

ACTION FOR WASHINGTON'S OCEAN

Initial Steps to Enhance Management of Washington State's Ocean and Outer Coasts



Interim Report of the
Washington State Ocean Policy Work Group

THE OFFICE OF THE GOVERNOR
OLYMPIA, WA

DECEMBER 31, 2005

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EXECUTIVE SUMMARY

This report presents the activities, initial findings, and early action recommendations of the Washington State Ocean Policy Work Group (OPWG). The OPWG was formed in August 2005, in response to a budget proviso requiring the Governor to initiate ocean policy development activity for the state. This report is the first of two, with a second more detailed report due December of 2006.

This report outlines the legislative charge to the Governor for ocean policy development action, background on ocean policy activities at the federal and state levels, and the initial steps taken to create the reports required by the proviso. The report briefly discusses the value of Washington's ocean and coasts, their economic contribution to the state, and the opportunities and threats facing the region.

The OPWG chose six policy areas for early focus: governance, scientific research, fisheries, aquaculture, coastal energy, and economic development. Detailed policy memos summarize current policy efforts of the state in each area, identify needs and gaps, and conclude with recommendations. These detailed memos are Appendices A-F of this report. Short abstracts of the memos are presented in Section V. The OPWG identified eight additional topics to be addressed in Year 2 (listed in Section VII).

Section VI of this report recommends early action steps for Year 2 of the OPWG. An underlying theme of the early actions steps is to gain additional input from all stakeholders in the state's ocean and coastal affairs. In addition, specific recommendations call for a detailed governance proposal by September, 2006, a more coordinated approach to marine science, added emphasis on renewable ocean energy policy, special attention to fisheries-related research needs, specific meetings to address aquaculture policy and coastal economic development, and active participation between OPWG, the Olympic Coastal National Marine Sanctuary, and the marine components of the National Park Service.

The report briefly discusses the value of Washington's ocean and coasts, their economic contribution to the state, the opportunities and threats facing the region, and recommends early action steps for Year 2 of the Ocean Policy Work Group.

OPWG PARTICIPATION (AUGUST – DECEMBER 2005)

OPWG Membership

Elliot Marks – Governor's Office (Chair)
Janice Adair – Dept. of Health
Heather Ballash – CTED
Al Carter – Gray's Harbor Co. Commissioner
Rep. Maralyn Chase
Michele Culver – Dept. of Fish & Wildlife
Ashley DeMoss – State Parks
Mike Doherty – Clallam Co. Commissioner
John Dohrman – PSAT
Jan Haywood – Dept. of Health
Marc Hershman – University of Washington
Sen. Ken Jacobsen
Eric Johnson – Washington Ports
Brian Lynn – Dept. of Ecology
Jim Skalski – OFM
Loren Stern – Dept. of Natural Resources
Sen. Dan Swecker
Megan White – Dept. of Transportation
Dave Williams – Assoc. of Cities

Additional OPWG Participants

Brad Ack – Puget Sound Action Team
Dave Catterson – Assoc. of Cities
Gary Cooper – IAC
Tom Clingman – Dept. of Ecology
Jeff Dickison – Squaxin Tribe
Jim Fox – IAC
George Galasso – Olympic Coast National Marine Sanctuary
Curt Gavigan – Senate Committee Services
Jennifer Hagen – Northwest Indian Fisheries Commission
Guy McMinds – Quinalt Tribe
Paul Parker – Assoc. of Counties
Kevin Ranker – San Juan Co. Commissioner
Steve Robinson – Northwest Indian Fisheries Commission
Ron Shultz – Dept. of Ecology / PSAT
Karen Terwilliger – House Democratic Caucus
Gordon White – Dept. of Ecology
Gary Wilburn – Senate Democratic Caucus
Jim Woods – Makah Tribe

UW School of Marine Affairs Graduate Student Researchers

Phebe Drinker
Alex Erzen
John Hansen
Katrina Hoffman
Dianna Jones
Jennifer Kassakian
Kate Litle
Sarah McAvinchey
Theresa Mitchell
Kendra Nettleton
Mela O'Haleck
Maggie Ostdahl

