are made possible through collaborative committees that guide the creation and implementation of the CCMP. As mentioned in the section describing the National Estuary Program in Chapter 9, limited federal funding and assistance for NEP implementation work has become a significant constraint upon our capacity and effectiveness. A clear distinction between the NEPs and other coastal programs was recently highlighted by a Coastal State Organization survey. The NEP needs focus on ecological implementation improvements; the needs of other programs focus on research. These results further highlight the NEP's unique niche in the coastal community. As with the regional information programs, ANEP encourages the utilization of the NEPs' expertise and our national organization in the facilitation of watershed collaboration efforts where there is not an already existing NEP.

Reducing Point Sources of Pollution and Increasing the Focus on Nonpoint Sources of Pollution

Recommendations 14-1, 14-2, 14-3, 14-4, 14-5, 14-6, 14-11, 14-12, 14-14

ANEP supports the Commission's recommendations for improvements to point and nonpoint sources of pollution, particularly those in reference to wastewater treatment plant discharges, septic systems, nutrient removal from animal waste research, stormwater management programs and atmospheric deposition. Hypoxic regions, or "dead zones," are caused by excess nutrient loads into our water systems and are one of the primary areas of concern for NEPs. Addressing the source of these nutrients is imperative to improving water quality and restoring estuarine habitat. Watershed-based programs with substantial reach into the interior of the United States, like the NEPs, are imperative programs to address the sources of the excess nutrient and toxins polluting our marine environments.

ANEP encourages further utilization of the 28 NEPs, its national association and their existing relationships with EPA and many state and local agencies for the extension and implementation of the necessary policies and programs. These existing watershed-based programs have built many strong working partnerships and are effectively implementing and refining best management practices for nonpoint pollution and water monitoring programs. The NEPs provide a logical vehicle for the implementation of these recommendations with the appropriate funding support.

Implementation of the National Integrated Ocean Observing System

Recommendations 26-4, 26-5

There is a clear need to include nearshore, coastal and head of tide areas in monitoring programs in order to fully represent the human/land/ocean interaction. To fully address the point and nonpoint pollution sources detailed in the Commission's recommendations in Chapter 14, the observing system must incorporate the inland pollution sources. At

the October 2003 meeting of the Coastal States Organization Coastal Coordination meeting, Margaret Davidson, NOAA's Coastal Services Center Director, stressed the need to incorporate the near coast, shoreline and estuarine areas into any observation system. ANEP strongly supports this position.

Comment Submitted by Mary P. Marsh, President, Maryland Conservation Council

May 25, 2004

I am submitting comments on the U.S. Commission on Ocean Policy Preliminary Report on behalf of Maryland Conservation Council, Inc., a statewide coalition of environmental organizations and individuals organized in 1969 to preserve and protect Maryland's rich biodiversity and natural heritage. Maryland's natural assets include our coastal shoreline and Chesapeake Bay. Fisheries management and protecting fish habitat are essential in the protection and restoration of both.

The oceans are in crisis. Both U.S. Commission on Ocean Policy and the Pew Ocean Commission reports document a crisis in our living oceans, and the scientific debate about the magnitude of the problem should be over. The important debate should now be how we can restore our oceans. USCOP's report has identified many of the most important problems with U.S. ocean management, and offered some potential solutions.

Unfortunately, these solutions fall short of what's needed to save our oceans for future generations.

These comments will focus on "part VI, Ocean Value and Vitality: Enhancing the Use and Protection of Ocean Resources"; specifically marine wildlife, fisheries and management recommendations. The Commission and decision makers should replace the current language with stronger recommendations such as:

Ecosystem Based Management

Actual policies must reflect the language of the report, and the scope of the crisis. The government should establish conservation of ocean ecosystems as the primary responsibility of fisheries management, and make economic decisions secondary.

Conflict Of Interest

Any governing body that oversees fisheries and ocean management should be held to the most rigorous conflict of interest standards followed by the government. A group that represents a full range of unbiased interests, including conservationists, and encourage public participation should make these decisions.

Rebuild Overfished Fish Populations

Fishery Management Councils need to rebuild all fish populations as soon as possible, beginning with those that are already determined to be overfished. Catch levels should be held below the level where more fish are taken than can be naturally replaced and it should include a margin for error that reflects scientific uncertainty.

Habitat Protection

The best available fishing technology should be required to limit the impact of fishing activities on the ocean floor. A bottom dragging technology ban should be enforced immediately, and the burden of scientific proof should shift to fishing companies to find

special zones where they can prove ocean dragging fishing practices would not harm valuable marine habitat. Pollution levels should also be measured for all known hazardous substances throughout America's oceans. Where ambient levels are found to be dangerous or unsustainable, restrictions should be established based on precautionary science and enforced.

Bycatch and Ecologically Sustainable Fishing Practices

The federal government should lead a new national effort to develop and promote fishing gear that reduces the tragic inefficiency of fishing technology, particularly high levels of unintended catch. Fishermen should be required, with support from government observers and technology, to gather data to establish baselines for any fishery where that data is not currently available. The responsible government agency needs to be required to implement bycatch plans as soon as possible, not just develop them. Highly inefficient and destructive fishing methods should be banned.

Marine Mammal Protection

Congress should amend the definition of harassment of marine mammals to reflect the recommendations of a 2000 report on marine mammal harassment by the National Research Council, with one significant addition. The definition suggested by the NRC defines harassment as any act that has the potential to cause meaningful disruption of biologically significant activities. As long as the term "meaningful" is clearly defined, this is an acceptable definition. The recommendation of the US Commission on Ocean Policy would significantly weaken the current definition.

Sustainable Marine Aquaculture

The federal government should impose a moratorium on commercial open ocean aquaculture until Congress adopts comprehensive aquaculture legislation that clearly defines a lead agency for issuing permits, sets mandatory citing and environmental standards, requires compliance with the nation's environmental laws such as NEPA, ESA, and MMPA, and prohibits farming of genetically engineered or non-native species. Furthermore, US aquaculture policy should promote small-scale, herbivorous finfish species raised in closed, land-based systems.

The U.S. Commission on Ocean Policy has provided us with a means to fix what is broken in the system in an informed manner. Future generations are depending on our decisions and actions to ensure that our oceans will be viable and full of life.

Thank you for this opportunity to comment.

Comment Submitted by Rebecca D. Crane, Program Manager, HSUS United Nations, Treaties, and Trade

**Public Comment on Preliminary Report
By the U.S. Oceans Commission
From The Humane Society of the United States (HSUS)
May 2004**

The Humane Society of the United States (HSUS) commends the U.S. Commission on Ocean Policy (Commission) on their Preliminary Report. This thorough report covers the major threats to the world's oceans and provides viable suggestions for improving the U.S.'s protection of these valuable ecosystems. The HSUS thanks the Commission for providing us with an opportunity to submit comments on the report. The comments below address specific items and issues where we see a need for strengthening the report or providing additional or revised goals and focus. We are only offering comments on those issues in which we have a direct interest and where we feel we can offer our expertise.

First we would like to offer a general comment. The HSUS supports the plan to create a National Ocean Council and regional ocean councils; however, we are concerned that it is likely to take many years to be fully implemented and suggest taking some action in the interim. Some of the Commission's recommendations are for regulations or inter-agency cooperation on a variety of initiatives, while other critical areas would require legislative proposals to reorganize current management authority and/or propose new management regimes. We suggest adding some interim guidelines that would allow action to be taken should immediate pressing concerns arise before the full plan for agency overhauls and the creation of the National Ocean Council is approved and operational.

Chapter 3

Setting the Nation's Sights

Overall The HSUS supports the guiding principles proposed in this chapter. However, we note that the principle entitled "Best Available Science and Information" does not include discussion of what to do when science is lacking or inadequate, an all too frequent

situation in ocean science. While the Precautionary Principle and the Precautionary Approach are discussed later in this chapter, either they should be introduced here or some other mention should be made of how managers should proceed when the best available science is minimal or non-existent.

In the discussion on the Precautionary Principle and the Precautionary Approach, we believe the former is presented in an unnecessarily biased manner. Indeed, the report acknowledges this by stating, “In its strictest formulation...” (p. 35). We find the discussion of these two concepts to be unnecessarily political and hair-splitting; nothing in the Commission’s definition of the Precautionary Approach is incompatible with a *less* strict formulation of the Precautionary Principle. We recommend that the report avoid falling into a partisan political trap by revising this section to eliminate bias and simply present its definition of the Precautionary Approach as being along a spectrum of ideas representing the Precautionary Principle.

Chapter 7

Strengthening the Federal Agency Structure

This chapter provides a blueprint for organizing and strengthening the many functions of the National Oceanographic and Atmospheric Administration (NOAA). We support the need to re-organize and consolidate many of the functions of NOAA and other agencies. In our comments below on Chapter 20 we raise concerns about conflicting missions within the departments of NOAA, specifically the conflict of missions within the National Marine Fisheries Service (NMFS), which is charged both with promoting sustainable commercial fisheries and conserving protected species. At times, the economic interests of achieving the first mission conflict with the conservation needs of the second. We suggest separating these two important functions from one another and housing them in separate divisions.

Chapter 8

Promoting Lifelong Ocean Education

The HSUS strongly supports the idea of expanding and improving ocean education and we agree with the Commission's recommendations to improve the funding and quality of educational programs. However, while we recognize the established position aquariums and zoos hold in the U.S. as informal education centers, we strongly caution the Commission against perpetuating an image that is not warranted. The quality of education varies widely among aquariums and zoos – there are no consistent standards for educational programs within the public display community nor does the Marine Mammal Protection Act establish a measurable standard or require any agency review or approval of educational programs. For-profit facilities in particular may offer heavily biased educational messages that do not necessarily promote needed conservation, as they have inherent conflicts of interest due to their commercial nature (for example, see *Spectacular Nature* by Susan G. Davis). We strongly recommend that the report avoid an uncritical acceptance that all aquariums and zoos offer appropriate or unbiased educational opportunities.

Chapter 16

Limiting Vessel Pollution and Improving Vessel Safety

Overall we agree with the points made in the discussion of cruise ships in this chapter, but the Commission does not include any discussion of the environmental impact made by the coastal infrastructure that goes along with a growing cruise ship industry. That is, the Commission limits its focus to wastewater discharge; it does not discuss the associated need for new dockyards and passenger processing centers when cruise ships establish new ports of call or expand their use of established ports of call. It also does not address the general need for new tourist activities to support an influx of hundreds and even thousands of passengers a day into a coastal area. Any discussion of the impact of cruise ships needs to include these issues. For example, certain areas may suffer significant habitat degradation when coral reefs or mangroves are dredged for cruise ship dockyards built to accommodate new or additional cruise ship visits; such impacts are

being increasingly felt in a number of Caribbean island nations and other regions targeted by an ever-growing cruise ship industry, catering heavily to American passengers.

Chapter 18

Reducing Marine Debris

The HSUS suggests that a significant source of loose trash (in any area) is off the back of garbage trucks. The discussion found under “Working with Communities” on p. 215 of this chapter should mention this source; it is not addressed by, for example, the recommendation to ensure that sufficient trash receptacles are available throughout communities. Even if all trash and litter were properly disposed of by the public, poorly designed garbage trucks can undo this effort during collection of trash and transport to landfills. Certain types of garbage trucks may require redesign to minimize the loss of trash during transport. In addition, the suggestion to require viewing by all oil rig personnel of a film demonstrating proper waste disposal practices and the impacts of marine debris on the ocean could also apply to coastal sanitation workers.

Chapter 19

Achieving Sustainable Fisheries

This chapter focuses largely on the need to improve fishery science, provide independent review and oversight, and assign responsibility for regional governance. These needs are clear and pressing and we largely support the recommendations of the Commission. As noted briefly in our comments on Chapter 7, and in greater depth below in our comments on Chapter 20, there is a conflict of mission within the NMFS. Specifically the mission of promoting sustainable commercial fisheries may not always be compatible with that of protecting vulnerable marine species. We suggest that this conflict needs to be more fully addressed in this chapter. Marine mammals, sea turtles, and even some species of highly migratory fish are sometimes disadvantaged when the need for their conservation is at odds with the financial interests of smaller coastal fisheries. We believe that these two purposes should be separated and assigned within NOAA to separate divisions, and not

be combined under NMFS. We acknowledge that the Commission recognizes this problem as it pertains to the Regional Fishery Management Councils (RFMCs) (p. 222, “Separating Scientific and Management Decisions”), but we suggest taking this solution one step further. NOAA needs similar “insulation” of scientific decisions and assessments from political pressures.

The section on “Broadening Council Membership” appropriately addresses the tendency for RFMC membership to be biased toward fishing industry representatives; RFMC membership often includes little or no representation from conservation interests, academia, or subsistence fishermen. However, Recommendation 19-12 only suggests that governors submit candidates including “at least two representatives each from the commercial fishing industry, the recreational fishing sector, and the general public.” Thus, although commercial fishing interests are specifically represented, as are recreational anglers, there would be no requirement to include stakeholders outside of recreational and commercial fishing. We suggest that the Commission revise Recommendation 19-12 so that it better addresses the problem laid out in the preceding paragraphs by recommending that governors should be required to select RFMC candidates who represent conservation interests, academia, and other specific interests, as well as the interests of commercial and recreational fishing and the general public.

The HSUS strongly supports the recommendations in this chapter that pertain to strengthening enforcement capability. One of the great impediments to success of both fishery management plans and marine mammal take reduction plans has been lack of compliance by commercial fishers who do not take required fishery observers, fish in closed areas or with technology that is prohibited, and in other ways do not comply with conservation plans. The same compliance problems exist for species protected under the ESA, such as sea turtle species.

We also wish to support recommendation 19-22, which directs the NMFS and the regional fishery management councils to develop specific regional bycatch reduction plans to address broad ecosystem impacts of bycatch. Understanding the nature and

extent of the bycatch and the underlying reason for it in each fishery is a key first step in reducing it.

A final comment for this section: on p. 248, under “International Fisheries and Trade,” the Commission notes that harm can come to marine species such as sea turtles, dolphins, sharks, and seabirds that are “unintentionally” caught in shrimp and tuna nets. The HSUS requests the Commission to clarify that the dolphins encircled in tuna nets in the Eastern Pacific Ocean are *not* unintentionally caught, but deliberately targeted and encircled by vessels in this fishery.

Chapter 20

Protecting Marine Mammals and Endangered Marine Species

In the section “Assessing the Threats to Marine Populations,” there is no mention made of resource competition, though competition for prey resources has been implicated in the decline of Steller sea lions; has been raised as a potential concern for juvenile monk seals in the Hawaiian Islands who feed on lobster; and has been raised as a concern for large baleen whales in the Northeastern U.S., as expansion of the herring and mackerel fisheries is contemplated. We would like to see this report specifically include resource competition as a factor that may threaten some stocks of marine mammals.

We also note that reference is made only to animals with long life spans when considering bioaccumulation of pollutants in tissues; we suggest inclusion of top predators (such as polar bears and killer whales) in this paragraph as well.

Regarding the reference to noise and its impacts on marine mammals, we note that noise, in particular military active sonar, has been implicated, via an unknown and much debated mechanism, in the *deaths* of marine mammals, not merely their disturbance. We recommend that a reference to anthropogenic noise be included in the list of possible causes of mortality; at a minimum the report should refer to the indirect effects of noise as a possible cause of mortality. We also note that marine mammal hearing is not the only

biological function that may be relevant when considering the impacts of noise. Noise may impact any air space in a marine mammal body or have significant behavioral impacts (up to and including panic and stranding); non-auditory impacts may in fact play a greater role when mortality is an issue than auditory impacts. All of these points are currently being discussed by the Marine Mammal Commission Advisory Committee on Acoustic Impacts on Marine Mammals.

Recommendation 20-1 suggests that the National Ocean Commission should consider whether there is a need for an oversight body such as the Marine Mammal Commission (MMC) for other marine animals whose populations are at risk. The HSUS believes that this sort of oversight would be very valuable. In keeping with the Commission's emphasis on ecosystem management, The HSUS suggests that, rather than have the MMC as well as several other bodies, there should be a single oversight body that reviews research and management activities relating to protection and conservation of populations at risk. This review could be provided by creating a single Marine Species Commission rather than having the MMC as well as several other bodies whose missions and jurisdictions must then be coordinated.

There are two concerns that have not been mentioned in the section on "Jurisdictional Confusion." One is the conflict or confusion over jurisdiction that occurs depending on where an animal is located at a particular life stage. For example, sea turtles in the ocean are under the jurisdiction of NOAA, but once ashore become of concern to the Department of Interior (DOI). Similarly there is a conflict in jurisdiction over anadromous fish depending on where they are during various life stages. This should be resolved.

Furthermore, a more troubling conflict or concern that was raised during the Commission's hearings is one frequently cited as an impediment to reducing interactions between marine mammals and commercial fisheries in a timely manner. That conflict results from the dual mission of the National Marine Fisheries Service (also known as NOAA Fisheries) to both protect fragile marine species and to promote sustainable

commercial fisheries. The economic interest (sustainability) of fisheries conflicts at times with the conservation needs of endangered and protected species.

This conflict is well illustrated in the Northeast Region where on-going entanglement of right whales by commercial fisheries threatens the survival of the species. However, the financial burden of using more risk-averse technology, or suffering additional time and area closures, poses a hardship to fishermen already hard hit by the need to reduce fishing effort to conserve collapsing ground fish stocks. This was explicitly stated by NMFS staff at the February 2004 meeting of the Take Reduction Team (TRT). There was discussion at the TRT meeting of the advisability of phasing in requirements to convert ground lines in fishing gear from floating line to sinking line that is less likely to entangle a whale. NMFS staff stated that they felt that the fishery could not afford the burden of immediate conversion to this more risk averse gear, despite the fact that this promised a great reduction in risk and was considered to be the most promising current method for reducing jeopardy to the species.

When the needs of a fishery conflict with the needs of a protected or endangered species, the NMFS dual mission often results in economic interests being favored. This is a gap in the protection of species that should be addressed in recommendations in this report. We believe that if jurisdiction over protection and conservation of marine mammals is to be given to NOAA, rather than the U.S. Fish and Wildlife Service, the Ocean Commission's recommendation (Recommendation 20-2) should specify that protection of marine mammals and their habitats be placed in a separate division from NMFS, to avoid a conflict of mission. Furthermore, the conservation mission of this new division should be of equal importance to that of NMFS, and with sufficient budget to achieve its mission.

Recommendation 20-3 suggests that coordination between NMFS and the U.S. Fish and Wildlife Service in the implementation of the Endangered Species Act (ESA) must be improved. While we agree that better coordination between these two agencies is needed, we suggest that Recommendation 20-3 should specify that this improved coordination

must be structured in such a way that does not dilute protections under the ESA for imperiled species. In other words, what is needed is a restructuring of the roles of each agency to avoid redundancy and conflict between the agencies, *not* a reduction in the total amount of staff time or other resources used in making listing or critical habitat determinations or in otherwise implementing and enforcing the ESA.

We note, in the first sentence under “Unclear Permitting and Review Standards,” that harassment is not included in the definition of take under the MMPA. Although harassment is discussed in its own separate section, it should be mentioned here as it is part of the statutory definition of “take.” As for the separate discussion of harassment, we are concerned that the Commission suggests in its phrasing that marine mammal research as a general matter is not likely to have significant effects on marine mammals. This is an extremely biased conclusion and is demonstrably untrue, as research involving such activities as tagging and capture/release have been shown in some instances to have very serious negative impacts on individuals and even populations. In addition, the Commission has perpetuated the mistaken belief that harassment includes *de minimus* reactions to human actions, as implied by its use of the word “noticed”. Minor reactions such as turning the head to look were never meant to be considered harassment under the NMFS’ regulations.

The HSUS strongly recommends the deletion of Recommendation 20-5. The definition of harassment under the MMPA is presently receiving considerable attention from Congress, conservation groups, academics, and federal agencies. The Commission’s endorsement of the 2000 National Research Council definition, which has been heavily debated and whose practical, regulatory application may pose serious difficulties, seems premature. The report should simply note that this issue is being carefully and thoroughly examined by relevant parties as the report is finalized.

Recommendation 20-6 addresses the promise of programmatic permitting to streamline the process by which certain activities could be permitted, reserving case-by-case permit review for circumstances in which there is a greater likelihood of harm to marine

mammals. While The HSUS generally supports this approach, we would like to recommend that consideration be given to ensuring that a cumulative impact review is done even for activities that are apparently benign. For example, photo identification of marine mammals is a non-intrusive, relatively benign form of research; however, it is important to ensure that the numbers of permits be limited to avoid situations (as has occasionally occurred in Massachusetts) where multiple permits are granted and researchers on a given day outnumber the whales they are trying to photograph. We also suggest adding the concept of precedent-setting activities to the recommendation, not just activities that are “unique.”

We are curious that whale watching boats were chosen to illustrate the utility of programmatic permitting. This is currently a category of activity for which no permits are required. It might be helpful for this report to either choose an illustration that is currently a permitted activity or add a sentence or two to the previous discussion of risks to explain why permitting may be necessary for activities, such as whale watching, that currently do not require permits.

We are confused by the inclusion of the word “confidential” in the paragraph and sentence beginning with “Communications must also be improved...” (p. 256). It is unclear what the Commission means by this; decisions on permits are a public process, so clearly they are not confidential.

This chapter mentions that directed hunting may be responsible for considerable numbers of deaths of marine mammals world wide. It also states that directed hunting is a likely priority to be addressed in an ecosystem-based management system, but it does not address the directed take of marine mammals in the U.S. Stock assessments for the Alaska region illustrate a number of cases in which stocks of marine mammals are being or have been killed by Alaskan natives in numbers that exceed the established Potential Biological Removal (PBR) level for the stock. For example, in the Western U.S. stock of Steller sea lions (which is listed as endangered), the PBR is 208 and the mean annual kill by natives is estimated to be as high as 246 based on a two year average from 1996-1997,

with no data available from any more recent years. Data on the numbers of animals killed in all hunted species lags by several years, and numbers are generally gathered via self-reporting (which is generally considered to be an underestimate). Co-management agreements serve as the only process by which such takes are regulated. Despite the fact that marine mammals are part of the public trust, the public is not represented in the negotiations over co-management agreements, nor is there a clear public process for commenting on them. The HSUS requests that the Commission address this concern with a recommendation for gathering timely and validated estimates of the number of marine mammals killed in subsistence hunts and recommending that the public be represented in the negotiations for any co-management agreements.

In the section on “Applying Ecosystem-based Management Principles,” the report states that for marine mammals the highest priority threat is likely to be hunting and fisheries bycatch; and that for other endangered species it is likely to be habitat destruction. This is likely to be true for endangered anadromous fish species. It is not true for endangered sea turtles, large pelagic fish (such as sharks, billfish and bluefin tuna), and sea birds (including several albatross and petrel species), which are endangered largely as a result of commercial fisheries such as the long line and shrimp fisheries.

We agree with the goal of moving toward ecosystem-based management referenced in this and other chapters, and support the definition of ecosystem-based management in the report. The report includes, as an example, the listing of several salmonids under the ESA and the conflicts—and perceived conflicts—with certain economic interests that these listings may have caused. It would certainly be preferable if a collaborative, ecosystem-based management approach could allow for adequate protection of listed species while avoiding large-scale economic disruptions. However, an ecosystem-based approach should not become a strategy that is used simply as a means of avoiding conservation actions that are necessary for the recovery of threatened and endangered species and their ecosystems. Nor should it be used to justify economically-driven actions; for example, proposals to renew commercial whaling have been made under the guise of ecosystem-based management at several international fisheries forums. We suggest that the

discussion of ecosystem-based management principles in Chapter 20 should clarify that ecosystem-based management should not allow for actions intended primarily to assuage economic concerns that could jeopardize the listed species or their ecosystems. Instead, this discussion should emphasize that an ecosystem-based approach, driven by the goal of protecting declining species and functional ecosystems, has the potential to benefit both imperiled species and affected economic interests, at least over the long term. The ways in which an ecosystem-based management approach can benefit economic interests is addressed in a more balanced way in Chapter 19; the same type of careful discussion should be applied to ESA-listed species in Chapter 20.

We support the Commission's call for the U.S. government to urge foreign fishermen to implement bycatch reduction methods similar to those adopted by U.S. fishermen. The U.S. government should also continue to press other nations to fully implement the U.N. General Assembly's unanimous resolutions calling for a complete ban on all high seas driftnets. Moreover, countries should be strongly encouraged to confiscate and destroy any illegal driftnets so they do not migrate to developing countries.

Chapter 22

Setting a Course for Sustainable Marine Aquaculture

While we recognize that domestic wild fisheries in the U.S. are in a state of collapse in many areas, and that promotion and development of mariculture in other countries has far exceeded that of the U.S.; marine aquaculture is not a panacea. There are, as stated in this report, a number of concerns arising from expansion of mariculture. But there are a number of concerns with expansion of marine aquaculture that the Commission has not addressed in its report, which focuses largely on water quality concerns and potential interactions between introduced species and wild stocks. There is, for example, no mention made of the fact that grow-out pens used in offshore aquaculture (in which large fish are fed whole prey fish) have been implicated in entanglement of small cetaceans who are drawn to the food resource. Entanglement risks also exist from the anchoring lines used in coastal shellfish mariculture sites if they are placed in areas used by large

baleen whales. There is also no mention made of the concerns arising from interactions between fish farms and marine predators (birds and pinnipeds) that may result in the use of lethal deterrence or non-lethal (yet potentially injurious) loud acoustic harassment devices that have been shown to displace odontocetes up to 2 kilometers from the sites. In addition, health studies have indicated that, largely as a result of their diet, farm-raised salmon carry contaminant loads well in excess of wild salmon, putting consumers at risk.

The recommendations contained in the preliminary report pertain largely to streamlining the permitting process, granting authority for collecting lease fees, and weighing competing uses of the ocean bottom or water column. Although Recommendation 22-2 states that the program should be “environmentally sound,” the report lacks a complete listing of environmental risks and costs, which seems necessary to ensure that priority be given to thorough environmental review. The HSUS recommends that the this chapter in the report be expanded by a few sentences in its “Regulatory Conundrum” section to include a brief listing of potential environmental concerns beyond water quality or inter-specific competition and disease transmission, which are the only risks discussed. For a recommendation to be given proper weight, it is important that the concerns surrounding it be properly illuminated.

Chapter 24

Managing Offshore Energy and Other Mineral Resources

Recommendation 24-1 is intended to help states realize benefits from oil and gas extraction off their coast. We are concerned, however, that it may actually provide an incentive to exploit fragile ocean areas. The Commission recommends that coastal states be provided with grants generated by oil and gas revenues to be “invested in the conservation and sustainable development of renewable ocean or coastal resources” (p. 294). While we support the designation of these funds for conservation and restoration of coastal areas, we are concerned that providing funds for development of ocean-based renewable energy plants may provide an indirect incentive for coastal states to overlook potential risks to wildlife and fragile ecosystems in a rush to use available funds for

development of wind and wave energy generating plants that are often proposed for installation in sensitive marine areas (e.g., important migratory bird flyways, migratory paths for marine mammals, essential fish habitat). The HSUS finds this recommendation to be well-meaning but problematic.

The Commission has appropriately pointed out the deficiencies in the process for review of permit applications for development of offshore renewable energy resources. Indeed, the Army Corps of Engineers' use of Section 10 process under the Rivers and Harbors Act is inadequate both because it is not designed to convey exclusive rights to use or occupy space and because it cannot provide for reasonable "rent" of space or royalties on profits; but it also lacks a mandate for rigorous environmental review. The Commission rightly contrasts the Bureau of Land Management's (BLM) systematic policy on planning land-based wind energy facilities with the Army Corps of Engineers' ad hoc approach to permitting offshore wind energy plants. Whereas BLM is conducting a programmatic environmental impact statement on the development of renewable energy on all the lands it manages, the Army Corps is evaluating permit applications on a site by site basis through a developer-driven process where an environmental impact statement may have its purpose and need determined by the private entity that stands to profit from it. While producing wind energy is generally more benign than extracting and burning fossil fuels, land-based turbines kill birds and bats, disorient migrants, and fragment important habitat. The construction and operation of offshore wind energy facilities may similarly harm marine life, migratory birds and bats, and adversely alter vital coastal processes.

We agree with the Commission's finding that inadequacies in the Federal Energy Regulatory Commission's review of wave energy may similarly fail in its review of environmental consequences of the installation of structures in the ocean environment.

The HSUS supports the recommendation that the newly formed National Ocean Council, with assistance from the proposed regional ocean councils, should develop a comprehensive offshore management regime that would review all offshore uses in a greater planning context that can weigh potential benefits against potential adverse

ecosystem impacts. We agree with the Commission's finding that energy projects must be evaluated based not only on the nation's need for energy but also in consideration of the potential adverse effects on marine life and natural systems. Likewise, we applaud the Commission's recommendation (24-5) that Congress establish a comprehensive management regime for the leasing and licensing process for renewable energy facilities where the public receives a fair return for the use of federal waters. We are, however, concerned that the benefits of Recommendation 24-5, which outlines the necessary components of legislation to govern offshore renewable energy development, may be a number of years away. The establishment of an adequate statutory framework appears predicated on the establishment of the National Ocean Council, which may mean that we will see development proceeding without appropriate statutory authority in the interim.

Since the time of the hearings, on which recommendations in this report are based, a number of wind farm proposals have been withdrawn; however, others have emerged, particularly offshore of New York. In that state, authorities are weighing proposals by both the Long Island Light and Power Authority and Bald Eagle Energy, which is proposing to erect turbines south of Long Island and data collection towers in Block Island Sound, a seasonal use area for endangered North Atlantic right whales. Along with the proposal by Cape Wind, these projects are proceeding through the very review process that the preliminary report has identified as inadequate, and thus are likely to be "grandfathered" under old rules if and when a more adequate regime such as the Commission proposes passes through Congress in the next few years.

The HSUS would like to recommend that the Commission speak to the issue of how to handle this rapidly emerging technology in the interim before establishment of the National Ocean Council. We believe that the Army Corps of Engineers should prepare, as is the Bureau of Land Management, a programmatic environmental impact statement that addresses Atlantic coast renewable energy development, and require that applicants follow site-specific research protocols recommended by the Fish and Wildlife Service. We suggest that the Commission recommend in the interim, between now and the passage of the recommended legislation, that a process similar to that proposed in

Recommendation 24-6 for evaluating non-energy mineral resources be immediately undertaken. In this case, the Army Corps, NOAA, Department of Energy, Department of Interior and the Coast Guard should systematically identify areas with the most promising potential for renewable energy (e.g., class 4 or greater wind strength) and conduct the necessary cost-benefit analysis and long-term security and environmental studies to create a national program that ensures the best and most risk-averse use of coastal areas. We also note a similar recommendation made in 16-12, which pertains to environmental risk from oil spills. This recommendation suggested a risk-based analysis to identify and prioritize the areas of greatest risk, and develop a comprehensive long-term plan to reduce risks. This type of recommendation for a comprehensive evaluation of appropriate siting ensures that offshore renewable energy projects proceed within a framework that has identified the areas of greatest benefit and least environmental risk to ensure that these projects are not developed in particularly sensitive ecosystems or in areas of significant importance to wildlife.

Chapter 25

Creating a National Strategy for Increasing Scientific Knowledge

The HSUS greatly appreciates the recommendations in this chapter. We especially support Recommendation 25-5, which, along with recommendations in Chapter 28, address the need to provide national maps incorporating living and non-living marine resource data along with bathymetry, topography and other natural features. This sort of information is critical to ensuring adequate protection of living resources. Activities by the U.S. Navy, the increasing proposals to use coastal areas for aquaculture and renewable energy, and the pressing need to define key habitats of fragile marine species all depend on just such a compilation of information, which is currently sorely lacking.

Chapter 29

Advancing International Ocean Science and Policy

The HSUS strongly supports this chapter. We agree that the U.S. needs to ratify and participate in all international agreements that promote the conservation of the marine environment and its inhabitants, in particular UNCLOS and CMS. Furthermore, The HSUS also agrees with the Commission that the only way to protect the oceans is for the U.S. to cooperate in international agreements, support conservation measures and adopt strong enforcement mechanisms. The HSUS also agrees that limiting fleet capacity and overall fishing effort is extremely important.

Conclusion

In conclusion, The HSUS feels that this preliminary report will develop into an important and necessary tool to increase and coordinate protection of the oceans and marine life. We appreciate the opportunity to provide our comments and suggestions for improving the final report. We are happy to answer any questions that may arise and to continue to offer our expertise on these issues as the report is finalized and the plans are implemented. Please do not hesitate to contact us for any reason.

*Comment Submitted by Tom Rossby, Graduate School of Oceanography,
University of Rhode Island*

May 22, 2004

The Preliminary Report of the Ocean Commission (ROC) is an impressive document, and regardless of its fate provides a most comprehensive summary of all aspects our ocean margin, from watersheds inland to the EEZ margin offshore. These limits suggest that it might have been called the Report of the Coastal Commission (RCC). The document is too large to absorb in detail, but a few things stood out that had me somewhat concerned.

The idea that NOAA should be the lead agency is of some concern because as a well-established agency it may not have the flexibility to provide a fresh approach. It seems to me a new approach along the lines of a non-political foundation would be more appropriate. NSF has succeeded admirably well; is there any way an 'Oceans Agency' can be similarly constructed? Independence is absolutely crucial for long-term success. Establishing and mandating the agency to act and operate in a rational and nonpolitical mode is without question the single biggest challenge facing implementation of the Commission's recommendations! Setting these expectations high a priori is particularly important here since this – coastal - agency will be subject to enormous pressure from all walks of society.

As a blue water oceanographer I would have welcomed stronger recognition of the role and importance of the high seas and their connection to our coastal waters. For example, the U.S. east coast waters have their properties set not locally, but by fluxes along the Canadian shelf from the Labrador Sea in the north and from the Gulf of Mexico in the south. Farther to sea the Gulf Stream is of enormous importance to commerce, defense, and fishing. The Gulf Stream plays a major role in supplying nutrients, the foundation of marine life, to our coastal waters. The Gulf Stream is also a major player in the global redistribution of heat from low-to-high latitudes. All along its path it releases vast quantities of heat to the atmosphere thereby having a major influence on our weather and very likely the stability/instability of global climate. The ocean's role in climate didn't get much attention – at least that I noticed.

On a different note, the emphasis on education throughout the report was most welcome. The importance of this cannot be overestimated. The proposals outlined in the report, whatever the balance and regardless of scope of thinking, will require an educated workforce. As everyone knows, the US is hurting from a conspicuous lack of interest in higher

education from within the country. This will become an even bigger concern in the years to come. It worries me that many of us are not even well-enough educated to appreciate how serious this situation is.

Comment Submitted by Louis (Sandy) Sage, Executive Director, Bigelow Laboratory

May 21, 2004

Contributions by:

Robert Andersen

Barney Balch

Annette deCharon

Michael Sieracki

Overview

In reviewing the “preliminary draft” report of the National Commission on Ocean Policy, I would like to acknowledge the fine achievement of the Commission members. The report presents a balanced yet bold vision for effective management of the oceans in this new millennium. It represents a comprehensive review of our national approach to stewardship throughout the last thirty years, the current status of the oceans and the challenges in a more complex future with an expanding human population and greater demand for the vast resources of this shared resource. The Commission has thoughtfully put forward a set of recommendations that will remedy most of the issues cited in this report and recognized by the ocean science community.

As with any undertaking of this magnitude, there is the tendency to gravitate to the details. However, in the case of this ten-year plan, the details presented will be ephemeral with the passage of time and changes in circumstances. Therefore, I will focus on general issues to further strengthen a future national strategy for effective stewardship of our oceans.

These recommendations reflect the contributions of ten senior scientists from Bigelow Laboratory. The overriding focus of the Bigelow team is to develop an effective basic research strategy on which to build a comprehensive knowledge base for the development of a national plan. The team also concentrated on public education and information bases. In addition to the above, my attention is on the overall structure of the implementation strategy.

The Guiding Principles articulated in the report are excellent. They are high ideals that we, as a community, must stretch and be creative to achieve: Sustainability, Stewardship, Ocean-land-atmosphere connections, Ecosystem-based management, Multiple use management, Preservation of biodiversity, Best available science and information, Adaptive management, Understandable laws and clear decisions, Participatory governance, Timelessness, Accountability, International responsibility.

Specific Comments

1) Political Balance in NOC.

The National Ocean Council will provide the overall direction and coordination and as such is a pivotal organization to the success of any ocean plan. The current design weighs heavily on appointments by the Executive Branch of government. The composition of a broadly representative Council is critical to the entire effort. The political balance must be designed into the appointment of members. There should be a wide representation of talent from elected federal officials, state entities, institutions, for profit sectors and private citizens of accomplishment. In this manner, the Council can be responsive to national needs and yet sensitive in addressing issues affecting states and local communities. This balance is critical for bipartisan support in the authorization and appropriation process.

2) Partnership of Sectors.

The report emphasizes the role of federal agencies both in the present and in the future and underestimates the value of other possible partners. As roles are further developed, the value of private partners such as the non-profit private and public research institutions, the state government agencies and the for profit sector, all of which have enormous resources of talent and experience to bring to bear on the issue.

3) Research.

- **Basic research** produces the knowledge of the ecosystem that is the basis of understanding the oceans and its processes, on which any effective management strategy will be developed. **Applied research** uses this knowledge of the oceans to develop strategies to improve fisheries management, develop biotechnology benefits or to address societal problems.
 - Basic research flourishes when there is a wide-open competition without any restrictions or advantages accorded to the potential competitors. The years of stagnating budgets are taking their toll with declining productivity in research produced and increasing effort in developing proposals to maintain basic programs. Funding for all ocean research has remained flat over the last 20 years while basic research funding has fared even worse. The Commission devoted considerable attention to increasing funding for both basic and applied research, yet it deserves a second mention.
 - A national ocean research strategy should be developed to identify critical gaps in our information base as well as emerging areas of interest and concern in resource management.
 - The Office of Naval Research has long been the supporter of more imaginative ocean research retreating its funding in the last couple of years. Their funding embraced the investigation of biological processes (hides submarines) that furthered our

understanding of invisible life and technology to the development of technology to produce measurement of biological health of the oceans from satellites to name Two examples. ONR is a vital component of our national basic research enterprise although they are virtually absent from the Commission Report.

- **Increased Research funding** should be dedicated to programs that support research activities throughout the U.S. (extramural funding lines in federal agency budgets) research institutions and universities as opposed to funding expanded federal research facilities. The funding duration for grants should be longer than the customary 3 years and should be 5 years and up to 10 years as suggested by the Commission. Recent credible news sources report that the U.S. is losing its position as the world science leader.
- There should be a rededication to discovery science by holding the line on the “mega” projects involving as many as 10 institutions that are an exercise in management techniques.
- Double the nation’s investment in ocean research to at least \$1.5/year in the next 5 years. The vast majority of this funding should be to fund the independent and state related institutions and universities. All research funding should be subject to rigorous and open competition. There should be programs to fund research infrastructure **in \$10s of millions** whether it be for laboratories or for an offshore research platform. **These are top priorities.**
- Congress should establish a national multi-agency Oceans and Human Health Initiative to coordinate the expanding research mandates in biotechnology and in marine diseases.
- National Sea Grant College Program should be expanded and support several research programs.
- The National Ocean Exploration Program should be consolidated under the lead of NSF and NOAA. Only 5% of the oceans have been explored in the 50 years of ocean research.

3) Education

Education efforts are needed to encourage public awareness in the value of ocean processes on the quality of life on this planet. It is also critical that the U.S. develop a larger pool of young persons interested in entering scientific and technical disciplines in oceanography to satisfy the rapidly approaching needs.

- Lifelong learning away from the classroom must become an educational priority to promote public understanding of the oceans.
- Oceans and oceans related topics must be included in the National Science Ed. Standards and in State standards. This is an egregious oversight that must be remedied. The oceans control our climate, and 97% of the living space on earth is in the oceans. Oceans are crucial to our life on earth!

- There is presently a vast deficiency of qualified science teachers. Need better recruitment and training programs.
- Foster collaboration among pre-service / in-service teachers and ocean research laboratories.
- National Ocean Education Office responsible for promotion of creative programs that will last over 5 years to achieve systemic change, undergo rigorous evaluation and be easily replicated in other areas.
- There is much reference to some existing federally produced programs while there is little notice of acclaimed programs with global impact that should be included.
- The role of federal agencies in solving these education problems is overemphasized. Partnerships at the local and regional levels with the federal agencies is an essential ingredient to success.

4) Specific Programs

- A program of particular interest to the Gulf of Maine community is the development of the Integrated Ocean Observing System (IOOS), as recommended in the Commission Report for. Bigelow contributed to the development the science for Ocean Observing for biological productivity by satellite remote sensors back in the 1970s and continues this interest with the conceptual development of the Gulf of Maine Ocean Observing System. This will be a critical tool for the future of ocean research
- Establish a program for supporting regional research and experimental resource management projects of interest to state and local jurisdictions. A program to establish an ecosystem based fisheries management pilot program to develop an information base and to develop the expertise for the transition to ecosystem management. Cost at one regional site would be at least \$2M /year.
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5) Additional Recommendations

- Establishment of the National Ocean Council—necessary to coordinate and integrate management policy between land-ocean-atmosphere
 - Separate offices on:
 - *Ocean Science-This would be in addition to those proposed in the Report. Necessary to produce the best information to achieve ecosystem management and, ultimately, sustainability of the ocean system.
 - Ocean Education-our effort must be integrated and progressive to serve to excite while educating a majority of the public and also to train the next generation of scientists and technicians.
 - Ocean Observing-this technology will absolutely drive the quality of our information base. Implement the national

Integrated Ocean Observing System and maintain funding so the system remains on the technical edge. This IOOS should integrate with the Global Ocean Observing System (GOOS). The NOC should facilitate efforts in international coordination and collaboration in Global Ocean Observing Systems. The funding of this technology should be a line item in NOAA's budget. This system will ramp up in 5 years to \$500M /year.

- Ocean Information-this will require a Herculean effort to produce a completed integrated database that is seamless to the user. Its utility will be worth the effort.
 - Establish NOAA as an independent cabinet level department under which all the distributed activities in managing the oceans will cluster. The budget of NOAA should be reviewed annually by the Natural Resources Program within the Office of Management and Budget.
-
- Ecosystem-based fisheries management should be embraced and the necessary research and education of various models developed to achieve wide acceptance.
 - There should be an integration of NOAA, as the presumptive oceans agency, with the Dept. of the Interior to facilitate sound management practices whether it be in a river, the continental shelf or in the atmosphere; all are interconnected.
 - A high priority is for the U.S. to become a signatory nation to the United Nations' Law of the Seas Agreement that recognizes the responsibilities and rights of member nations in managing the high seas of the world.

Comment Submitted by, Emily Wakeman, Santa Rosa, CA

May 21, 2004

As an ocean enthusiast and an inhabitant of the lovely Northern California coast, I was very pleased to hear of the new extensive (boy howdy!) report on the state of the world's oceans by the U.S. Commission on Ocean Policy. I am currently a senior university student (Sonoma State University) and this semester I was able to take both a marine biology and marine ecology course. I must admit, however, before these courses I was not aware of the critical state of our oceans. Now I am all too aware of the problem (education is funny that way, the same thing happened when I took the ³Biology of Sexually Transmitted Disease² class...). I applaud the efforts of this council; you have accomplished the thorough and long awaited study our planet had needed so badly. Now to implement it...

Being finals week, time did not allow for me to read the report in its entirety. That was okay, because what interests me most are the actions the government plans to take to protect this most valuable resource from pollution, over exploitation, and whatever else humans can manage to throw at it. Generally, I find myself in agreement with all of your recommended actions.

A National Ocean Council is of the utmost importance. The US is currently in the position to begin a tradition of global awareness. In the thirty years since NOAA was formed, we have made unfortunate discoveries about the health of marine ecosystems. Restructuring NOAA to focus more attention on ocean policy would be helpful. In addition, the increased power over local policy to regional councils will help alleviate some of NOAA's responsibility (after all, there is a lot to manage between the ozone and the bottom of the ocean). These local councils are also important because who knows the coast better than the people who earn their living, research, and recreate there? In addition, coastlines can vary dramatically within only a few miles, with regards to topography, ecology, and human induced disturbances. Varied environments may require varied methods of preservation and restoration, so no one blanket policy can cover them all.

After volunteering in a fifth grade class, I was saddened and amazed at the near complete lack of science education. How can we possibly make sense of a significant paper, such as the ocean policy report, if we were never taught how fish breathe underwater or why plants need light to make us oxygen? Improving science education in the elementary, junior, and high schools is the only way to make reports such as this accessible to the general public. Another educational point that I would like to make is that I can understand the apathy towards the ocean's current condition from the land-locked citizens of our country. Before I was enlightened by higher education, I had no idea that the ocean was responsible for regulating our climate. This could be a very important fact to agriculturalists in the central states.

Another important advance is the admission that watershed does in fact pollute the water. I doubt that most people realize the impact that sewage dumping or fertilizer run-off have on the coastal region. Most seriously, this can lead to anoxic water, compromising fishing industries (just look at the Gulf of Mexico). By pushing science,

this report will encourage quantification of our ocean's health, which will force us to see the picture in black and white.

Ah, fisheries. Just the wrong balance of economic dependence and easily exploited resources. This is a delicate situation that must be handled carefully. Because reluctance to reduce fishing by fishermen is based simply on income, is there money anywhere in that great big ol' budget for monetary rewards from those fisherman who respect conservation recommendations? Continued fishing at this rate is not possible. Studies have shown that overfishing decreases biodiversity, and gradually, as target species are whiped out, we begin ³fishing-down² the food chain. I know that I don't want to be eating shipworm or lamprey sushi in ten years.

The only areas that I feel are lacking are: (1) no specific reference to increasing the number of Marine Protected Areas and, (2) no mention of encouraging long-term studies specifically. MPAs give us a snapshot of what an area was like before it got worse. This will tell us how we arrived at that compromised state and may hint at how to solve the problem. Of course, MPAs also serve to preserve species that would otherwise be excluded due to human harassment.

I am a big fan of long-term ecological studies, but often they have difficulties getting their feet off the ground due to lack of funding. With all that new money coming in, a large portion of it should be set aside specifically for funding long-term studies. These studies can serve a similar functions as MPAs, but without access restrictions. These invaluable studies best assess the rate and patterns of degradation.

The publication of this report is a big step on the way to preventing further destruction of our ocean habitats (I am probably dating myself, but my G.I. Joe cartoon always said, ³knowing is half the battle.²). (One more thing: you all worked hard on this, so publicize it! Outside of class, I haven't seen or read anything about this report!) I am looking forward to these exciting and restorative changes so that my grandchildren may one day wake up on a foggy beach with seaweed in their hair and sand in their eyes. So with out further ado, let's implement some of these changes!

*Comment Submitted by Robert G. Fleagle, Prof. Emeritus of Atmospheric Sciences,
University of Washington*

May 17, 2004

The Commission had the opportunity to complete the work of the Stratton Commission report of 1969 and to take further needed steps. It missed this opportunity in important respects. Perhaps most important, it should have recommended that NOAA be made an independent agency or that it become part of a new, more comprehensive environmental agency. (Although the Stratton Commission had recommended creation of NOAA as an independent agency, it was established in 1970 as a subordinate part of the Department of Commerce.) The need for a more independent and stronger agency is stronger now than ever.

The Commission report does not recognize adequately the essential and close linkage of atmospheric and ocean observations and science and their joint role in applications, viz., climate, fisheries, water supply, pollution, coastal safety, etc. Each application should be based on broadly unified observations, science, and operations.

Comment Submitted by Dale Beasley, President, Columbia River Crab Fisherman's Association (CRCFA)

May 13, 2004

CRCFA thanks you for the opportunity to express our views relative to the Ocean Commission Report and how the report will directly affect the Dungeness crab supported fishing communities. We view this report as an extremely important historical event that will guide the future of our national ocean treasure, and planet's lifeblood well into the future. The Ocean Commission developed a good overall set of guiding principles that if followed will lead to an improved comprehensive ocean stewardship ethic.

This preliminary report allows inadequate time for meaningful public response to such a comprehensive document.

CRCFA has been grappling with most issues presented within the report for over a decade and the ONE recommendation that we have is: DO NOT build in excessive rigidity – different areas of the country face similar, but different problems that need solutions that accommodate local variability. The CZMA recognizes this and is the PRIMARY tool available, and should remain central to future development.

We cannot and MUST not develop complete National Standards for every situation. Example: Dungeness crab on the Pacific Coast of Washington, Oregon, and California has a special status under the Magnuson/Stevens FCMA – it has extended state management jurisdiction out to two hundred miles. On two separate occasions the Pacific Fisheries Management Council has reviewed the crab fisheries for possible Federal management of the fishery and twice remanded it back to the states. This is not an accident, but the best way to manage the fishery & attempting to put National Standards to this fishery would KILL the most successful and sustainably managed fishery in not just the United States, but possibly the entire world. This year, after over 100 years of state management, we are seeing record-breaking production.

It is our STRONG recommendation that state jurisdiction of Dungeness crab be extended indefinitely and National Standards be specifically exempt from this fishery.

We suspect that other fisheries around the country may have similar situations and our primary recommendation is that variation in management is essential. One size shoe cannot and must not be the only solution that is acceptable. We must account for local variability and retain the flexibility to continue the GOOD practices of the past as well as the ability to change past Failures.

Our # 1 recommendation is that sustaining coastal fishing communities should be job one, which requires a strong conservation ethic balanced with social needs of the community which can be adjusted by addressing over-capitalization to sustainable levels. The bigger is better philosophy must go. The mom & pop businesses of the past were far more compatible with sustainable fisheries than the industrial enterprises pushed in the

recent past. Rewarding over-capitalization with an IFQ would be a terrible and unforgivable breach of a public trust. Our fisheries must retain equal access, equal opportunity at optimum participant levels to preserve reasonable access for future generations and maintain the health of coastal fishing communities. **IFQ – JUST SAY NO!**

Adding additional layers of bureaucracy will eat up dollars needed for on the ground projects. We have a strong basis from which to develop future programs, what is needed is collaboration across agencies and jurisdictions, that consolidate functions across agencies. One example could be to start with our ocean observing systems and redesign some our ocean buoys to accomplish multiple tasks. Some USCG navigation buoys could house National Weather Service swell and wind instrumentation with university underwater observations of currents, DO, Nitrogen, turbidity, and other important measurements, getting a three for one bang for the buck, a simple solution at the buoy level.

Our final recommendation is that all comments received from the public be published as a part of the final record and included in at least an electronic version available on CD to anyone that requests it.

We would like to continue to expand our comments, but again the 30 day response time does not allow for additional and valuable contributions that should be included in the final report.

Sincerely concerned for the health of our oceans, the life-blood of the coastal fishing communities,

Dale Beasley, President, Columbia River Crab Fisherman's Association

Comment Submitted by James Heirtzler, NASA/Goddard Space Flight Center

May 12, 2004

Thank you for the opportunity to make a few comments on the US Ocean Commission Draft Report. I have read the entire Draft Report (excluding the Appendices) and base my comments on marine experience in the US Navy during World War II, 10 years at Columbia University's Lamont Earth Observatory and Hudson Laboratory and about 20 years with Woods Hole Oceanographic Institution. I follow ocean activities with keen interest here at NASA/Goddard Space Flight Center. (It seems that there were no NASA members of the Commission or its Science Advisory Panel.)

This work is timely and encyclopedic and will stand as a reference on the state of ocean activities in the United States for years to come. It is clear that Admiral Watkins, the Commission, its Science Advisory Panel, and especially the Commission Staff devoted considerable effort to this study and deserve the thanks of the ocean community and people of the United States. Their task was infinitely more complex than that of the Stratton Committee and their report is twice as large.

To some extent the report is so comprehensive, with so many recommendations that it is tantamount to an overhaul of large segment of the US government and one gets lost in the complexities of it all. Would it not have been better to emphasize a few major points and leave the important details to a second document? (This was begun on page xvii.) The responsibilities proposed for the National Ocean Council alone are staggering and can hardly be undertaken with the one million dollar budget given, or the staff size suggested. Probably this impression prompted Bob White's comment (see EOS for 4 May 2004) that NOAA should be moved to an independent agency position.

As a member of the NASA family, I naturally looked to see how NASA was mentioned. The Commission may not have been aware of the NASA realtime capabilities in mapping coastlines, tracking shipping, locating red tides, measuring the changing geomagnetic field, providing up to date information on winds, waves and tides, tracking major water resources on land and relaying information from arrays of stations. While NOAA or the USGS could do some of these things, only NASA can launch satellites. The NASA organization is now in a state of flux because of the Moon/Mars initiative and now would be a good time to get them on board.. As was mentioned, NASA's experience in archiving massive amounts of data is unique.

I must take exception to the second paragraph on page 328 where is

says "NASA does not have the extensive atmospheric, land, and ocean ground-truthing infrastructure needed to verify remote observations for operational purposes." On the contrary NASA, and Goddard Space Flight Center, is considered the expert on construction, calibration, and ground truthing remote sensing spacecraft on land and at sea.

The Report puts great emphasis on the IOOS. To the uninitiated this sounds like an array of weather stations for the 70 percent of the Earth covered by oceans. I think the case for the IOOS was not made clear here.

Regarding education and international activities, certainly the International Ocean Drilling Project sets the example for a successful international marine program and that should be brought out.

One other general comment: This is a report on Ocean and Coastal Policy, not just Ocean Policy and possibly the title, or a subtitle should reflect that. An index would be useful.

Again, thanks one and all for the effort.

Comment Submitted by Kenneth D. Johnson, Bristol VT

May 12, 2004

Thank you for your work on coastal and ocean issues.

I would like to comment on a few of the many issues. First, a more proactive approach is needed to better regulate fishing in order that the long-term sustainability of fishing stocks is assured. While this will certainly mean economic hardship for some in the fishing industry, some prudent public policy to assist them in making a transition another line of work and coping with potential debt issues should be considered. The ocean is a huge resource but must be managed intelligently for it's long-term health.

Second, water quality is a serious problem in many areas of the nation where expansion of the population has outstripped the capability of the infrastructure to deal with runoff and sewage. These are very serious issues that deserve considerable attention as they affect the health of the citizens who live near, work in or recreate in the ocean. Much pragmatic long term planning and major investment in infrastructure improvements must be done to ensure that we stop degrading the quality of the water entering the oceans.

Finally, there continues to be a shortage of energy, especially renewable energy, in the nation. The failure to raise corporate fuel economy standards, our continued reliance on oil as the major source of energy and very modest public investment in renewable energy are only a few of the many shortcomings of current policy. Please give strong consideration to fully supporting renewable energy projects and investment in the ocean near the United States. Many people protest when a renewable energy project is proposed for an area near them, and yet claim that they support renewable energy, that progress on renewable energy is very slow. Let our public policy truly reflect the long-term benefits to the nation as a whole and give less weight to some citizen's desires to have inexhaustible energy at their disposal while not having to see any form of generation near them.

Thank you for the opportunity to comment.

Comment Submitted by Mel Rader, Water Resources Scientist and current Fulbright Fellow

May 10, 2004

Thank you for producing such a strong and informed document on ocean policy. I hope as many of your recommendations are transferred into policy as possible.

I have comments related to climate change and renewable energy policy. First, I would like to emphasize the possible dire consequences that climate change would have on the oceans. Just the economic consequences of a small rise in sea level would be enormous. Therefore, I think it is imperative that the commission advocates for a strong response to climate change. In the current political atmosphere it may not be possible to significantly curb greenhouse gas emissions. However, it is certainly feasible to provide funding for research to understand the effect of climate change on oceans, as well as formulating a long-term plan for managing the effects of climate change. It is imperative that the scientific community and the U.S. government is proactive toward the climate change issue and plans for uncertain future. This will be critical for future health of the oceans.

On a related issue, I believe it is imperative that the commission remains open to offshore developments for the purpose of renewable energy production - especially wind turbines. Wind power development has the benefits of providing a relatively inexpensive source of energy with minimal emissions. It will most likely be a critical component of the U.S. energy mix in the decades to come and it is important that clear rules are laid out now which allows this type of development but also safeguards the health of coastal ecosystems.

Comment Submitted by G. Carleton Ray, Research Professor, Department of Environmental Sciences University of Virginia

May 7, 2004

Dear Commissioners: I wish to commend you on a refreshing and imaginative Report, which I strongly support. During a half-century of experience in global coastal and ocean science and conservation in polar, temperate and tropical coasts and oceans, I have seen how environments have changed and appreciate the urgency of implementing your findings.

I would make only a one major point. Your ecosystem emphasis is essential. However, the Report might further emphasize the point made in a table at the conclusion of the Executive Summary: " Strengthen the link between coastal and watershed management". This link was the rationale for coining the term "coastal zone" three decades ago, which has become a mantra for management. However, this "zone" is more than that, as you have indicated. In a recent textbook, we have named this zone the "coastal realm" in order to give it a more ecological slant (G.C. Ray & J. McCormick-Ray, 2004. Coastal-Marine Conservation: Science and Policy. Blackwell Science, Oxford, UK). This realm is distinguished by interactions among land, ocean, and atmosphere that make clear that traditional disciplinary and jurisdictional distinctions between "terrestrial" and "marine" are insufficient for both science and management. Further, it is probably the most important global realm in terms of both Earth processes and human habitability, as the table from our book (below) verifies. Therefore, your Final Report would benefit greatly in all respects by exploring how integration of processes and jurisdictions from watersheds to seasheds within the coastal realm may be implemented. In this context, the open ocean and coastal oceans are ecologically distinct, requiring different management regimes.

Also, recognizing that this Report is a policy statement, I have two further concerns. First, the establishment of a National Ocean Council seems a very positive step. However, how exactly this new body might relate to the existing Fishery Councils, CEQ, and mandates such as carried out under the Marine Mammal Protection Act is clearly a difficult matter. It is no less than "reorganizing government". But if so, what becomes of existing structures and their constituencies? I suspect that this can not be predicted at this time.

Second, scientific research within both the coastal realm and open ocean is highly fragmented, as you say, but also pathetically underfunded, as you also point out. The Report's projected funding seems hardly sufficient. Such funding is, obviously, not only of a scientific nature, but also must include education, enforcement, and a host of other matters. I am concerned particularly about the development of political will and public support for the funding that is required. Clearly, this Report will have to be "sold" to a public that, in so many respects, just doesn't "get it." How strong support might be generated is of considerable concern.

Again, congratulations on a far-sighted Report.

Comment Submitted by Beverly Lynch, Newark, MD

May 6, 2004

We do not need a National Ocean Council; we have too much bureaucracy as it is. This would just entail another expense, increasing the size of government. The government does not need to spend more money on ocean research. That is not the purpose of government.

Commercial fishermen should not have to pay user fees as the ultimate user is the consumer, who would not have access to fish with out the commercial fisherman.

Vessel monitoring systems should not be required on all fishing vessels. This is a sure way to put the small operator out of business. This excess monitoring is not needed. The government does not need to know where every fisherman is at all times. These systems are very expensive and a hassle as the fisherman must call in every time he goes out, but can not call in on weekends, restricting the days he can get out.

Individual transferable quotas are a good idea as long as the quotas go to working fishermen, not investors and absentee owners.

Comment Submitted by Larry Brown, Playa del Rey, CA

April 25, 2004

Congratulations on completing the very comprehensive Preliminary Report on the health of our Oceans. I sincerely hope it will become a blue print for a blue ocean for our nation's and states' marine protection policies and a model we can share with other countries sharing our planet and our oceans.

I have been a avid recreational fisherman and active conservationist in marine resource issues for for over 40 years. I have personally witnessed the devastation to our oceanic habitat, wet lands, estuaries, bottom spawning beds, coral reefs and specific fisheries in my travels to over 40 countries on six continents as a fisherman, scuba diver and tourist. All the damage I have personally seen and read about is simply from over fishing from the non-selective gear of commercial fishing and pollution! I have also seen how dynamic and resurgent nature can be when given the opportunity to heal itself from the effects of pollution and over fishing.

By rigorously implementing all of the recommendations in the Preliminary Report I am confident we can still save our ocean. It is urgent that we do this immediately in our nation to protect our 200 mile (oceanic) exclusive economic zones but work with the international community to provide the model and pressure to other nations to implement similar protective measures. Unless we lead a global approach the international migrating pelagic fishes and marine mammals of the world and the foreign non-pelagic fishes and mammals will continue to be destroyed from the pollution and irresponsible, non-selective fishing gear used by foreign commercial fishermen in their waters or the international waters of the world.

1. We need to outlaw all forms of non-selective commercial fishing gear, including, longlines, drift nets and ground trawls.
2. We need to outlaw the importation and sale of all fish caught using this non-selective commercial fishing gear.
3. We need to fund major research and investments to eliminate pollution from storm water run off into our wet lands, estuaries and bays.
4. We need to fund major research and investments to reduce all other forms of industrial land based pollution, (air, water and waste) which eventually lands up as chemical pollution in our oceans.
5. We need to immediately stop all commercial and residential development that deleteriously affects the amount of or quality of our remaining wet lands, bays and estuaries.
6. We need major investments to buy back and restore wet lands, bays and estuaries

and the spawning habitats of near shore fisheries devastated by years of bottom trawling.

I am very thankful for the Preliminary Report of the US Commission on Ocean Policy and am optimistic and confident we can still save our ocean and planet. We must have the national and international resolve to make the hard and necessary decisions to protect our ocean for future generations.

Comment Submitted by Dr. David Dow, East Falmouth, MA.

April 25, 2004

The U.S. Ocean Commission members and their supporting staff deserve thanks for synthesizing the regional hearings and public comments into such a fine product. I feel that the commission's report along with the Pew Ocean Commission report released last year contain many excellent ideas which will provide a guideline for better ocean governance, stewardship of ocean resources, and reducing human impacts on these ocean resources, and the importance of the ocean to the nation's economy. The Pew report contained bolder recommendations in many areas, but the U.S. Ocean Commission report recommendations placed an economic price tag on their package with a mechanism for generating these funds. The U.S. Ocean Commission package is more pragmatic and is attuned to current economic and political realities. The two commissions identified many of the same problems and hopefully this will provide a call to action by Congress and the Administration to address some of these problems in conjunction with the states, tribes, and localities.

I decided to comment on some broad themes which I will relate to some specific recommendations in Chapter 31, rather than nit pick the report on a recommendation specific basis. I feel the report should be evaluated in its entirety and it is a good product in this sense. However in commenting one needs to refer to specific sections and leave it to the commission to decide whether suggested changes would make any substantive difference in the overall new ocean governance/management scheme.

I agree with the 12 guiding principles that the commission utilized, even though some of them will be contradictory and have to be selectively applied in actually protecting ocean resources/habitats, while utilizing the ocean for supporting our economy. I personally support sustainable use of renewable ocean resources with application of the precautionary principle for the use on renewable and nonrenewable ocean resources. Under the precautionary approach one favors the protection of living marine resources (LMRs) in the face of scientific uncertainty on the consequences of economic use and the burden of proof should fall on the users that their economic activities will not adversely impact ocean LMRs and marine biodiversity.

The commission report's sediment management discussion (rec. 12-4) appears to have a assimilative capacity focus for addressing this issue, while I would favor source reduction of pollutants and in place disposal of contaminated dredge spoils as more cost effective and environmentally friendly approaches. The Massachusetts Water Resources Authority (MWRA) has utilized industrial pollutant source reduction to reduce the toxic contaminant levels in their influent and has also converted the sludge from the secondary treatment process into a fertilizer. In the Boston Harbor Navigation Improvement Project they backfilled the contaminated dredge spoils into the blue clay layer which was dredged deeper than the channel, while in New Bedford Harbor the PCB-contaminated sediments were placed in confined disposal facilities on the side of the harbor. Since the offshore disposal of contaminated dredge spoils is a permitting nightmare, I feel that a

source reduction policy for toxics and soil conservation best management practices would help diminish this problem. There will still be a need to dredge channels to promote transportation and even with source reduction, there will be a need for disposal of contaminated spoils. I feel that the Boston Harbor and New Bedford Harbor examples show that in harbor options should be pursued before one considers offshore disposal with its uncertain environmental effects and permitting challenges.

In the research component of sediments management, I see a need to address the following issues:

- * Uptake of toxic organic and methylated heavy metals into biota involves both equilibrium partitioning (bioconcentration) from the dissolved fraction and food chain bioaccumulation. The bioavailability of contaminants needs to be factored into the concentrations in the sediments in order to decide how to manage them. This is an area which the current Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (COE) sediment quality triad deals with inadequately.
- * We need more research on source reduction of toxics from point sources and best management practices (BMP)/total maximum daily loads (TMDLs) to reduce toxic and soil transport from nonpoint sources into coastal water bodies.
- * More research is needed into the beneficial uses of noncontaminated dredge spoils on both the opportunities and potential constraints (like mis-matched grain sizes or sediment water properties in beach nourishment projects).

I don't see a good rationale for moving NOAA's Coastal Zone Management Act Section 6217 nonpoint pollution program into EPA's Clean Water Act Section 319 program (rec. 14-9). I feel that the section 6217 program has forced states to come up with watershed plans to address nonpoint pollution which is a growing source of diminished water quality in coastal estuaries/embayments. If NOAA is to be the lead ocean agency and not EPA, then moving nonpoint pollution into EPA doesn't seem to be a good strategy. I also don't feel that EPA's voluntary section 319 program has been that successful. Obvious financial resources at the state/local level to address this problem are limited and education is required to get private parties to use best management practices to control sediment input to water bodies. There is obviously an important role for wetland restoration and vegetated buffers along stream corridors to reduce sediment loading before one proceeds to expensive manmade structural solutions. There is also a need to develop a long term strategy from converting from individual septic systems to regional wastewater systems where structural solutions are required.

National water quality monitoring is discussed in rec. 15.1. I feel that this is needed, but after reading EPA's draft National Coastal Condition Report II, much more integration is required between NOAA, EPA, and the USGS. For example, NOAA's mussel watch toxic contaminants monitoring program and the state beach closure/seafood safety warnings can't be linked because of different sampling locales and protocols and non-comparable standards between the states and national shellfish sanitation guidelines. The

same can be said for the NOAA/NOS estuarine water quality evaluations for eutrophication and EPA's nutrient criteria for water bodies which are based upon different protocols/conceptual approaches. Hopefully the National Ocean Council can resolve some of these problems, but without control over the personnel and financial resources for the different agencies, there is a challenge in moving to coordinate activities for agencies with different legislative mandates and constituency groups/Congressional oversight committees. The Coastal Condition report is based upon an memorandum of agreement (MOA), but making this a success is obviously a major challenge.

A related topic is the link between monitoring, indicators, management information needs and societal goals (rec. 15.3 and 15.4). This would involve both a national water quality monitoring program and integrated ocean observing system dealing with chemical, physical and biological parameters (IOOS). My view is that society needs to develop a vision with associated goals which is a political process involving science, socioeconomic issues, concerns about equity and values, cultural norms, etc. This leads to legislative mandates and management actions by agencies which are supported by monitoring programs to collect data. The development of indicators and models is employed to convert this data into information to be used by managers and policy makers, to evaluate the success of their management actions and progress in achieving societal goals. This process is inherent in the commission's recommendations, but I feel it would be useful to state it explicitly as a stand alone guideline.

Even though I agree that watershed management approaches should be utilized to reduce the impact of development and sprawl on coastal water quality, habitat loss/degradation, and the status of LMRs, one should not ignore far field effects. Here on Cape Cod the bulk of the nitrogen and mercury input comes from the regional airshed, while our finfish resources are impacted by offshore harvesting. Most land uses in coastal watersheds are controlled by local zoning regulations/town ordinances and not federal or state government decisions. The commission ignores this local component on land use decisions in rec. 9-4. The localities need technical help from the states/federal government in deciding whether coastal water quality and LMR problems are amenable to local solutions or require regional approaches instead. On Cape Cod discussions are underway to develop a regional wastewater treatment system to reduce the nitrogen loading from septic systems to local embayments which has led to poor water quality, loss of eelgrass beds, and collapse of the bay scallop harvest. Obviously government financial help will be required to implement a regional wastewater system. The changed abundance/distribution of finfish in coastal embayments would require a regional approach. The same is true for the human health mercury advisories for consuming fish from our freshwater ponds.

Ocean Zoning and Marine Protected Areas (MPAs) are addressed forthrightly in the Pew report, but skirted in the U.S. Ocean Commission report in favor of ecosystem-based offshore management (rec. 6-2). Our experience here on Cape Cod with wind farms suggests a need for ocean zoning of federal bottomlands and the associated water column. Even though we need renewable energy from wind, it should not be up to private developers to decide where they wish to put these facilities. There is also the consistency

issue between the state and federal ocean regulations. The Massachusetts Ocean Management Task Force recognizes a need for zoning based upon their experience with Cape Wind which is located in federal waters, but which will require a cable through state waters to hook up with the regional electric grid. Since this project is under COE EIS review it is premature to comment on whether its public benefits will exceed its environmental costs. The speculative Winergy wind farm proposals were not as well developed as the Cape Wind project and show an even greater case for government ocean zoning to guide these siting decisions. Offshore aquaculture, natural gas/oil pipelines, sand and gravel extraction, bottom trawl fishing impacts on habitat, etc. illustrate the need for ocean zoning. Ecosystem-based management (EbM) is one tool to help accomplish ocean zoning, but it is not sufficient in my mind.

Another tool is Marine Protected Areas (MPAs) which would be developed to limit human uses in specified spatial areas to: protect cultural resources, restore fish populations, protect threatened/endangered wildlife populations (sea turtles, marine mammals, and sea birds), enhance marine biodiversity/protect sensitive bottom habitats, etc. Certainly no take MPAs (marine reserves) are controversial and should be developed with public involvement to ensure well defined goals, adequate monitoring, adaptive management, a precautionary approach, and the resources required for enforcement. Since MPAs are much broader than marine reserves, there are a variety of management entities that could be potentially involved: proposed regional ocean councils, fishery management councils (FMCs), national marine sanctuaries/state ocean sanctuaries, etc. I agree with the Pew Commission that the regional ocean councils should coordinate MPAs in cooperation with the states and FMCs. The role of the regional ocean councils is not that well defined in the U.S. Ocean Commission report. The Gulf of Maine Council on the Marine Environment or International Joint Commission might be good models. I was disappointed that the U.S. Ocean Commission recommendations (6-3, 6-4, 9-2, 11-2) in this area were so tentative and lacking in imagination on the role of the regional ocean councils and the use of MPAs.

I agree with many of the recommendations for the FMC reforms and feel that the U.S. Ocean Commission report has a more realistic approach than the Pew Commission. I feel that the recently released NMFS Strategic Plan for Fisheries Research reveals an inherent separation in the agencies mission between harvesting commercial and recreational fish and the stewardship of natural trust LMRs and protected species. This NMFS report's bias on harvestable resources is reflected in the commission's rec. 25-3 on socioeconomic research which ignores government stewardship responsibilities (natural capital and non-market environmental evaluation) and ignores environmental economics in favor of traditional natural resource economics. I feel that the management and research should examine this from a more holistic perspective. Thus one needs to define ecosystem-based fishery management in an operational manner that includes harvested resources, protected species management, marine biodiversity and stewardship of LMRs.

I don't agree with rec. 20-5 that the definition of harassment under the Marine Mammal Protection Act (MMPA) should only apply to human activities that disrupt behavior significant for survival and reproduction. Since we don't know that the status and trends

in the population size of many marine mammal populations, I don't see how one can expect to identify scientifically which manmade activities effect the survival and reproduction at the population level. There are certainly biomarkers of exposure to chemical contaminants in individuals, but the population consequences are unknown. I wouldn't change the harassment definition until this situation is better resolved scientifically. Otherwise it will cause a litigation nightmare, as evidenced by the Navy's SURTASS towed array system. I don't feel that the Navy should be exempted from federal environmental regulations as proposed in the range preservation and training bill being considered by Congress. Exemptions exist to environmental regulations when these are necessitated by national defense concerns and this is the approach which should be utilized. I agree with rec. 20-8 that the ocean noise research on marine mammals should not be conducted by the Navy or NMFS, since this is viewed as suspect by many environmentalists and animal rights proponents. Hopefully independent, peer-reviewed research will help resolve whether the SURTASS system has negative impacts on marine mammals.

The final issue is that goals for ocean and coastal habitat restoration by the regional ocean councils is uncoupled from the fishery management council Essential Fish Habitat (EFH) process (rec. 11-2). This may in some cases represent reality, but in many situations habitat restoration is driven by the desire to enhance wildlife and protected species. Thus from a practical perspective EFH designations and habitat restoration decisions may need to interact. Under rec. 19-21 the argument is made to move toward a multispecies or ecosystem-based approach for EFH designation, but I would argue that since we don't understand the functional value of habitat for a single species on its secondary production, that this recommendation is premature. Much more research needs to be done at the single species level before moving to broader levels of biological organization. The research on fishery closures and their effects on the ecosystem beyond the boundaries of the closed area illustrate that there are complex spatial/temporal scaling issues involved. Certainly the Georges Bank Closed Areas for groundfish have illustrated that this was a useful tool for restoring yellowtail flounder and haddock outside and sea scallop populations within. The priority for restoration of inshore habitats would require some functional understanding as well, even the function might be other ecological services besides supporting fisheries.

Thanks for the opportunity to comment on the draft document.

Comment Submitted by Dr. Mitchel W. Eisenstein, Stony Brook, NY

April 20, 2004

Some alarming trends need to be addressed. the possibility of the great ocean conveyor being slowed down or stopping due the influx of fresh water from melting glaciers and arctic ice, could be helped by positioning tankers filled with salt along the conveyors emergence from the arctic ice pack and the tankers will resalinize the oceans at that point. it might take round the clock tanker dumping for many years or it might not take that much, but one thing is sure, it should be investigated as a way to buffer the nonsaline freshe water infiltration of the conveyor and stopping it, which could plunge the western world into a temporary ice age, and cause massive social upheavel.

secondly, the pouring of nitrates into the oceans in the form of fertilizers is causing algae blooms that kill estuaries, reefs, gulfs and fisheries. it has to stop. organis methods of composting agriculture must be integrated into our ways of growing food. this means the widespread incorporation of organic methods of agriculture which doo not wastefully leach inorganically bound free nitrogen, phosphorous etc into environment. when we have compost methods that are bound to bacteria and living loam, the energy requirements are cut substantially for growing food. but this is going to take a commitment of governments to stop giving special benefits to the giant corporations who rip giant holes in the earth and have tremendously wasteful practices which generate massive byproducts that make it impossible for the small farmers and operators to compete.

these giant processes created to maximize efficenciency reduce people to consumers who are specks to be shuffled around and reorganized as needed. the move for greatest profitability and efficiency is re enslaving the world and de-democratizing it.

giant factory ships for fishing have raped the oceans and ruined whole ecosystems. they are the enemy of this planet. business has declared war against nature. but without a balanced view of reverence and stewardship, it is unsustainable and leads to great adversity and tribulation. we all want to become more efficient, but when giant corporations think about efficiency, people are an afterthought.

corporations must not have greater rights than individuals. this is a key condition of restructureing the way we treat our planet. god in his wisewdom put other planets very far away from earth as a message that we better take care of what we have and developpe a sincere feeling for this place and give back not just take. but some people, businesses, philosophies and even religions, minimize the value of respecting nature. nature represents the relationship with the forces of the universe that have reached a level of balance that establishes and sustains life. it cannot be disparaged and toyed with lightly.

genetic experimentation on microbial life is premature. we should be experimenting on things that will, if they go wrong, not effect everything else. experiment on humans or on tertiary cell lines that have low or no levels of reproduction. that way if they get out intothe environment they will not disrupt tthe way life works. but no, we have to shit on

gods face with genetically altering the dna of bacteria and viruses with the certain result that something is going to get out there and cause a catastrophe on the planet as surely as i am breathing this breath.

i fully expect an experiment gone wrong to do something like kill every bird or every fish or every bacteria or every mold in the near future. oh yes you should expect it. because the world has failed so miserably to move beyond the most basic animal survival instincts.

Comment Submitted by CDR John W. Koster, Executive Officer of USCG Activities/Marine Inspection Office Europe

April 15, 2004

Adding Green to the Coast Guard's Racing Stripe - A Commentary, by Commander John W. Koster, USCG, Executive Officer, USCG Activities/Marine Inspection Office Europe

The U.S. Coast Guard would be very astute if it were to now very publicly commit to an even higher level of dedication to conservation and protection of the environment.

The evolution of the Coast Guard's environmental culture over the past 20 years has been phenomenal. However, even while recognizing that we do presently have relevant mission activities and programs for Maritime Pollution Prevention and Response, Protection of Living Marine Resources, Ballast Water Management, enforcement of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), and a Commanding Officer's Environmental Guide, I believe that we still cannot properly claim to be the pre-eminent steward of the marine environment that we could and should be. Opportunities exist to do even better. The times call for us to take certain aspects of those undertakings to a higher level and to move into some new areas.

The popular "green" movement that has been sweeping the globe will only continue to accelerate. Since 1970, the Living Planet Index - a measure of the health of our planet's ecosystems - has declined by about 35 percent. Freshwater ecosystems have especially been impacted, deteriorating by 55 percent during the same period.(1) Invasive species, including aquatics, present a worldwide threat to all-important biodiversity; so much so that the west coast states of the U.S. have deemed it necessary to separately move ahead with ballast water management laws and enforcement programs that are more extensive than current federal and international regimes.

The incredible reality of global warming is with us. Winter pack ice in the Arctic has declined by 25 percent over the past century and the Bering Sea is now effectively ice-free, even in winter. In a report from 2002, the National Research Council said that "...available evidence suggests that abrupt climate changes are not only possible but likely in the future, potentially with large impacts on ecosystems and societies."(2) Dr. Terrence Joyce, who chairs the Physical Oceanography Department at the prestigious Woods Hole Oceanographic Institution, recently went on record regarding the bizarre possibility of the Northeast and northern Europe and Asia being

plunged into a mini-ice age in 10 years due to a resulting displacement of the Gulf Stream.(3)

And in tropical waters, it has been estimated that a up to a quarter or more of the world's coral reefs have already died due to the combined assaults of coastal pollution, ocean warming, and sea level rise.(4) These "rain forests of the sea" are absolutely vital to the health of the planet.

The evidence suggests that the current round of global warming was precipitated by mankind's generation of greenhouse gases. Additional increases of from 2.5 to 10 degrees Fahrenheit by the year 2100 have been projected, should concentrations of carbon dioxide and other heat-trapping gases continue to climb.(5) However, the stringent environmental laws deemed necessary to halt current trends have yet to be enacted, much less enforced.