OPWG LEAD & UW STUDENT RESEARCHERS

Governance

Elliot Marks – Governor's Office (Lead)
Phebe Drinker – UW
John Hansen – UW
Mela O'Haleck – UW

Research Priorities

Loren Stern – DNR (Lead)
Kate Litle – UW
Theresa Mitchell – UW
Kendra Nettleton – UW

Sustainable Fisheries

Michele Culver – WDFW (Lead)
Jennifer Kassakian – UW
Maggie Ost Dahl – UW

Aquaculture

Loren Stern – DNR (Lead)
Sarah McAvinchey – UW

Economic Development

Heather Ballash – CTED (Lead)
Dianna Jones – UW

Coastal Energy

Marc Hershman – UW (Lead)
Alex Erzen – UW

SUBCOMMITTEE CONTRIBUTORS

Al Carter – Gray's Harbor Co.
Rep. Maralyn Chase
Gary Cooper – IAC
George Galasso – OCNMS
Sen. Ken Jacobsen
Brian Lynn – Dept. of Ecology
Sen. Dan Swecker
Bob Bailey & Greg McMurray – Oregon
Ocean Policy Advisory Council

Rep. Maralyn Chase
Mike Doherty – Clallam Co.
John Dohrman – PSAT
Brian Lynn – Dept. of Ecology
Guy McMinds – Quinalt Tribe

Rep. Maralyn Chase
Jennifer Hagen – NWIFC
Guy McMinds – Quinalt Tribe
Loren Stern – Dept. of Natural Resources

Rep. Maralyn Chase
Linda Crerar – Dept. of Agriculture
Michele Culver – WDFW
John Dohrman – PSAT
Jan Haywood – Dept. of Health
Guy McMinds – Quinalt Tribe
Sen. Dan Swecker
Jim Zimmerman – WA Fish Growers Assoc.

Al Carter – Gray's Harbor Co.
Rep. Maralyn Chase
Mike Doherty – Clallam Co.
Eric Johnson – WA Ports
Dick Larman – OTED
Peter McMillin – OTED
Guy McMinds – Quinalt Tribe
Carole Richmond – IAC

Al Carter – Gray's Harbor Co.
Rep. Maralyn Chase
Mike Doherty – Clallam Co.
John Dohrman – PSAT
Sen. Ken Jacobsen
Brian Lynn – Dept. of Ecology
Guy McMinds – Quinalt Tribe
Ron Tessiere – Dept. of Natural Resources
Tony Usibelli – CTED

LEGISLATIVE CHARGE

The following section of ESSB 6090, the state operating budget, outlines the requirements for the Governor to provide reports by the end of 2005 and 2006 on state ocean policy activities and next steps. The Governor's Office initiated the Ocean Policy Work Group as a means to carry out these requirements, by conferring with the Departments of Ecology, Fish & Wildlife, and Natural Resources to assemble the appropriate representation to begin policy discussions and creation of a first policy report.

ESSB 6090 - Operating Budget

OFFICE OF THE GOVERNOR

- By December 31, 2005, the governor's office shall identify the recommendations of the U.S. commission on ocean policy appropriate for immediate implementation.
- By December 31, 2006, the governor's office shall provide a report:
 - ▶ Summarizing the condition of the state's ocean resources and their contribution to the state's character, quality of life, and economic viability;
 - ▶ recommending improvements in coordination among state agencies and other jurisdictions;
 - ▶ recommending measures to protect and manage ocean resources;
 - ▶ recommending measures to finance ocean protection, management, and development programs; and
 - ▶ recommending legislation regarding ocean resources or policy.

Funds have been allocated to the Governor's Office, the Department of Ecology, the Department of Fish & Wildlife, and the Department of Natural Resources to carry out the charge.

NATIONAL POLICY CONTEXT

US Commission on Ocean Policy and PEW Oceans Reports

Within the last two and a half years, two major commissions released the two most comprehensive reports on ocean policy in the United States in over thirty years. Not since the 1960's has ocean policy been examined to such an extensive and detailed degree.