In recent times, our oceans and shores (indeed, the entire water column) have become literally awash with bits and pieces of hydrocarbon-based plastics that degrade at an impossibly slow rate in the marine environment.(6) Research Vessel ALGUITA documented mind-boggling amounts of pelagic plastic debris throughout its 7,500 mile Central Pacific cruise in 2002.(7) Some of this waste plastic resembles birds' and sea creatures' natural foods. Its chemical make-up may include endocrine disrupting hormone mimics, or can adsorb and concentrate persistent oily toxins now present in the environment such as PCBs, DDE and PBDEs (polybrominated diphenyl ethers). The destructive mechanical effects upon wildlife of plastics ingestion and entanglement are also well documented. For instance, examination of the stomach contents of numerous Laysan Albatross chicks found dead on Midway Atoll revealed them to be stuffed with plastic items such as cigarette lighters, bottle caps and the like.(8) And swatches of plastic films (e.g., bags and other packaging materials) landing on the seafloor smother bottom fauna and stifle normal benthic respiration. Similar to marine oil pollution, the source of most of this debris is from the land, but it winds up running off into our navigable waters and thenceforth the world's oceans. We need to have a greater voice in the larger issue. Becoming more involved in strategic alliances and partnering will be key.

Environmental stories are daily front-page news, perhaps even more so in Europe, where many leading environmental organizations are based. In Germany, for instance, recycling is said to be a national passion. A proposed amendment to the European Union Packaging Directive, to be met by June of 2006, includes new targets (by weight) of 60-75% for packaging waste recovery and 55-70% for recycling. Even the foreign maritime industry journals are filled with stories of serious environmental concerns. America can achieve better alignment with our counterpart nations' heightened sensitivity to green issues.(9)

Highly credentialed academicians have described humanity's demand on the biosphere's regenerative capacity (or "ecological footprint") as now at least 20 percent too great for the Earth to sustain, which, coupled with population dynamics, could grow to 180-220% of the earth's biological capacity by 2050. As demand rises exponentially, the socio-economic consequences of further crashing of fishstocks due to overfishing(10) will be disastrous. The oceans are in crisis. Reform is needed.(11)

As an initial move, just the simple expedient of stating our intent, as an agency, to fully embrace the position that there are extremely serious and immediate implications would be a terrific gesture (along the lines of then Surgeon General of the U.S., Dr. C. Everett Koop's courageous outspokenness against Big Tobacco - speaking of which: cigarette butts with their plastic cellulose acetate filter media are the globe's most prevalent item of marine debris)(12). Our speechwriters and public affairs officers could expand upon the theme. As events run their course, the Coast Guard will be in a ready posture to make the most of legislative and regulatory opportunities and for capitalizing on the public's acknowledgement and support in the competition for more resources needed to rise to the challenges. A large component of our workforce is already eager for this kind of work and we can anticipate that it would provide an ever-stronger impetus for many young people to desire a career in the Coast Guard.

It took the gigantic EXXON VALDEZ spill and terrible events of Sept. 11th, 2001 to unleash the potential for creating adequate national oil pollution and port security/maritime homeland security programs. But, in truth, they were manifestations of threats we had already comprehended. Let us not be once again obliged to resort to a reactionary mode of championing necessary change.

To very aptly quote from a July, 2002 editorial in the International Herald Tribune by Dr. Claude Martin, Director-General of WWF International, the world's largest conservation organization, "...Sustainability on a global scale will undoubtedly become a key issue of the coming decades. Governments which fail to see this, and which fail to redesign their policies appropriately, will put at risk the future of the planet - their own people included of course. They will also call into question the very purpose of government."(13) In other words, given the scientists' well-considered projections and predictions, it would be negligent for us to not employ bold vision. Or to borrow one of our Commandant's favorite quotes, "To think and act anew..." (Abraham Lincoln).

Things a proactive "premier environmental Coast Guard" should work towards might include:

- * Leading by example through investment in training our recruits and workforce in conservation ethics and instituting the federal

government's most uncompromising and progressive environmentally responsible practices (i.e., reduce, reuse, recycle and renew)

- * Using our new Deepwater fleet to showcase "greenest" achievable air emissions, and black and grey water and other waste stream processes

- * Serving more organically raised food in our messes and dining facilities

- * Considering suspension of cigarette sales and use on board all CG property

- * Co-sponsoring more public forums similar to our role in the International Oil Spill Conference (e.g., on marine debris, etc.)

- * Developing a calendar of Program level presence/participation in other important venues (could include almost anything upon which our jurisdiction touches) in order to engage in dialogs on holistic approaches to solutions (i.e., on issues of production, consumption and alternatives)

- * Advocating for speedy ratification of global environmental treaties and protocols such as the Stockholm Persistent Organic Pollutants Convention; Rotterdam Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade; Basel Convention and Ban Amendment on hazardous waste trafficking and dumping; and the 1996 Protocol to the London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter

- * Seeking for and applying more funding to support pertinent research and development (including for ballast water and hull fouling aquatic nuisance species vectors)

- * Raising our level of enforcement of the various Annexes of MARPOL 73/78

- * Dedicating even more resources to the protection of living marine resources such as fisheries and coral reefs, including international assistance

- * Greatly expanded networking, outreach and education programs for all of the above

- * Forging stronger ties with NOAA, the U.S. EPA and the UN Environment Programme

- * Establishing a scientific advisory board with membership from America's great research institutions

- * Starting to think about what the implications of abrupt climate change might have upon the demand for the USCG's services

- * Devising a long-range strategy for earning new appropriations for relevant activities

More strongly committing to a position of true world leadership on the environmental forefront is appropriate and a wave, if we chose to ride it, that will only make our Service look, and feel, great.

Readers are encouraged to review these websites:

1. www.panda.org/news_facts/publications/general/livingplanet/index.cfm (WWF - Living Planet Report)
2. www4.nas.edu/news.nsf/isbn/0309074347?OpenDocument (The National Academies - Possibility of Abrupt Climate Change)
3. web.ionsys.com/~remedy/The%20New%20Ice%20Age.htm (Discover magazine - The New Ice Age)
4. www.coral.aoml.noaa.gov/gcrmn/Status_2000.pdf (Global Coral Reef Monitoring Network - Status of the Coral Reefs of the World: 2000)
5. www.wri.org/index.html (World Resources Institute - SEARCH on "Climate change science and impacts")
6. www.marine-litter.gpa.unep.org/index.htm (UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities - Global Marine Litter Information Gateway)
7. www.nhmag.com/ (Natural History magazine - go to Web Site Archive & click on November 2003: Trashed)
8. www.environment-hawaii.org/800cov.htm (Environment Hawai'i - Floating Plastic Debris Poses Threat to Albatross Chicks in North Pacific)
9. www.europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/02/1459|0|RA|PID&lg=EN&display= (European Commission - Roadmap for enhanced protection and conservation of marine ecosystems)
10. www.oceanconservancy.org/dynamic/press/releases/archive.htm?id=020709a (The Ocean Conservancy - Health of the Oceans report)
11. www.actionbioscience.org/environment/pew.html (actionbioscience.org - abridged executive summary from the report of the Pew Oceans Commission)
12. www.hampton.va.us/publicworks/press/pdf/cigarette_butts_as_litter.pdf (Underwater Naturalist - Cigarette Butts as Litter: Toxic as Well as Ugly)
13. www.ecomall.com/greeshopping/footprints3.htm (full text of Dr. Claude Martin's editorial "The March Towards the Destruction of the Environment")

Comment Submitted by John Dohrmann, Olympia, Washington

Olympia, Washington

June 4, 2004

Admiral James D. Watkins
chairman, U.S. Commission on Ocean Policy
1120 20th Street, NW
Washington, District of Columbia 20036

Dear Admiral Watkins:

Thank you for the opportunity to comment on the Preliminary Report of the U.S. Commission on Ocean Policy. I commend the Commission for your leadership represented in your preliminary report and recommendations. As demonstrated by the statistics cited in the report, the oceans are critically important to the ecological and economic health and to the security of the United States.

Chapter 4: Enhancing Ocean Leadership and Coordination

I support the goals of this chapter to improve ocean leadership and coordination. Given the documented importance of the ocean and coastal economies, the nation needs to provide a greater focus on ocean and coastal policies. The proposed structure can provide improved coordinated without trying to completely restructure government. It is important for the chair of the National Ocean Council to have sufficient status to obtain cooperation from federal entities. An independent staff is also crucial to support the work of the Council. The National Ocean Council structure should recognize the important role of state, tribal and local governments in coastal and watershed management and treat them as full partners. Regional Ocean Councils should be represented in the national structure. In addition, Canada and Mexico should be included as partners in this national structure.

I strongly support the recommendation for ecosystem-based management and recommend it be incorporated more fully throughout the report. Ecosystem-based management requires that managers be provided with ecosystem information and models that allow them to understand the effects of their decisions on the ecosystem. For example, fishery managers need fishery-independent abundance information for both target and non-target species. Agencies managing offshore activities should all be working from a common assessment of the regional ecosystem, perhaps provided by the regional ocean councils.

Recommendation 4-10, calling for the creation of regional ocean councils, is one of the most important in the report. Regional councils should be formed and given real authority throughout the rest of the report. Governors should have the key assignment to

organize regional ocean councils. The Integrated Ocean Observing System, water quality monitoring, regional ocean information, and ocean resource management should all be coordinated through the regional ocean councils. Councils should oversee and distribute regional ecosystem assessments and provide the connection between federal agency management and the coastal communities. Canada and Mexico should be included in the appropriate regional ocean councils. The design of regional councils recommended in the PEW report should be incorporated.

I support the recommendation that federal agencies move to common regional boundaries. They should also be encouraged to consult with the regional ocean councils on their regional management activities.

Chapter 5: Advancing a Regional Approach

The formation of regional ocean councils should be a high priority. The recommended regional ocean information programs and regional ecosystem assessments should be implemented but should be housed in the regional ocean councils, not governed by a parallel system of boards. The regional staff necessary for the information program activities can also staff the functions of the regional ocean councils. Housing the regional information programs in the regional councils will provide a single, clear regional structure and ensure that the monitoring and research activities are aware of the regional management needs. In turn, the ocean, coastal and watershed managers in the regional should use the common regional ecosystem assessment to inform management decisions. If the regional ocean information programs are established before the regional ocean councils, they should operate under an interim structure only until regional ocean councils are established.

Federal entities should be required to consult with regional ocean councils before undertaking ocean and coastal activities.

One way for the regional ocean councils and regional information programs to improve coordination and dissemination of research is to organize periodic science conferences for the region. The periodic research conferences that have been held in Puget Sound provide a good model.

The regional information programs must serve the needs of state, tribal and local managers represented through the regional ocean councils. Information collection must be consistent and long term. If the regional information programs use a grants process to support monitoring and research, they must ensure that important long-term data sets are collected without gaps or incompatible data. Some monitoring might best be done by contracting with the state management agencies which need to use the data.

Chapter 6: Coordinating Management in Federal Waters

I support the establishment of an ecosystem-based offshore management regime that sets forth guiding principles for the balanced coordination of all offshore uses. The system

must be coordinated with the regional ocean councils and should include mapped use designations that blend seamlessly into the coastal zone management and land use systems of the coastal states. The issues that need to be considered in siting offshore uses, such as environmental effects and interference with fishing and navigation, don't suddenly change at the three mile line. I also support the principle of resource rent but don't want a management structure that is so dependent on user fees that management decisions are biased.

Marine protected areas appear to be an important tool for managing ocean and coastal ecosystems but it is important that the purpose of each area be clearly stated and then management measures adopted to achieve the purpose. Monitoring is necessary. Local communities must be consulted and tribal fishing rights must be recognized and respected. Marine protected areas must fit into fishery harvest management and the management of uses of federal waters. Regional ocean councils can provide coordination.

Chapter 7: Strengthening the Federal Agency Structure

The Commission has raised important issues about how well the structure of federal government addresses ocean policies. One problem with any reorganization focused on oceans is that many of the human activities that are of concern in the oceans and coastal areas are also of concern in inland areas. Stormwater runoff is a problem for every urban area in the country. Inadequate sewer treatment or failing on-site sewer systems threaten ground water and surface waters wherever they occur. There are fish farms on land and proposals for offshore aquaculture. We have wind farms on land and wind farms proposed offshore. What is important is that the management of these activities be protective of the affected ecosystem and that competing uses are balanced to minimize conflicts. Recommendation 7-5 offers a good approach for an eventual reorganization of the federal government that recognizes the links among all the resources of the sea, land, and air and establishes a structure for more unified, ecosystem-based management of natural resources.

In the meantime, I support adoption of an organic act for NOAA, to better integrate the functions. I feel that EPA should continue to be the lead federal agency protecting the oceans and coastal watersheds from pollution of land, air and water.

Chapter 8: Promoting Lifelong Ocean Education

The Commission does a good job of recognizing the opportunities and benefits of ocean education. The recommendations should also mention coastal, estuarine and watershed education.

I am a little concerned that these recommendations create too many parallel activities. For example, recommendations 8-12 and 8-13 make almost identical assignments to two different organizations with no mention of coordination. Partnerships and coordination work best at the local watershed or estuary or regional level and the Ocean.ED structure should be linked to activities on these scales.

Ocean and coastal education in the K-12 system should be enhanced but this needs to be accomplished through the existing educational structures and aligned with other state and federal initiatives like the No Child Left Behind Act of 2001. Ocean.ED should work through the existing federal/state/local structures for K-12 education. Two recommendations mention Ocean.ED working with local authorities or districts, which seems unrealistic. But it might make sense if Ocean.ED works through regional ocean councils and state educational structures, which are then in direct contact with local school districts.

The Commission should expand recommendation 8-16, dealing with informal community education. Education and involvement programs by citizen groups, business organizations and other local entities can make a big difference in people's attitudes and behaviors. We need to build the capacity of these local organizations, provide competitive grant opportunities and make materials easily adaptable for local use. Recommendation 8-6 should be expanded to include a national electronic warehouse of materials that can be modified and applied at the local or regional level.

There should probably be a specific recommendation for continuing education programs for a wide range of public decision makers to acquire ocean and coastal knowledge and tools. This could be linked to recommendation 19-14, under which all newly appointed Regional Fishery Management Council (RFMC) members would be required to complete a special training course.

Regional ecosystem assessments and ocean/coastal science conferences organized by regional ocean information programs provide excellent educational opportunities. K-12 teachers can be encouraged to attend and student papers can be invited and awards given to the best work.

The recommendation (8-15) addressing traditionally underrepresented and underserved groups is good but should somehow be expanded to the K-12 system. When children are old enough to be asked "What do you want to be when you grow up?" they are old enough to be introduced to ocean-related job opportunities.

Chapter 9: Managing Coasts and their Watersheds

I support reauthorization and updating of the Coastal Zone Management Act. States should be encouraged to incorporate coastal zone provisions into state and local land use and growth management planning. In addition, state coastal zone programs should be considered in the recommended new regime for managing uses of federal waters throughout the EEZ.

I support the recommendation that the National Ocean Council propose changes to federal funding and infrastructure programs to discourage inappropriate growth in fragile or hazard-prone coastal areas but if the Commission is aware of specific programs that should be modified, they should directly recommend changes to Congress to avoid the delay involved in waiting for NOC recommendations.

While I generally support consolidation of federal area-based programs, the National Estuary Program is a model for the collaborative watershed initiatives mentioned in recommendation 9-4 and the individual programs are heavily involved in water pollution control. The NEP program should be kept under EPA as part of the federal Clean Water Act but the Commission should consider opportunities to use NEPs for habitat restoration planning and delivery in Chapter 11. In recommendation 9-4, the Commission should consider expanded federal consistency requirements as an incentive for watershed initiatives.

Chapter 10: Guarding People and Property against Natural Hazards

I support the recommendations of this chapter but they should include the need for ecosystem-based management and, where possible, include coordination with regional ocean councils and regional ecosystem assessments. Coastal projects, in particular, need to be viewed within a broader ecosystem perspective.

Chapter 11: Conserving and Restoring Coastal Habitat

I support increased federal funding for conserving and restoring coastal and estuarine habitat. The changes recommended here should be linked to the existing Estuary Restoration Act, passed in 2000.

Recommendation 11-2 should give regional ocean councils the role of determining habitat conservation needs and setting regional goals and priorities. Regional boards created solely to oversee regional ocean information programs should not take on habitat management responsibilities. If regional ocean councils are not formed, states should set habitat goals through their coastal zone management responsibilities.

I support developing a comprehensive wetlands protection program that would link to coastal habitat and watershed management efforts but because wetlands protection is a national need, I question whether the NOC should take the lead. The NOC could focus on coastal wetlands.

Chapter 12: Managing Sediments and Shorelines

Chapter 1 (page 11) clearly reflects the national problem of toxic chemical contamination of coastal and estuarine sediments. Yet this chapter on sediments lacks any sense of urgency in cleaning up this mostly historic problem. The Commission should include recommendations here or in Chapter 14 calling for an accelerated national program of sediment remediation including support for treatment of contaminated sediments. Recommendation 12-5 supports remediation but lacks urgency. Each day we wait, additional toxic chemicals are entering the food web. We need to accelerate remediation while improving our tools. Funding for the federal Superfund program is also needed. Contaminated sediments are very damaging to coastal and estuarine ecosystems and pose a serious threat to human health.

I support recommendation 12-1 to address long-term management of clean sediment and to support controls of continuing pollution sources to ensure that sediments being added to our estuaries and coastal areas are clean and are managed in an ecosystem context.

I strongly support the recommended changes to U.S. Army Corps of Engineers procedures for selecting least-cost disposal option for dredging projects and the recommended activities of regional dredging teams, working with regional ocean councils.

Chapter 13: Supporting Marine Commerce and Transportation

Some of the problems identified in this chapter can be addressed through the Coastal Zone Management Program, especially if it is better coupled with local land use planning and watershed initiatives. Planning for the marine transportation system must be integrated with coastal land use planning, sediment management, and other issues like vessel pollution controls. The committee identified in recommendation 13-2 seems appropriate but needs to work with regional ocean councils and state and local planning structures.

Chapter 14: Addressing Coastal Water Pollution

The Commission should call for accelerated remediation of contaminated sediments in this chapter because of the coupling of toxics in sediments with the food web.

I strongly support increased requirements for advanced nutrient removal for wastewater treatment plant discharges into nutrient-impaired waters. Since most estuaries are nutrient sensitive, we should move to water re-use or land application of treated effluents and minimize or eliminate marine and estuarine outfalls.

I strongly support the recommendation to characterize the extent of the impact of household and industrial chemicals in wastewater. Further, methods should be developed to remove or destroy chemicals that currently pass through standard sewer treatment systems.

I strongly support recommendation 14-2 dealing with on-site sewer systems. Inadequate on-site systems are involved in many closures of shellfish growing areas and other water pollution problems. The federal Clean Water Act appears to ignore this wide-spread source of pollution.

Nutrients from animal wastes also pose a serious threat to estuaries and coastal waters if poorly managed. I support recommendation 14-3 to expand the availability of best management practices that retain animal waste-derived nutrients and pathogens on agricultural lands. Methods for beneficial re-use and energy production should also be developed and made available.

Recommendation 14-4 is very welcome. Even as coastal areas scramble to provide wastewater and drinking water services to new residents, the existing infrastructure is reaching the end of its useful life. This long-term plan should include incentives to replace old systems with innovative systems that use conservation to reduce demand and focus on re-use or land application of treated effluents.

I support improved monitoring and enforcement of the NPDES system. Enforcement is important to provide a level playing field and should include efforts to identify unpermitted discharges. The recent explosion of general NPDES permits puts a greater burden on compliance programs.

I support recommendation 14-8 calling for the NOC to establish significant reduction of nonpoint source pollution in all impaired coastal watersheds as a national goal, and set specific, measurable objectives focused on meeting human health- and ecosystem-based water quality standards. Specific measurable objectives should be established on a regional basis, keyed to the regional ecosystem assessments. No amount of pollution reduction in Washington State will improve the dissolved oxygen conditions in Long Island Sound. Actual reductions in nonpoint pollution are best achieved through watershed planning and local programs.

I support incorporating the coastal nonpoint program into the federal Clean Water Act (recommendation 14-9) to support EPA's lead role for pollution control. This can improve linkages to Section 319 and the National Estuary Program, Section 320.

I support recommendation 14-11, providing increased outreach programs to provide local land use decision makers with the knowledge and tools needed to make land use decisions that protect coastal water quality. This could be combined with the functions of Ocean.ED. The planning director of a coastal county needs to understand coastal issues ranging from stormwater to forage fish spawning beaches and the effects of bulkheads on littoral drift.

I strongly support recommendation 14-12 concerning bringing a comprehensive approach to stormwater management programs. More emphasis might be given to low impact development tools, especially for new development, and the need to undertake retrofits to address water quality or flooding problems.

I support recommendation 14-13 to strengthen the ability of collaborative watershed groups to address problems associated with nonpoint source pollution by providing them with adequate technical, institutional, and financial support. The Commission should recognize that the 28 NEPs are collaborative watershed groups which, as mentioned in Chapter 9, have been hindered by inadequate funding. This has also prevented new estuaries from entering the NEP. The best way to strengthen watershed groups is to require that federal programs be consistent with approved watershed plans.

I also support increased efforts to manage atmospheric deposition. This may require additional controls for some sources of air pollution.

Chapter 15: Creating a National Water Quality Monitoring Network

The recommendations of this chapter are very good and would result in a dramatic increase in information available for management decisions. Given the Commission's support for ecosystem-based management, the recommendations on water quality monitoring must be integrated into ecosystem monitoring programs covering physical, chemical and biological parameters. In particular, managers need monitoring of living resources tied to the water quality data. As discussed in recommendation 15-4, water quality monitoring data need to be easily accessible.

Chapter 16: Limiting Vessel Pollution and Improving Vessel Safety

I am please to see the Commission present a comprehensive set of recommendations to address vessel pollution and safety issues. As noted by the Commission, the international shipping system and flags of convenience have allowed vessels to avoid appropriate pollution controls. I strongly support the recommendations in this chapter, especially the recommendation for a new national regime for managing wastewater discharges from large passenger vessels, requirements that MSDs continue to meet discharge standards, and incentives to install better treatment devices and cleaner engines.

Air emissions from large ships are a significant problem and will probably need something stronger than voluntary reductions. Implementing recommendation 16-10 to improve international air emission standards should be a high priority.

Vessel safety remains a big concern, especially oil tankers and barges. But freighters and passenger vessels also carry large quantities of fuel and lube oil. Recommendations 16-12 and 16-13 should address safety for all vessels, not just the oil transportation system. The development of refuges should be coordinated through regional ocean councils and the states. In general, the Coast Guard should be encouraged to work closely with regional ocean councils on vessel pollution and safety issues.

Chapter 17: Preventing the Spread of Invasive Species

I strongly support establishing a strong national ballast water management program as described in recommendation 17-1. It is essential that this program address all vessels under Coast Guard jurisdiction, including barges, and both coast-wise and international trips. Interim standards should be adopted as soon as possible and the entire program needs to be coordinated with the IMO standards.

The existing aquatic nuisance species programs on the West coast are well coordinated through the work of the Western Regional Panel. This should continue to be the main coordinating structure, although Ocean.ED and the regional ocean councils should be involved. The Sea Grant Program can continue to play a key role in education about aquatic nuisance species.

I support the recommendation for a plan for early detection of invasive species and a system for prompt notification and rapid response but in practice it needs to be closely tied to the IOOS, regional ecosystem assessments and all coastal and estuarine ecosystem monitoring.

Chapter 18: Reducing Marine Debris

I support the recommendations for reducing marine debris, especially dumping by vessels and derelict fishing gear. Recovering lost fishing gear can have large habitat benefits but it is inherently dangerous work requiring trained personnel following strong safety protocols. Funding is needed for programs to locate and remove derelict fishing gear.

Chapter 19: Achieving Sustainable Fisheries

I support recommendations to move to ecosystem-based management and to prevent over-harvesting of target and non-target species. Fishery-independent monitoring and population estimates of living resources will be necessary to support this effort. Regional ecosystem assessments, assembled by regional ocean councils and ties to the IOOS, should be structured to support fishery management activities.

I support recommendations 19-2 and 19-3 placing the burden of “picking a number” on the SSCs. I’ve heard arguments that the SSCs should reflect scientific uncertainty by providing a range to the management councils. This would be a serious error because the councils will be pushed by economics to adopt the least protective number. I believe the SSCs should agree on “a number” and provide it and a discussion of the uncertainties to the council.

I commend the Commission on its analysis of the difficulties of managing the fishing industry which brings the public’s fish to market. Your recommendation 19-15 dealing with dedicated access privileges is excellent.

Chapter 20: Protecting Marine Mammals and Endangered Marine Species

I support the recommendations to improve protection of marine mammals and endangered species. Better ecosystem monitoring will improve our ability to address population declines before listing is necessary. NOAA should be given sufficient resources to address declining species abundance before conditions trigger petitions for listing.

I support the recommendations to clearly identify activities not requiring permits and using general permits to minimize the number of individual permits needed under the MMPA or the ESA.

I strongly support recommendation 20–8 to develop better information on underwater noise. This recommendation should include the development of management measures.

Chapter 21: Preserving Coral Reefs and Other Coral Communities

I support protection of corals, including deep-water corals, as an element of ecosystem-based management.

Chapter 22: Setting a Course for Sustainable Marine Aquaculture

I support the recommendations for a system of sustainable marine aquaculture. While NOAA can be the overall lead federal agency, the EPA should take the lead on the water pollution issues since aquaculture in state coastal waters and estuaries are addressed through Clean Water Act permits, as are upland fish farms. Siting of offshore aquaculture facilities should be coordinated through regional ocean councils.

Chapter 23: Connecting the Oceans and Human Health

I support the recommendations concerning human health. In recommendation 23-1, note that harvest and extraction of marine bioproducts may occur in state-managed waters. State authorities need to be fully informed and state harvest management must be respected.

I support the development and implementation of improved methods for monitoring and identifying pathogens and chemical toxins in ocean waters and organisms. Methods should also be applicable to lakes, which also suffer toxic algal blooms. We need new management measures that will reduce ecosystem harm and risks to humans from marine pathogens and chemical toxins.

Chapter 24: Managing Offshore Energy and Other Mineral Resources

The recommendations in Chapter 24 should call for coordination through the regional ocean councils and with coastal states and coastal zone management programs. We should avoid building a system where coastal management is so dependent on revenues from OCS oil and gas that management decisions are compromised. Monitoring associated with energy production or mineral extraction should be coordinated with the IOOS and regional ecosystem assessments.

Chapter 25: Creating a National Strategy for Increasing Scientific Knowledge

I support a broad national strategy for increasing scientific knowledge, as laid out in recommendations 25-1 through 25-5. There needs to be a better process for identifying the needs of regional, state, tribal and local decision makers and directing a portion of research activities to those needs. Pure research to expand our basic knowledge is also needed.

The national ocean exploration program called for in recommendation 25-4 should include continuing exploration of coastal waters and estuaries. Many coastal and estuarine areas are still largely unexplored.

Chapter 26: Achieving a Sustained, Integrated Ocean Observing System

I support designing and carrying out the IOOS. As shown in table 26-2, the IOOS should collect information on the entire marine ecosystem. The IOOS should incorporate or be linked to monitoring for other elements of the Commission's recommendations. Coastal, estuarine and watershed data should be incorporated. Regional ocean councils and state and tribal managers should be involved early in the design of the system. Regional ocean councils should house and manage the regional portions of the IOOS and develop regional ecosystem assessments. Mexico and Canada should be invited to participate in the IOOS.

Ocean.US should work closely with the regional ocean councils as a way to seek input from coastal and ocean communities. Ocean.US should ensure that the system will answer key questions posed by fishery and coastal managers. Ecosystem-based management depends on ecosystem characterization and monitoring. IOOS must cover the estuaries and shorelines which are essential habitat for numerous marine species.

Funding for the IOOS is essential. In addition, Ocean.US should look for opportunities to have states carry out IOOS tasks in coastal and estuarine areas to build the states' scientific capacity and to improve their awareness and use of the results.

Chapter 27: Enhancing Ocean Infrastructure and Technology Development

I support the recommendations for enhancing ocean infrastructure and technology development. Infrastructure and technologies to address the coastal and estuarine needs of state, tribal and local managers should be included. It is fine to develop new and better oceanographic vessels and instruments but what we desperately need are new technologies that will prevent damage to the ocean ecosystem as well as improved treatment methods for wastewaters and air emissions.

Chapter 28: Modernizing Ocean Data and Information Systems

The recommendations in Chapter 28 are very good. Regional ocean councils and state, tribal and local managers need access to data and information to support ecosystem-based management. The Ocean.IT structure needs input from the regional ocean councils and the data management designs should support information products relevant to national, regional, state, and local needs. This will probably involve incorporating information from other systems, including EPA's water quality systems.

Chapter 29: Advancing International Ocean Science and Policy

The Commission should give more thought to our relationships with Canada, Mexico and other nations with whom we share national or EEZ boundaries. I also support the recommendations dealing with the Law of the Sea and other international issues.

Chapter 30: Funding Needs and Possible Sources

Although the importance of the ocean and coastal systems justify increased funding and attention, I am very concerned about a system where the agencies managing offshore uses are dependent for their funding on approving expanded uses. This at least creates the appearance of a conflict of interests.

Again, thank you for the opportunity to comment. You and the other members of the Commission have done an excellent job. I suspect that much of the credit should be shared with the Commission's staff.

Sincerely,

John Dohrmann

Comment Submitted by William A. Nurthen, Port Authority of New York and New Jersey

William A. Nurthen
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Dear Commissioners:

On behalf of the Port Authority of New York and New Jersey, I would like to thank you for the opportunity to comment on the Preliminary Report. Specific comments keyed to Chapter, Page and Recommendation follow below:

1. Chapter 5, Page 61, Recommendation 5-4; Concur with the recommendation that environmental impact statements required by the National Environmental Policy Act (NEPA) take into account any available regional ecosystem assessments. Taking regional ecosystem assessments into account would improve the ability of federal agencies to meet their NEPA requirement for a cumulative impacts evaluation for proposed activities. Taking regional assessments into account should be done in a way that does not unnecessarily lengthen the time frame to obtain decisions on any project requiring a NEPA EIS.
2. Chapter 5, Page 62, Recommendation 5-5: Concur with the recommendation that Congress should establish regional boards to administer regional ocean information programs. The Port Authority should be included as a member of the regional board for the New York/New Jersey region.
3. Chapter 6, Page 68 and 69, Recommendations 6-3 and 6-4; We agree with the recommendation for developing national goals and guidelines leading to a uniform process for the effective design and implementation of marine protected areas, and that the designations will be based on the best available scientific information. Further, we agree that national goals and guidelines, based on scientific information should be used as the basis by the Regional Ocean Councils in the design and implementation of marine protected areas.
4. Chapter 9, Page 111 and 114, Recommendations 9-1 and 9-4; We support these recommendations, because they incorporate a watershed focus and the need for Congress to provide better financial, technical, and institutional support for watershed initiatives. Certain activities that we perform, such as our channel deepening program, which requires the removal of sediments some of which are contaminated, are impacted by what takes place upstream. Due to limited resources, we are not able to prevent migration of various contaminants from the watershed elements to our harbor; thus, substantially

increasing the cost of sediment disposal. These recommendations would provide the tools to prevent the migration of contaminated sediments into the NY/NJ Harbor.

5. Chapter 10, Page 120, Recommendation 10-1; Adoption of this recommendation would result in a change to the US Army Corps of Engineers' Civil Works Program to add the requirement for peer-review of cost-benefit analyses of coastal projects. This additional requirement for a peer review, if adopted, should be managed in a manner that will not lengthen the time frame for the US Army Corps of Engineers to get an approval for the cost-benefit analyses used to justify proposed projects. This also seems to go beyond the recommendation of the National Research Council's 2002 report, which limited their call for external review to controversial or complex civil works projects.

6. Chapter 11, Page 127, Recommendation 11-1: Concur with the recommendation for Congress to amend the Coastal Zone Management Act to provide sufficient funding for a dedicated coastal and estuarine land conservation program. We would also support the supplementary recommendation for each state coastal management program to identify coastal habitats and to develop a plan for establishing partnerships with willing landowners for conservation purposes. This recommendation could provide funding to augment the Habitat Protection Plan the Port Authority has with the states of New York and New Jersey, in which the Port Authority provided \$30M to each state for the purchase of environmentally valuable land, identified by the state, for the purpose of preserving the property, saving critical habitats and creating areas for public access to the waterfront.

7. Chapter 11, Page 133, Recommendation 11-4; We support the recommendation to link coastal habitat and watershed management efforts to development of a comprehensive ecosystem based wetlands protection program. The integration of the Clean Water Act Section 404 wetlands permitting process into this broader management approach should be designed so as to not to delay the permitting process.

8. Chapter 12, Page 139, Recommendation 12-1; We support the recommendation to develop a national strategy for managing sediment on a regional basis that takes into account both economic and ecosystem needs and involves port managers, coastal planners and stakeholders in watershed planning. In addition, the requirement that ecosystem-based management principles serve as the foundation for permitting processes will lead to regional coordination and cooperation among the many parties affected by sediment. The result could benefit dredging disposal efforts by controlling the amount of contaminated sediments that are deposited in the New York/New Jersey harbor from the upstream watershed.

9. Chapter 12, Page 141, Recommendation 12-2; We support this recommendation because it proposes that the USACE consider revising their criteria for the least-cost disposal option for dredging projects to account for a full range of economic and environmental costs and benefits for options that reuse dredged material, as well as for other disposal methods.

10. Chapter 12, Page 142, Recommendation 12-3; We support this recommendation, which calls for the National Dredging Team to apply the Secretary of Transportation's 1994 proposals on ways to develop and implement a streamlined permitting process. This would seem to support concerns raised with respect to recommendations 5-4, 10-1 and 11-4, which as noted above could lead to a lengthening of the process, if not carefully integrated.

11. Chapter 12, Page 143, Recommendations 12-4 and 12-5; We support these recommendations, which call for an interagency strategy to enhance sediment management, funding to encourage Corps' monitoring and study activities, and a proposal for USEPA to develop a coordinated strategy to assess, monitor and research the transport and management of contaminated sediment. Development of the strategy called for in these recommendations would serve to complement the ongoing Contaminant Assessment and Reduction Program (CARP) in which the Port Authority, the states of New York and New Jersey, the US Army Corps of Engineers and the US EPA are partners for the New York/New Jersey Harbor.

12. Chapter 13, Page 151, Recommendation 13-2; We support the recommendation that the Interagency Committee for the Marine Transportation System recommend strategies and plans for devising alternate funding scenarios to meet short and long-term demands on the marine transportation system. Given the projected increases in cargo volumes for the Port of New York and New Jersey and the high cost associated with port and intermodal infrastructure improvements, alternative funding sources will be required to ensure completion of enhancements to regional marine transportation system elements needed to accommodate the anticipated growth in maritime commerce.

13. Chapter 13, Page 153, Recommendation 13-5; We support the recommendation for the US Department of Transportation (DOT), with other appropriate entities, to establish a national program to provide a comprehensive picture of freight flows in the US and to enhance the performance of the nation's intermodal transportation system. Given the expected growth in maritime commerce at the Port of New York and New Jersey, the Port Authority of New York and New Jersey as well as the states of New York and New Jersey should be included among the appropriate entities to provide input into the development of this program and the prioritization of future needs for ports and intermodal transportation capacity.

14. Chapter 13, Page 154, Recommendation 13-6; Concur with the recommendation that DOT work closely with the US Department of Homeland Security and the Federal Emergency Management Agency to incorporate port security and other emergency preparedness requirements into a national freight transportation strategy. This recommendation recognizes the importance of ports to our national security and the need to prevent, respond and manage the consequences of a terrorist attack as well as identify alternative port capacity to maintain the flow of maritime commerce. Federal funding to address the emergency preparedness needs identified by this strategy should be provided.

15. Chapter 14, Page 170, Recommendation 14-12; We support this recommendation, which calls for the USEPA to work with state and local governments to ensure that stormwater management programs are based on a comprehensive approach. This recommendation would lead to better management of stormwater discharges with less contamination reaching our waterways and be of ecological benefit while also reducing the cost to dispose of contaminated sediment resulting from dredging.

16. Chapter 14, Page 171, Recommendation 14-13; We support this recommendation, which calls for providing collaborative watershed groups with adequate technical, institutional and financial support in order to address problems associated with nonpoint source pollution.

17. Chapter 15, Page 179, Recommendations 15-1 and 15-2; We support these recommendations, which call for a federal interagency group to develop a comprehensive national water quality monitoring network, and to ensure that this network includes adequate coverage of coastal areas and upland areas affecting them and is linked to the Integrated Ocean Observing System.

18. Chapter 16, Page 204, Recommendation 17-1; We support this recommendation, which will assist the US Coast Guard in developing a nationwide ballast water management program with standards that are based on sound and enforceable science and also subject to revision to incorporate new technologies. The states should have an input into developing these standards.

Comment Submitted by Charles Kennel, Ph.D., California Ocean Science Trust

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May 18, 2004

Submitted via E-mail

Admiral James D. Watkins, U.S. Navy (Retired)
Chairman
U.S. Commission on Ocean Policy
1120 20th Street, NW, Suite 200 North
Washington, D.C. 20036

SUBJECT: Public Comment on the Preliminary Report of the U.S. Commission on Ocean Policy

The California Ocean Science Trust (CalOST) is a non-profit organization created by statute to fund marine and coastal research in California and to encourage coordinated, multi-agency, multi-institution approaches to ocean resource science. CalOST is pleased to provide the following comments on the Preliminary Report of the U.S. Commission on Ocean Policy that apply to ocean resource management in general and ocean research, education and technology in particular. We have provided the same comments to California Governor, Arnold Schwarzenegger.

Endorsement of key findings that relate to Stewardship, Economic Sustainability, and Ocean Governance

CalOST endorses the key recommendations in the Report, which include:

- Adopting of regional ecosystem-based management that recognizes the critical interrelationship between the land, ocean and coastal interface;
- Investing in our long-term economic prosperity through coastal and ocean protection; and
- Strengthening ocean management through improved coordination of governmental structure and functions, improving federal leadership and coordination and accession to the United Nations Convention on the Law of the Seas.

Endorsement of key findings that relate to Research, Education and Technology

California's leadership role in ocean science: CalOST embraces the Report's call for strengthening federal/state partnerships and invigorating existing research structures that have enabled California to be a leader in ocean science.

National strategy for increasing scientific knowledge: Wise ocean governance is predicated on sound science. CalOST acknowledges the need for the preparation of a national strategy to identify and meet scientific knowledge needs

Sustained, Integrated Ocean Observing System: CalOST supports the establishment and maintenance of ocean observance systems at the regional, national and global levels that will enhance our ability to understand the interrelationships between terrestrial, coastal and ocean environments through reliable monitoring and forecasting of physical, chemical and biological conditions and processes.

Ocean Infrastructure and Technology Development: CalOST urges the adoption of the recommendations in the Report which call for enhancing ocean infrastructure and technology capacity through improved collaboration, new funding and innovative applications of existing technology.

Ocean Data and Information Systems: CalOST encourages the development of information management practices that are capable of transforming data into products that support sound decision making. We concur with one of the central findings of the Commission that “Effective policies should be based on unbiased, credible and up-to-date scientific information”

Ocean Education: CalOST supports the Report’s call for the cultivation of a broad public stewardship ethic through a foundation of high-quality ocean education.

Doubling of the Nation’s Investment in Ocean Research: The effective and timely implementation of most of the Commission’s findings is predicated on adequate funding. The current \$600 million federal expenditure on ocean research needs to be significantly increased to provide the scientific tools for better ocean management.

CalOST applauds your Commission on preparing such a thorough assessment of the status of our oceans and comprehensive blueprint for action. We stand ready to assist you and your Commission in any way we can to promote this bold ocean agenda.

Please contact me at ckennel@ucsd.edu or (858) 534-2826 or our Executive Director, Justin Malan at the letterhead address at any time regarding this letter or any other ocean science matter.

Respectfully submitted,



Charles Kennel, Ph.D.
Chairman

Comment Submitted by Elizabeth Brusati, Davis Chapter of the Society for Conservation Biology

Dear Admiral Watkins and the Ocean Commission:

We are a group of approximately 35 graduate and undergraduate students at the University of California-Davis, with a mailing list reaching over 250 people. As a local chapter of the Society for Conservation Biology (SCB), a professional organization of conservation biologists, we wish to enter a public comment on the U.S. Ocean Commission's Preliminary Report. Our group's goal is the maintenance, protection, and study of biodiversity and as a local group we represent current and future leaders who will address the continuing loss of biodiversity and ecosystem functions in the ocean and other habitats. The following views are those of our chapter and do not necessarily represent the parent SCB organization.

First, we applaud the Commission's work and believe that in general your recommendations represent a significant step towards improving our nation's management of marine resources. We also believe your recommendations provide much-needed focus on several pressing issues. Specifically, we support the emphasis on ecosystem management and the use of best available science in management decisions. Protecting the habitats and species that live in or near the ocean is important from both an ecological and economic perspective. Protection is especially important in our region since many sectors in California depend on the ocean for revenue. In California, tourism contributes more to the economy than any other ocean-related industry and it is particularly important to small, rural communities along the coast as a means of diversifying and stabilizing their economies. In 2003, 8 of the 10 most-visited state parks in California and 4 of the 5 most popular national park sites were located directly on the coast¹. Tourism in California brings our economy more than \$75 billion annually in direct travel spending and supports jobs for more than 1 million state residents². These facts provide a strong impetus to implement the report's recommendations to improve conservation of the ocean.

We hope the federal government follows the many recommendations to strengthen existing legislation (e.g. Coastal Zone Management Act, Clean Water Act) and establish financial disincentives for states and individuals who do not follow the law. Many laws are already in place to protect native species and habitats; improving enforcement will go a long way towards preventing further decline in habitat quality.

In particular, we strongly support the following recommendations:

Recommendations 5-2, 6-1, 7-1, 7-5, 20-3 and others that include coordination among agencies. Strengthening NOAA, improving coordination among agencies and programs, and directing them to implement an ecosystem-management approach will allow marine and coastal habitats to be managed as the integrated whole that they are and to consider the impact of development, agriculture, and resource-extraction activities that may reach

far beyond county or state boundaries. For example, management of threatened salmon species along the west coast must consider the impact of land-use practices (i.e. timber harvest) far from shore that destroy habitat as well as the overfishing that threatens salmon in the ocean. The commission's call for an emphasis on sustainability in management practices may help alleviate the "tragedy of the commons" that characterizes too many fisheries stocks today. In the same vein, we support **Recommendation 19-16** to remove the financial incentives that promote overcapitalization in the fishing industry and the resultant overfishing.

Recommendation 8-2 and others to increase education at all levels on conservation of marine resources. To ensure the protection of natural resources for generations to come, the public must be informed of the functions that marine and coastal resources provide as well as the fragility of these habitats. Education is consistent with the report's emphasis on sustainability, allowing citizens to understand long-term effects of policy decisions, from local zoning laws to national fisheries management plans.

Recommendations 17-3, 17-5, 17-7. Improving programs for prevention of marine invasive species as well as educating the public about this threat is another important recommendation. In addition, current policies should be amended to use the precautionary principle: individuals proposing to intentionally introduce or import non-native species should be required to show that such species will not threaten native ones. Too many seemingly "harmless" species have been introduced from other countries or moved to new areas of the United States where they have subsequently become significant problems. In addition, oceanic ballast water exchange prior to docking should become required, rather than merely voluntary, along the west coast because it is a major vector for new species introductions.² When a species is determined to be invasive, control efforts must begin quickly while the infestation is relatively small and eradication is still possible. We hope that the improved coordination among agencies recommended by the Commission will speed efforts to stop invasive species. Prevention is much less expensive than eradication.

Recommendation 25-1. Reversing the declining trend in ocean-related research will allow scientists to address the many issues in fisheries, pollution, invasive species and other topics that threaten marine resources. As scientific researchers, we are eager to address basic and applied questions in ecology of the marine and coastal environments. Currently, many management efforts stall because too little information is available for confident predictions of the effects of various management strategies. A recent New York Times article reported that the United States is losing its dominance in the sciences; increasing funding for ocean-related research will open opportunities for graduate students, university faculty, and others who have many ideas for studies but lack the resources to implement them. Additional research will improve the nation's ability to identify and respond to threats, such as non-native species, that damage the sustainability of native species and habitats and allow better conservation of threatened habitats such as coral reefs. As stated above, we also strongly support the use of best available science in all management policies.

We would like to express our concern with **Recommendation 22-3** that provides for increased aquaculture research. Some forms of aquaculture, especially farming of Atlantic salmon in net pens, expose native species to pathogens and pollution. In addition, hatchery-raised fish lack the survival instincts of wild fish and cannot be a substitute for improving wild populations. We support **Recommendation 22-2** to support environmentally sound aquaculture on the condition that legislation must be passed to allow monitoring of aquaculture and enforcement against individuals and companies whose operations threaten native species.

We also believe that increases in non-renewable resource extraction must be balanced against their potential cost to the ecology values of the coastline as well as to the scenic beauty that makes it so popular, and so valuable to local economies, as a tourist destination. We agree with **Recommendation 24-1** that a portion of federal revenues from oil and gas leases should be applied towards the cost of environmental impacts from energy activity.

Thank you for your consideration.

Sincerely,

Elizabeth Brusati, on behalf of
Society for Conservation Biology-Davis Chapter
University of California-Davis

¹California Division of Tourism webpage.
http://gocalif.ca.gov/state/tourism/tour_homepage.jsp. Accessed 3 May 2004.

²California Division of Tourism. 2002. "California Tourism's Contributions to the California Economy: 1998-2002." <http://www.clia.org/tourism.cfm>

³ Ruiz et al. 2000. Invasion of coastal marine communities in North America: apparent patterns, processes, and biases. *Annual Review of Ecology and Systematics*. 31:481-531
Elizabeth Brusati
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VADM Paul Gaffney, USN (ret)
President, Monmouth University
Cedar Road
West Long Branch, NJ

27 April, 2004

Dear Paul:

Last night was a splendid evening. The principal speakers were so well informed, articulate, and concise, and – after serving on the DEP Marine Fisheries Council for over a decade, I finally got to meet the Commissioner!

The Ocean Commission report is far too huge to comment on knowledgeably in a single page. I would like to address a couple of items in perspective of experience in public ocean management, admitting to lack of any of the input available to your group..

1. The Commission's concern that ocean responsibility is too fractionated in Washington is unfounded. The oceans is a venue, rather than a goal in itself (like space). At least 28 federal agencies use them in execution of their respective charters. Attempts at further consolidation – beyond NOAA – will ultimately lead to chaos. It would be like having a separate agency for computers.
2. On the other hand, coordination is always useful and especially needed in these times, to ensure maximum use of the public dollar. In this regard, their concept is nothing more or less than exhumation of PL. 89-454 (National Council on Marine Resources and Engineering Development). Further it will be the eighth such council/committee/etc .so constituted and with that particular charge. That's to the best of my knowledge, and there may have been even more. I was Executive Secretary of the first; we reported to the President's Science Advisor, Jerome Weisner. (If you're interested, I've retained their reports) .That was also the action that established the National Council on Oceans and Atmosphere. I was the only person ever appointed to that council from New Jersey. Three days after my appointment, the Senate withheld their funds and terminated them!!
3. In that same vein, this Commission's report on the health of the Oceans and our governance of them is the 23rd such review, also to the best of my knowledge. Can't say we lack for documentation!!
4. Education of the public appears to be a unanimous desire, but it needs fine tuning. Everyone present last night had been educated to the oceans, but misunderstanding was rampant. This needs lots more work.
5. Beyond question, the major sector of interest relates to the public desire for a cleaner aquatic

environment, and the Hudson/Raritan certainly drew its share of attention last evening. I sympathize deeply with those people who are either or both afflicted with passion for clean waters, and/or who are individually affected financially thereby. I would offer only three points.

A. We would like the water to be as clean as when this area was inhabited only by a couple of Indian tribes. Unfortunately, there are now rather a few more people living here than in those good old Indian days;

B. People think that our coastal waters are dirty. I was the chemist on the first survey of these waters, in 1948. Now, THAT WAS DIRTY WATER. By comparison, we're swimming in distilled water today!

C. The ratio of expenditure to water purity is not arithmetic; it is algebraic. For example, suppose it costs $\$X$ to remove half of the contaminants from the water. It may cost $5X$ to take out half of what's left. It will then probably cost $\$50X$ to remove half of what's again left, thus encountering Zeno's paradox! The question of how pure we want our water to be and how much we're willing to allocate/prioritize requires very sophisticated analysis.

6. With no apologies for my bias, the one program with the flexibility, organization, and charter to tackle the most problems enunciated in the Commission's report is Sea Grant.

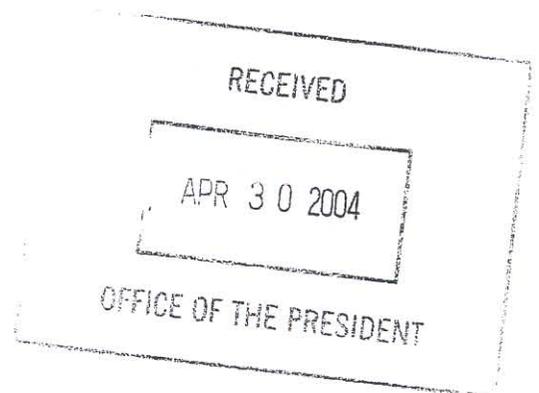
7. The report is absolutely admirable in its comprehensiveness. The only area I can't seem to find addressed is internationalization of our ocean program, with particular reference to its friend-making capacity. In an era when we're almost universally hated, and where the government had allotted less than a \$million to using the oceans to make friends in the Middle East, that money has now been removed in favor of the military budget. We figure that removed fund will purchase one twentieth of a war plane.

Thanks much for taking the time to read this, Paul. I sent a similar letter to Frank Pallone..

Sincerely,



Robert B. Abel



Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury,
Michael Carrier, Katy Coba, Michael Graine, Stephanie Hallock, Ann Hanus,
Geoffrey Huntington, Hal Weeks
From: Oregon NGOs
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report

The following series of memos provide comments to help in crafting your response to the U.S. Commission on Ocean Policy's Preliminary Report, release on April 20, 2004. The comments are the opinions of the named commenters only and do not represent a consensus among the various groups.

The contents and contacts are as follows:

Offshore Mineral Exploitation

Andy Kerr, The Larch Company, (503) 701-6298

Fisheries & Ocean Governance

Peter Huhtala, Pacific Marine Conservation Council, (503) 325-8188

Marine Reserves

Susan Ash & Samantha Murray, Audubon Society of Portland, (503) 292-6855

Coastal Sprawl

Robin Hartmann, Oregon Shores Conservation Coalition, (541) 672-3694

**** NOTE: THESE COMMENTS WILL BE PROVIDED 5/10/04 ****

Dredging/Sediment

Matt Van Ess, Columbia River Estuary Study Task Force, (503) 325-0435

Water Quality

Markus Mead, Surfrider Foundation, (503) 709-2912

Invasive Species

Mark Systema & Robin Waldeck, Portland State University, (503) 725-3833

**** NOTE: THESE COMMENTS WILL BE PROVIDED 5/10/04 ****

Aquaculture

Paul Englemeyer, (541) 547-4227

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Offshore Mineral Exploitation
Andy Kerr, The Larch Company, (503) 701-6298

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Andy Kerr, The Larch Company
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report (Offshore Mineral Exploitation)

Imagine if Oregon Governor Vic Atiyeh had welcomed with open arms Interior Secretary James Watt' proposal to lease offshore Oregon to oil and gas development in the early 1980s. The boomlet would have long been over for Oregon's coastal economies, with the full impact of the economic, fiscal and environmental hangover be being felt right about now. Whatever jobs were generated (most were filled by people with Louisiana accents) are gone. Unlike the timber boom, which lasted a century before busting, the offshore oil boom lasted only a decade. There was only one oil spill, but it was a big one. In the late 1990s Governor Kitzhaber had to cope with the New Carrissa, which was merely a freighter fueled by oil— not an oil tanker. This oil spill, from an offshore platform, ruined regional crabbing, oystering and other fishing, and it decimated nearby beaches and ruined the tourism industry. Yes, the odds were said to be very very low, but the spill happened.

The following comments are not primarily directed at the U.S. Commission on Ocean Policy's preliminary report.¹ Instead, these comments dwell on the potential consequences of an ocean policy, developed by the federal Administration, Congress or the State of Oregon that could allow, facilitate or require development of mineral resources off the Oregon Coast.

What's Out There

To date, geologists have identified the following exploitable minerals off Oregon's shore:

- oil and gas
- methane hydrates
- polymetallic sulfides

(These comments do not cover near-shore and more eminently exploitable resources such as sand, gravel and [jetty] rock sources.)

Oil and Gas. The most substantial threat to the living resources of the Oregon Coast is offshore oil and gas development. The nation uses huge amounts of petroleum resources and domestic

¹ U.S. Commission on Ocean Policy. 2004. Preliminary Report of the U.S. Commission on Ocean Policy: Governor's Draft (Apr. 2004).

production has been in decline for decades, increasing our dependence upon foreign supplies with the attendant consequences.

The projected total exploitable oil available from offshore Oregon *and* Washington would supply the United States at 2003 consumption rates for less than three weeks (Table 1). The projected total exploitable "natural" (aka methane) gas from offshore Oregon and Washington would satisfy the nation for a little over two months (Table 2).

Table 1. Oregon and Washington Offshore Oil Potential Versus United States Consumption

Projected 2003 United States <i>daily</i> oil consumption in millions of barrels. ²	20.18
Projected <i>total</i> exploitable oil from offshore Oregon and Washington in millions of barrels. ³	410.0
Total number of days Oregon and Washington offshore oil would sustain United States consumption. ⁴	20.7

Table 2. Oregon and Washington Offshore "Natural" Gas Potential Versus United States Consumption

Projected 2003 United States total consumption of "natural" (a.k.a. methane) gas in trillion cubic feet. ⁵	22.02
Projected total exploitable natural gas from offshore Oregon and Washington in trillion cubic feet. ⁶	3.9
Total number of days exploiting Oregon and Washington offshore natural gas would sustain United States consumption. ⁷	65.5

² Energy Information Administration. 2003. Short-Term Energy Outlook. U.S. Dept. Energy. (Table 5) (Apr. 2003). Available at <http://www.eia.doe.gov/emeu/steo/pub/5tab.html>.

³ Detzel, T. 2003. Senators unable to bar oil inventory off coast. *The Oregonian* (Apr. 10, 2003): A7.

⁴ Calculated: 410.0 is 5.6% of 7,365.7 million barrels (annual national consumption); 1 day is 0.27% of 1 year; $5.6 / 0.27 = 20.7$ days.

⁵ Energy Information Administration. 2003. Short-Term Energy Outlook. U.S. Dept. Energy. (Table 8) (Apr. 2003). Available at <http://www.eia.doe.gov/emeu/steo/pub/8tab.html>.

⁶ Detzel, T. 2003. Senators unable to bar oil inventory off coast. *The Oregonian* (Apr. 10, 2003): A7.

⁷ Calculated: 3.9 is 17.7% of 22.02 trillion cubic feet (annual national consumption); 1 day is 0.27% of 1 year; $17.7 / 0.27 = 65.5$ days.

Polymetallic Sulfides. Gorda Ridge, 125 miles west of Brookings and 10,000 feet below the ocean surface, is a spreading oceanic ridge where the North American continental plate is drifting away from the Pacific plate. A sediment layer of up to 1,000 meters acts as a thermal insulator over buried volcanoes below. Combined with seawater, the conditions are favorable for formation of polymetallic sulfide deposits containing high grades of gold, silver, copper and zinc, as well as significant amounts of antimony, bismuth, lead, cobalt and tin.⁸

Methane Hydrates. "Natural" gas is methane found underground (or sub-ocean floor) in gaseous form. Methane hydrates (technically they are methane clathrates) are frozen (solidified) methane. Methane hydrates are locked in ice and have been found in Arctic permafrost and between rock layers below the deep ocean floor. Driven by federal subsidies, it is possible that methane hydrates could be extracted from the deep ocean within 15 years.⁹ There is great interest in Hydrate Ridge for this resource, 60 miles west of Newport.¹⁰

Environmental Consequences of Offshore Oregon Mineral Development

All mining is environmentally damaging. Mitigation can reduce, but not eliminate environmental impacts (for example, mitigation is building a fish hatchery after damming a river or a wearing a prosthesis to replace an amputated a leg). Mitigating the environmental impact of mineral development in the rough seas and unpredictable weather of offshore Oregon is impossible.

Oil and Gas. Even using the "best available practices," offshore oil and gas exploitation involves routine discharges of "produced waters" into marine environments that include toxic compounds such as cadmium, lead, mercury, zinc, polycyclic aromatic hydrocarbons and sometimes radium.

If an oil spill occurs, then all bets are off. No clean-up technology is effective for the high seas that can also contend with the weather conditions typically found off the Oregon Coast. Abstaining from mineral development is the only way to protect the marine environment and the renewable resources that depend upon it.¹¹

A moratorium on federal oil and gas exploitation in offshore Oregon has been in effect since 1982 and is scheduled to last until 2012. If the current administration wins a second term in office, the moratorium may be lifted in 2005.

Polymetallic Sulfides. While mining in waters nearly 10,000 feet deep and a hundred miles offshore would seem impossible, the potential still exists even with today's technology. But Gorda Ridge is more important to science than to the economy. Unique life forms have been

⁸ U.S. Geological Survey. (undated). The Escanaba Trough of Gorda Ridge: A Laboratory for Mineral-forming Processes. Available at <http://marine.usgs.gov/fact-sheets/gorda/>.

⁹ Charter, R. 2004. Response to the U.S. Commission's preliminary report and its statements on the proposed future exploitation of potential energy resources from seafloor methane hydrates. Environmental Defense.

¹⁰ Kunzig, R. 2004. 20,000... Microbes Under the Sea. *Discover* (Mar. 2004): 34-41.

¹¹ Charter, R. 2004. Response to the U.S. Commission's preliminary report and its statements on the proposed future exploitation of potential energy resources from seafloor methane hydrates. Environmental Defense.

discovered there, life forms that obtain their energy not from the sun, but from the heat of the earth. Nonetheless, the federal government attempted to lease the area for mineral development in the late 1980s. It could happen again. The current administration in Washington, DC, makes former Interior Secretaries James Watt and Don Hodel seem quite moderate.

Methane Hydrates. More serious is the possibility of mining methane hydrates off Oregon's shore. Methane hydrates mining would require that the seafloor bottom "overburden" be removed (and dumped somewhere else) to facilitate large-scale strip-mining of the seabed. Alternatively, antifreeze chemicals might be injected into boreholes for "in situ" gasification of the solidified methane. Potential impacts include destabilization of the ocean floor causing geologic hazards, the water column being filled with toxic substances, and silt plumes affecting adjacent areas. Regardless of the chosen technology, it is likely that huge amounts of methane would not be captured by the mining process, but instead released into the water column and eventually the atmosphere. Burning methane creates carbon dioxide, the most prevalent greenhouse gas in the atmosphere. Methane released directly into the atmosphere would be even worse for global warming than burning it first. A molecule of methane is 7.5 times more effective at global warming than a molecule of CO₂. While combusting "natural" gas is less damaging to the atmosphere than burning coal or oil, it is still a major contributor to global warming. Mining methane hydrates could be catastrophic for the atmosphere and the ocean environment, while prolonging our nation's dependence on nonrenewable energy.¹²

Existing Oregon Policies

A large body of Oregon statutes, rules and policies tend to favor resource conservation and use of renewable energy over nonrenewable resource exploitation. Oregon's Ocean Resources Management Program, which incorporates statewide land use planning Goal 19 (amended 2000), Oregon Resources Management Plan (1990), and Oregon Territorial Sea Plan (1994; part of the Oregon's Coastal Management Program), has a strong bias—developed through many years of study, and public hearings, meetings, and discussion—toward the long-term conservation and sustainable use of renewable resources over the short-term exploitation of non-renewable resources. Land use Goal 19 seeks to:

conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social values and benefits and to give higher priority to the protection of renewable marine resources—i.e. living marine organisms—than to the development of non-renewable resources.

The goal and other state documents contain the essence of Oregon policy that this state Administration should continue: *Renewable resources will win out over non-renewable resources. The long-term economy is more important than the short-term economy.*

¹² See Kunzig, R. 2004. 20,000... Microbes Under the Sea. *Discover* (Mar. 2004): 34-41.

Avoiding the Largest and Most Acute Threat to Offshore Oregon

The U.S. Commission on Ocean Policy draft report presumes that America requires the energy available for offshore oil and gas (and methane hydrates) exploitation. Oregon should not. Richard Charter, currently a marine conservation advocate with Environmental Defense, has represented local governments in congressional deliberations about offshore oil development and marine protection for 23 years. In comments to the commission he notes:

Since the energy sections of the Commission's preliminary report are focused primarily on the marine impacts of extracting hydrocarbon fuels, the document fails to adequately address the positive implications for the oceans should the U.S. prioritize the expedited implementation of clean, renewable energy sources. These technologies include painless, economically feasible, energy efficiency and conservation measures, renewable fuels, improved power grid technologies, and alternative electrical generating sources. Further, the report does not address in any depth the potential for alleviating the need for offshore oil and gas and seafloor methane hydrate exploitation through improvements to auto fuel efficiency standards, the use of hydrogen from renewable sources throughout the transportation sector, or the broader utilization of biodiesel or ethanol fuels. The report also does not explore readily available energy savings throughout the construction and manufacturing sectors, actions that could relieve pollution and infrastructure pressures on the marine environment resulting from conventional fuels development in the ocean.¹³

Following the Money

The U.S. Commission on Ocean Policy is promoting an insidious proposal entitled the "Ocean Policy Trust Fund" (OPTF).¹⁴ While superficially attractive, the proposal is fraught with difficulties. The OPTF would pay affected states and federal agencies to participate in developing and implementing ocean policies. The source of revenue for OPTF would be dedicated offshore oil and gas revenues to While this may seem reasonable at first glance, however, rather than driving ocean policies that favor renewable resources as Oregon has clearly committed to doing, the OPTF would *promote*—not avoid or mitigate—offshore oil and gas development. Local objections could be swept away under the OPTF framework, or at least silenced, by dangling money before cash-strapped states like Oregon.

Congress' record on "trust funds" is not a proud one. The Social Security Trust Fund is expected to go dry within a few decades. The Land and Water Conservation Fund was supposed to be funded from Outer Continental Shelf leasing revenues and used to protect and conserve fragile ecosystems. That fund is today a joke with very little money being used for land and water

¹³ Charter, R. 2004. Response to the U.S. Commission's preliminary report and its statements on the proposed future exploitation of potential energy resources from seafloor methane hydrates. Environmental Defense.

¹⁴ U.S. Commission on Ocean Policy. 2004. Preliminary Report of the U.S. Commission on Ocean Policy: Governor's Draft (Apr. 2004): 376-77.

conservation. Congress and especially the current Administration are generally hostile to land and water conservation. The nearly billion dollars a year received by the LWCF that is supposed to be spent protecting the environment is instead used to cover the federal deficit.

Oregon also has experience with two other kinds of dedicated funds that illuminate the problems that earmarked monies can have:

- **Sharing Federal Timber Receipts.** Until recently essential local government services (roads, schools, etc.) in most Oregon counties were substantially funded with a portion (25-75 percent) of receipts from federal timber sales. This source of funding collapsed as public policy evolved to reduce logging levels on federal forests. A driving force, along with the timber industry, in overcutting Oregon's federal forests, was local government officials addicted to federal timber revenues. Oregonians should not have been in a position where we believed we had to clearcut our forests to educate our kids and fill potholes. We should not get trapped in a similar position with the OPTF.

- **Tobacco Settlement.** Many states have not used their tobacco settlement money for anti-tobacco programs and to offset health care costs as intended, but rather to fund other programs. While it is a good thing that the states are finally receiving partial funding to cover costs already incurred in the care of dying smokers, it would have been far better for the situation not to exist at all. Oregon cannot say no to past smoking; it can say no to future mineral exploitation.

Favoring Renewable Resources and Future Generations

The policy choice for the Governor of Oregon boils down to whether this state and his administration will continue to favor the conservation and use of renewable resources over the use of nonrenewable resources. Making the choice for renewable resources over nonrenewable resources (and there is always an irreconcilable conflict) is making the right choice for current generations of Oregonians and those yet to come. Supporting nonrenewable resource extraction of offshore Oregon could pump up the state's GDP in the short-term, but at the long-term cost to a sustainable and productive Oregon economy and environment. In the grand scheme of things, very little amount of energy is available, that would be mined a very short period of time, that could expose offshore Oregon and the Oregon Coast at risk of damage that could last forever.

Our energy needs can be met through conservation, efficiency and eventually switching to renewable (non-fossil) fuels. We can mine our minerals far more efficiently through increased recovery from the waste stream. Coastal tourism and local seafood cannot be had elsewhere. If this state administration is serious about promoting sustainable local seafood production and consumption (e.g., *Brand Oregon*), then it should inform the U.S. Commission on Ocean Policy that Oregon is *not* interested in short-term offshore mineral exploitation. .

When oil and gas and other mineral development again become a possibility for offshore Oregon (sometime between 2005-2012), the political temptation of some will be to try to cut the baby in half: go for the big bucks associated with mineral exploitation and attempt to mollify renewable

resource constituents (or to provide political cover) by proposing that part of the money raked in from mineral development be used to mitigate environmental and social impacts, or otherwise politically buy off local interests. The subsequent impacts of long-term, irreparable damage to living marine resources from mineral exploitation could be catastrophic. It is not just a matter of calculating the risk (political and otherwise) of a major Santa Barbara-type oil spill. That mitigation measures will be taken—perhaps even more than has been done anywhere else—is also of little consequence to the long-term conservation and use of renewable resources.

There is only one Oregon Coast. Sometimes, the prudent thing to do is to just say: "No. Not on my watch."

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Fisheries & Ocean Governance

Peter Huhtala, Pacific Marine Conservation Council, (503) 325-8188

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Peter Huhtala, Pacific Marine Conservation Council
Date: May 7, 2004

The **Pacific Marine Conservation Council (PMCC)** is a public-benefit, non-profit corporation that works with fishermen, marine scientists, conservationists, and the general public. PMCC seeks to ensure that needed steps are taken to rebuild and sustain depleted groundfisheries along the West Coast, as well as to balance healthy marine ecosystems with viable fishing community economies. We are pleased to offer comments regarding fishery-related recommendations of the U.S. Commission on Ocean Policy (USCOP).

PMCC supports most of USCOP's recommendations regarding marine fisheries management. However, we believe that three of the Commission's recommendations could be improved by being more specific. These recommendations involve monitoring and reducing bycatch (the unintentional catch of non-targeted species), ensuring fair and balanced representation on regional fishery management councils, and reducing the potential for individual conflict-of-interest on these councils.

(1) REDUCING BYCATCH: USCOP recommends (*Recommendation 19-22*) that the National Marine Fisheries Service (NMFS) “develop regional bycatch reduction plans that address broad ecosystem impacts of bycatch.” While this idea is commendable, it does not offer specific and practical actions that can be taken in the near future.

Bycatch—including unintentional take of overfished species, endangered species, marine mammals, birds and other marine life—is a major problem in many fisheries in the United States. In particular, the lack of adequate monitoring systems to quantify the total mortality of overfished or precautionary-zone fish species along the West Coast has contributed to the further depletion of several fish populations. These depletions have constrained access to healthy fish populations, and have resulted in hundreds of millions of dollars in economic loss to coastal economies due to the foregone access.

PMCC believes that NMFS should be mandated to assess the adequacy of all regional bycatch monitoring systems. This process would include timely reports to Congress regarding what steps are needed to make each system adequate for (1) quantifying total mortality of all managed species and (2) gathering information on bycatch of other marine life. Without adequate bycatch monitoring, fisheries management

Fisheries & Ocean Governance

Peter Huhtala, Pacific Marine Conservation Council, (503) 325-8188

lacks essential information, and it is nearly impossible to develop baselines for bycatch reduction of non-assessed populations.

We already know from previous studies (including Pikitch and Babcock 2003 and Powers 2003) that present levels of observer coverage are inadequate in several West Coast fisheries. **PMCC believes that Congress should at least double the present modest federal contribution to regional observer programs.**

Although USCOP asks that regional bycatch reduction strategies be developed, explicit goals of these strategies are not expressed. **PMCC believes that Congress should clarify and strengthen national bycatch reduction mandates.** The statutory requirement for bycatch monitoring and management plans should be to reduce bycatch to the maximum extent practicable, with a goal of levels approaching zero. The plans should specify objective and measurable methods and targets to reduce bycatch on an annual basis by a statistically significant amount from the previous year, and should include all direct and indirect sources of mortality. Non-conventional ecosystem-based tools, such as marine protected areas to protect habitat of bycatch species, should be considered in such plans.

(2) BALANCED REPRESENTATION ON FISHERY MANAGEMENT

COUNCILS: In *Recommendations 19-12* and *19-13*, USCOP offers means to broaden representation on regional fishery management councils in a fair and balanced manner, specifically seeking to increase representation from outside the fishing industry. Requiring the governors to provide a slate of names for each open appointment that includes recreational, commercial, and public interests is a good start toward this end. However, the intent of these recommendations could be more effectively achieved with the addition of this slightly more specific language:

The Magnuson-Stevens Act should be amended to:

- **Require governors to consult with the representatives of the public, including conservation groups, when developing lists of individuals to serve on councils.**
- **Require the Secretary of Commerce to ensure balanced representation between representatives of the non-fishing public, and representatives of commercial and recreational fishing, when making council appointments.**

(3) REDUCE CONFLICTS OF INTEREST AT FISHERY MANAGEMENT COUNCILS:

USCOP points out the inherent potential for, as well as the perception of conflicts of interest in decisions made by members of the regional fishery management councils. Aside from recommending broader representation on the councils, the Commission does not offer specific additional solutions, although implementing *Recommendations 19-2*

and 19-3 would reduce conflicts that might inspire setting allowable catch rates beyond those advised by council and NMFS scientists.

Current law exempts council members from the conflict of interest standards that apply to all other regulatory bodies of the federal government. Instead, the Magnuson-Stevens Act requires council members to recuse themselves from a council action if they own or represent more than 10% of a gear type or sector. Even if a council member is found to have voted on a matter from which they should have been recused themselves, the vote cannot be reconsidered. The scope of this problem is demonstrated by the fact that 60 percent of the appointed council members have a direct financial interest in the fisheries they manage. Therefore, we suggest the following additional recommendation:

The Magnuson-Stevens Act should be amended to:

- **Prevent council members from voting on any issue that would affect a financial interest that they are required to disclose.**
- **Prevent council members who have been convicted of violating the Magnuson-Stevens Act from serving on a council.**

ADDITIONAL COMMENTS: PMCC has highlighted the three areas described above where noncontroversial modifications to the recommendations of USCOP could lead to substantially improved management of our nation's fisheries. We close with a brief list of further comments and suggestions:

- USCOP should consider an additional recommendation that each regional fishery management council be required to establish and seek the advice of a standing Ecosystem Considerations Committee. These committees would include qualified experts who could look at council decisions and research priorities from the perspective of ecosystem-based management.
- In order to analyze the steps necessary to fully implement the ecosystem-based management approach recommended by USCOP, comprehensive programmatic environmental impact statements (EIS) that include a focus on this approach should be completed for all major fisheries in the United States. However, the process of completing these EISs should not delay efforts to manage fisheries from an ecosystem-based perspective, nor preclude the simultaneous development of ecosystem-based fishery management plans.
- PMCC believes that Congress should mandate that scientific determinations of ecosystem health and the status of fish populations be insulated from decisions on who should exploit those resources and to what degree. Elevating the council Scientific and Statistical Committees, as set forth in *Recommendations 19-2* and *19-3*, may not be the only way to achieve this end. Other means include establishment of a new entities, such as regional scientific and technical teams

that would be charged with setting catch limits and establishing other biological parameters within which fisheries can operate.

- PMCC believes that mechanisms should be established to solicit and incorporate community-based priority needs in the annual research needs list developed by the councils, as described in *Recommendation 19-7*.
- PMCC enthusiastically supports *Recommendation 19-9*, which calls for expanded support for regionally-based cooperative research programs, involving fishermen and scientists. Congress should increase funding for these cooperative research programs as soon as possible.
- PMCC also appreciates the specific, minimum national guidelines for dedicated access privileges as described in relation to *Recommendation 19-15*. Congress should immediately adopt such a set of standards for individual fishing quota systems (e.g., HR 2621), as preliminary development of such systems is already underway absent these sensible, requisite standards. The Commission places too much emphasis on the potential benefits of dedicated access privilege systems.
- PMCC believes that the Commission doesn't focus enough on making specific recommendations to improve habitat protection.

Thank you for considering these comments and suggestions from Pacific Marine Conservation Council regarding the preliminary report from the U.S. Commission on Ocean Policy.

References:

Pikitch, Ellen K and Elizabeth A. Babcock, 2003. *How Much Observer Coverage is Enough to Adequately Estimate Bycatch?* Pew Institute for Ocean Science

Powers, Joseph E. et al; National Marine Fisheries Service, 2003. *Evaluating bycatch: a national approach to standardized bycatch monitoring programs*. NOAA, NMFS, Silver Spring, MD. 88 pp.

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Marine Reserves

Susan Ash & Samantha Murray, Audubon Society of Portland, (503) 292-6855

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Samantha Murray and Susan Ash, Audubon Society of Portland
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report

INTRODUCTION

Thank you for this opportunity to comment on the Preliminary Report of the U.S. Commission on Ocean Policy (USCOP Report) dated April 20, 2004. The Audubon Society of Portland has 10,000 members that care deeply about the protection of coastal and estuarine wildlife and habitat off of Oregon's coast. We are pleased to see that the USCOP Report recognizes the compromised health of today's oceans and near-shore habitat and the need for a comprehensive national ocean policy that emphasizes ecosystem-based management.

This acknowledgement follows many years of work by Oregon to utilize its renewable ocean resources in a sustainable manner, in accordance with Goal 19, and develop near shore fishery and estuarine management plans. It also follows the creation and establishment of Oregon's Ocean Policy Advisory Council, a prototype for the Regional Oceans Councils outlined by the Commission. The USCOP Report calls for essential reform to the current piecemeal framework that governs the economic stability, biodiversity, water quality, and exploration of U.S. oceans, by recommending uniform federal leadership, regional participation in policy-making, and strengthened scientific research and analysis.

Over the years, Oregon has led the nation in its strong commitment to protecting its living ocean resources while maintaining productive coastal economies. However, one of Oregon's key management reform priorities was all but absent from the USCOP Report and should be further incorporated. This essential piece is the discussion of fully protected marine reserves. Several coastal states and nations have established reserves for a variety of purposes, and although Oregon currently has no such areas, OPAC has laid the groundwork for launching a network of marine reserves. While it is encouraging that the USCOP Report cursorily identifies some benefits of Marine Protected Areas (MPAs) generally in Chapter Six, it is disappointing that it neither specifically addresses

Marine Reserves

Susan Ash & Samantha Murray, Audubon Society of Portland, (503) 292-6855

reserves nor adequately discusses the ecological, scientific, economic and social values of MPAs and reserves.

ECOLOGICAL BENEFITS OF MARINE RESERVES AND MPAs

As mentioned in the USCOP Report, MPAs are “area[s] of the marine environment that [have] been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources within.”¹ One category of MPAs is fully protected marine reserves, where all extractive or destructive activities are prohibited. In order to achieve the maximum range of ecological benefits from marine reserve establishment, the world’s leading marine scientists have concluded that full protection is critical.² Marine reserves can be established for a variety of purposes, but are particularly valuable as tools for conserving and managing natural marine resources and habitat because they are based upon the fundamental principles of ecosystem-based management.³ Although marine reserves and MPAs cannot protect against invasive species, global warming, drifting pollutants generated outside protected areas, coastal development or inadequate regulation of land-based activities that degrade the marine environment, they may make marine ecosystems more resilient in the face of such threats.

International scientific studies indicate that marine reserves boost the density and size of exploited fish species within reserve boundaries.⁴ Individual reserves provide dwindling fish populations a reprieve from unintended impacts of commercial and recreational fishing, providing insurance against management uncertainty and overfishing. They also protect the structure and function of marine ecosystems by preventing damage from mobile fishing gear and by-catch of non-target species within their boundaries. Additionally, reserves allow larger, older female fish to survive—fish that produce not only far more eggs but also healthier offspring than smaller fish.⁵ Along the west coast of the United States, existing marine reserves in Washington and California consistently support significantly more and larger fish that produce substantially more eggs than adjacent areas outside reserves.⁶ For example, lingcod inhabiting reserves in Puget

¹ **President Clinton**. 2002. Executive Order 13158.

² **Scientific Consensus Statement on Marine Reserves and Marine Protected Areas (Scientific Consensus)**. 2001. The declining state of the oceans and the collapse of many fisheries have created a critical need for new and more effective management of marine diversity, populations of exploited species and overall health of the oceans. Marine reserves are a highly effective but under-appreciated and under-utilized tool that can help alleviate many of these problems. One hundred and sixty-one marine scientists and experts signed the Consensus Statement. <www.nceas.ucb.edu/Consensus>.

³ **Apollonio, S.** 1994. The use of ecosystem characteristics in fisheries management. *Reviews in Fisheries Science* **2**:157-180.

⁴ **Halpern, B.S.** 2003. The impact of marine reserves: do reserves work and does reserve size matter? *Ecological Applications* **13(1) Supplement**: S117-S137.

⁵ **Berkeley, S.A., C. Chapman, and S.M. Sogard.** 2004 Maternal age as a determinant of larval growth and survival in a marine fish, *Sebastes melanops*. *Ecology* **85**: in press.

⁶ **Hixon, M. A.** 2002. Existing small marine reserves can indicate whether a larger network is feasible: case study from the West Coast of the United States. *MPA News* **4(3)**: 5.