Released in June 2003, the Pew Oceans Commission report, [America's Living Oceans: Charting a Course for Sea Change](#),¹ marked the first major review of domestic ocean policy since the Stratton Commission. Though this study was funded through the Pew Charitable Trusts, and thus was not affiliated with the US Government, the extensive review of many areas of ocean policy, as well as the recommendations of the report, provide valuable information for coastal management at all levels of government. Some of the recommendations, among others, focused on ecosystem-based management, sustainable use of resources, establishing regional ocean governance councils, restoring fisheries, protecting coastlines and coastal waters, ensuring sustainable aquaculture practices, and increasing ocean research and education.

Funds have been allocated to the Governor's Office, the Department of Ecology, the Department of Fish & Wildlife, and the Department of Natural Resources to carry out the charge.

¹ Available at: http://www.pewtrusts.org/pdf/env_pew_oceans_final_report.pdf

In August of 2000 the United States Congress concluded a three year effort by passing an Oceans Act bill which established the U.S. Commission on Ocean Policy (USCOP). In April 2004 the USCOP released its preliminary report for review by the nation's Governors and other stakeholders. It was at this point that many States provided input to the Commission, which was included in the December 2004 final report, [An Ocean Blueprint for the 21st Century](#).² It was also at this point that many States began to initiate ocean policy activities of their own in response to the work of both the Pew Oceans Commission and the USCOP.

Both of these reports have served to put the spotlight on ocean policy activities of federal, state, and regional governmental entities. The central message of both of these reports was the call for forward-looking ocean policies to guide coastal management of emerging uses, and new technologies, to both maximize their benefits and minimize potential threats to our nation's oceans and coasts. Both reports have identified and promoted successful ocean management models. Where policies of the past were proving less successful, recommendations for change were provided. Finally, in those areas where policies or management regimes were identified as altogether lacking, recommendations were developed to respond to such gaps. Combined, these two reports provide the most expansive review of ocean policies in decades, while laying the groundwork for potential changes that could enhance ocean and coastal management for the entire country for decades to come.

Federal Executive-Branch Activities

In December 2004, the Bush Administration released the US Ocean Action Plan as a response to the USCOP Report. In addition, the President issued an Executive Order creating a cabinet-level Committee on Ocean Policy to coordinate federal activities on ocean-related issues, as well as assist in the coordination and collaboration with state, local, tribal, and private interests in ocean policy.

One of the first acts of the Committee on Ocean Policy was to establish the National Science and Technology Council Joint Subcommittee on Ocean Science and Technology (JSOST) with the directive to develop an Ocean Research Priorities Plan and Implementation Strategy by December 31, 2006. In addition, the Committee on Ocean Policy has established the Subcommittee on Integrated Management and Ocean Resources (SIMOR). In an effort to provide input to JSOST on high priority ocean and coastal research needs, specific problem areas, and immediate needs for addressing resource management challenges, SIMOR has assembled a Federal State Task Team on Research Priorities. As participants in the West Coast Region (California, Oregon, and Washington) Federal-State Task Team, Washington State is working to ensure the State's ocean and coastal priorities are included in the regional inputs.

This is a prime example where the initial federal response to the Pew and USCOP reports has already begun, and also where State input to these activities is essential. Federal activities taking place now, and those likely to emerge in the future, will require State input regarding many areas of ocean policy.

² Available at: http://www.oceancommission.gov/documents/full_color_rpt/000_ocean_full_report.pdf

Ocean & Coastal Bills in Congress

Several bills have been introduced in the US Congress as a direct response to the work of the Pew Oceans Commission and USCOP. The bills focus on national-level topics ranging from curbing marine debris to creating an overarching policy for US ocean affairs. Selected bills introduced in the current Congressional session are highlighted below.