Marine Reserves

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Sound, Washington, are twice as abundant, significantly larger, and produce 100 times more eggs than lingcod in comparable areas exposed to fishing.⁷ Additionally, many marine reserves restore habitats that have been degraded by overfishing. In 1978, the National Park Service closed to fishing the Anacapa Island Ecological Reserve in southern California, where fishing for predators-- California sheephead and lobster—allowed sea urchins to proliferate and overgraze on kelp forests. After predator populations were released from fishing pressures and their numbers increased, urchin numbers dramatically decreased, and the reserve sustained a five-fold increase in kelp density compared to kelp density outside the reserve.⁸ The larger kelp forests, in turn, supported more abundant and diverse marine life.

SCIENTIFIC BENEFITS OF MARINE RESERVES AND MPAs

Marine reserves may have significant scientific value. The ocean's ecosystems are in constant flux from both natural cycles and human activities. And since changes occur simultaneously, but at various temporal and spatial scales, it is often difficult to distinguish natural from human-caused changes. In fact, the Oregon State of the Environment Report 2000 states, "the most significant risk to marine fisheries ... is our insufficient understanding of the complex interactions of natural and human caused changes in stock health."⁹ Marine reserves that are off-limits to direct human disturbance can provide benchmark data to distinguish between ecosystem changes from natural variability and human activities. Once benchmarks of marine health are established within reserves, they can be used to compare the same indices outside the reserve. Understanding the effects of human activities on marine ecosystems is critical for pursuing management strategies and measuring their efficacy.

ECONOMIC BENEFITS OF MARINE RESERVES AND MPAs

As noted in the USCOP Report, MPAs can be an effective means of not only maintaining biodiversity and protecting habitats, but also of addressing socioeconomic goals and advancing sustainable fisheries management. Many, including the Pacific Fisheries Management Council, have recognized the potential economic benefits of marine reserves and MPAs.¹⁰ In 2000, the Council included marine reserves as a management tool promoting stock recovery, biological productivity and economic productivity. Reserves may help replenish fisheries by dispersal of larval, juvenile and adult

⁷ **Palsson, W. A., and R. E. Pacunski.** 1995. The response of rocky reef fishes to harvest refugia in Puget Sound. Puget Sound Research '95 Proceedings **1**:224-234.

⁸ **Lafferty, K.D. and D.J. Kushner.** 2000. Population regulation of the purple sea urchin, *Strongylocentrotus purpuratus*, at the California Channel Islands. In Brown D.R., K.L. Mitchell and H.W. Chang, Eds. Proceedings of the Fifth California Islands Symposium, Minerals, Management Service Publication #99-0038.

⁹ **Oregon Progress Board.** 2000. Oregon State of the Environment Report, Statewide Summary, Salem, Oregon.

¹⁰ **PFMC.** Pacific Fishery Management Council. Information sheet: *Marine Reserves*. <www.pcouncil.org> and <www.pcouncil.org/reserves/reservesback.html>.

Marine Reserves

Susan Ash & Samantha Murray, Audubon Society of Portland, (503) 292-6855

organisms. For example, the Merritt Island reserve off of Florida's east coast produces older, bigger and more abundant sport fish than waters outside of the reserve. Some larger fish swim out of their protected boundaries into nearby fishing grounds. Not surprisingly, the majority of Florida's record-breaking game fish are caught within 100 kilometers of Merritt Island's protected waters.¹¹ Marine reserve and MPA networks may be better able to prevent future collapses than other management measures if they are designed to stabilize weak stock populations that force broad closures when stocks are declared overfished.

Increased tourism could provide another revenue source to coastal communities. Tour-operators and ocean recreation shop owners may receive direct financial gain from SCUBA-diving, surfing, sea-kayaking, bird watching and whale-watching ventures while other businesses receive indirect benefits by servicing these activities.

Finally, when Oregon's fishermen honor marine reserve boundaries, they may have the opportunity to market their catch as sustainable, which could increase ex-vessel revenues. The Marine Stewardship Council, an organization that certifies seafood caught using sustainable practices, grants credit toward certification to fisheries that use marine reserves as a management tool. Fishermen covet certification because it can provide a critical label to their product in highly competitive seafood markets. Sustainable fisheries management supported by marine reserves can influence buyers' choices in terms of investing in environmentally harvested fish and rejecting unsustainable catches. Such eco-labeling allows west coast fishermen to maintain their market share, gain access to new markets that require such labels and demand higher prices for their catch.

SOCIAL BENEFITS OF MARINE RESERVES AND MPAs

Biocentric values—values the public places on nature for nature's sake—constitute important social benefits of marine reserves and MPAs. In 2003, the PEW Oceans Commission found that most people regard ocean health as an important public trust. A national survey conducted by SeaWeb found that pollution and depletion of marine mammals tops respondents' list of concerns.¹² Nearly 70 percent agreed that some areas of the ocean should exclude not only damaging activities, but recreational ones as well. Almost all survey participants were alarmed that less than one percent of the Earth's ocean has some measure of protection. This study indicates that most people have an environmental ethic that supports marine reserves.

¹¹ **Roberts, C.M., J.A. Bohnsack, F. Gell, J.P. Hawkins, and R. Goodridge.** 2001. Effects of marine reserves on adjacent fisheries. *Science* **294**: 1920-1923.

¹² **Edge Research.** 2002. Public Attitudes About Ocean Protection in Oregon: A Survey of 700 Oregon Residents. Conducted on behalf of SeaWeb, The Audubon Society of Portland and the Ocean Wilderness Network.

SeaWeb also conducted a survey of Oregonians regarding their ocean ethics.¹³ Results indicate that residents value a healthy ocean for economic and recreational purposes. Nearly 70 percent of respondents support the creation of marine reserves that prohibit all extractive activities, and their backing persists, even when their favorite fishing spots could become off-limits. Both coastal and inland residents affirm that long-term conservation benefits should take precedence over short-term job losses and higher seafood prices, demonstrating that Oregonians support the creation of marine reserves.

Water quality protection is also an integral part of marine protection for both ecological and recreational benefits. Although this goal of marine protection is often forgotten in the focus on fisheries management, water quality is not only a key indicator of overall marine ecosystem health, but also of critical importance to human health.

DESIGN AND IMPLEMENTATION OF MARINE RESERVES AND MPAs

We commend the establishment of the Marine Protected Area Center and look forward to the development of a framework for a national system of MPAs. Additionally, we strongly urge that the Center include marine reserves in this network. Many scientists agree that the best way to protect and restore marine biodiversity is to establish a fully protected reserve network of a variety of sizes and spacing.¹⁴

We acknowledge that further consolidation of federal oversight is necessary. However, we feel that there must be strong participation from the local level in the design and implementation of a network of reserves and MPAs, which must be developed within the broader context of regional ecosystem-based planning. Reserves with no enforcement provide no benefits, so networks are most likely to be effective when stakeholders, conservationists, fishing communities and coastal residents are included in the discussion of where, how many and how big the reserves and other MPAs should be. Although different stakeholders will have different ambitions, a single protected boundary can accommodate a wide spectrum of goals from different groups and individuals.

We agree that reserve and MPA networks must be established based upon the best available science, have clear policy goals, and implement a monitoring system to determine success over the lifetime of the reserve. We believe that reserves and MPAs should not be time limited when not connected to monitoring and adaptive management decisions. Additionally, we believe that performance timelines are good in so far as they allow for periodic monitoring and adaptive management when the assumptions do not turn out as planned. However, assessments must carefully appraise passive use values such as ecological and social values, as well as scientific and economic values. Reserves

¹³ *Id.*

¹⁴ *Supra*, FN 2.

should be moved around or changed only if carefully ascribed monitoring questions require an adaptive management process that allows for some flexibility.

CONCLUSION

The Audubon Society of Portland applauds the efforts of the U.S. Commission on Ocean Policy in producing this Preliminary Report. It echoes the independent findings of the PEW Commission in 2003, saying that the health of our oceans is in dire need of rehabilitation and management reform. Over the years, the nation has looked to Oregon as a leader in ocean and fisheries policy. We commend you for your efforts thus far and now ask you to recommend incorporating one of Oregon's key management reform policies, a network of MPAs including fully protected marine reserves, into the final draft of the USCOP Report. Your leadership on this issue will benefit not only the coastal ecology and economy of Oregon, but of our nation.

Marine Reserves

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Coastal Sprawl

Robin Hartmann, Oregon Shores Conservation Coalition, (541) 672-3694

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Graine, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Robin Hartmann
Date: May 14, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report (Coastal Sprawl)

Oregon Shores Conservation Coalition (Oregon Shores) is a statewide non-profit group dedicated to protecting Oregon's coastal region. Our group has thousands of members and volunteers who monitor every mile of Oregon's 360-mile coastline four times a year to watch for natural changes as well as human-induced problems, and we participate in local land use decisions and policy implementation to assure that the goals of Oregon's land use program help protect our treasured coast.

We were, therefore, particularly interested in reviewing the results of the US Ocean Commission's (Commission) report (Report) and the recommendations as they relate to Chapters 9,10, and 11. These chapters deal with managing coasts and their watersheds, guarding people and property against coastal hazards, and conserving and restoring coastal habitat. Oregon's state programs, some of which are cited in the Report, can help shape this document in positive, practical ways and add depth and focus to the recommendations put forward by the Commission. We hope you will consider our comments as your office provides input to the Oceans Commission on their report.

In general, we believe that the Oceans Commission has done a good job in identifying many of the real and growing environmental concerns along our coast and offering some first steps toward solving these problems. The Commission has recognized issues that we are well aware of in Oregon and that we are struggling to address. It noted that increased development in the coastal zone can put more people and property at risk from coastal hazards, reduce and fragment fish and wildlife habitat, cause loss of wetlands, alter sedimentation rates and flows, and contribute to coastal water pollution. It also identifies issues that Oregon has just begun to acknowledge, e.g. loss of beaches from both sea-level rise and development (e.g. seawalls and riprap).

We would like to see the Governor applaud the Commission's recognition of the need to consider issues and management structures in terms of whole ecosystems, fully endorse the need to provide both incentives and disincentives for protecting key coastal habitats, and for steering development away from hazard areas.

Coastal Sprawl

Robin Hartmann, Oregon Shores Conservation Coalition, (541) 672-3694

However, many of the recommendations involve the preliminary steps of “research, planning and providing alternatives.” Though we recognize that changes in how our government programs are structured and coordinated might lead to increased efficiency and program performance, and while we recognize the need for additional research in some areas, we believe there is adequate, even if not optimal, management structures in place and sufficient information to move forward immediately in making real policy changes that will make on-the-ground progress possible. We believe that Oregon can urge the Commission to strengthen its recommendation to assure progress is made in the short term even while longer-term changes are being implemented. **We also think that a major flaw in the report is its understated treatment of global warming.** The report states, “Climate change, rising global temperatures, and sea level rise will place additional stresses on coastal habitats.” This fails to capture the insidious consequences of continuing to ignore the increasing effect global warming will have on human safety, economics, and ecological systems.

USCOP Recommendations

A. Strengthen CZMA

Oregon Shores asks the Governor to support **Recommendation 9-1** in full, regarding the re-authorization of the Coastal Zone Management Act. Oregon should support the call to strengthen the planning and coordination capacities of coastal states, assure ecosystem-based watershed management, contain growth within urban growth boundaries, assess resources, set measurable goals and performance measures and be judged by progress towards these goals. These recommendations resonate with Oregon’s approach to salmon recovery, the Oregon Progress Board’s benchmark program, and Oregon’s land use laws.

B. Consolidate Area-Based coastal Mgt Programs

Oregon Shores asks the Governor’s office to support **Recommendation 9-2**. This recommendation regards consolidating area-based coastal management programs in a strengthened National Oceanic and Atmospheric Administration (NOAA), capitalizing on the strengths of each program. At a minimum, this consolidation should include the Coastal Zone Management, National Estuarine Research Reserve System, and National Marine Sanctuary programs currently administered by NOAA and additional programs administered by other agencies: the Coastal Barrier Resources System; the National Estuary Program; and the U.S. Fish and Wildlife Service Coastal Program. We believe that there could be efficiencies in doing so, however there is also a risk that instead of gaining implementation resources for these programs themselves by organizational efficiency, that overall budgets could be reduced and focus lost.

C. Discourage Growth in Hazard Areas

Oregon Shores asks the Governor’s office to support **Recommendation 9-3** in full. We think it critical that there be changes to federal funding and infrastructure programs that would discourage inappropriate growth in fragile or hazard-prone coastal areas and ensure consistency with national, regional, and state goals aimed at achieving

Coastal Sprawl

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economically and environmentally sustainable development. It is critical to the impacts of federal flood insurance policies on promoting growth in hazard areas and to understand the cumulative effects of shoreline protection programs, wetland filling, and the loss of sand supply when dredged materials are taken offshore. However, we believe **this recommendation does not go far enough** by just calling for a review of existing programs to eliminate incentives for inappropriate growth. We believe the Governor should ask that recommendations be made to have FEMA identify existing programs, or develop new ones as necessary, to proactively identify areas, obtain development rights in yet undeveloped areas, or move structures in identified coastal flooding and high hazard erosion zones to avoid losses and minimize costs before disaster strikes. We also believe the Governor should call on the Commission to recommend that FEMA and the CZMA require post-disaster rezoning and restrictions that would not allow re-building in floodplain or erosion zones and identify funding sources to provide for buying out remaining values. The Governor should encourage the Commission to call on CZMA, FEMA, and COE to implement a Goal 18-like provision that requires attention to hazard avoidance, the use of non-structural solutions over structural solutions to coastal erosion issues, and does not allow hardening of the shoreline for new developments that could be set back adequately to avoid such hazards. Full disclosure of hazards in real estate transfers and peer review of all hazard reports could also be suggested as nation-wide policies.

D. Watershed Approach

Oregon Shores supports **Recommendation 9–4**. This recommendation relates to the need to approach coastal issues on a whole-watershed basis. The Report calls for Congress to amend the CZMA, the Clean Water Act, and other federal laws as appropriate to provide better financial, technical, and institutional support for watershed initiatives and provide for incentives and flexibility. It calls on the National Ocean Council to develop guidance concerning the purposes, structures, stakeholder composition, and performance of such initiatives.

This recommendation endorses the approach that Oregon has taken with its salmon plan and, to some extent, its Senate Bill 1010 plan. However, we believe **this recommendation does not go far enough**. As we have learned in Oregon, to assure that efforts at watershed restoration are meaningful and cost effective, local and regional initiatives must be guided and supported by priority watershed analyses, science-based assessments, established benchmarks, limiting factor analyses, technical review of projects, and the like. Additionally, there must be incentives and disincentives built into federal support programs to assure and reward performance and overcome political inertia against meaningful on-the-ground changes.

E. Flood Insurance

Oregon Shores generally supports **Recommendation 10–4**, except we don't understand why the recommendation has to wait until the National Ocean Council is formed to move forward. We ask that the Governor's office call on the Commission to directly encourage

Coastal Sprawl

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Congress to increase financial and technical assistance to state and local entities for developing hazards mitigation plans consistent with requirements of the FEMA. The National Ocean Council should also identify opportunities for conditioning federal hazards-related financial and infrastructure support on completion of FEMA-approved state and local hazards mitigation plans. **Oregon Shores further recommends that state and local hazard mitigation plans be required to emphasize avoidance of impacts and non-structural alternatives before other remedies.**

Similarly, we ask the Governor to encourage the Commission to directly call on FEMA to make recommended changes to the National Flood Insurance Program (NFIP) to reduce incentives for development in high-hazard areas (rather than delaying implementation by waiting for the National Ocean Council to recommend these same changes). We generally support the Report's call to *“establish clear disincentives to building or rebuilding in coastal high-hazard zones by requiring property owners at risk of erosion to pay actuarially sound rates for insurance; enforce measures that reduce vulnerability to natural hazards, including assistance in retrofitting older structures and buyout programs for susceptible structures with repetitive-loss histories; create enforceable mechanisms to direct development away from undeveloped floodplains and erosion zones.”*

FEMA should be called on to immediately implement the incentive-reducing measures identified. Additionally, these measures should be reworded. Oregon Shores is not in favor of allowing the retrofitting of older structures once a disaster has happened. This in-itself creates a disincentive to make changes pro-actively. We suggest that buyouts should be the requirement after the first disaster event and that retrofits should be partially subsidized, but only if done in a pro-active fashion.

F. Conservation/Acquisition

The scientific community and agencies in Oregon have long recognized the importance of the concept to “Protect the best, then restore the rest.” This concept reflects the need to build out from “anchor” habitats and recognizes that functionally, and practically, a restored system often does not perform all the functions or provide all the values that the complex natural system possesses.

Protecting the best saves money. This concept is now nationally recognized and is reflected in the Commission's statement that: “Conservation is important to maintain critical habitats and the benefits they provide. It is also cost-effective, avoiding the much larger expense and scientific uncertainties associated with attempting to restore habitats that have been degraded or lost.”

Oregon Shores supports **Recommendation 11–1** that calls on Congress to amend the Coastal Zone Management Act to authorize and provide sufficient funding for a dedicated coastal and estuarine land conservation program and to assure that each state coastal management program identify priority coastal habitats and develop a plan for

establishing partnerships among willing landowners for conservation purposes, with participation from local government, nongovernmental, and private-sector partners.

However, this recommendation does not go far enough. The Governor should recommend that the Commission call for full funding of the Land and Water Conservation to the level authorized.

Oregon Shores fully supports **Recommendations 11–2 and 11-3** and urges the Governor to do so as well. Recommendation 11-2 calls for the development of national goals for ocean and coastal habitat conservation and restoration efforts and coordination among all related federal activities. The regional ocean councils and regional ocean information programs should determine habitat conservation and restoration needs and set regional goals and priorities that are consistent with the national goals. Recommendation 11-3 calls on Congress to amend relevant legislation to allow federal agencies greater discretion in using a portion of habitat conservation and restoration funds for related assessments, monitoring, research, and education. This later recommendation is particularly key, because conservation and restoration science is new and much is to be learned from successes as well as mistakes.

G. Wetlands

Oregon Shores appreciates the Commission’s acknowledgement of the multiple, significant values provided by wetlands and the shortcomings of the Section 404 program and disjointed wetland protection programs. We agree with the Report’s statement that: “As the nation recognizes the interconnectedness of upland and downstream areas, considers entire watershed systems, and moves toward an ecosystem approach, comprehensive wetlands protection should be considered as an integral part of ocean and coastal management.”

Though Oregon prides itself on environmental protection, we are marked by our past actions and continue to lose wetlands even today as indicated by recent studies in the Willamette Valley (with similar results likely elsewhere). In Oregon, Division of State Lands has estimated that about 60-70% of our coastal wetlands have already been lost to filling, diking and draining.

Therefore it is critical that we protect our remaining wetlands and restore degraded ones where we have willing landowners. Accordingly, we urge the Governor to endorse **Recommendation 11–4** that calls on the National Ocean Council to coordinate development of a comprehensive wetlands protection program that is linked to coastal habitat and watershed management efforts and make specific recommendations for the integration of the Clean Water Act Section 404 wetlands permitting process into that broader management approach.

Thank you for your attention to our comments.

Coastal Sprawl

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Dredging/Sediment

Matt Van Ess, Columbia River Estuary Study Task Force, (503) 325-0435

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Matt Van Ess, CREST, (503) 325-0435
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report

Columbia River Estuary Study Taskforce (CREST) is a council of local governments working with communities in both Oregon and Washington on regional natural resource planning issues at the mouth of the Columbia River. CREST, based in Astoria, Oregon was initially established in 1974 as a research organization, and is now actively engaged in land use planning, watershed and estuarine restoration, and coastal zone management.

The management of Columbia River dredged material directly affects the natural resource based economy of the communities CREST represents and over the last few years' sediment management has become our most important issue. Of particular concern are impacts to the estuarine and nearshore ocean environment associated with dredged material disposal. Impacts from dredged material disposal occur directly from disrupting species use of habitats and indirectly by altering coastal habitat necessary to support commercially valuable species. This is particularly relevant to salmon dependent on the Columbia River Estuary as providing key migrating and rearing functions and for Dungeness crab dependent on estuary and nearshore ocean habitat.

In response to the economic and environmental concerns regarding dredging and dredged material disposal in the Columbia, CREST is working towards improving managing sediments in the Columbia River Estuary and specifically increasing beneficial uses of sediments. The recommendations proposed in **Chapter 12 of the U.S. Commission on Ocean Policy (USCOP) *Managing Sediment and Shorelines*** directly support regional efforts being proposed in the Columbia and CREST would like to offer strong support for the recommendations.

Manage sediments on a regional basis taking into account economic and ecosystem needs. (USCOP Recommendation 12-1)

The Columbia River has been significantly altered through the installation of jetties at the Mouth of the Columbia, maintenance dredging and pile dike construction in the lower river, and dam construction in the upper portions of the Columbia Basin. These impacts have dramatically altered the hydrology and flow of sediment in the river and have

Dredging/Sediment

Matt Van Ess, Columbia River Estuary Study Task Force, (503) 325-0435

resulted in shoaling in the estuary and erosion along the coast. Efforts to manage sediment in the context of regional ecosystem needs are important and necessary address sediment transport in the entire system and to move beyond the current project by project management.

U.S. Army Corps of Engineers should ensure that its selection of least cost disposal policy reflects the full range of economic and environmental costs and benefits for options that reuse dredged materials, as well as for other disposal methods.

(USCOP Recommendation 12-2)

CREST strongly supports efforts for the U.S. Army Corps of Engineers reform to more robustly include the full range of economic and environmental costs into cost benefit analysis for their projects. This recommendation is critical to understand the economic impacts of Corps projects locally to coastal areas, where the economy and environment are so closely linked.

Implement ecosystem based approaches to manage dredging and work with regional dredging teams and regional ocean councils, to establish management programs that include watershed, coastal areas, and the nation's shoreline. (USCOP

Recommendation 12-3)

As is described above actions upstream in the Columbia have greatly altered and impacted sediment delivery to Oregon and Washington coastal beaches. Erosion will continue to accelerate with current proposals to deepen the Columbia and establish a "Deep Water" disposal site offshore of the Mouth of the Columbia River. The process for establishing the "Deep Water" disposal site is an excellent example of why regional, watershed scale, analysis of ecosystem based approaches to sediment management are immediately needed.

U.S. Army Corps of Engineers, NOAA, EPA, and USGS, should develop strategies to improve assessment, monitoring, research and technology to enhance sediment management and encourage the Corps to monitor outcomes of past projects to address cumulative regional impacts to coastal ecosystems. (Recommendation 12-4)

EPA should develop a coordinated strategy to better understand contaminated sediment transport, and to develop technologies for better prevention, safer dredging, and more effective treatment of contaminated sediment.

(Recommendation 12-5)

Improvements in monitoring and sediment characterization and treatment are also needed in the Columbia. Cumulative impacts analysis will contribute to ecosystem based management of federal dredging projects. More effective treatment and understanding of contaminated sediments will also ensure coastal areas are not negatively impacted from upstream activities such as the cleanup of the Portland Harbor superfund site on the Willamette River.

In our region interested parties including Oregon and Washington's Governors offices, local governments, port districts, and natural resource federal and state agencies have

Dredging/Sediment

Matt Van Ess, Columbia River Estuary Study Task Force, (503) 325-0435

Page 2 of 3

recognized the need for improving sediment management on the Columbia River and have begun to address the issue more broadly. The formation of the **Lower Columbia Solutions Group** has brought together a consensus approach to accelerate beneficial uses of dredged material projects and to support regional sediment management at the Columbia watershed scale. This effort is significant in that it has brought together groups that have disagreed on sediment management in the past and have now agreed to focus on beneficial uses of dredged material in the context of economic and ecosystem needs. The recommendations of the USCOP on Managing Sediments and Shorelines support our regional efforts in the Columbia and I strongly encourage full adoption and implementation of the recommendations.

Thank you for the opportunity to comment. Hopefully I have provided on the ground examples from the Columbia River to support USCOP recommendations for improving sediment management. Again, CREST supports the USCOP recommendations on managing sediments and shorelines and encourages full implementation by the USCOP and full endorsement of the recommendations to improve managing sediments and shorelines by Oregon's Governor Kulongoski.

Thank you and if you have any questions regarding CREST, our comments on the USCOP, or regional sediment management in the Columbia please do not hesitate to contact me at 503-325-0435.

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Water Quality

Markus Mead, Surfrider Foundation, (503) 709-2912

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Markus Mead, Oregon Field Coordinator, Surfrider Foundation
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report

Coastal areas comprise less than one-fifth of the United States land area and account for over one-half of the nation's population and is rapidly growing. This growth brings pollution, habitat destruction, and increased demand for a dwindling supply of ocean food products. The US Commission report finds that increased coastal development, altered sediment flow, over-fishing, and dramatic declines in water quality have all damaged the health and safety of our oceans and beaches.

The Commission acknowledged that: "...substantial enhancement of coastal water quality will require significant reductions in nonpoint source pollution—a technical and political challenge." Nonpoint source pollution occurs when rainfall and snowmelt carry pollutants over land, into streams eventually, into coastal waters. Nonpoint source pollution comes from many places including buildings, streets, industrial activity and automobiles. This is in contrast to point source pollution, which can be traced to a specific point of discharge, such as a wastewater treatment plant or a factory. We need to clean up nonpoint pollution at its source - the storm drains.

On a beautiful summer day, Oregon's oceans appear deceptively pristine. Since September 12, 2003, eleven public notices of high bacteria levels have been posted along Oregon's coast from Twin Rocks on the north coast to Mill Beach in Curry County. Many of these public health notices were active for consecutive months during continued testing. These bacteria often enter our oceans via nonpoint-source systems.

Nonpoint source pollution is the greatest cause of surf zone pollution in most areas. Therefore, recognition of the interconnectedness of land-based decisions to water quality and marine habitats is vital to marine conservation. In their report, The Commission calls for increased coastal and ocean education in our nation's schools, spotlighting the "connections to all earth systems" like the connection between watersheds, beaches and the ocean.

Water Quality

Markus Mead, Surfrider Foundation, (503) 709-2912

Monitoring water quality also helps identify the unhealthy linkages between the coastal uplands, estuaries, and nearshore waters. Marine protection in Oregon must take into account water quality, recognizing that it is not only a key indicator of overall marine ecosystem health, but also of critical importance to human health. Fish and shellfish must exist with the pollutants we put in the ocean. These pollutants become introduced into the food chain and are then absorbed up the ecosystem into all marine species. Testing for, and identifying pollutants will stop their introduction, making for healthier fish, and helping sustain coastal resource-based economies.

To assure that Oregon's marine waters are clean, so that our marine species are of the highest quality, so our ecosystems can function properly, and our human beach users remain healthy, we recommend the following:

- Implement technologies that stop nonpoint pollution by filtering runoff as it enters the storm drains.
- Strengthen the BEACH Act to enable funds to not only monitor beaches but to test for a variety of additional indicators such as PCBs, benzene, and dioxins. Sampling dollars should also be allowed to trace back to sources of pollution using DNA or other testing methods.
- Provide a tool for decision makers and developers to guide development away from sensitive areas such as transfer of development rights, and conservation easements.
- Re-allocate a portion of existing utility infrastructure grant money specifically to cities wishing to implement "natural wetland" sewage treatment facilities such as those used by Cannon Beach. These facilities are cheaper to maintain, and unlikely to be damaged by storm erosion, such as that which occurred in Port Orford. Enhance these grants with a financial incentive to be "green".
- 329 million gallons of municipal sewage flow daily out of US treatment plants that have a 301(h) waiver and are not performing secondary treatment on all wastewater. We recommend establishing Water Quality Overlay Zones near wastewater plants, river mouths, and other outfall areas. Regular monitoring of these zones would provide incentive for sewage treatment facilities to not violate their NPDES permits.
- Congress should provide adequate funding for comprehensive planning and implementation of nonpoint source pollution practices to stop the flow of urban and agricultural runoff into our inland waterways which flow to our oceans.

Water Quality

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- Provide incentives or requirements for coastal cities and counties to create and implement stormwater management plans to capture, treat, or filter stormwater prior to its release into our streams, bays and ocean.
- Strengthen oil spill prevention laws by requiring all vessels, especially Personal Water Craft, to use four stroke engine technologies.
- Remove unnecessary dams and debris basins to allow sediments to reach our beaches, promoting recreation and tourism, as well as recreating nearshore habitat, vital for juvenile salmon, salmon prey fish, crab grounds and other nearshore species.

The Surfrider Foundation is a nonprofit environmental organization dedicated to the “protection and enhancement of the world’s oceans, waves and beaches, for all people, through conservation, activism, research and education.” Founded in 1984, Surfrider’s coastal environmental work is carried out by over 40,000 United States members in 60 domestic chapters and four International Affiliates located along the coasts of the Continental United States, Hawaii, Puerto Rico, Europe, Australia, Japan and Brazil. Our years of success in preserving coastal zone environments is due to the dedication, commitment, and diligence of our local members and central coordination of these efforts on each of the five continents where the Foundation operates.

Water Quality

Markus Mead, Surfrider Foundation, (503) 709-2912

Page 3 of 3

Invasive Species

Mark Systma & Robin Waldeck, Portland State University, (503) 725-3833

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Dr. Mark Sytsma, Robyn Draheim
Center for Lakes and Reservoirs, Portland State University
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report
Chapter 17. Preventing the Spread of Invasive Species

Thank you for the opportunity to provide you with our comments and recommendations on the preliminary report by the United States Commission on Ocean Policy (the Commission). We appreciate your efforts to engage the state's stakeholders as you formulate your comments to the Commission.

Preventing the spread of invasive species, both into and within the marine and coastal waters of the United States, is an important issue and we are pleased that the Commission has acknowledged its significance by including this topic in their report. We agree with much of the Commission's report regarding invasive species and, in fact, are already pursuing many of the strategies outlined. We believe, however, that there are pressing invasive species issues important to Oregon and the West Coast that the Commission has not yet addressed. In summary, the Report should:

- call for better enforcement of U.S. Coast Guard ballast water management rules within the Department of Homeland Security or transfer of the program to another Department;
- recommend that the U.S. Coast Guard develop regulations to prevent the spread of invasive species between domestic ports;
- recognize the potential importance of hull fouling as a vector for invasive species introduction and should recommend additional research to better define the threat;
- recommend that existing laws prohibiting the transport of nonnative species, e.g., Lacey Act, be enforced through increased funding of responsible enforcement programs;
- acknowledge efforts by states and recommend federal funding of state-developed outreach and education efforts;
- endorse rapid management response to all new invasive species infestations;
- support development of narrowly focused detection and response plans that will be effective when implemented rather than national plans that are likely to be too general;

Invasive Species

Mark Systma & Robin Waldeck, Portland State University, (503) 725-3833

- acknowledge state and local efforts and focus new efforts on research and management that directly address the invasive species problem, rather than recommend creation of additional “structural” elements that already exist;
- recommend formation of state invasive species councils to facilitate streamlining of programs within and between states;
- examine disparity in funding between regions of the country and recommend more even distribution of federal funds for aquatic invasive species management;
- recognize the value of a sustainability paradigm in considering shipping related invasive species management; and
- recommend that the National Invasive Species Act be passed and that new and existing programs for invasive species management be funded at authorized levels.

In the following sections we summarize the recommendations of the USCOP on invasive species management, provide information on how we are already implementing similar programs on a local and regional scale, and provide a rationale for our suggestions for improving the USCOP report to better address invasive species issues in Oregon.

Making Prevention the First Line of Defense

While prevention should indeed be the first line of defense against invasive species the Commission does not adequately communicate that prevention is most often the only defense available against the introduction and subsequent impacts of aquatic invaders. Unlike terrestrial invasions, few eradication projects have been attempted on marine species and ever fewer have been termed “successful”.¹ Most often, by the time that aquatic invasions are documented, it is far too late to attempt anything but adaptation to the invader.

17-1 Improvements to the U.S. Coast Guard’s national ballast water management program

The primary need for improvement of the U.S. Coast Guard ballast water management program is funding. Coast Guard efforts on invasive species have suffered since the agency was moved into Homeland Security. The Portland Marine Safety Office of the Coast Guard has stopped enforcing ballast water management regulations, resulting in a substantial decline in compliance with existing federal requirements. Improved Coast Guard rules are scheduled to become effective this summer, however, without adequate enforcement the rules will not be an effective deterrent to new introductions. The Ocean Policy Commission Report should call for better enforcement of U.S. Coast Guard ballast water management rules within the Department of Homeland Security or transfer of the program to another Department.

17-2 Independent scientific review of existing ballast water management research

¹ *Caulerpa taxifolia*, an invasive marine alga whose management is cited in the USCOP report, may be only one of a handful of successful marine eradication projects in U.S. waters out of more than 250 known non-native marine and coastal species found just on the West Coast (Cohen and Carlton 1995).

Program review should be an ongoing effort within any program, including the ballast water management research program. The need for review, however, presupposes that there is activity to review. To date, funding of ballast water management research has been inadequate to mount a research effort adequate to meet the threat of aquatic bioinvasions. Increased funding of ballast water management research is needed.

Until successful ballast water treatment protocols and tools have been developed, tested, and successfully implemented, currently available ballast water management methods – primarily ballast water exchange – must be made more effective. Research conducted at the Center for Lakes and Reservoirs at Portland State University, in collaboration with the Smithsonian Environmental Research Center and the U.S. Coast Guard, is aimed at developing methods for verification that ballast water exchange has occurred.

The Commission's preliminary report does not address the most pressing ballast water issue in Oregon: *coastal transport of ballast water*. Current U.S. Coast Guard regulations only address ballast water in transoceanic shipping; the regulations do not address ballast water transport between domestic ports. Because Columbia River ports are typically a second port of call for ships on the West Coast, Oregon is particularly at risk to movement of invasive species in ballast water taken on board ships in domestic ports, such as those in San Francisco Bay². Not only are these ballast water releases not covered under the federal ballast water guidelines, they may pose an even greater risk to coastal ecosystems than transoceanic ballast because shorter travel times enhance survival rates and the nonnative species being transported have already been successful in a similar habitat. Because of the high risk, West Coast states have begun implementing their own regulations concerning coastal shipping and ballast water exchange. Disagreements over exchange requirements have led to different and sometimes contradictory policies, a problem that will likely not be remedied until coastal shipping and ballast water are addressed on a national scale. The USCOP Report should recommend that the U.S. Coast Guard develop regulations to prevent spread of invasive species between domestic ports.

The Commission's preliminary report correctly recognizes that there are pathways of invasive species introduction other than ballast water that are important, and recommends public education to address them (Recommendation 17-3). The report does not mention, however, one of the potentially most important pathways: *hull fouling*³. The surface area of hulls arriving from

² See *Report on the Oregon Ballast Water Program in 2002*, which was prepared by the Center for Lakes and Reservoirs at Portland State University for the Oregon legislature. The report is available at <http://www.clr.pdx.edu>.

³ Hull fouling (that is those communities of marine organisms that grow or encrust the undersides of vessels) has long been known as a vector for transporting invasive species. San Francisco Bay, Coos Bay, the Columbia River estuary and Puget Sound all are home to numerous species that are believed to have been transported in the fouling communities of ship hulls (See Carlton, J.T. 1979. *History, Biogeography, and Ecology of the Introduced Marine and Estuarine Invertebrates of the Pacific Coast of North America*. PhD Thesis, University of California, Davis. 904pp.). Two recent marine introductions to Hawaii have been directly attributed to hull fouling. A bivalve, *Chama macerophylla*, and a sponge, *Gelliodes fibrosa* were introduced in the fouling community of a floating drydock towed to Hawaii from the Philippines in 1992. Recent surveys of the nonnative marine species in the Hawaiian Islands suggest that 90% (or 212 of 343 species) arrived in hull fouling communities (See Godwin, L.S., 2003. *Hull Fouling as a Pathway For Marine Invasions to Hawaii: Analysis of Vectors and Developing Management*

foreign ports into the United States is estimated at about 438 million square meters each year. That is comparable to an area 1.5 times the size of Vermont. Based only on scale, hull fouling may represent a much larger potential threat for bioinvasions than does ballast water⁴. The Report should recognize specifically the potential importance of hull fouling as a vector for invasive species introduction and should recommend additional research to better define the threat.

Hull fouling concerns are greatest with barges, floating dry docks, mothballed fleets and other floating structures that may reside in marine waters for extended periods of time before being moved to new locations. Significant amounts of barge traffic along the West Coast suggest that hull fouling may be a significant threat to Oregon. Furthermore, the International Maritime Organization's recent ban on (toxic) anti-fouling paint, may result in an increase in hull fouling of maritime vessels and an increase in movement of invasive species on hulls.⁵ The Center for Lakes and Reservoirs at Portland State University is initiating a study of the importance of hull fouling as a vector of invasive species introduction to the Columbia River. This work will help define the problem and inform policy development to reduce the threat of this vector.

17-3 Increase public awareness about the importance of prevention

Alerting the general public to behaviors that lead to invasive species introductions is a vitally important component of any comprehensive plan to manage invasive species. Recommendation 17-3 and subsequent steps appear to have been suggested in lieu of recommending regulations be implemented or enforced in industries that import and sell nonnative aquatic species to the general public. The Report should recommend that existing laws prohibiting the transport of nonnative species, e.g., Lacey Act, be enforced through increased funding of responsible enforcement programs.

Instilling in the general public a sense of personal responsibility for of invasive species prevention is a process that needs to be developed cooperatively. Resource agencies should work cooperatively with those industries and stakeholders that traditionally benefit directly from nonnative species sales to ensure that fewer groups feel unfairly targeted and that the message is successfully distributed to the target audiences. Furthermore, an outreach and education effort should be based on a thorough understanding of the types of messages that resonate with the target audience. The message may vary geographically, demographically, and by audience activity.

Strategies, Bishop Museum. Proceedings of the Third International Conference on Marine Bioinvasions, La Jolla, California, March 16-19, 2003, p. 45.).

⁴ Ruiz, G. Ships as Vectors: Assessing the Role of Hull Fouling in Biological Invasions. 11th International Congress on Marine Corrosion and Biofouling. University of San Diego, California. 22 July to 26 July 2002

⁵ On January 1, 2003 the International Convention on the Control of Harmful Anti-Fouling Systems went into effect prohibiting the use of harmful organo-tins (which act as biocides and over time leach into surrounding water) in anti-fouling paints used on ships. It also established a mechanism to prevent the future use of other harmful substances and pollutants in anti-fouling systems. By January 1, 2008 all organo-tin anti-fouling compounds must be removed from vessels and platforms or coated with an approved sealant to prevent further leaching. See <http://www.imo.org> for more information.

Oregon is leading the effort on the West Coast in public education on invasive species. The Oregon Invasive Species Council (OISC) is developing a statewide marketing campaign and an "umbrella" message about the importance of prevention of invasive species introduction. The effort will be based upon thorough market research to "fine-tune" the message for particular audiences. The Report should acknowledge efforts by states and recommend federal funding of state-developed outreach and education efforts.

Accelerating Detection and Response

We agree with the Commission that prevention is the best tool against invasive species. Faced with the reality of accelerating invasion rates, however, detection, and rapid response plans are crucial. The Report calls for a national rapid response plan that is triggered by a threshold for action. One well-established rule of invasive species management is that small infestations that are discovered early can be eradicated, while the probability of effective control decreases and cost for control increases as the invader's population size increases. The Report should endorse rapid management response to all new invasive species infestations; the trigger should be for inaction, i.e., rapid response should occur unless the population size is too large or widespread to result in a likely probability of control.

17-4 Establish and fund a national plan for detection, notification and rapid response

This is a critically important recommendation. The Commission correctly noted that limited resources and jurisdictional squabbles hinder the development and implementation of these plans. The Report called for development of a national plan for rapid response. To be effective, however, response plans should be species/taxa or location-specific. A national plan would likely be too generic to be useful.

In Oregon, the Oregon Department of Agriculture and the Center for Lakes and Reservoirs at Portland State University have collaborated on a response plan for spartina, an invasive plant in West Coast estuaries.⁶ Large infestations of spartina exist in Washington and California, while Oregon has only a small infestation that is under eradication. Thus, a detection and rapid response plan that is narrowly focused can be effective; similar efficacy has yet to be demonstrated with more general response plans. While admittedly more resource intensive, the Report should support development of narrowly focused detection and response plans that will be effective when implemented rather than national plans that are likely to be too general.

Basic information on species distribution is fundamental to invasive species management. This information is lacking for many, if not most, coastal systems in the U.S. The need for comprehensive surveys and monitoring outlined in Recommendation 17-4 addresses one of the greatest deficiencies in marine invasive species management. A significant increase in funding will be required to address the problem.

⁶ See Pfauth, M, M. Sytsma and D. Issacson. 2003. *Oregon Spartina Response Plan*. Prepared for Oregon Department of Agriculture. 61pp.

In 2001, the Center for Lakes and Reservoirs at Portland State University initiated the Lower Columbia River Aquatic Nonindigenous Species Survey (LCRANS). LCRANS was undertaken to provide comprehensive information about the aquatic invasive species present in the lower Columbia River. The results of this investigation will serve as a baseline for evaluating the rate of species introductions to the river, permit measurement of the efficacy of ballast water regulations, and help understand bioinvasions at larger geographic scales. In addition, the data will be useful for determining where the lower Columbia River is vulnerable to invasion and for evaluating effects of introductions on important ecological processes. To-date our research has established that more than 70 nonnative plants and animals are present in the lower Columbia River and suggests that the rate of new species invasion has increase during the past 30 years.⁷

Improving the Control of Invasive Species

Agency cooperation and coordinated regional actions are crucial when dealing with the complicated issue of marine invasions, and establishing clear jurisdiction, mandates and funding for aquatic invasive species within those agencies is also a necessary step to successful management. Oregon is involved in several coordinating organizations. The Center for Lakes and Reservoirs at Portland State University hosted the inaugural meeting of the Western Regional Panel on Aquatic Nuisance Species to coordinate activities in the West and co-founded the Pacific Ballast Water Group, an association of industry, regulatory, and academics that focuses on regional coherence in ballast water management regulation. Portland State University also co-founded the Columbia River Aquatic Nuisance Species Initiative, which brings together ports, shipping, academic, and political leaders to address invasive species problems associated with shipping on the Columbia River. The Commission's preliminary report does not recognize the grassroots, locally initiated efforts that are ongoing on the West Coast. The Report should acknowledge local efforts and focus new efforts on research and management that directly address the invasive species problem, rather than recommend creation of additional "structural" elements that already exist. The problem is not lack of opportunity to coordinate activities – it is the lack of activities that need to be coordinated.

17-5 Streamline federal and regional programs for managing marine invaders

Increased support for regional and state programs responsible for preventing introductions is imperative for successful management of marine invasions. Even with funding for the Oregon Aquatic Invasive Species Management Plan, which was created by the Center for Lakes and Reservoirs at Portland State University and approved by Governor Kitzhaber, money and personnel are spread too thin. In addition, conflicting and unresolved jurisdiction issues hinder the implementation and enforcement of existing management. The Oregon Invasive Species Council provides a venue for working toward clarification of conflicts in jurisdiction and management goals within Oregon. The Report should recommend formation of state invasive species councils to facilitate streamlining of programs within and between states.

⁷ See *Lower Columbia River Aquatic Nonindigenous Species Survey: Interim Report* prepared by R. Draheim, M. Sytsma, J. Cordell, and J. Chapman. 2003. Available at <http://clr.pdx.edu>

Under current federal legislation, funding for ballast water and aquatic invasive species research and management is heavily weighted on the Great Lakes and Chesapeake Bay. The Report should examine disparity in funding between regions of the country and recommend more even distribution of federal funds for aquatic invasive species management.

International Partnerships

The introduction and spread of marine invasive species is indeed a global issue and one that cannot be fully addressed without cooperation and partnerships throughout the global community. As noted above, lack of a strong federal program on ballast water has resulted in a proliferation of state programs that complicate international partnerships.

17-6 Take a leading role in the global effort to control the spread of non-native species

The USCOP is correct in acknowledging the need for the U.S. to become a world partner in preventing the spread of invasive species. The Center for Lakes and Reservoirs At Portland State University participates in the Pacific Northwest Economic Region Invasive Species Committee, which includes representatives from Canadian provinces as well as U.S. states. The Oregon emphasis on sustainability could be a model for the U.S. and the world in this regard. Shipping is critical to the Oregon economy, but shipping is also a major mode of dispersal of damaging aquatic invasive species. In the Columbia River, introduced species threaten our state and region's natural resources and investment in salmon recovery. The Report should recognize the value of a sustainability paradigm in considering shipping related invasive species management.

Research Needs

17-7 Develop and implement an interagency plan for research and monitoring

Clearly, a coordinated response among state, federal, and tribal agencies is required for effective invasive species management. As noted throughout this report, for the most part it is not the lack of capability that is lacking, it is lack of funding. Funds for existing programs are often not funded at authorized levels. Furthermore, the National Invasive Species Act, which is a vehicle for accomplishing many of the planning, management, and coordination functions called for in the Report, has stalled in Congress. The Report should recommend that the National Invasive Species Act be passed and that new and existing programs for invasive species management be funded at authorized levels.

Thank you for taking the time to review our recommendations. The Commission's report will provide an important basis for future ocean management. Therefore, the Commission's final recommendations should be visionary and build upon current programs. We hope this memorandum highlights successes in invasive species management in Oregon, needed improvements to federal invasive species management, and invasive species issues not adequately addressed by the Commission's preliminary report.

Invasive Species

Mark Systma & Robin Waldeck, Portland State University, (503) 725-3833

Page 7 of 7

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Aquaculture
Paul Englemeyer, (541) 547-4227

Memo

To: Governor Kulongoski
CC: Jim Myron, Jim Brown, Bob Bailey, Lindsay Ball, Patty Burke, Bill Bradbury, Michael Carrier, Katy Coba, Michael Grainey, Stephanie Hallock, Ann Hanus, Geoffrey Huntington, Hal Weeks
From: Oregon NGOs
Date: May 7, 2004

Re: U.S. Commission on Ocean Policy Preliminary Report

Key strong points that we can endorse;

- Acknowledges that marine aquaculture must be sustainable.
- Identified a list of potential impacts which include; disease, genetic contamination, competition between farmed and native stocks, effects on water quality and wetlands, harm to surrounding ecosystems, marine mammal entanglement, use of wild fish in feed, antibiotic and hormone contamination, and introduction of non-native species.
- Seeks the development of a coordinated and consistent policy, regulatory, and management framework that is based on scientific and engineering support for an ecologically and economically sustainable marine aquaculture industry.
- Provides for collection of rent from aquaculture operations.
- Recommends aquaculture leases post performance bonds.
- Calls for application of best management practices.
- Recommends international cooperation.

Weaknesses

- Fails to recommend that proposed offshore marine aquaculture facilities in the EEZ be required to meet an environmental standard before NOAA issues permits and leases, and that NOAA have clear authority to revoke permits and leases or impose new restrictions if facilities do not adhere to the standard.
- Otherwise offers few solutions to serious environmental issues, and eaves responsibility of addressing environmental issues primarily with industry.
- Fails to deal with the issue of genetic impacts or genetic engineered species.
- Focuses on balance between economic and environmental objectives, with the implication that it's acceptable for potentially highly profitable aquaculture operations to cause substantial environmental degradation.
- Fails to discuss the need to assess potential cumulative impacts of marine aquaculture development on the environment and on fishing.

- Fails to give clear direction to use '**precautionary approach**' to this developing industry.
- Fails to discuss basic need for zoning in the EEZ before opening any area to aquaculture.
- Fails to consider actions to be taken for inspections, record keeping, escapements, storm events, disease outbreaks, marine mammal entrapments and other foreseeable events.
- Focuses research, development, and extension activities primarily on speeding the development of the marine aquaculture industry.

Comparison to Pew Report

<u>Pew Recommendation</u>	<u>U.S. Commission Recommendations</u>
<ul style="list-style-type: none"> • Implement a new national marine aquaculture policy based on sound conservation principles and standards. Details include -- Congress should pass legislation to regulate marine aquaculture and establish national standards for ecologically sustainable marine aquaculture facilities. NOAA or the proposed oceans agency should be the lead federal agency. Until standards and policy are established, there should be a moratorium on the establishment of new marine finfish farms, and similarly the use of genetically engineered marine or anadromous species. • Provide international leadership for sustainable marine aquaculture practices. 	<ul style="list-style-type: none"> • Congress should amend National Aquaculture Act to make NOAA the lead federal agency for implementing a national policy for environmentally and economically sustainable marine aquaculture and create an Office of Sustainable Marine Aquaculture in NOAA. • NOAA's new Office of Sustainable Marine Aquaculture should develop a comprehensive, environmentally sound permitting, leasing, and regulatory program for marine aquaculture. • Congress should expand funding for marine aquaculture R&D, training, extension, and technology transfer programs in NOAA. The Office of Sustainable Marine Aquaculture should set priorities for these funds. • The U.S. should work with the U.N. Food and Agriculture Organization to encourage worldwide adherence to the aquaculture provisions of the Code of Conduct for Responsible Fisheries.

Recommendations for Strengthening the U.S. Commission Report

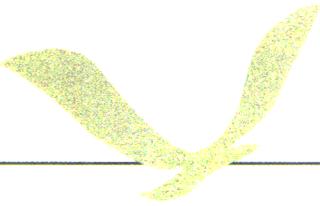
The Commission should urge that:

- NOAA assess the potential cumulative impacts of marine aquaculture development on the environment and on fishing.

- The new Office of Sustainable Marine Aquaculture be clearly held accountable to the directions in the Magnuson-Stevens Fishery Conservation and Management Act.
- NOAA develop a clear '**precautionary approach**' when dealing with uncertainty and risk.
- NOAA evaluate areas in the EEZ as suitable or unsuitable for aquaculture before opening any area to aquaculture.
- Proposed offshore marine aquaculture facilities be required to meet a strict environmental standard before NOAA issues permits and leases, and NOAA should have clear authority to revoke permits and leases or impose new restrictions if facilities do not adhere to the standard.
- NOAA's regulatory program include actions to be taken for inspections, record keeping, escapements, storm events, disease outbreaks, marine mammal entrapments and other foreseeable events.
- Preventing environmental impacts be a major focus of research, development, and extension for marine aquaculture.

Comparison of USCOP report to current programs and proposed actions

NOAA plans to submit to Congress legislation to streamline federal permitting of offshore aquaculture facilities and fund activities to promote offshore aquaculture. Although the text of the bill is not yet public, NOAA officials have indicated that the legislation will not require that offshore facilities meet a broad environmental standard before they can be permitted, but rather rely heavily on an environmental code of conduct. NOAA has not, at least yet, examined the potential cumulative impact of marine aquaculture development that would be facilitated by the legislation.



Sea Grant Association

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Robert R. Stickney

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May 24, 2004

U.S. Commission on Ocean Policy
1120 20th Street, NW
Suite 200 North
Washington, D.C. 20036

Dear Commissioners:

On behalf of the Sea Grant Association (SGA), thank you for your comprehensive and thoughtful treatment of the nation's ocean policy, management and information needs. The Sea Grant Association represents the combined capabilities of the academic and research institutions nationwide that participate in the National Sea Grant College Program. The SGA serves these institutions by coordinating activities, prioritizing action at the regional and national levels, and offering a unified voice on critical coastal, ocean, and Great Lakes issues. We are especially grateful for the Commission's recognition of Sea Grant's tripartite mission of research, outreach and education. Sea Grant's integrated approach is particularly well suited to tackle many of the difficult problems identified in the Commission's report and as a network we are committed to realizing the goals you have articulated.

The Sea Grant Association wholeheartedly endorses the Ocean Commission's recommendation to significantly enlarge the National Sea Grant College Program. SGA particularly appreciates your recognition of Sea Grant as an underutilized resource; we echo your acknowledgement that growth is not possible with Sea Grant's current budget. The Ocean Commission recommendation to significantly enlarge the National Sea Grant College Program in order to strengthen the U.S. research enterprise can be achieved immediately through an increase in appropriations within the currently authorized levels of the National Sea Grant College Program. The impact of increasing Sea Grant's research capacity would be seen very quickly nationwide as programs engage the ocean research community in addressing important economic, environmental, and social issues facing the ocean, coastal and Great Lakes regions.

We agree that Sea Grant should be empowered to be the primary outreach mechanism for delivering and interpreting information products developed through regional ocean information programs and the state Sea Grant programs are eager to serve in this capacity. We urge you to elucidate this point in your final recommendations and to recognize the need for additional resources to enhance the necessary outreach infrastructure required to achieve this goal. With its established extension network, Sea Grant is uniquely positioned to be the two-way conduit between the providers and

users of information. Indeed, Sea Grant's greatest asset may be the trust that has been developed and nurtured through 35 years as an "honest broker" of scientific information.

Similarly, the Commission report recognized that Sea Grant is at the forefront of coastal, ocean and Great Lakes education. The state Sea Grant programs have the organization and expertise necessary to carry out diverse and innovative educational activities and we are eager to implement the Commission's recommendations in partnership with COSEE and the nation's universities. The structure and function of the National Sea Grant College Program should serve as a key component in NOAA's education and outreach strategy. To achieve this, Sea Grant education funding should be brought in line with our extension efforts. This would enable all Sea Grant programs to employ full time education staff, have direct interaction with COSEE, and have long-term, dedicated resources for schools and teachers.

Sea Grant programs nationwide are at the front lines in many if not most of the critical areas the Commission has identified in its historic report. Our 30-year history of engagement with universities and a myriad of stakeholders places us in a unique position to help in the stewardship and restoration of coastal America. Thank you for your excellent outreach efforts throughout the development of this preliminary report including the opportunity to provide testimony and participate in regional meetings. We look forward to working together to build on the opportunities you have identified for Sea Grant as the next step in our efforts to achieve stewardship and sustainability of our coastal resources.

Sincerely,



for Robert R. Stickney
President

cc: Admiral Conrad Lautenbacher, NOAA Administrator
Rick Roson, AA, OAR
Ronald Baird, Director, NSGCP
Jerry Schubel, Chair, Sea Grant Review Panel



American Society of Civil Engineers

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June 4, 2004

Public Comment on Preliminary Report
U.S. Commission on Ocean Policy
1120 20th Street NW
Suite 200 North
Washington, D.C. 20036

RE: Preliminary Report of the U.S. Commission on Ocean Policy

The American Society of Civil Engineers (ASCE), in conjunction with its Coasts, Oceans, Ports, and Rivers Institute (COPRI), appreciates the opportunity to submit these comments on the preliminary report of the U.S. Commission on Ocean Policy that was released on April 20, 2004.*

ASCE and COPRI commend the Commission for the broad-ranging and thoughtful examination of our oceans that is presented in the report. The Commission correctly highlights the many economic benefits of the coast and ocean, from marine transportation and commerce, coastal tourism and fisheries. In particular, we endorse the Vision for the Future on page xii of the report and the Guiding Principles contained on page 427. These are sound. They include notions of sustainability, ecosystem based management, and multiple use management. ASCE supports these ideas, and they are fundamental to getting the job done. They should be supported because this approach, if adopted, will influence the federal agencies and their staffs.

* ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 130,000 civil engineers individually in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Service rules. COPRI is a professional institute within the American Society of Civil Engineers, serving more than 2,500 professionals as the multi-disciplinary and international leader in improving the knowledge, teaching, development, and practice of civil, ocean, coastal, and hydraulic engineering.

While the Commission notes that our nation needs to foster and encourage students to pursue careers in marine science, it is also important to recognize the need for trained and qualified engineers. We encourage you to insist on having at least one civil engineer appointed to the Presidential Council of Advisors on Ocean Policy.¹

A.

Throughout the section on education and research, the Commission needs to think broadly about America's educational needs and expand all the discussions to cover the engineering, physics, oceanography and the earth sciences. In particular, Recommendation 8-1 should be expanded to consider achievement in natural and social sciences, engineering and earth sciences and increasing ocean awareness.

Recommendation 8-7 should also cover engineering in the development of stronger and more effective relationships between research and education. We recommend that the U.S. Army Corps of Engineers be added to the list of supporting agencies as it has a critical national role in many aspects of this report. In Recommendation 8-9, there should be support for colleges and universities in promoting introductory marine science, coastal, and ocean engineering, and oceanography courses to expose students to these subjects.

B.

The Preliminary Report recommends the use of financial disincentives, such as the withholding federal-aid highway money, as a means of achieving positive water-quality results. Specifically Recommendation 10-4 advises Congress to "provide authority under the Clean Water Act and other applicable laws for federal agencies to impose financial disincentives and establish enforceable management measures to ensure action if a state does not make meaningful progress toward meeting water quality standards on its own."

ASCE cannot support policies that penalize one program as a way to gain improvements in another area. To be clear, ASCE supports controls for urban area and highway stormwater runoff to protect public health and the environment. Non-point-source regulations must focus on receiving waters and their watersheds, define pollutants in stormwater runoff in terms of significant impairment to the beneficial uses of receiving water, and incorporate the control of pollution from stormwater runoff to the maximum extent practicable (MEP) as defined through a community planning process, using best management practices (BMPs).²

In 1987, the Clean Water Act was amended to strengthen the regulation of stormwater

¹ AMERICAN SOCIETY OF CIVIL ENGINEERS POLICY STATEMENT 101, APPOINTMENT OF ENGINEERS TO POLICY POSITIONS IN GOVERNMENT (2003), at <http://www.asce.org/pressroom/news/policy.cfm>.

² AMERICAN SOCIETY OF CIVIL ENGINEERS POLICY STATEMENT 461, RURAL NONPOINT SOURCE WATER QUALITY (2003).

runoff from all sources. But the 1987 amendments expanded the definition of point-source to include stormwater runoff which differs from traditional “point sources” regulated under the National Pollution Discharge Elimination System in that stormwater discharges are characterized by dispersed discharges and episodic flows.

ASCE also believes that the government should not tap into the Highway Trust Fund (HTF) to establish stormwater controls for federal-aid highways. The nation’s highway infrastructure is in a serious state of disrepair, and every dollar in the HTF is needed to make critically needed safety upgrades.³

The budgetary firewalls instituted in the Transportation Equity Act for the 21st Century (TEA-21) have been successful in protecting trust fund dollars. As we demonstrated in the *2001 Report Card for America’s Infrastructure* and the follow-up Progress Report in 2003, there is an urgent need for capital improvements in all of the nation's transportation systems.⁴ These needs also have been clearly identified and documented in the U.S. Department of Transportation's Conditions and Performance Report, and other sources as well. A modern adequate transportation system utilizing all modes is absolutely necessary to maintain our expanding economy.

C.

Recommendation 14-4 requests that the U.S. Environmental Protection Agency (EPA) develop a comprehensive plan for obtaining long-term funding for the nation’s “current aging and inadequate wastewater and drinking-water infrastructure, anticipating demands for increased capacity and more stringent treatment in the coming decades.”

ASCE strongly supports this recommendation and urges Congress to create a clean water trust fund to address these well-documented needs.⁵

The *2001 Report Card for America’s Infrastructure* and the Progress Report, released in 2003, studied the conditions of our nation’s wastewater and drinking-water facilities. Both types scored poorly in our evaluations.

We found that the nation's 16,000 wastewater systems face enormous needs. Some sewer systems are 100 years old and many treatment facilities are past their recommended life expectancy. Currently, there is a \$12 billion annual shortfall in funding for infrastructure needs; however, federal funding has remained flat for a decade. Because of this continuing shortfall, more than one third of U.S. surface waters do not meet water quality standards.

³ AMERICAN SOCIETY OF CIVIL ENGINEERS POLICY STATEMENT 434, TRANSPORTATION TRUST FUNDS (2003).

⁴ AMERICAN SOCIETY OF CIVIL ENGINEERS, 2003 PROGRESS REPORT: AN UPDATE TO THE 2001 REPORT CARD (2003), at <http://www.asce.org/reportcard> .

⁵ AMERICAN SOCIETY OF CIVIL ENGINEERS POLICY STATEMENT 480, CLEAN WATER INFRASTRUCTURE FUNDING (2003).

America's farmers, fishermen, manufacturers and tourism industries rely on clean water to carry out activities that contribute over \$300 billion to our economy each year. However, the challenge to continue providing clean water remains, as our existing national wastewater infrastructure is aging, deteriorating and in need of repair, replacement and upgrading. In fact, EPA has reported that without improvements to the nation's wastewater treatment infrastructure, we face the very real risk of losing the environmental gains we have achieved over the last three decades since the passage of the Clean Water Act of 1972.

While drinking water quality remains good, the infrastructure of the nation's 54,000 drinking-water systems is aging rapidly. Federal funding remains flat, while the infrastructure needs continue to increase. There is an annual shortfall of \$11 billion needed to replace or rehabilitate facilities that are nearing the end of their useful life and to comply with federal water regulations.

D.

Recommendation 30-1 urges Congress to establish an "Ocean Policy Trust Fund" within the U.S. Treasury. Money for the Trust Fund would be allocated from the income from oil royalties to finance the oceans programs in the Preliminary Report. ASCE supports this proposal.

We believe that dedicated trust funds have been proven successful in the past. With respect to funding sources generally, ASCE endorses (1) tax-exempt bond financing and related infrastructure funding strategies for establishing public-private partnerships, expanding state revolving loan funds and creating a Federal Infrastructure Bond Bank; (2) state infrastructure financing agencies supported in part by federal loans to provide low interest loans for new construction, rehabilitation or replacement; (3) private financing and operation of infrastructure components such as water systems, water pollution control plants, rail transit, toll roads, landfills and similar facilities; (4) user fees for operation, maintenance, replacement or rehabilitation; (5) multiyear capital budgeting at the federal level to separate the national investment needs from operating expenses; (6) development fees and impact fees to pay for new infrastructure construction; and (7) dedicated user fees and trust funds (off budget) for specific classes of infrastructure such as highways and airport-airway systems.

E.

Chapter 12 of the Preliminary Report provides an excellent discussion of the complex problem of dual role of sediment in the coastal environment. Current studies are identifying that perhaps one trillion cubic yards of sediment has been diverted from the coast within the United States alone, through varying activities such as sand and gravel mining, dams and water reservoirs, coastal structures, and navigation projects.

The positive benefits of these activities are not in dispute; however, the consequences to the coast need to be addressed to maintain beach and intertidal habitat areas, a

protective buffer for inland development, coastal recreation and the basis for much of the U.S. tourist economy. A congressional authority should be developed to coordinate, plan, design and facilitate the supply of coastal sediment lost by anthropogenic activities. Regional sediment management is an excellent framework for a comprehensive approach to help direct these current and future management and development issues for our beaches and shores. The coastal engineering community as a whole, and particularly the Corps of Engineers, has played a vital role in the development of the regional sediment management concept. We believe that the results of these efforts are needed for the report to be comprehensive.

The Integrated Ocean Observing System presents a broad vision for better understanding our oceans. The information and applications that can develop from such a program will provide major new opportunities in all aspects of the oceans, from safer marine transportation and better predictors of coastal storms, to tools for sound ocean resource management and understanding of global weather patterns.

Such a program will renew our nation's appreciation for the many blessings we receive from the ocean. It will also require trained professionals in a broad array of disciplines and ASCE and COPRI, again, hope to work, as appropriate, with the National Ocean Council, the Presidential Council of Advisors on Ocean Policy, the National Oceanographic Partnership, the Committee on Ocean Science, Education, Technology and Operations, and Ocean U.S. to insure that the knowledge, teaching, development, and practice of civil engineering and other disciplines keep pace with the demands and expectations that will come with these new ocean challenges.

Should you wish ASCE to clarify or elaborate on any items, ASCE and COPRI would be happy to discuss them further with the Commission. Please contact the ASCE Government Relations Department at (202) 326-5227 or at govwash@asce.org .

Thank you again for the opportunity to comment.

Respectfully submitted,

THE AMERICAN SOCIETY OF CIVIL ENGINEERS

COASTS, OCEANS, PORTS, AND RIVERS INSTITUTE

DEPT OF

MAY 13 2004

LAND CONSERVATION
AND DEVELOPMENT

May 7, 2004

Mr. Robert Bailey
Ocean-Coastal Management Program
Oregon Department of Land Conservation and Development
635 Capitol St NE, Suite 150
Salem, OR 97301-2540



OREGON
STATE
UNIVERSITY

Dear Bob,

I am pleased to send you the enclosed scientific review of the U.S. Commission on Ocean Policy (USCOP) preliminary report.

The Institute for Natural Resources (INR) appreciates your invitation, on behalf of the Governor, to coordinate this review of the report by Oregon University System scientists. We hope that this is the first of many chances to assist the Governor and state agencies by providing scientific review and analysis of public policy issues.

In order to complete a timely and useful scientific review, INR convened a Marine Science Advisory Panel comprising a select group of well respected marine scientists from the Oregon University System.

The review is comprehensive. Panel members considered all recommendations relevant to the marine science and higher education community in Oregon. They also invited and incorporated comments from colleagues as appropriate. Due to the time and procedural constraints of the 30-day comment period for the USCOP report, however, we were not able to invite participation from the broad range of Oregon University System scientists who may be interested in the Commission report.

The scientific review evaluates the scientific foundation and outlines priority recommendations of the USCOP report in the areas of marine science and higher education as agreed upon by this panel of Oregon scientists.

We hope this review will help inform Governor Kulongoski's response to USCOP report as it relates to Oregon's marine environment.

Best wishes,

A handwritten signature in black ink that reads 'Gail Achterman'.

Gail Achterman
Director

cc: Jim Brown, Governor's Natural Resources Office
David Van't Hof, Governor's Natural Resources Office
Jim Myron, Governor's Natural Resources Office
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**Scientific Review by the
Marine Science Advisory Panel of Oregon University System Scientists of the**

**U.S. Commission on Ocean Policy Preliminary Report for
Governor Kulongoski's Oregon Response**

EXECUTIVE SUMMARY

The Marine Science Advisory Panel (Panel) of Oregon University System scientists commends the U.S. Commission on Ocean Policy (USCOP) for its comprehensive review of the Nation's current approach to ocean policy and management and its recommendations for future improvements. The USCOP report highlights three key messages:

1. The oceans are important to all Americans.
2. A multitude of land-based and ocean-based activities are negatively affecting oceans.
3. Changes are urgently needed.

There is ample and unequivocal scientific evidence to support these conclusions. Moreover, these key messages are as important and relevant to Oregonians as they are to the entire Nation.

The USCOP anchors its recommendations for a new national ocean policy in 13 Guiding Principles. These principles range from Sustainability and Stewardship, to Ocean-Land-Atmosphere Connections, Best Available Science and Information, and Ecosystem-Based Management. The Guiding Principles, which are grounded firmly in science, capture the essence of how ocean policy should be developed and implemented. Despite the compelling logic of the principles, they currently are not used to provide positive guidance for decision-making at federal, state, or local levels around the Nation. Only recently has their importance been recognized. The Panel concludes that these Guiding Principles are solidly grounded in science, and it strongly endorses using them to anchor recommendations and decisions. (Refer to Section I of the review for scientific comment about the USCOP Guiding Principles.)

The Panel notes that most of the USCOP recommendations do not go far enough to achieve the goals articulated in the Guiding Principles. For this reason, the Panel encourages Governor Kulongoski to highlight in his response the need for the USCOP to strengthen its recommendations so that they, in fact, enable both Oregon and the country to make significant progress toward the goals outlined in the report.

The USCOP Guiding Principles mesh well with Oregon's goals for management of its natural resources, including the marine environment. Specifically, a 2003 Executive Order by Governor Kulongoski defines sustainability to mean "using, developing and protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own need." In addition, since 1973, Oregon has maintained a strong program of Statewide Planning Goals that express the State's policies on land use and on related

topics. This policy framework includes Goal 19, Ocean Resources, which outlines the intent “to conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations.”

A common attribute of many of the USCOP Guiding Principles and Oregon’s approach to ocean policy is a focus on the long term and an understanding of the interactions among ocean, atmosphere, and land. Considering the long-term consequences of various activities to the marine environment is central to responsible management and policy development. In recent years, scientists have increasingly come to recognize the interconnectedness among the physical, chemical, geological, and biological aspects of the ocean, and their interactions with human society. Yet, a long-term focus has been inadequately represented in the development and implementation of ocean policy. Oftentimes, the political and economic frameworks for managing oceans have focused largely on short-term benefits and impacts and have not examined issues from a system-wide perspective.

In order to address the USCOP Guiding Principles, new policy approaches are necessary that encourage, reward, and, where appropriate, require a long-term focus in management of the marine environment. Based on our scientific review of USCOP, we support the development of strong policies—ones that provide insurance and create buffers for inadvertent mismanagement or unexpected environmental change, preserve options, and allow natural and human systems to be resilient over the long term. For example, Congress should be urged to pass legislation to codify the Guiding Principles articulated by the USCOP as a national ocean policy. Sustained and expanded investments in research, education, and infrastructure will also be necessary to develop these sound policies and new approaches to management.

Given that these and other Oregon policies are coincident with the USCOP Guiding Principles, the Panel used these principles as a foundation for identifying priority recommendations from the perspective of the Oregon marine science community. (Refer to Section II of the review for a comprehensive outline of scientifically-relevant priorities from the perspective of the Panel, along with current scientific and higher-education efforts in Oregon that could serve as models for implementation of the recommendations, and new, important opportunities for marine research, monitoring, and education in the state.) The Panel recommends six overarching priorities:

- 1) A mechanism is needed for coordinated ocean policy development and implementation at the Federal level. (Chapters 4 and 6)
- 2) Regional ocean governance is needed to address challenges to oceans at an ecologically appropriate scale (the Large Marine Ecosystem) and engage in collaborative decision-making that involves Federal, regional, state, and local entities. (Chapter 5)
- 3) Formal and lifelong education is needed to teach Americans about connections in the marine environment and among ocean, land, and atmosphere, and the importance of oceans to sustaining life and providing important goods and services to the Nation’s economy. (Chapter 8)
- 4) Additional research in biogeophysical sciences, social sciences, and economics is needed to inform this coordinated approach to policy and management. (Chapters 25-28)

- 5) An Integrated Ocean Observation System (IOOS) is needed to improve the Nation's information base about oceans and to inform decision-making at Federal, state, regional, and local levels. (Chapter 26)
- 6) Expanded investments in scientific, technical, and human infrastructure are required to realize these priorities.

The Guiding Principles help not only to define a vision for future ocean policy in the U.S., but also a framework against which the effectiveness and progress of recommendations made by the USCOP may be judged in the future. In addition, the 2000 Oregon State of the Environment Report identified a host of indicators by which the state measures the environmental condition of its ocean and coastal areas. (Refer to Section III for a consideration of these indicators as they relate to USCOP recommendations.) This comparison may be useful as the State identifies priority recommendations from the USCOP report, in addition to areas where the recommendations may be strengthened to address issues of concern to Oregon.

The Marine Science Advisory Panel

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**Scientific Review by the
Marine Science Advisory Panel of Oregon University System Scientists of the
U.S. Commission on Ocean Policy Preliminary Report for
Governor Kulongoski's Oregon Response**

TABLE OF CONTENTS

Section	Page
I – Scientific Comment by the Marine Science Advisory Panel (Panel) about the Guiding Principles of the U.S. Commission on Ocean Policy.....	1
II – Comprehensive Review of the U.S. Commission on Ocean Policy Recommendations as Relevant to Marine Science and Higher Education in Oregon.....	2
III – Comparison of the 2000 <i>Oregon State of the Environment Report</i> and Recommendations from the U.S. Commission on Ocean Policy.....	21

SECTION I – Scientific Comment about the USCOP Guiding Principles

The U.S. Commission on Ocean Policy (USCOP) has articulated a set of overarching Guiding Principles to frame the creation of a new national ocean policy. When taken collectively, these principles provide a careful, circumspect, and ambitious context from which to develop policies that will promote vibrant coastal communities, healthy and resilient ecosystems, abundant wildlife, sustainable fisheries, clean and safe shorelines, and enjoyable and inspirational recreational opportunities—in short, the visions that Oregonians articulate for their coast and ocean. The Guiding Principles align closely with Oregon’s Statewide Planning Goals, policies, and values. In fact, they underscore the importance of weighing long-term interests more heavily than short-term ones in the balance of competing uses. They are holistic in geographic scope, rather than focused on a single component of a complex ecosystem. The USCOP Guiding Principles were conceived to foster an atmosphere of objective scientific inquiry to form the basis of policy and decision-making to reconcile the diverse needs of all Oregonians.

The Guiding Principles capture the core elements of “what has been missing” from management to date, at the federal, state, and local levels. For example, the long-term theme that cuts across many of the Principles is central to responsible management and yet has been inadequately represented. Instead, the political and economic framework for management has often focused only on the short term and has not examined issues from a system-wide perspective. By developing operational content for the USCOP Guiding Principles and the current policies of Oregon, the Nation and the state can make measurable progress in ocean and coastal management.

The USCOP Guiding Principles and Oregon policies also provide a set of templates against which recommended actions are to be judged. During its deliberations, the Panel has asked if the various proposed policies and actions recommended in the USCOP report will lead to such goals as *Sustainability* or *Ecosystem-Based Management*, which are outlined in the Principles. In many cases, the answer was “no, not without strengthening the proposed approach.” Governance frameworks could move toward a long-term focus by encouraging, rewarding, and, where appropriate, requiring policies and actions which take a long view. This task is politically challenging, but necessary and appropriate for meaningful change. Additionally, it must be recognized that policies and actions, even once approved against the template of Guiding Principles, cannot remain static. This notion is embodied in the USCOP Guiding Principle of *Adaptive Management*. *Adaptive Management* recognizes that policies and actions that provide insurance and create buffers for management uncertainties or environmental change, preserve options, and allow recognition of resiliency in natural and human systems are needed—for research, monitoring, management, and funding alike. Similarly, changes to the ecosystem from processes acting over long time scales are important to acknowledge when developing policies and actions that address the Guiding Principle of *Ecosystem-Based Management*.

In summary, the Panel concludes that the USCOP Guiding Principles closely align with Oregon’s statewide goals, policies, and values, and endorses their operational definition and eventual application as templates and measures against which to weigh new policies and actions. The Panel notes that most of the USCOP recommendations do not go far enough to achieve the goals articulated in the Guiding Principles. Stronger recommendations will be needed if the country is to achieve the lofty goals called for in the report.

SECTION II – Comprehensive Review of USCOP Recommendations as Relevant to Marine Science and Higher Education in Oregon

The Marine Science Advisory Panel (Panel) identified six overarching priorities during its deliberations (see Executive Summary):

- 1) A mechanism is needed for coordinated ocean policy development and implementation at the Federal level.
- 2) Regional ocean governance is needed to address challenges to oceans at an ecologically appropriate scale (the Large Marine Ecosystem) and engage in collaborative decision-making that involves Federal, regional, state, and local entities.
- 3) Formal and lifelong education is needed to teach Americans about the connections in the marine environment and among oceans, land, and the atmosphere, and the importance of oceans to sustaining life and providing important goods and services to the Nation's economy.
- 4) Additional research in biogeophysical sciences, social sciences, and economics is needed to inform this coordinated approach to policy and management.
- 5) An Integrated Ocean Observation System (IOOS) is needed to improve the Nation's information base about oceans and to inform decision-making at Federal, state, regional, and local levels.
- 6) Expanded investments in scientific, technical, and human infrastructure are required to realize the aforementioned priorities.

The Panel used these priorities as guideposts for completing a comprehensive review of the USCOP recommendations. Based on these priorities, the Panel has selected a number of recommendations that are of particular relevance and high priority to marine science and higher education in Oregon. These recommendations are outlined in the following pages. In addition, the Panel identifies current scientific and higher-education efforts in Oregon that could serve as models for implementation of the recommendations, and new, important opportunities presented by the USCOP recommendations for marine research, monitoring, and education in the state.

PRIORITY 1: A mechanism is needed for coordinated ocean policy development and implementation at the Federal level.

The Panel recognizes the need to coordinate ocean policy development and implementation at the Federal level. One possible approach to address this need is through the structural change recommended by the USCOP at the highest levels of government. The Panel agrees with Recommendation 4-1, to establish an interagency National Ocean Council at the level of the President. The National Ocean Council would facilitate communication of data and information for scientifically-informed decision-making at the national and regional levels, distribute funding necessary to support basic and applied research and monitoring, and assess the state of the Nation's oceans and coasts on a periodic basis to measure the achievement of national ocean goals, as specified in the USCOP report. The National Ocean Council structure could enable USCOP science-relevant recommendations to be translated into meaningful action.

The Panel also supports establishment of the Committee on Ocean Science, Education, Technology, and Operations (COSETO) within the National Ocean Council to coordinate and

plan federal marine facilities and operations, federal oversight of the Integrated Ocean Observing System, and coordination of ocean-related efforts (see Recommendation 4-7). In addition, the Panel endorses the USCOP recommendation to create a formal structure for input from nonfederal individuals and organizations through the Presidential Council of Advisors. This direct conduit for information to the President would be a welcome opportunity for communication from the perspective of the marine science and education communities.

In addition to its National Ocean Council recommendations, the USCOP sets forth a three-phase process to: 1) strengthen the National Oceanic and Atmospheric Administration (NOAA), primarily through enactment of an organic act, 2) consolidate selected ocean and coastal programs from other agencies into NOAA, and 3) include oceans and coasts within a unified federal agency structure (such as creation of a Department of Natural Resources) to manage all natural resources. The Panel agrees that agencies and the capacity to coordinate and collaborate among the management system should be strengthened. An organic act for NOAA would be a step forward in defining roles and responsibilities. However, the Panel cautions that Phases Two and Three the proposed process will take an amount of long-term funding and leadership not previously demonstrated, and may be unrealistic.

A second possible approach to coordinated policy development and implementation at the federal level is through clarification of federal agency responsibility for each current and foreseeable use in the offshore area. Under Recommendation 6-1, a lead federal agency is designated to coordinate with other federal agencies and authorities. The Panel endorses this approach because it provides a natural mechanism for collaboration with regional ocean councils.

The National Ocean Council and regional ocean councils are also instructed to establish a coordinated ecosystem-based offshore management regime, resting partly on notions of balancing multiple uses through a set of guiding principles and collecting resource rent from new and emerging offshore activities. While the principle of “fair return” as articulated in the USCOP report has the initial appearance of being reasonable, the Panel is concerned that, in practice, it may be counterproductive to addressing the USCOP Guiding Principles of Stewardship and Sustainability.

PRIORITY 2: Regional ocean governance is needed to address challenges to oceans at an ecologically appropriate scale (the Large Marine Ecosystem) and engage in collaborative decision-making that involves Federal, regional, state, and local entities.