- HR 50 – National Oceanic and Atmospheric Administration Act
 - ▶ An organic act to establish NOAA, also charging NOAA's administrator to create a plan for modernization and science and technology research development.
- S 39 – National Ocean Exploration Program Act
 - ▶ A bill to establish a coordinated national ocean exploration program within NOAA.
- S 50 – Tsunami Preparedness Act
 - ▶ A bill to improve tsunami detection, forecast, warnings, notification, preparedness, and mitigation in the US and abroad.
- S 361 – Ocean and Coastal Observation System Act
 - ▶ A bill to develop an integrated system of ocean and coastal observations for the Nation's coasts, oceans and Great Lakes, and improve warnings of tsunamis and other natural hazards.
- S 362 – Marine Debris Research, Prevention and Reduction Act
 - ▶ Establishes a program within NOAA to reduce and prevent the occurrence and adverse impacts of marine debris on the marine environment and navigation safety.
- HR 2939 – Oceans 21, The Ocean Conservation, Education, and National Strategy for the 21st Century Act
 - ▶ A bill to establish a national oceans policy, national standards on protecting and maintaining healthy marine ecosystems, and a national oceans advisor, and for other purposes.
- S 1224 – National Oceans Protection Act of 2005
 - ▶ Declares the purpose of this Act is to secure for future U.S. generations a full range of benefits of healthy marine ecosystems, creates a national ocean policy, and establishes NOAA, and for other purposes.

State Initiatives around the US

Many coastal States around the country have reexamined their own ocean policy activities in light of the reports of the PEW Oceans Commission and USCOP. These initiatives have facilitated regional partnerships at the state level, allowing multiple States to come together in an effort to provide a stronger stance on certain issues where multi-State policy agreement can be reached. Some examples of these State initiatives are listed below.

- Oregon Ocean Policy Advisory Council
 - ▶ Reconstituted January 2004; broad stakeholder advisory body to coordinate state ocean policy activities, early focus on marine protected areas.
- California Ocean Protection Council
 - ▶ Established December 2004; 5-member council of state agency and legislature representatives, recently released coastal information, research and outreach strategy.
- Alaska Ocean Policy Cabinet
 - ▶ Established December 2004; mechanism for state agency coordination and interaction with federal government on ocean and coastal issues.
- Hawaii Ocean & Coastal Council
 - ▶ Established January 2005; broad stakeholder representation to provide advice and recommendations for addressing Hawaii's ocean and coastal matters.
- Massachusetts Ocean Management Initiative
 - ▶ Initiated March 2003; policy review effort for state management policies on ocean and coastal areas, with legislation proposed to create policy advisory body.
- Florida Oceans and Coastal Resources Council
 - ▶ Established May 2005; development of a research plan and resource assessment, including resource use patterns, socioeconomic trends and monitoring of infrastructure.
- British Columbia & Canada's Ocean Strategy
 - ▶ Initiated 2002; release of Canada's Ocean Strategy, a national plan with implementation through memorandum of understanding British Columbia.

WASHINGTON STATE'S INITIAL STEPS

Ocean Policy Work Group Background

The Ocean Policy Work Group was formed by the Governor's Office, with input from the Departments of Ecology, Fish & Wildlife, and Natural Resources. The membership of the work group included CTED, OFM, Dept. of Health, State Parks, and City, County and Port Associations. Members of the State House and Senate also serve on the work group, and tribal representatives have served as observers. Because of the flexible and open nature of the work group's early meetings, members of the group have been somewhat self-selecting, with certain members actively involved while others have chosen to be kept informed through updates on work group progress. Additional parties contributed to work group efforts and policy memos where the policy topic was of particular interest to these outside sources.

The Governor's Office and OFM contracted with the University of Washington to aid in research and drafting of its first two reports. Professor Marc Hershman, a former USCOP commissioner, has served as a member of the group. He led a seminar class of graduate students at the UW School of Marine Affairs that has performed research and writing in support of the group. Specifically, the students aided the work group subcommittees by drafting the policy memos discussed in this report.

Geographic Scope

The initial scope of the work group has focused on the straits, the three major coastal estuaries, including the Lower Columbia, Willapa Bay, and Gray's Harbor, and the outer coasts and oceans of the State. The work group chose to focus on those areas of the marine environment not receiving sufficient policy attention. The work group agreed that while connections with other coastal areas of the State, such as the Puget Sound, should be considered, the group's focus would be the straits, the coastal estuaries, and the outer oceans and coasts.

Work Group Operating Procedures

The work group first convened in August 2005. At this meeting the group's scope and an initial topics list was discussed, with certain policy issues chosen for the year 1 report and other issues delegated for further study in year 2. Those issues determined to be addressed sufficiently elsewhere in State government were removed from the list altogether.

Since then, the work group has met three times through a flexible open-meeting process to discuss its initial policy list and subsequent preparation of its first report. Six subcommittees were formed to work on each early policy topic, with a subcommittee chair supervising the drafting and revision of draft policy memos and progress toward policy recommendations. Graduate students at the University of Washington School of Marine Affairs attended all work group meetings, and worked closely with their subcommittees to provide support in memo drafting.

THE CASE FOR OCEAN POLICY ACTION IN WASHINGTON STATE

The Ocean Policy Work Group believes that Washington State has a strong need for better developed ocean and coastal policies, based on the importance of the State's coastal resources and communities, the recent policy developments around the country, and the external pressures to which Washington State must form a strong response. Discussed in detail below, all of these factors lead to the conclusion that the State must continue to build on the early efforts of the OPWG, giving immediate attention to the topics and recommendations of this report while ensuring mechanisms are in place to continue this valuable ocean policy development.

Importance of ocean and coastal resources and communities to the State

The ocean and coastal resources of Washington make up some of the most valuable assets the State is proud to call its own. The economic processes that directly rely on them, and the number of citizens that hold the utmost respect for them, make effective management of our coastal waters a top priority for every citizen and visitor to Washington State.

The ocean and coastal resources of Washington make up some of the most valuable assets the State is proud to call its own.

The fishing industry is one of the most valuable for Washington. Commercial fisheries are based in numerous coastal ports. Landings revenues in 2004 totaled over \$100 million. Recreational fisheries are enjoyed by State residents and visitors from around the world. In Washington State, 33 of 39 counties contain a public port district, supporting goods exchanged via shipping that totaled over \$100 billion in 1997. International trade growth is expected to increase 5% a year in Washington for the next 20 years. Tourism in Washington State is an \$11 billion a year industry, supporting 30,000 small businesses and over 120,000 jobs. Much of this tourism is based in coastal areas, with wildlife watching and water-based activities as some of the most popular with tourists.

World-class ocean research and exploration is being performed off the coast of Washington, through the contributions of state universities and private Washington-based endeavors. These activities are developing the latest in technology to understand earth and ocean processes, providing an opportunity for the state to be a driving force in these scientific advances, while also serving to benefit local industries and economies through support and servicing of these activities. Coastal communities also stand to benefit through increased understanding and preparation for hazards such as storm surges and tsunamis.

Finally, all residents of the state, regardless of job or location, value the coasts based simply on their beauty and therapeutic qualities. Whether it be building a retirement home, spending a weekend in a beachside cabin, or simply visiting for the day every few years, the ocean and coasts of Washington are appreciated as some of the most rugged and beautiful natural resources along the west coast. To let these areas, however remote they may be, become more degraded and forgotten over time is to do an injustice to every person in the State. Rather, effective management will ensure that Washington's ocean and coastal resources will receive the continued attention they deserve, while also exploring new opportunities that will benefit the state for decades to come.

Overarching Themes

The primary goal of the OPWG was to identify gaps in the policy structure for ocean and coastal affairs for Washington State. The work group sought to find those policy areas where relevant issues were not being addressed, and to develop recommendations to effectively fill those gaps without creating redundancy or duplication of efforts.