Chapter 5 focuses entirely on *Advancing a Regional Approach* to ocean policy development and management. A multitude of land-based and ocean-based activities are negatively affecting oceans, which makes a regional approach to governance important from both political and scientific perspectives. Politically, a regional approach is imperative because activities impacting the marine environment are diverse and cross political jurisdictions. To meet USCOP Guiding Principles such as Sustainability, Stewardship, and Multiple Use Management, effective policy and management will take an across-jurisdictional approach.

The examples of regional approaches articulated at the beginning of Chapter 5 illustrate the need for regional approaches. While these examples offer a good starting point and important progress in moving toward the USCOP Guiding Principle of Ecosystem-Based Management, they cannot yet be characterized as successful examples given that the problems facing the health of the Chesapeake Bay and the Gulf of Mexico, and salmon in the Pacific Northwest persist.

From a scientific perspective, a regional approach to ocean governance is necessary to address challenges to oceans at an ecologically appropriate scale, the Large Marine Ecosystem (LME). These areas define functional, cohesive ecological units that provide a logical basis for the scale of regional governance. LMEs capture the interconnectedness among the physical, chemical, geological, and biological aspects of the ocean. Fish, larvae, pollutants, nutrients, and the organisms that generate harmful algal blooms move within an area bounded by the ecosystem, not political boundaries within that ecosystem. LMEs have long been recognized in oceans; for example, the current regional fishery management councils (RFMCs) are largely based on these units. LMEs make good sense from a management standpoint as well as an ecological standpoint, and are the appropriate units for the establishment regional ocean councils (ROCs), which are called for in Recommendation 5-1.

Off Oregon, the necessary and appropriate scale for establishment of a ROC is the California Current LME, which lies off the coasts of Washington, Oregon, and California. The Panel identifies this scale of regional governance as a priority. Yet, this defined area goes beyond the USCOP statement that, "Regional ocean councils should encompass relatively large areas with similar ecosystem features... At a minimum, the boundaries of each regional ocean council should encompass the area from the inland extent of coastal watersheds to the offshore boundary of the nation's exclusive economic zone. The boundaries of the RFMCs may be used as a starting point in the process of developing each council, although these regions may not always be suitable. For example, more than one regional ocean council may be necessary along the Pacific Coast where there is only one RFMC" (p. 59). The USCOP report is inconsistent in that it highlights Ecosystem-Based Management as a Guiding Principle, yet suggests that regional management units potentially be based on political boundaries. The Panel strongly suggests that the boundaries of ROCs should be determined by ecosystem boundaries.

The Panel also recognizes that while the California Current LME should be the basic unit for management, certain problems may require a refinement of this geographic scale to adequately address the issue. Some smaller-scale issues (e.g., Columbia River sediment management) may require a consideration of a subregion of the California Current LME, while other issues require a focus larger than the LME. For example, the atmospheric deposition of nitrogen and other pollutants in the Pacific Northwest is oftentimes from global sources, such as those around the Pacific Rim. Increasing economic development in Asia will impact Oregon's air quality, with subsequent impacts through atmospheric deposition. Recent estimates note that the Los Angeles Basin expects to receive most of its pollution from outside of the U.S. beginning in this decade. Yet, the issue of the potential for global changes to impact coastal marine ecosystems is not well recognized. A comprehensive understanding of marine ecosystems requires continued and expanded examination of the global-scale changes that affect them. Different problems and issues should be solved using knowledge about geographic scales appropriate to the patterns and

processes that cause the problem. Nevertheless, LMEs provide the appropriate, basic unit for regional ocean governance.

The Panel endorses Recommendation 5-2 regarding establishment of regional ocean information programs (ROIPs). The regional coordination, prioritization, and funding functions of the proposed ROIPs are urgently needed. While it is critically important that these programs deliver information that is relevant to policy, management, and outreach, the ROIPs must be solidly science-based—not agency-based—to be truly successful. The USCOP recommends that the ROIPs “may be subsumed within the regional ocean council structure” (p. 59). Yet, multiple reports from the National Research Council (NRC) of the National Academy of Sciences highlights the lessons learned about design and execution of scientific information, with the consistent conclusion that science agencies are most appropriate to deliver the best scientific information. For this reason, oversight of the proposed ROIPs likely should come from a science agency.

The Panel reiterates that, like the ROCs, the logical scale for ROIPs is an integrated area defined by LME boundaries. This scale contrasts with the ROIP regions outlined on pp. 61-62 of the USCOP report, which recommends three west-coast regions (Northwest, Central West Coast, and Southern California).

A regional approach based on LMEs also applies for regional ecosystem assessments. The Panel agrees with Recommendation 4-3, which states that regional ecosystem assessments should be developed and periodically updated. However, the appropriate scale at which assessments, research, and monitoring should be conducted along the West Coast is the California Current LME, not three separate areas as outlined by the USCOP.

A number of past and existing efforts in Oregon have the potential to serve as models for portions of a ROIP and as foundation for the regional ecosystem assessments, including:

- The U.S. GLOBEC Northeast Pacific Program, which conducts multi-disciplinary research designed by oceanographers, fishery scientists, and marine ecologists to examine the potential impact of global climate change on ocean ecosystems.
- PISCO, the Partnership for Interdisciplinary Studies of Coastal Oceans, with its focus on coupling interdisciplinary marine research, monitoring, and policy-relevant outreach for the nearshore area of the California Current LME.
- PNCERS, the Pacific Northwest Coastal Ecosystems Regional Study, with its natural-science, social-science, and economic studies of nearshore and estuarine ecosystems in the Pacific Northwest to inform coastal management and decision-making.

For the ROCs, ROIPs, and regional ecosystem assessments, adequate support in the form of funding and human capital is critical to success.

Following are the Panel’s review of specific issues detailed in the USCOP report that relate to regional ocean governance.

Achieving Sustainable Fisheries

Chapter 19 of the USCOP report recognizes the importance of a solid scientific basis, the creation of properly aligned incentives, and the shift toward Ecosystem-Based Management for decision-making about fisheries.

The report addresses the scientific basis of decision-making in (Recommendations 19-1 through 19-4). These focus on the requirements, roles, and responsibilities for the Scientific and Statistical Committees (SSC) of the RFMCs. When considering the Pacific Fishery Management Council (PFMC), which makes decisions about fisheries off the coasts of Washington, Oregon, and California, the reliance on volunteer labor for SSCs has resulted in a very small pool of qualified and willing members. By recommending compensation, the USCOP report provides an opportunity to enlarge the pool of potential members. In addition, these recommendations will strengthen the source of science advice to the PFMC by providing stronger screening and independent assessment of expertise. In addition, the recommendations suggest that the SSC will help not only to review the existing scientific information on which decision-making about fisheries is based, but also to identify important scientific information. This suggestion changes the current role of SSCs from reviewers to providers of information. The Panel agrees that rigorous independent review of the science basis for decision-making is important. The PFMC already conducts a modified within-region independent review of the biological science through the Stock Assessment Review Panel (STAR) process. This process provides a good starting point from which to work. However, funding will be required for these recommendations to be realistic.

The importance of properly aligned incentives for decision-making about fisheries is noted by the USCOP. Recommendation 19-6, which suggests that no fishing be allowed to take place without an approved fishery management plan, shifts the burden of proof from “fish unless prevented” to “fish only when allowed.” It will provide an incentive to have a full regulatory approach developed. Recommendation 19-15 also addresses incentives by highlighting the importance of allowing dedicated access privilege tools to be developed for fisheries management. Regarding the PFMC, the moratorium on Individual Transferable Quotes (ITQs), in place from 1996-2002, was a problem. At the time the moratorium was implemented, PFMC had one ITQ program in development and others planned. ITQs are a mechanism that addresses the problem of overcapacity, which is a major concern for PFMC fisheries. By ending the race for fish, dedicated access privileges such as ITQs change the incentive structure of fishing and also provide a mechanism to reduce fishing capacity. This recommendation will be welcomed by PFMC fishing industry members, fishery scientists and managers. Recommendation 19-16 would help to address the overcapacity of the fishing fleet off the West Coast, including the removal of tax incentives to unnecessarily increase capacity.

The USCOP report highlights the importance of moving toward an Ecosystem-Based Management approach to fisheries management. Recommendations 19-21 and 19-22 state that NOAA Fisheries should transition away from a single-species approach, first to multi-species, then to an ecosystem approach. The recommendation is attempting to ensure that practical steps are taken to define and protect what are now called Habitat Areas of Particular Concern, but from an ecosystem perspective. The Panel supports these recommendations, but acknowledges that they will require specific operational guidance to be developed. The Panel also notes that

the influence of global-scale shifts in ocean circulation, as well as global economic forces on U.S. fisheries is important and potentially immense. Oregon, by virtue of its location on the Pacific Rim, could pursue both research and decision-support issues that connect global and regional-scale ecosystems and economies.

In addition, Oregon, along with other states along the West Coast, is well positioned to serve as a model for implementation of some USCOP recommendations related to fisheries. For example, several programs already exist in and beyond Oregon to enable cooperative research, which is suggested for expansion in Recommendation 19-9. Ongoing cooperative research in this region is encouraged by and conducted through such programs as:

- Port Liaison Project funded through the NOAA Northwest Fisheries Science Center
- Cooperative Institute for Marine Resources Studies at Oregon State University (OSU)
- Scientists and Fishermen Exchange, created by Extension Sea Grant in Oregon

The USCOP report highlights new opportunities for growing the information base about fisheries off the Oregon coast by suggesting:

- Saltwater anglers be required to purchase licenses to improve in-season data collection on recreational fishing, which would address the paucity of data about recreational fishing in the PFMC region that results in poorly informed management decisions.
- Vessel monitoring systems (VMS) be phased in as a requirement for licensing, which would help contribute to monitoring and data collection about fisheries.
- VMS be integrated into a larger data system, which would create new possibilities for timely, accurate, and comprehensive monitoring and reporting of fisheries data.

Connecting the Oceans and Human Health

Chapter 23 addresses a number of human health issues related to the ocean, including marine bioproduct discovery and development. Under the Guiding Principles of Ecosystem-Based Management (including the precautionary approach) and Preservation of Marine Biodiversity, scientific research is intended to be conducted and information relayed to support the development of bioprospecting criteria. These criteria would address the USCOP Guiding Principle of Best Available Science and Information and Oregon's Statewide Planning Goal 19, Ocean Resources. Areas of special sensitivity, including deep-water coral ecosystems and hydrothermal vent communities, may lay off the coast of Oregon, thus this issue is important to the state.

Harmful algal blooms (HABs), marine bacteria and viruses, and contaminated seafood are also all discussed in the context of reducing the negative health impacts of marine microorganisms. According to a USCOP chart on HABs, the Oregon coast has experienced incidences of Neurotoxic Shellfish Poisoning and Amnesic Shellfish Poisoning, particularly in the area of the Columbia River plume. The USCOP directs several federal agencies and a newly proposed multi-agency entity, the Oceans and Human Health Initiative, to increase research and monitoring efforts and funding for HABs and marine microbiology and virology in general. The regional ocean information programs will need to coordinate with these efforts to receive the support necessary to adequately research and monitor these phenomena off the coast of Oregon and in the region. They also will support the USCOP's identified need to protect the safety of

the Nation's seafood supply through development of rapid, accurate, and cost-effective means for detecting pathogens and toxins in seafood and the subsequent warning of at-risk populations when unsafe conditions are present. This research and monitoring support will necessarily be integrated into the ocean observing system proposed by the USCOP. In addition, scientifically-based information about seafood safety, from both foreign and domestically-landed and cultivated fish, can be distributed through public outreach and education programs to Oregonians, both as preplanned materials and as a rapid-response warning system. Oregon Sea Grant and other educational programs could assist with these efforts.

Conserving and Restoring Coastal Habitat

The USCOP recommends that one function of the ROIP is to determine regional habitat conservation and restoration needs, goals, and priorities that mesh with coastal habitat goals developed by the NOC (Recommendation 11-2). This recommendation highlights the need for Oregon to work together with other coastal states to develop a standardized habitat classification system that is based on a series of common and regionally-applicable units for the mapping of coastal habitats. Moreover, Oregon, Washington, and California could take this opportunity to collaborate on development of a unified system of metrics to gauge the extent of habitat loss, including retrospective assessments of habitat alteration and historical changes in coastal land-use patterns. Pacific Northwest states might formulate a sub-regional approach to the establishment of priorities for coastal habitat preservation, identify critical restoration needs, and develop a regionally-based mechanism to capitalize on timely opportunities for conservation of habitats that meet regional criteria for restoration and enhancement.

Oregon has already taken steps forward in conserving and restoring coastal habitat, and developing a science-based framework to monitor and evaluate the effectiveness of coastal habitat restoration efforts.

- Oregon has turned the tide on loss of coastal tidal marshes, due to adoption of statewide planning goals (Goal 16), restoration activities, and beneficial uses of dredge spoils.
- OSU is a leader in coastal mapping.
- Oregon already has completed a hydrogeomorphic (HGM) assessment of coastal tidal wetlands.
- The Oregon Watershed Enhancement Board (OWEB) coordinates a program for land acquisition, restoration, and monitoring that is focused on improvement in coastal watersheds, including estuaries.

Oregon also can seize on new opportunities presented by the USCOP recommendations to secure resources to update Oregon's estuary maps, which now are three decades old.

Employing Marine Protected Areas as a Management Tool

The federal definition of Marine Protected Areas (MPAs) is "any area of the marine environment that has been reserved by Federal, State, territorial, tribal or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." The USCOP recognizes that MPA is a broad, umbrella term created for many different reasons, including conserving living marine resources and habitat, protecting endangered or threatened species,

maintaining biological diversity, and preserving historically or culturally important submerged archaeological resources. It also recognizes that MPAs are important tools for the Guiding Principles of Ecosystem-Based Management, particularly when designed within the broader context of regional ecosystem planning and employed in conjunction with other management tools. The USCOP does not, however, define marine reserves, a subcategory of MPAs that protect discrete areas in the ocean by prohibiting extractive or destructive activities in perpetuity.

Current scientific understanding indicates the particular usefulness of marine reserves and networks of marine reserves, as one tool in the toolbox of ecosystem-based management and sustainable fisheries management. The Oregon Ocean Policy Advisory Council (OPAC) MPA process examined scientific information and heard from stakeholders over a two-year timeframe. At the end of that time, OPAC determined that marine reserves are a useful tool in marine resource conservation of Oregon's Territorial Sea, and that a limited system of marine reserves should be established as soon as possible, after stakeholder input on design and site selection, to test and evaluate the effectiveness of reserves in meeting Oregon statewide planning goals. Marine reserves are particularly useful in this ecosystem-based management context because they protect part of or entire ecosystems, and have particular implications for the USCOP Guiding Principles of Ecosystem-Based Management, Preservation of Marine Biodiversity, and Stewardship. MPAs, including marine reserves, enhance Multiple Use Management by creating zones for a diversity of uses. In the fisheries management context, marine reserves may be useful to provide insurance against unintended mismanagement by employing the precautionary approach, baseline information against which to evaluate the effects of extractive activities, and places for education and scientific study.

Managing Offshore Energy and Other Mineral Resources

From a scientific perspective, the USCOP recommendations for managing offshore energy and other mineral resources are sound. Almost all issues in this chapter involve regulatory and oversight authority. Some issues, however, are particularly relevant in light of scientific planning, research, and monitoring activities through the proposed ROIPs.

Recommendation 24-4 directs the National Ocean Council and the Department of Energy, among other entities, to review the status of methane hydrates research and development to determine if methane hydrates can contribute significantly to meeting the nation's long-term energy needs. Off the Oregon coast, interest from and work by Oregon scientists on methane hydrates already is underway. Any investment provided to this research through Recommendation 24-4 will be of benefit, particularly for studying the dynamics of methane gas hydrates through the planned cabled observatory on the Juan de Fuca Plate and tying that research into regional ocean information programs and the regional and national ocean observing systems. Research and monitoring activities will help address the USCOP Guiding Principle of Best Available Science and Information to guide future activities.

Oregon's offshore oceanic environment also makes it a good candidate site for renewable energy development, such as offshore wind farms, current/tide conversion, and thermal energy conversion. Limitations include commercial and technological development. Research sites elsewhere (e.g., current and tide conversion models exist off the coast of Washington) should be

examined. While promoting renewable energy over nonrenewable sources, the Panel suggests that the precautionary approach should be used in developing the Best Available Science and Information for development standards. All of these activities could have important, unexpected impacts; for example, energy extraction from internal tides might reduce the amount of energy available for mixing, thus decreasing nutrient inputs to the nearshore ocean in some locations.

Lastly, while gravel extraction is not likely to become an issue due to plentiful sources in the Coast Range and the Cascades, there are extensive polymetallic sulfides off the coast of Oregon, within the Exclusive Economic Zone on the Endeavor and related ridge segments. Because the technological ability to mine those resources is so far away, research priority at this stage should be low, but kept in mind.

Preventing the Spread of Invasive Species

Although Oregon is among the pioneering states that have enacted legislation to require discharge of ballast water offshore, Oregon ports and harbors are still highly vulnerable to the continued introductions of non-native species. The number of vessels that successfully complete a total mid-ocean exchange of ballast water is still small in comparison with the number of vessels that undergo partial ballast exchange or do not attempt ballast replacement before arrival in the deep-water ports of Portland, Coos Bay, and Newport. In addition, Governor Kulongoski's efforts to revitalize the economies of coastal ports and promote increased maritime commerce likely will lead to an increase in the number of foreign ships that bring cargo into and out of Oregon's ports and harbors. Consequently, the USCOP recommendations in Chapter 17 provide an opportunity for Oregon to take steps to protect its vulnerable ports and harbors by lending support for development of a national compulsory ballast management program. This program would include mandatory mid-ocean exchange and research into methods for the shipboard treatment of ballast water during transit.

While the USCOP report focused almost entirely on the spread of invasive species through ballast water, multiple vectors exist for the introduction of new species into Oregon's coastal marine and estuarine habitats. For example, Japanese eelgrass (*Zostera japonica*) was introduced into Oregon estuaries in the early 1980s via oyster aquaculture and has since spread over much of the previously unvegetated shoreline. European green crab (*Carcinus maenas*), initially introduced into San Francisco Bay via seaweed bait, has since moved northward into Oregon estuaries by larval transport on ocean currents. Chinese mitten crab (*Eriocheir sinensis*) is another threat from the south, and Atlantic cordgrass (*Spartina alterniflora*) threatens from the north. In California, invasions have resulted from salt-water aquaria as well as deliberate introductions of species. The future expansion into Oregon of aquaculture using genetically-modified organisms may be an important issue as well.

Oregon offers several good examples of management, monitoring, and stewardship programs that are already working to limit the spread of invasive species:

- The Oregon Invasive Species Council.
- Sea Grant / Marine Invasive Species Team (MIST), which is a coordinated effort by the Oregon and Washington Sea Grant programs to facilitate regional research and outreach on coastal invasive species.

- Taxonomic surveys and monitoring in the Columbia River, Yaquina Bay, and Coos Bay/South Slough.

Setting a Course for Sustainable Marine Aquaculture

Chapter 22 highlights the need for additional scientific information about aquaculture practices and effects to inform the development of policies and practices for the aquaculture industry. The Panel agrees with this assessment, but notes also that aquaculture comprises a diverse portfolio species, culturing locations, and practices. Research, training, and extension about aquaculture must be sufficiently broad to address this diversity, and include natural scientists, social scientists, and economists. This focus, along with additional funding, will assist the Nation as it moves toward sustainable aquaculture that enhances production, while reducing environmental impacts.

PRIORITY 3: Formal and lifelong education is needed to teach Americans about the connections in the marine environment and among oceans, land, and the atmosphere, and the importance of oceans to sustaining life and providing important good and services to the Nation's economy.

The USCOP recommendations intend to better coordinate national and regional ocean education through Ocean.ED, under the COSETO. The Centers for Ocean Sciences Education Excellence (COSEE) would be moved from National Science Foundation (NSF) to Ocean.ED, and are to enhance their partnerships with the National Sea Grant College Program (Sea Grant) “by developing links in all the regions in which they both operate.” Sea Grant colleges exist in every coastal state, including the Great Lakes. OSU is Oregon’s Sea Grant college. The 30 Sea Grant colleges have demonstrated their commitment to ocean education throughout their 35-year history. To help move towards regional cooperation with COSEE, it would be helpful if the Sea Grant network of universities were mobilized and funded as COSEE partners to create a broad base for ocean education programs.

With regards to informal education, Sea Grant is ready to provide its human capital to the effort, and already has a nationally-networked extension program in place that can further the USCOP recommendations to work with other appropriate entities to enhance community education. In the light of this, Sea Grant can help COSEE networks to establish and evaluate similar informal and adult education programs in ocean science. Establishment of an Oregon COSEE, as per the USCOP recommendation to expand these centers, would help facilitate a partnership between Oregon researchers who are already leaders in Federally-funded programs in adult literacy with Oregon’s community colleges, as well as expand efforts to develop and assess “free choice” learning.

In addition to Oregon universities, the educational and outreach programs provided by such groups as the South Slough National Estuarine Research Reserve (NERR) can provide a model for diverse education that focuses on estuaries as part of the ocean ecosystem:

- Technical advisory services and professional seminars provided by staff scientists

- Financial support for graduate thesis work in the form of NERR Graduate Research Fellowships
- NERR Coastal Training Program, which provides information delivery to coastal zone decision-makers
- Operation of an estuarine interpretive center to provide visitors and the public with educational displays, guided programs, videos, maps, and printed materials
- Operation of an active K-12 education program for school children, including teacher-training workshops and on-line web-broadcast outreach activities

Undergraduate and graduate education is to be enhanced under the USCOP recommendations primarily through cross-cutting mechanisms that allow traditionally separate disciplines to integrate. The number of social scientists and economists in management agencies is generally lacking. The Oregon University System (OUS) is well positioned to address the need for agency scientists to be trained using an interdisciplinary approach. This need could be addressed through academic departments that provide in-depth disciplinary graduate education in the social sciences and the conduct of social-science research: anthropology, sociology, political science, law, and resource economics. These programs have a history of providing interdisciplinary exposure to marine issues while providing disciplinary depth. An approach such as this is important given that interdisciplinary training is needed, but should not replace strong disciplinary training that will contribute positively in an agency setting.

Potential exists to expanding several existing graduate programs within the OUS to better integrate ocean science, law and policy, and social sciences:

- Marine Resource Management Program (MRM) at OSU, which is a national leader in training Master's level students in policy and management in the context of a solid program in ocean sciences.
- The J.D. degree at the Ocean and Coastal Law Center of the University of Oregon, which already uses distance-education technology to teach UO's Ocean and Coastal Law course to MRM students at OSU.
- The existing intercampus Master's and Ph.D. programs in Environmental Science and Environmental Policy between OSU and UO.

PRIORITY 4: Additional research in biogeophysical sciences, social sciences, and economics is needed to inform this coordinated approach to policy and management.

Chapter 25 describes the need to create a national strategy for increasing scientific knowledge that can inform decision-making about oceans. The Panel endorses Recommendation 25-1, which would double the federal ocean and coastal research budget over the next 5 years. This funding would enable research priorities identified throughout the USCOP report, ensuring that these priorities would not be unfunded mandates.

The Panel also agrees with the recommendation to develop a national ocean research strategy. Such a strategy would benefit from developing a careful process by which regional as well as national needs are addressed and to avoid unnecessary duplication. It is important that the national ocean research strategy encompass both basic and applied research.

The USCOP specifically notes the potential to expand the National Sea Grant program, which seems to the Panel to be a reasonable way to address the recent history of stagnant funding levels for a demonstrably successful federal/regional research program. The Panel thinks it important to highlight that Sea Grant is not just a coastal research program, but instead extends from headwaters to bluewater (particularly in the areas of fishery management, fishery science, and international law). For example, in the past, Oregon Sea Grant has funded fisheries oceanography research.

The Panel wholeheartedly supports Recommendation 25-3, which would create a national social science and research program, and require all ocean agencies to include socioeconomic research within their purview. This recommendation addresses a chronic inadequacy in social science research and data collection among biology and oceanography-dominated ocean agencies. It supports findings and recommendations from the 2003 NOAA Social Science Review Panel Report to significantly strengthen the social and economic research for oceans and coasts. It also proposes formal mechanisms to address fragmentation and inconsistencies among existing data programs that exist outside of ocean agencies.

The Panel supports recommendations to expand funding for ocean exploration, which is an issue important to Oregon. Researchers from OSU's College of Oceanic and Atmospheric Sciences (COAS) are leaders in this arena, including the use of submersibles, autonomous underwater vehicles (AUVs), and remotely operated vehicles (ROVs). Based on past experiences with these technologies, the Panel notes that such ocean exploration may be most appropriately directed by a science agency, such as NSF. NSF has shown excellent capacity to lead these activities, given their strong connection between exploration and research. Moreover, the capabilities of ROVs and AUVs are advancing rapidly, and it is difficult to see how a mission-driven agency such as NOAA can provide adequate leadership in this arena.

The Panel notes several potential areas of research that are important to Oregon, but which may or may not have been noted in the USCOP recommendations:

- Regarding Chapter 9, Managing Coasts and Their Watersheds, research that links the coastal ocean and watersheds is an area where Oregon could provide national leadership. Entities such as the Bonneville Power Administration have been highly supportive of coastal ocean research. The GLOBEC Program has shown that salmon returns are largely a function of coastal ocean conditions when juvenile salmon first enter the sea. Such results show that integrated ocean-watershed studies are essential. With the presence of the Columbia River watershed in the Pacific Northwest, Oregon and its neighbors could help set the pace for interdisciplinary research that addresses land-sea connections.
- Regarding Chapter 12, Managing Sediments and Shorelines, shoreline erosion is an area where Oregon has been a leader in research. Most of Oregon's erosion problems are north of Cape Blanco where the shoreline is sinking. It will be imperative to continue and expand this research in order to develop effective policies and predictive capabilities, especially as humans continue to alter sediment transport and "harden" shorelines is effective. Moreover, climate change may significantly affect the wave climate off Oregon which, when coupled with sea level rise, will change the erosion potential of Oregon's coast.

- Also regarding Chapter 12, river bars are critical for coastal navigation in Oregon, affecting both small and large ships. Although USCOP recommendations did not elaborate on this issue, Oregon could use this as an opportunity to significantly advance the state's ability to provide up-to-date information to ship operators. For example, the dynamic scientific models that couple waves, tides, and seafloor topography could help provide real-time predictions about bar conditions in many of Oregon's harbors.
- Chapter 25 recommends coordinating the development of standardized maps and charts incorporating living and nonliving marine resources. Better understanding about marine ecosystems obtained through research and exploration has the potential to dramatically improve the scientific basis for decision-making in Oregon and around the country.

The Panel does note, however, that mention about the impacts of global-scale processes on the regional systems and dynamics are conspicuously absent. Despite this absence, the impacts of changes in ocean/atmosphere processes in distant regions can greatly affect Oregon. For example, shifts in precipitation and sea-surface temperature in the tropical Pacific can affect storm tracks in mid-latitude locations such as Oregon. The USCOP is largely silent on these issues, and does not propose any research or observing systems to examine this coupling. The Panel highlights that simply studying coastal oceans in isolation is likely not sufficient to provide knowledge that advances decision-support capabilities about connections among ocean, land, and atmosphere.

PRIORITY 5: An Integrated Ocean Observation System (IOOS) is needed to improve the Nation's information base about oceans and to inform decision-making at Federal, state, regional, and local levels.

Chapter 26 comprehensively addresses Achieving a Sustained, Integrated Ocean Observing System. The federal backbone of the IOOS will consist of regional observing systems that represent a collaboration of state and federal agencies, academia, private industry, and non-governmental organizations. For this reason, many aspects of the proposed IOOS are relevant to marine science in Oregon.

Recommendation 26-2 proposes that IOOS elements be developed along regional lines under the leadership of the NOC, with NOAA responsible for implementation. Regional IOOS activity already is underway in Oregon and the Pacific Northwest. OSU and Oregon Health and Science University's Oregon Graduate Institute (OGI) are part of the Northwest Association of Networked Ocean Observing Systems (NANOOS), which is designed to help a Pacific Northwest IOOS become self-sustaining after its initial funding.

This emerging regional system will be designed and implemented as a cooperative system of data providers and information users along the Pacific Northwest coastal zone. The coastal component of the IOOS envisioned for the Pacific Northwest is a network of data acquisition and dissemination sites that will provide comprehensive and timely information about the status, condition, and future of the nearshore ocean, shorelines, and estuaries. As an example of work already underway on this front, South Slough NERR recently was awarded funding to participate in the early development of a coastal observatory pilot project for the estuaries and shores of

Oregon and Washington. The NERR will install data transmission equipment at three long-term monitoring stations located within tidal waters of the South Slough estuary. Real-time data generated by these stations will be transmitted to a centralized database and modeling facility located at the OGI, and integrated into the Pacific Northwest regional monitoring network for the nearshore ocean, estuaries, and shoreline as part of NANOOS.

As part of the development of a Pacific Northwest IOOS, OSU has included the Oregon Coastal Ocean Observing System (OrCOOS) in its Federal agenda. OrCOOS is aligned with two of OSU's thematic areas as identified in its new strategic plan: understanding the Earth as a dynamic system, and managing Oregon's natural resources. OrCOOS will provide fundamental research and education to inform policymakers regarding complex environmental issues facing the Pacific Northwest. Through its coverage of the entire Oregon coastal region, OrCOOS will create educational opportunities and inform management systems using real-time ocean information, building on the unique capabilities available at Hatfield Marine Science Center (HMSC). In addition, OrCOOS will create marine technician jobs and help to support the local coastal economies as observing elements are put in place and maintained. Oregon fishermen, some of whom are unable to fish because of increasingly common closures to fishing grounds, could contribute to OrCOOS. For example, the contributions could come in the form of using their boats to install and service ocean sensing systems or making direct ocean observations. OrCOOS would be coordinated with CORIE, an established observing system in the Columbia River estuary operated by OGI. Expanding OrCOOS and CORIE to include observing systems in Washington is a logical next step. This entire approach is consistent with Recommendation 26-2.

The Panel notes, however, that IOOS as it is proposed focuses solely on coastal oceans. Seafloor observatories (such as the NEPTUNE Observatory that will be located on the Juan de Fuca Plate off Oregon) and global observing systems are not included. In addition, very nearshore areas are excluded. Unfortunately, this approach does not consider either the impacts of remote and global-scale processes or those very close to shore. Moreover, the IOOS focuses primarily on physical observations and data products, and it does not recognize the importance of coupling biological and physical data or the integration of observations with numerical models. Although the concept of ROIPs is extremely powerful, the limitations may be that resulting systems are provincial and focus only on local needs. Oregon scientists have the potential to enhance the IOOS as it is proposed, thus addressing some of the aforementioned issues. COAS is a recognized leader in the coupling of numerical models with data, especially in the coastal ocean. This research includes both atmosphere and ocean processes. COAS also is a national leader in global-scale models and satellite observations. A successful IOOS will forge strong links between global and regional observing systems, and models and data. In addition, PISCO has demonstrated the power of interdisciplinary approaches to couple biological and physical information, along with novel ways of combining monitoring with experimental research. All of these approaches are complementary and necessary for real understanding and progress.

Recommendation 26-4 emphasizes the necessity of incorporating user needs for an IOOS to be successful. One of the key attributes of the IOOS will be the provision of near real-time predictions and decision-support tools. Moreover, these observing systems will provide significant educational opportunities in both formal and informal settings. The report focuses

primarily on the processes to develop requirements and a management structure for the IOOS, but little is said about overall system architecture, which will have a significant impact on the ability to meet user needs. Oregon has the potential to contribute knowledge about the needs of users. For example, HMSC exemplifies the types of users and contributors that exist for an IOOS: scientists from several departments of OSU along with units of the Oregon Department of Fish and Wildlife, NOAA Fisheries, NOAA's Oceanic and Atmospheric Research Program, the Western Ecology Division of the Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the USDA's Agricultural Research Service. In addition, COAS has deployed several real-time observing system components, and could bring their expertise to bear on the development processes for the IOOS.

The USCOP report proposes focusing development of the IOOS by determining a core set of data products that are necessary. The Panel recognizes, though, that this exercise could result in a massive shopping list of variables with a high level of ambiguity. For example, sea-surface temperature (SST) would appear to be straightforward, but there are many ways to measure SST, and the appropriate method depends on the questions being asked. The Panel suggests that a more fruitful approach to the development of IOOS is to define a core set of services being delivered or questions being asked. From this standpoint, Oregon Sea Grant, HMSC, PISCO, and COAS collectively have a unique capability to develop a service-driven IOOS for the Pacific Northwest. Partnerships with systems in the Columbia River estuary (i.e., CORIE) and Washington could also be developed. Several components of the observing system are presently deployed by COAS, and these data are being assimilated into predictive numerical models.

The USCOP notes that satellite remote sensing provides critical observations for IOOS, but the Panel suggests that the present plans for IOOS need to be expanded to include satellite sensors as part of the observing suite. If this were the case, the NOAA Cooperative Institute for Oceanographic Satellite Studies (CIOSS) at OSU, which focuses specifically on the application of satellite remote sensing to a variety of research issues related to the California Current LME, could be an important contributor to the IOOS. This work includes the development of coastal ocean products as well as satellite data assimilation.

The development and transfer of sensor technology to the IOOS is the focus of Recommendation 26-7. The Panel supports the fundamentals of this recommendation, but highlights that transfer is not a serious challenge facing IOOS technology. Rather, the problem is that development of new technology is costly and risky. Sensors need many years of development and testing under harsh conditions. In the past, the Office of Naval Research (ONR) was the primary source of funds for technology development, but ONR's capacity in this regard has dropped precipitously. Advances in information technology have outstripped the ability of most ocean instrumentation companies to incorporate the latest data-handling capabilities. For this reason, ocean instrument development remains a capital-intensive activity with little mass-market potential. The potential exists to create new approaches to technology development and intellectual property in the context of Federal/university/private-sector partnerships. In Oregon, COAS has a long record of instrument and algorithm development for coastal ocean research. Recently, a local company, WET Labs in Philomath, announced a partnership with a Canadian firm to develop new sensor systems for IOOS. Oregon entities such as these could be productive partners in the future.

Recommendation 26-8 mandates that NASA pass responsibility for its research satellites to NOAA. With its operational mandate, NOAA is the logical home for the sustained, systematic observations of the Earth system, whereas NASA is the leader in the development of new remote sensing technology and the scientific exploitation of remote sensing. Nonetheless, the 2003 report by the NRC noted the difficulty in transitioning from research capacity to operational status. The report also highlighted the need for long-term planning and coordination to ensure that essential research capacity is maintained after transition, and that the operational agency (in this case, NOAA) is prepared technically and financially to assume these responsibilities. The Panel is concerned that NOAA does not have the capacity to take over the present and planned suite of NASA research satellites. Implementation of this recommendation will take many years of planning as well as leadership. Regarding the Oregon scientific community, OSU has been a leader in ocean remote sensing for two decades, and its faculty have served on several NASA science teams, in addition to acting as project scientists for NASA missions. The Oregon CIOSS could help enable the transition of short-term NASA research missions to a long-term observing capacity within NOAA.

Recommendations 26-9, 26-10, and 26-11 concern the implementation and management of IOOS and its relationship to global observations. As noted earlier, development and operation of the IOOS needs to be pursued on a regional basis with full consideration of the ranges of needs, from observations to science analysis to decision support. Development of the IOOS must begin with a clear, achievable set of goals, and slowly expand as new capabilities and new requirements emerge. Moreover, the regional IOOS systems must be cognizant of global-scale feedbacks and impacts. NOAA may assume the leadership of this process, but it must pursue these programs in the context of coalitions between Federal, state, and local agencies as well as universities.

Opportunities to use the IOOS address Oregon information needs and/or expand existing programs that have begun to address decision-making include:

- Oregon's tsunami warning and hazard evaluation system addresses information needs related to a type of natural hazard pertinent on this coast. This extensive system, comprising both monitoring and research capabilities to alert and expand understanding of tsunamis, is an important area for further study.
- In order to adequately address the USCOP recommendations to conserve and restore coastal habitat, open access to remote-sensing platforms is needed to provide high-resolution, hyperspectral spatial information about the extent, location, boundaries, and condition of coastal habitats for rapid incorporation into geographic information systems.
- As part of the creation of a national water quality monitoring network, Oregon is presented with an opportunity to build its information base about water quality in the marine environment. The National Eutrophication Survey (published by NOAA in 1999) revealed that relatively little is known about the dynamics of nutrient loading and nitrogen availability in Oregon estuaries in comparison with other coastal states. Baseline information is needed to gauge the current status of nutrient loading and eutrophication, and to evaluate future changes in nutrients, as these can serve as fundamental ecological indicators of habitat degradation or improvement. In addition, monitoring information about levels of bacterial contamination and other water-quality parameters is generally lacking for Oregon's estuaries and coastal waters, and

development of a comprehensive, coast-wide program to monitor water quality is still in its infancy.

PRIORITY 6: Expanded investments in scientific, technical, and human infrastructure are required to realize the aforementioned priorities.

The Panel recognizes that recommendations outlined in the USCOP report require a huge investment in human capital and infrastructure. If the Nation is to achieve the vision set forth by the USCOP, the number of technically trained people needed during the coming years to accomplish this vision is huge. Growth in human capital will be required in the areas of social science, economics, public policy, natural science, and engineering.

Regarding the scientific and technical infrastructure needs to implement the USCOP recommendations, Chapter 27 focuses on Enhancing Ocean Infrastructure and Technology Development. While much of this chapter highlights capacity building in the Federal agency infrastructure, the Panel suggests that more consideration be given to university infrastructure given its role as a full partner in the ocean enterprise. In addition, it is important to recognize that the demands will far exceed the ability to fund these needed investments, so some prioritization of needs will be essential. For example, some assets must be developed as complete units (e.g., ships and satellites), whereas others can be developed in a phased manner (e.g., observing systems or laboratory equipment). Careful attention must be paid to these different needs as the associated funding required is equally as diverse. The panel suggests avoiding the tendency to favor those pieces of infrastructure that can be funded as small increments rather than large components.

Recommendation 27-4 catalogs many of the infrastructure requirements, but misses two key elements. First, the vast amount of technical capacity depends on highly-trained technical staff. These people include information technology specialists, laboratory technicians, and seagoing technicians. In many cases, these skills are needed in the private sector, and universities and government agencies cannot match private-sector salaries. In other cases, there simply is a lack of replacement of technical staff, especially in the area of ocean instrumentation design, deployment, and recovery. These skills are acquired only after years of experience. The development of an IOOS will require a larger cadre of seagoing instrument technicians, as well as project managers to design and implement the regional observing systems. The second overlooked area is the increasing demand for medical-grade laboratory facilities such as ultra-clean rooms for geochemical analyses and genomics. The costs of such labs are nearly an order of magnitude higher than the traditional labs, and funding such facilities is beyond the capacity of most academic institutions.

Surface ships are briefly discussed, but there are no specific recommendations regarding how their replacements will be funded. The demands of an IOOS on ship, ROV, and AUV capacity are not evaluated, and it is likely that the Nation does not have enough available seagoing capacity to deploy and maintain an IOOS. Specific to Oregon, the research vessel *R/V Wecoma* is fast approaching the end of its life. The ocean-science community has established science-mission requirements for the "Oceans" class of ships (of which the *Wecoma* is one), and the costs to

bring ships to the level of meeting these requirements are in the range of \$65-75M. No funding mechanism, however, has been identified for these improvements. COAS also has been exploring the capabilities of AUVs and their role in seafloor observatories. AUVs could play a critical role in an IOOS, but there is no established program to fund such infrastructure, which is in the range of \$10M.