Many new technologies and uses for the oceans, in addition to newly identified stresses to the oceans brought on by environmental and anthropogenic changes, have reinforced the idea that new policies for the oceans are needed. These advances in understanding and attention provide a rare opportunity to further explore the connections between the ocean and humans, leading to potential solutions to many broad societal problems as well as identification of potential threats.

The ocean is no longer the unknown aspect of nature it once was. In the 21st century, the oceans provide the next frontier in advancement of our way of life, with increasing opportunities in biotechnology, worldwide communication, fisheries, minerals, sustainable aquaculture, and observation to predict environmental change and hazards.

Washington State is anxious to pursue these new opportunities for ocean policy development, but the present structure of institutions and players within state government is highly complex and overlapping. The OPWG has focused its early efforts on beginning discussion among these players, and giving attention to the best ways to coordinate policy activities while ensuring efficient and comprehensive collaboration on future opportunities as they arise.

External Pressures

Many policy developments underway are directly linked to Washington State ocean governance, providing external pressures to which the state must respond. The Bush Administration's energy and aquaculture bills both concern development in the offshore areas of coastal states, requiring an immediate state response for involvement in policy activities.

The Pacific Northwest has observed recent ocean and coastal policy advances in Oregon and British Columbia, urging Washington State to contribute on policy discussions so that coordination and consensus on future efforts can be reached. California has demonstrated leadership in directly responding to these ocean policy reports, serving as an early conduit to the federal government and providing an opportunity for alliance on progressive policy issues.

Within the State, coordination and collaboration with coastal tribes throughout the state as autonomous co-management entities is a constant priority for state policies. Links to common policy issues and ongoing activities in the greater Puget Sound must be explored, as the ocean, straits, and Puget Sound will always be strongly linked. The development of ocean and coastal management schemes that can be agreed upon by all state management bodies, regardless of location or jurisdiction, is a necessity for successful policy development on such a wide array of issues.

INITIAL TOPICS ADDRESSED

Introduction

The budget proviso establishing the OPWG required an interim report due December 2005 and a more comprehensive report due December 2006. This report summarizes phase one of the work group's efforts, including summaries of six policy memos focused on those topics chosen for early action by the OPWG. The full policy memos are found in Appendices A-F.

Topic Areas

Governance

Governance was chosen as an initial topic to be addressed by the OPWG because of the recent ocean policy developments at the national level and the rapid progress many coastal states around the country have made in order to respond to developments at the federal and state level. Washington hopes to initiate an effort of its own, both to better coordinate and communicate on these within the State, as well as through increased collaboration with other states and the federal government.

The Governance Subcommittee recommends pursuing the appropriate membership, function, and authority for a new ocean policy mechanism in 2006, which represents a wide range of ocean and coastal interests from throughout the state, including state agencies as well as non-governmental entities.

The governance policy memo summarizes the current ocean governance structure in Washington State, the relationships that exist within State government, and identifies where deficiencies might be filled to improve overall ocean management. Along with investigation of these State ocean policy activities, policy action models from elsewhere within the State as well as initiatives taking place in other coastal States were investigated

The Governance Subcommittee

recommends pursuing the appropriate membership, function, and authority for a new ocean policy mechanism in 2006, which represents a wide range of ocean and coastal interests from throughout the state, including state agencies as well as non-governmental entities.

The Research Priorities Subcommittee

recommends the creation of a governing board and council with representatives from management agencies and tribes, scientific communities, and stakeholder groups to establish management needs, align research priorities, and monitor the progress through specific work plans based on a strategic framework.

The Sustainable Fisheries Subcommittee

recommends an immediate focus on benthic habitat characterization and mapping as the top priority for the short-term. Specifically, the subcommittee recommends ensuring increased communication among and collaboration on benthic research between stakeholder entities, and seeking increased funding for benthic habitat research both within the State and at a regional level.

to provide additional policy background that might serve future efforts of the work group. The memo also identifies specific policy issues that will likely need to be addressed in order to pursue more efficient governance mechanisms.