Additionally, in order to implement the ocean observing systems, the USCOP has identified many important issues in regards to ocean data and information systems: increasingly complex and more varied data sets, enormous data volumes, increasingly distributed data sources and archives, and rapidly evolving hardware and software capabilities (see Chapter 28). The Panel notes that the information technology (IT) challenge will be to support the search for new relationships between data sets and to deliver information services to a wide range of users. This delivery need is especially true in the light of the shift from centralized, mainframe computers driven by the needs of the science and technology community to a distributed computer system driven by commercial needs and mass-market forces. Ocean.IT proposed by Recommendation 28-1 should address the needs of the larger community, in addition to acknowledging the information management already underway through exiting data centers. It also will need to be responsive to the evolution of both user needs and IT capabilities. This charge will be particularly challenging because most government-acquired systems have not been successful in addressing these varied needs, primarily due to procurement policies and requirement processes. Recommendation 28-2 for NOAA and the Navy to collaborate on the delivery of standard data products will be useful, but will also run into similar difficulties because both the products and user requirements will evolve over time.

OSU may be able to assist with the Ocean.IT process, serving as both a model and participant. COAS is one of the Nation's leaders in the development and application of innovative IT to a range of oceanographic and atmospheric science problems. This work includes smart sensors to for nearshore and coastal observations, Geographic Information Systems (GIS), data assimilation models for ocean/atmosphere prediction (including ocean ecosystems), networked software applications, and high-definition data visualization. COAS researchers have been at the forefront of advising NASA, NSF, and other Federal agencies on these issues. This interdisciplinary approach stresses the connections between the components of the Earth system, as well as an understanding of linkages between ecosystems and the physical environment. In addition, COAS is responsible for a broad range of ocean data products, including those based on satellite sensors, coastal radars, and coastal video cameras. OSU also has an active program of IT development, especially in the area of low-cost, off-the-shelf technology. Its fundamental IT architecture is based on a highly-distributed approach, using state-of-the-art networking technology to link together a wide variety of IT assets. The basic principle is to retain a close connection between the science requirements and expertise with the IT implementation. The involvement of COAS faculty would place data production in close proximity to data developers, thus helping ensure that the products are based on the Best Available Science and Information, a USCOP Guiding Principle.

The notion of central data repositories with standard data products has shifted in response to changes in network capacity and local storage technologies. Central archives such as the National Oceanographic Data Center (NODC) have struggled with the increasing volume and

variety of oceanographic data. Moreover, NRC's Committee on Data Management and Computation reports from the early 1980s emphasized the importance of maintaining close links between active scientific investigations and data archives in order to ensure that data remained relevant to contemporary science. These forces have resulted in a more distributed approach to data management. Investigators are making data sets available over the Internet through Web-based interfaces to local data holdings. However, it is difficult to locate such data holdings without personal contacts to the investigator. Technologies, such as OpenDAP (Open Data Access Protocol) which is noted in Recommendation 28-3, have provided standardized methods to publish and to access such local data holdings as well as centralized data archives. New methods, such as XML (Extensible Markup Language) and data ontologies will provide more capabilities for researchers to organize and publish their data holdings and for locating and accessing data. Moreover, these approaches will enable data providers to be far more responsive to changing user needs. Although the USCOP recognizes the need to start this process, Recommendations 28-3 and 28-6 fundamentally envision a centralized process where the needs and requirements can be specified with complete certainty. The Panel suggests, however, that the reality is that modern IT systems must be designed for an uncertain world, and must be dynamic and iterative.

Regarding programs already underway in Oregon relevant to these recommendations, COAS has been one of the lead developers in collaboration with researchers at the University of Rhode Island on the OpenDAP protocol. Moreover, COAS has developed more widespread technologies based on Microsoft's .NET framework to provide a variety of Web services for satellite data archives. The most complex knowledge systems, ranging from climate-change research to homeland security, cross traditional disciplinary boundaries. They require synthesis of information from many sources, and they must adapt in response to a changing environment (including changes in the knowledge environment). In keeping with the Guiding Principles of Best Available Science and Adaptive Management, COAS has based its IT infrastructure on a distributed implementation. Moreover, new methods of extracting information from new and evolving data sets are being explored with Oregon-based software developers. This is an area where Oregon could establish national leadership in developing linkages between observing systems, knowledge extraction, and decision support.

Recommendation 28-4 proposes that Federally-funded researchers be required to submit their data sets to centralized archives. The intent of the USCOP is correct, but the Panel notes that the approach is likely not sufficient. Frequently, the Federal archives are not prepared to host and distribute new data sets being developed by the research community. Many data sets are distributed locally by the individual researcher without going to a national archive. Again, the recommendation from the USCOP is based on a centralized approach to data/information systems. The Panel highlights that Oregon researchers have a long history of interdisciplinary research across a broad range of fields, and realize that sharing data, information, and knowledge is essential for science to be successful.

SECTION III – Comparison of the 2000 *Oregon State of the Environment Report* and USCOP Recommendations

Oregon State of the Environment Report	US Commission on Ocean Policy Preliminary Report
<i>MARINE ECOSYSTEM INDICATORS:</i>	
Exploited Fish and Shellfish Stocks	<ul style="list-style-type: none"> • <i>Recommendation 19-21. Change designation of essential fish habitat to multi-species ecosystem-based approach</i>
Bottom Habitat Degradation	<ul style="list-style-type: none"> • <i>Recommendation 11-2. Develop national goals for ocean and coastal habitat conservation and restoration efforts</i>
Marine Mammals	<ul style="list-style-type: none"> • <i>Recommendation 20-2. Amend the Marine Mammal Protection Act to place jurisdiction for marine mammals within NOAA</i> • <i>Recommendation 20-4. Clearly specify categories of permitted activities that affect marine mammals</i> • <i>Recommendation 20-7. Promote expanded research, technology, and engineering program to examine and mitigate human activities on marine mammals and endangered species</i>
Kelp Forests	<ul style="list-style-type: none"> • <i>Recommendation 11-2. Develop national goals for ocean and coastal habitat conservation and restoration efforts</i>
Marine Protected Areas	<ul style="list-style-type: none"> • <i>Recommendation 6-3. Develop national goals and guidelines for the effective design and implementation of marine protected areas</i>
Harmful Algal Blooms and Toxic Shellfish	<ul style="list-style-type: none"> • <i>Recommendation 23-1. Expand marine research programs for virology and microbiology</i> • <i>Recommendation 23-4. Establish a national multi-agency Oceans and Human Health Initiative</i>
Shoreline Armoring and Beach Loss	<ul style="list-style-type: none"> • <i>Recommendation 10-1. Ensure valid, peer-reviewed cost-benefit analyses of coastal projects to mitigate impacts and coordinate with broader coastal planning efforts</i> • <i>Recommendation 10-3. Reduce incentives for development in high-hazard areas</i> • <i>Recommendation 12-1. Develop national strategy to address activities that affect sediment flows</i> • <i>Recommendation 12-4. Improve assessment, monitoring, research, and technology to enhance sediment management, and study the cumulative regional impacts of sediment management practices on coastal watersheds and ecosystems</i>

<i>ESTUARINE ECOSYSTEM INDICATORS:</i>	
Change in Area of Estuarine Habitats a. overall estuary size b. tidal marshes and swamps c. eelgrass beds	<ul style="list-style-type: none"> • Recommendation 11-2. Develop national goals for ocean and coastal habitat conservation and restoration efforts
Area of Estuarine Habitats Protected	<ul style="list-style-type: none"> • Recommendation 11-1. Dedicated coastal and estuarine land conservation program
Aquatic Nuisance Species	<ul style="list-style-type: none"> • Recommendation 17-1. Apply uniform national standards for ballast water management • Recommendation 17-3. Coordinate public education and outreach efforts on aquatic invasive species • Recommendation 17-4. Establish a national plan for early detection of invasive species
Freshwater Inflow	<ul style="list-style-type: none"> • Recommendation 15-2. Ensure that the national water quality monitoring network includes adequate coverage in coastal areas and uplands
Estuarine Water Quality Trends	<ul style="list-style-type: none"> • Recommendation 14-1. Advanced nutrient removal for wastewater treatment plant discharges • Recommendation 14-2. Increase technical and financial assistance to improve septic systems and on-site treatment facilities • Recommendation 14-3. Fund research on removal of nutrients from animal wastes • Recommendation 14-6. Modernize the NPDES information system and strengthen enforcement • Recommendation 15-1. Develop a national water quality monitoring network of critical stations and measurements needed to assess long-term water quality trends and conditions • Recommendation 15-2. Ensure that the national water quality monitoring network includes adequate coverage in coastal areas and uplands

STEVEN J. McCORMICK
President and Chief Executive Officer

June 1, 2004

Admiral James D. Watkins, Chair
U.S. Commission on Ocean Policy
1120 20th Street, NW
Suite 200 North
Washington, D.C. 20036

Dear Admiral Watkins:

The Nature Conservancy wishes to congratulate the U.S. Commission on Ocean Policy for their excellent preliminary report and recommendations. We would also like to thank the Commission for this opportunity to provide comments.

The Commission's findings are based on a comprehensive and compelling body of evidence, and we concur with your conclusions. Our coastal and marine resources are essential to the wellbeing of the nation; these resources are in serious decline. New science-based models for their conservation and management must be rapidly implemented; and all sectors of society must be active participants in an effective and coordinated model for ocean governance.

We believe the Commission has developed an achievable set of recommendations that can move our nation in the right direction. In particular, the Conservancy commends the Commission for:

- Explicitly recognizing the importance of biodiversity conservation, the necessity of an ecosystem-based approach to management, and establishing stewardship and sustainability as basic underlying principles for all recommendations contained in the report. These principles are reinforced by specific recommendations throughout the report on governance, science, habitat conservation and restoration, and managing coastal and ocean uses.
- Recommending significant new investments in coastal and ocean management, conservation, research, and stewardship activities, as well as a dedicated funding source – the Ocean Trust Fund. The oceans and coasts have suffered from inadequate funding to support planning and conservation. An Ocean Trust Fund dedicated to supporting a range of conservation activities would make a significant positive difference, provided the process for allocating funds is directly linked to the ecosystem-based approach to planning and management described in Chapter 5.

- Recommending a substantially enhanced NOAA with a broader conservation and management authority. The challenges outlined in the report require the existence of a strong ocean agency.
- Recommending a coordinated, ecosystem-based management approach in federal waters, where science is used to support better decision-making, with regional ecosystem assessments as a necessary major first step. Place-based management authority and well-developed siting criteria are also needed to encourage compatible multiple use of ocean space, reduce conflicts among ocean uses and ensure that ecologically sensitive areas are not damaged by incompatible uses.
- Including strong recommendations for preventing the spread of invasive species, including specific recommendations for prevention, early detection and rapid response, public outreach, control and management, and research (Chapter 17). Implementation of each recommendation in this chapter should be coordinated closely with the National Invasive Species Council.
- Recommending increased use of science in decision-making, and emphasizing the need to connect research priorities to pressing issues associated with coastal areas and living marine resource. This theme is well reinforced throughout the report in recommendations for substantial increases in funding for science at the federal level; for observing systems that collect a broad array of data (biological, commercial, social, physical, etc.); and for links between observing systems, monitoring programs and centralized sources of data. In implementing the multiple science recommendations, it is essential that investments be balanced between coastal, near shore and offshore areas.
- Recommending the revision of multiple government policies and programs to include incentives and market-based mechanisms to encourage the conservation of living marine resources by parties engaged in private economic and philanthropic activities. Recommendations in Chapters 9 and 10 would correct inappropriate incentives for development and refocus existing voluntary programs, including those through the U.S. Department of Agriculture, to address threats such as non-point source pollution. Additionally, we appreciate the recommendations in Chapters 4 and 5 describing the work of the National and Regional Ocean Councils that call for participation by non-governmental organizations.

As the Commission moves to finalize its report, and the Administration and Congress implement it, we recommend that the following sections be clarified and strengthened:

Regional Scale, Ecosystem Approach to Coastal and Ocean Management (Chapters 4 and 5)

The Conservancy supports the multiple recommendations in Chapters 4 and 5 and believes that they can, when taken with the Guiding Principles, serve to improve stewardship and

sustainable management of the coastal and marine environment. We also support the rapid initiation of Regional Ecosystem Assessments to serve as a foundation for this process.

We suggest highlighting the importance of integrating land, freshwater, coastal and ocean conservation; clarifying the relationship between regional councils and the states; and rapidly proceeding with pilot scale Regional Council project activities.

1. ***Further emphasize land / freshwater / marine linkages.*** The Report should explicitly recognize that the collection and integration of terrestrial, freshwater, near shore and offshore information will be necessary to produce Regional Ecosystem Assessments that provide a meaningful guide for managers. In addition, the report recognizes the role that regional councils can play in working with upstream decision-makers on issues that affect the coasts using the example of non-point source pollution. The fact that many of the example locations cited by the Commission (Chesapeake Bay, Everglades, CALFED Bay-Delta) are also confronting the problem of freshwater flow management as an ever-increasing threat to estuaries and other near shore ecosystems needs explicit recognition.
2. ***The relationship between the regional councils and the states should be more clearly delineated.*** The need for better regional alignment between federal agencies is critical. We strongly support including non-governmental organizations among those with an interest and role to play in determining how Regional Councils are established and operated. However, Recommendation 4-10, which describes the creation of regional councils, is vague on the relationship of the regional councils to state governments and other entities. States are the implementers of coastal zone management and have responsibility for managing marine resources. The regional councils could and should offer a forum for coordinating these management efforts across state lines – but only if they are integrated with and enhance the existing coastal management framework, and are not simply an additional layer of bureaucracy. In addition, the recommendations should more clearly describe the role the regional councils play in developing coastal and regional assessments, and how they will coordinate that process with regional information programs and the governance recommendations.
3. ***Chapter 4 (Recommendations 4-3 and 4-10) should clarify that the voluntary creation of Regional Councils called for in Recommendation 5-1 proceed at a pilot scale, even as National Ocean Council (NOC) guidelines are being developed.*** The approach set forth in Chapter 4 calls for the NOC to develop guidelines for demonstrating approaches to ecosystem management, as well as mechanisms for learning and adapting future efforts. Recommendation 4-3 directs the NOC to develop procedures for ecosystem management, and ensure that preservation of marine biodiversity is well supported across the resource agencies. We support this recommendation, but believe that the process the NOC is called upon to develop should not be interpreted as reason to delay implementing new regional governance and ecosystem management approaches. As the Commission is well aware, this type of management is ongoing in several areas of the country and a number of new projects are underway. The NOC guidelines and the Regional Councils should catalyze – not delay – new and existing place-based initiatives.

Protection and Restoration of High Biodiversity Areas (Principles and Chapter 11)

The preliminary report recognizes that the greatest problems and loss of habitats and ecosystem services are in the near shore environment. To manage these systems well, we need information, an expanded and strengthened set of conservation and restoration tools, and sufficient resources for their full implementation.

One such powerful tool, recognized by the Commission, is conservation of near shore areas – including acquisition, stewardship, and restoration activities. We suggest that the Commission's final report recommend the following:

1. ***Increase funding for habitat restoration programs.*** We are encouraged by recommendations calling for increased coordination in support of restoration activities by various agencies, and flexibility in use of funding available. However, the report does not include a recommendation for increased funding to support restoration activities. Existing resources are inadequate to the task and demand is growing – as is dramatically illustrated by the example of restoration efforts underway in Louisiana. The Commission should call for increased funding for habitat conservation and restoration activities at a scale to meet the need. The Commission should amend recommendation 11-3 as follows:

“Recommendation 11-3. Congress should amend relevant legislation to authorize increased funding for habitat conservation and restoration activities and should allow federal agencies greater discretion in using a portion of those funds for related assessments, monitoring, research, and education.”

2. ***Strengthen and modify the recommendation that a sufficiently funded, dedicated program for protection of coastal habitat be added to the Coastal Zone Management Act (Recommendation 11-1).*** As noted in the report, such a program – the Coastal and Estuarine Land Conservation Program (CELCP) – was created in 2002, but suffers from many challenges, including not being permanent. The recommendation that states complete their CELCP plans is a critical step in the development of this program, but this section could be strengthened by including the following specifics in the discussion of what is needed:

Change the matching requirement for grants from a 1:1 to a 75:25 federal/non-federal cost share, comparable to other similar land protection programs.

Changing the cost share requirement will provide increased flexibility, particularly in poorer states or communities where a 1:1 match requirement on an expensive coastal property would pose a significant barrier to a conservation project. The proposed 75:25 federal/non-federal match corresponds to the requirement for the USFS Forest Legacy program and the USFWS Cooperative Endangered Species Conservation Fund. The higher federal share provides flexibility and can catalyze increased interest in the program. As the program grows and demand increases, the need to be increasingly competitive will drive most projects to exceed the minimum cost share requirement.

NOAA should develop and implement a clear process for project selection and a mechanism for linking state priorities to a set of national goals for the CELC Program. Specific priorities for land conservation should be established at the state level, but NOAA must develop and apply a set of national criteria that provide a credible means of evaluating very different projects. At a minimum, such a national review should select projects that are strategically situated, highly threatened, and important for the protection of federal trust resources

3. ***Call for expanded, dedicated support for the National Estuarine Research Reserves land protection program.*** The Commission should also recognize that the role of the NERRS necessarily includes protection of the resources in their boundaries, and that dedicated funding to support that activity is critical.

Coral Reef Conservation (Chapter 21)

The Nature Conservancy commends the Commission for its recognition of the threats to and values of the coral reef ecosystems, both in the United States and globally. We therefore support the recommendations found in Chapter 21, with the following strengthening changes:

1. ***Recommendation 21-2 to strengthen the U.S. Coral Reef Task Force (CRTF) should specify an expanded, international leadership role for the Task Force, as well as an enhanced role for non-governmental organizations.*** Implementation actions should include fuller involvement of the Freely Associated States in the work of the CRTF, including provision of support for the development and implementation of Local Action Strategies (or similar) in these states. It is important that the Commission specifically recognizes and supports the essential role that the U.S. Department of Interior need play in such an effort. In addition, the CRTF should be tasked with expanded U.S. engagement in and support for international coral reef initiatives (both bilateral and multilateral), including direct support for partnership programs (e.g., White Water to Blue Water partnerships in the Caribbean). The Commission should encourage expanded nongovernmental organization participation in the work of the CRTF, both at the national and local levels, especially in the development and support of Local Action Strategies and in linking applied science to management actions on the ground;
2. ***Recommendation 21-3 should be revised to cover the range of threats to coral reef resources.*** The Commission should expand its recommendations to include additional tools (including technical assistance and capacity building support) targeted at a broader array of threats. Incompatible harvest activity is but a subset of the multiple threats and challenges facing coral reefs in the U.S. and worldwide. Financial support is needed for actions to address other threats identified in the preliminary report, including sedimentation and elevated sea surface temperatures linked to coral bleaching and diseases. Incentives should be provided for a full range of activities that will build resilience into coral reef management in the face of local and global threats;
3. ***Additional resources are required for coral reef conservation.*** The preliminary report suggests that the Tropical Forest Conservation Act (TFCA) offers a model debt-reduction

program to provide such incentives. While such a program could make an important contribution, experience under the TFCA has shown that this kind of program can provide only a portion of the additional resources needed to address coral reef conservation needs. The list of countries with significant coral reef resources eligible to take advantage of this mechanism is limited. The United States should not regard it as the sole vehicle for providing expanded resources or incentives. Additional resources can and need to be provided through expansion of NOAA's International Coral Conservation grants program, and expansion of U.S. Agency for International Development's (USAID) programs targeted at marine biodiversity conservation; and

4. The Chapter analysis and recommendation should be expanded to recognize the value of and imminent threats to all coral reef ecosystems, including cold water and deep sea corals.

U.S. International Leadership (Principles and Chapter 29)

The Conservancy concurs with the Commission's conclusion that international leadership is essential to U.S. ocean policy effectiveness, and that multilateral approaches are needed to achieve coordinated solutions to global ocean issues. We therefore urge stronger language and more specificity for the following recommendations:

1. ***Recommendation 29-9 calls for expanded assistance to coastal nations of more limited means for human resource development, technology transfer, information sharing, and other science-based advisory and consultative services.*** A funding commitment sufficient to make the changes needed to preserve or rebuild healthy ecosystems is required. Acknowledging that resources are limited, the Conservancy urges the Commission to recognize there are excellent opportunities to exercise leadership and develop partnerships with small island developing states around conservation and sustainable use of coastal and ocean resources, on which these states are especially dependent. We also urge that there be:
 - an explicit commitment to support the implementation of a key target agreed upon at the World Summit on Sustainable Development – creation of representative networks of marine protected areas around the globe by 2012;
 - an expansion of the existing funding available through NOAA for international marine conservation work, especially for coral reefs;
 - additional resources to allow the USAID to place greater emphasis on marine conservation;
 - expanded future replenishments of the Global Environment Facility to provide increased financial support for marine biodiversity and small island developing states; and
 - enactment of a debt-reduction program, similar to the Tropical Forest Conservation Act, focused on coral reef ecosystems, as discussed in Chapter 21.

2. ***Recommendation 29-2 should be revised to acknowledge and highlight the compatibility of the work program of the Convention on Biological Diversity on marine and coastal biodiversity with a large number of the Commission's conclusions and recommendations, and to direct that NOC consider this in their deliberations.*** The Convention on Biological Diversity provides a framework for ocean and coastal development – and a series of commitments by the vast majority of nations – that is consistent with many of the Commission's findings and recommendations. At its recent meeting, the Conference of the Parties to the Convention reconfirmed its support for a work program on marine and coastal biodiversity. The program stresses the importance of the ecosystem approach and identifies key actions in the areas of fisheries management, integrated coastal management, coral reef conservation, marine aquaculture, and preventing the spread of invasive species. In addition, the Conference of the Parties adopted a new work program on protected areas, which targets the creation of representative networks of marine protected areas by 2012, as agreed at the World Summit on Sustainable Development.

These areas and others provide excellent opportunities for U.S. leadership and sharing of experience, as well as a framework of national and international commitments on which the U.S. could base the increased collaboration called for by the Commission in Recommendation 29-8.

Rapid Implementation is Essential

The degraded condition of our nation's ocean and coastal resources described in the Commission's preliminary report is serious and immediate action is needed. In order to begin rapidly turning the Commission's recommendations into action, we urge:

The President establish the recommended Executive Office of Ocean Policy, convene the National Ocean Council called for in the preliminary report composed of federal agencies with ocean and coastal protection, and appoint the recommended Council of Advisors;

Federal and state agencies with ocean and coastal protection and management responsibilities take immediate action to implement the Commission's recommendations through demonstration projects and multi-sector partnerships with non-governmental organizations engaged in the use or conservation of ocean and coastal resources; and

Congressional leaders assure prompt consideration of and action on the Commission's recommendations, including ocean policy legislation and an organic act for a national ocean agency.

The Nature Conservancy is fully committed to being a partner, as we move forward to take needed action on the ground and in the water. As a science-based, nonprofit organization, we work in collaboration with local residents, partner organizations, government agencies and other stakeholders to identify, protect, and manage significant habitats and natural systems.

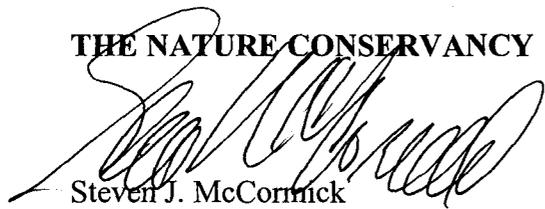
We employ pragmatic, non-confrontational strategies to reduce threats to biodiversity and ensure the long-term health and function of ecosystems.

In the sea as on land, The Nature Conservancy identifies important sites for the conservation of biodiversity through marine ecoregional plans. The identification of these priority sites makes no presumption about the best strategies for conservation at individual sites. The Nature Conservancy identifies the present and likely future threats to marine diversity at these sites before identifying appropriate strategies for conservation. At over a hundred marine sites around the world, The Nature Conservancy has used a variety of strategies for marine conservation, including habitat restoration of important nursery and spawning areas, removal of invasive species, coastal land acquisition, private acquisition of submerged lands, elimination of destructive practices, management of extractive marine resources activities, and reduction of nutrient and pollutant inflow to estuaries and marine protected areas. No single strategy works everywhere and at every site; multiple conservation strategies are needed. The selection of appropriate strategies depends on biological, socioeconomic, and political circumstances at each site.

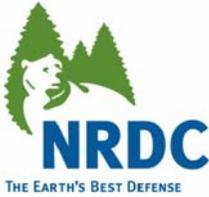
We thank you for the opportunity to provide these comments. Again, we commend the Commission for its vision and pragmatism.

Sincerely,

THE NATURE CONSERVANCY



Steven J. McCormick
President and CEO



June 4, 2004

Admiral James Watkins
U.S. Commission on Ocean Policy
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RE: Comments on the Commission's Preliminary Report

Dear Admiral Watkins and fellow Commissioners:

On behalf of the Natural Resources Defense Council (NRDC) and our more than 550,000 members, we are writing to offer comments on your preliminary report. These comments supplement those NRDC submitted jointly with several other environmental groups under separate cover. We appreciate the admirable work of the Commission and its staff in crafting this document, and we hope it will indeed spark a “sea change” in national ocean policy.

We commend the Commission's findings about the vital importance of the coast and ocean, the severe problems they face, and the need for far reaching changes in ocean policy and management. We applaud the Commission for emphasizing the need for ecosystem-based management and for a coherent decision-making framework. But we also believe that some recommendations need to be strengthened to ensure that we restore and sustain this great national asset — healthy, thriving oceans.

Chapters 4, 6 and 7: Strengthening National Management Structures

We agree with the Commission's conclusions that the threats to ocean life and habitat are serious, that the time has come to make substantial improvements in governance, and that a new national ocean policy framework is essential to achieving the vision of thriving oceans. The Commission rightly recommends steps to improve coordination among federal agencies working on ocean issues to elevate ocean issues within the federal government. The ocean assistant to the president and the coordinating council endorsed by the Commission could help move in that direction, and clarifying the mission of the National Oceanic and Atmospheric Administration is essential. The Commission recognizes that actions by agencies other than NOAA have extensive impacts on the oceans and that more dramatic changes are needed to the federal agency structure, but puts off major changes affecting those agencies to the long-term.

In our view, significant steps toward a more coherent policy framework for all federal ocean-related activities could be undertaken more immediately. Specifically, a national ocean policy act, which establishes a framework and standards to which *all federal*

agencies affecting the oceans are held accountable, is a step that is needed on an urgent basis. Furthermore, to address the problems the report identifies, we urge the Commission to make healthy ocean ecosystems — a value in itself and the foundation on which so many of our uses of the ocean are based — an explicit goal of the ocean policy framework you seek to establish. These objectives can be achieved in the most enduring way through enactment of a national policy act and the broadly representative political process it requires.

Chapter 5: Regional Ecosystem Management

We support the Commission's recommendation for ecosystem-based planning by regional ocean councils. But to make this concept work, we believe the councils must have the authority to create enforceable regional plans, consistent with national standards, much as state clean water agencies create implementation plans that meet national water quality standards. In that vein, we suggest that healthy ocean ecosystems should be an explicit goal of these councils.

We concur with the report's observation that marine protected areas (MPAs) are an effective tool for protecting biodiversity and habitat, managing on an ecosystem basis, sustaining fisheries and providing insurance in the face of uncertainty. Hundreds of scientists have called for the establishment of MPAs for these purposes, and opinion polls in west coast states and New England show strong public support for expanding their use. We also agree that national goals and guidelines could be helpful, and heartily agree with the call for well-designed studies at the start of the design process.

The brief section on MPAs has a couple of omissions that could be easily remedied. Surprisingly, given the report's emphasis on improving science, the Commission makes no mention of research or baseline reserves. Scientists consider such areas essential if we are to learn how ocean systems work and assess the effects of human activities. Without reference areas, the report's recommendations for ecosystem-based management will fall short, for lack of sound information about what constitutes healthy ecosystems and how they function. Lacking baseline information, more research may provide an ever more detailed accounting of diminishing ocean resources without fostering real understanding or more effective conservation policies. A recommendation to include reference reserves in regional MPA networks would be make this section more consistent with and supportive of the Commission's commitment to improving ocean science and education.

Another overlooked issue is the national interest in preserving special ocean places. National interests are discussed as reasons for not restricting various activities, but no mention is made of the vital national interest in protecting unique and varied ecosystems as a legacy for our children, as we have long done through parks and wilderness areas on land. We suggest that the Commission acknowledge this national interest and recommend that the federal government establish an effective national system of MPAs, including fully protected areas, to address that need.

Given the value of MPAs as a tool, we urge you to recommend that the creation of MPA networks be a national priority, as well as a required task of regional councils, rather than leaving that key job to the discretion of councils which do not have regulatory authority. A recent evaluation of progress made by the Northwest Straits Commission is instructive. Under the initiative, eight voluntary bottomfish recovery zones were created where enforcement occurred through education and peer pressure only. After five years, researchers found no significant difference in fishing pressure between the recovery zones and comparable open areas. (Northwest Straits Marine Conservation Initiative Five-year Evaluation Report). The challenge of making real changes in the water argues for giving regional entities the authorities and tools to set enforceable standards.

The Northwest Straits Commission also illustrates the problem with the preliminary report's call for a uniform national process to designate MPAs. While voluntary reserves may not have been successful, the general process is widely supported, having integrated a very broad group of stakeholders and ideas. Different processes tailored to local and regional needs can work well, and may be necessary to accommodate regional differences. National standards should focus on minimum requirements for successful MPAs and MPA processes, and not eliminate flexibility in designing processes or sites. Developing a coordinated ocean management regime, while important, should not delay ongoing state, federal, or regional MPA planning and designation activities.

Chapter 14: Water Quality

The Commission makes important findings regarding the serious threats to coastal and ocean water quality from nutrient pollution and the need to gain control over nonpoint sources of pollution. However, many of its recommendations rely on technical assistance and incentives, despite the fact that such programs have been largely ineffective. Congress should amend the Clean Water Act to require mandatory controls on polluted runoff. Mandatory programs are workable, as states such as California have demonstrated. California law mandates controls on certain types of polluted runoff, including agricultural runoff, and requires fees on the agricultural and timber industries to pay the costs of that program. Receipt of federal farm support payments should be made contingent on use of best management practices to control farm runoff.

To gain a better handle on nutrient pollution, EPA and the states must promptly adopt numeric water quality standards and criteria for nutrients, which are responsible for creating dead zones in the Gulf of Mexico and elsewhere. A tradable credits program, as recommended by the Commission, should not be instituted until such standards are in place and such a program should ensure that the trade would not cause or contribute to a violation of those water quality standards.

All NPDES permits for stormwater pollution (whether municipal, industrial or from construction) should be required to use the best available technologies economically achievable and to include water quality based effluent limitations in order to meet the water quality standards of the receiving waters. The Commission fails to focus on the

need for more effective utilization of existing authorities under the Clean Water Act to control major point sources of pollution affecting coastal and ocean waters, such as sanitary sewers and factory farms. It also fails to recommend prompt implementation of the current TMDL program.

We also urge that the Commission recommend a significant increase in the State Revolving Fund to address growing water pollution problems caused by urban stormwater and sewage (including septic).

Chapter 19: Sustainable Fisheries

We applaud the Commission's emphasis on the need for structural changes in the way fishery decisions are made and its recommendation for a shift to ecosystem-based management. The oceans are a public trust, and the report recognizes that fisheries should be managed in a way that protects them as a public's asset. The Commission rightly concludes that decisions about how many fish can be safely caught should not be made by those who fish. We support these concepts and welcome the recommendations to insulate scientific decisions from political interference, use default measures to ensure progress, create regional bycatch reduction plans that address ecosystem impacts, and grapple with the effects of recreational fishing.

The approach most consistent with the public trust status of the oceans, in our view, is to have NOAA — the guardians of that trust — make decisions about allowable catch levels, as well as about bycatch and habitat protection, while the fishery management councils determine the allocation of that catch among different types of fishermen and women.

The Commission has chosen a different path, in which the council's scientific and statistical committees (SSC) would make decisions about allowable catch. That approach has merit, but it also has pitfalls in its current form. For example, some types of adjustments to catch levels would remain in council hands (for example, setting optimum yield levels), allowing councils to forego critical adjustments dictated by the need for precaution. And conflicts of interest could still foil the Commission's intentions. A few key changes could make the Commission's approach more effective, including recommendations to make maintaining healthy ocean ecosystems a goal of fisheries policy, and making the precautionary approach a guiding principle. Council representation should be balanced between members of the public and fishing representatives, and both Council and SSC members should be required to meet rigorous conflict of interest standards, rather than the weak provisions currently in the Magnuson-Stevens Act. SSC members should be nominated by the Secretary of Commerce or a scientific institution, not by the councils, from a publicly solicited list of nominees. And Congress should enact a lifetime cap on the number of terms that can be served by any individual.

Chapter 20: Marine Mammals and Endangered Species

We support the emphasis placed by the Commission in this chapter on ecosystem management and improvements in governance. We are concerned, however, that several of the Commission's recommendations, as currently worded, could have unintended consequences that would actually undermine protection of these species. At a time when ocean habitat is in general decline and positive protection is needed, we hope that the Commission will consider modifying some of its recommendations, in addition to strengthening others, to preclude a negative outcome.

The preliminary report recommends that the U.S. Marine Mammal Commission coordinate with other relevant federal agencies through the National Oceans Council (NOC). We believe some special measure of caution is necessary here. The Marine Mammal Commission (MMC) was established by Congress as an independent body that could objectively review the management decisions of other agencies; its independent status is essential to its effectiveness. Thus we support the Commission's mandate that the MMC should coordinate with the NOC while "remaining independent," but we suggest that this recommendation be expanded to specifically preserve the Commission's current duties and authorities under the MMPA. We also recommend an explicit call for an oversight body for sea turtles, most of which are already listed as endangered or threatened under the Endangered Species Act (ESA).

The report directs the NOC to improve coordination between the wildlife agencies in implementing ESA. This recommendation is important, and we would strengthen it to include federal agencies outside NOAA and the U.S. Fish and Wildlife Service that exercise authority over potentially harmful land-based activities. For example, in light of the threat posed by toxics to marine mammals and other marine species, better coordination with the U.S. Environmental Protection Agency is essential. In addition, we suggest that the recommendation should be modified to reference other laws, such as the MMPA and Magnuson-Stevens Act, which conserve or manage marine species and their habitat.

Under the terms of the preliminary report, NOAA, through Congressional mandate, would be required to specify which activities require permits under the MMPA, which are simply prohibited, and which are allowable without further authorization. We believe it is essential, however, to recommend at least elementary review and monitoring for those activities the agencies might consider excluding from the permit process. Basic review and monitoring are essential for protecting marine mammals from the cumulative impacts of even minor human activities and for evaluating our ever-changing uses of the ocean. In addition, to develop consensus on what otherwise might be a contentious issue, the USCOP should call for the public to be proactively involved in the process, beyond the round of notice-and-comment that agency action of this scope will require.

The Commission recommends amending the Marine Mammal Protection Act (MMPA) with a definition of "harassment" that is significantly weaker and more ambiguous than

the existing one. Indeed, the U.S. Marine Mammal Commission, in testifying before Congress about the same National Research Council language that the preliminary report appears to endorse, observed that such language “effectively reverses the precautionary burden of proof that has been the hallmark of the MMPA since 1972.” The Commission should recommend that any change to the core definition of harassment reflect the Act’s precautionary purpose, that it facilitate the important goal of addressing “broad, long-term threats and concerns” (p. 258), and that the process by which it is developed include meaningful participation of the public as well as the scientific community.

The Commission recommends that the permitting process under the MMPA be reordered such that, where possible, categories of activities would be evaluated programmatically and only those that rise to a higher level would be given case-by-case review. We support the idea of programmatic regulation, particularly in its application to activities with the potential for cumulative impacts. But we are concerned that such regulation can also be used to avoid careful analysis, and we believe that the Commission should recommend the following additional steps to ensure that the process it envisions truly advances the goal of marine mammal protection.

1. Clarify that – as with “tiering” under NEPA – programmatic review would not eliminate the need for more discrete or site-specific analysis and that such analysis would also be subject to public notice and comment. We believe such a recommendation to be necessary given NMFS’ existing practice, used in the case of Navy sonar, of deferring site-specific review until after a final rule has been issued. This practice effectively bars participation of the public and the general scientific community in a critical part of permitting decisions.
2. Insist that the process be responsive to the welfare of particular regions and populations of animals, a goal that, though essential to an ecosystem approach, could otherwise get lost within a regulatory scheme focused on activities rather than species and habitat.
3. Gain consensus on what augurs to be a significant change in marine mammal policy; it should recommend that the public be included in the process by which programmatic activities are defined.
4. Make specific recommendations – such as adding a citizen-suit provision like those found in most other major environmental statutes – that would strengthen enforcement of the MMPA.

We support the recommendation that additional funding be provided for research on the effects of noise on marine mammals, but have three concerns about the relevant discussion in the preliminary report. We are concerned about the independence of funding sources. The report recognizes the need to decrease reliance on U.S. Navy research in the field of marine mammals and ocean acoustics. Given the involvement of other federal agencies (such as NSF and MMS) in contentious noise-producing activities, the solution the Commission has endorsed – distributing monies across several agencies – is not sufficient to avoid the appearance of conflict of interest. We urge you to recommend that increased funding in this arena be run by an independent body such as

Admiral James Watkins

June 4, 2004

Page 7 of 7

the Marine Mammal Commission, and be administered through competitive research grants. Indeed, we would suggest running other marine mammal research on controversial issues, such as sea otter recovery and sea lion deterrence, through an independent fund as well. Second, we are concerned about the scope of research as it has been described here. The report should clarify that, in order to “reduce or prevent the negative impacts of human-generated noise on these animals” (p. 257), research on mitigation measures and technologies is also essential. Finally, we are concerned about an inconsistency in the report’s treatment of the subject. The characterization of ocean noise as a “high-profile, lower-impact issue” (p. 258) that appears later in the report is inconsistent both with the Commission’s discussion of the science of ocean noise and with its call for additional research funding on acoustic impacts. We recommend that this characterization be modified or removed.

Chapter 30: Funding and the Ocean Trust Fund

The proposed ocean trust fund is the sole source of money for implementing the report. As currently proposed, the fund’s major source of revenue is oil and gas development. Because the need for ocean funding is so great, this single-source design raises the possibility that the fund will encourage new oil and gas activities and undermine the coastal protection it was created to achieve. We believe that rather than rely on a trust fund mechanism, these recommended improvements in ocean policy should be funded out of general revenues. Any trust fund recommendation, however, should make clear that the fund should not provide an incentive for states or localities to accept more offshore drilling or drilling closer to shore and that the fund should include standards that eliminate or restrict the ability of coastal states to spend money on environmentally damaging activities.

Thank you for considering our comments. We greatly appreciate the Commission’s work and look forward to working with you on the next major challenge: advancing the core recommendations of this important report.

Sincerely,



Sarah Chasis
Director, Water Coastal Program



Kate Wing
Ocean Policy Analyst



Karen Garrison
Co-director, Ocean Initiative



Michael Jasny
Attorney for the Marine Mammal Protection Project