Research Priorities

Washington State does not currently maintain a coordinated ocean research priorities agenda to address the many issues that affect marine ecosystem health and human health, such as fisheries decline, habitat alteration, invasive species and hypoxia. Several groups have developed their own list of research priorities, but these are not integrated across disciplines nor are they coordinated. The recent focus on the marine environment by both the Pew Commission and the US Commission on Ocean Policy identified a need for coordinated regional research priorities. In response, the current Bush Administration redirected the National Science and Technology Council Joint Subcommittee on Ocean Science and Technology (JSOST) and the Subcommittee on Integrated Management and Ocean Resources (SIMOR) to coordinate federal activities on ocean-related issues.

The Research Priorities Subcommittee recommends the creation of a governing board and council with representatives from management agencies and tribes, scientific communities, and stakeholder groups to establish management needs, align research priorities, and monitor the progress through specific work plans based on a strategic framework.

Three critical procedural recommendations are put forth:

1. The Ocean Policy Work Group should continue to address research priorities under its current mandate.
2. The list of Washington State research priorities should be expanded and commented upon by broader, inclusive stakeholder processes, such as workshops and continued interviews.
3. The selected focus should remain on ocean and coastal issues, while recognizing and directly cooperating with ongoing efforts in Puget Sound.

Sustainable Fisheries

The State of Washington has limited direct authority over fisheries operating off its coast, with control of activities out to three nautical miles. A focus on collecting better information for fisheries will allow the state to improve its own management and improve the input it provides federal managers. Benthic habitat characterization and mapping has been among the list of items needed to establish a baseline of the current status of ocean resources. Additionally, increased research on habitat will allow fishery managers at both the federal and state level to better plan for the conservation and enhancement of the stocks of fish that depend on certain habitats.

The Sustainable Fisheries Subcommittee recommends an immediate focus on benthic habitat characterization and mapping as the top priority for the short-term. Specifically, the subcommittee recommends ensuring increased communication among and collaboration on benthic research between stakeholder entities, and seeking increased funding for benthic habitat research both within the State and at a regional level.

Aquaculture

Aquatic farming has been producing quality products in Washington State for over a century. Regulations and protocols by state and federal agencies are in place. These protocols and regulations have served agencies, protected the general public and public resources and the aquatic farmer well. There is however room for improvement, especially with the possible expansion of aquaculture into the offshore area due to growing global

demand for aquaculture products. Many current protocols meet international requirements for foreign trade as well as European Union and other various US Trade Agreements.

Due to the plateau in wild capture fisheries, aquaculture development, policy and marketing will become increasingly more important issues for nations, states and municipalities. The need for legislative and regulatory action is highlighted by the conflicts aquaculturists may experience with other uses of the ocean such as commercial fishing, navigation, tribal, and recreational uses. There is debate regarding the next steps Washington should take in either promoting or opposing aquaculture.

At this time, the Aquaculture Subcommittee recommends further communication on aquaculture issues, leading towards a consolidation of a state position that takes all relevant stakeholder views into account. To pursue this goal, stakeholder meetings should be arranged to begin the process of gaining additional input on the issue of offshore aquaculture.

Coastal Energy

With fluctuating oil and gas prices, a desire to lessen dependence on fossil fuels, and an increasing awareness of the risks of global warming, diversification of our energy supply is imperative to achieving energy security. Addressing Washington's coastal energy issues will help prepare for that future. Coastal energy includes two separate but related energy arenas: 1) Offshore hydrocarbons (oil and natural gas), and 2) Marine renewable energy technologies (wave, tidal /current and offshore wind). The US Interior Department's Minerals Management Service (MMS), and a variety of other state (CTED, EFSEC, Ecology, DNR) and federal (Dept. of Energy, FERC) agencies, have regulatory management authority under the Energy Policy Act of 2005, depending on a coastal energy project's location within state waters or the federal exclusive economic zone.

Offshore oil and gas activity in the federal exclusive economic zone off Washington's coast has been prohibited by Presidential Executive Order since 1990. The Washington Ocean Resources Management Act prohibited oil and gas development in state ocean waters in 1989. The Presidential moratorium will expire in June 2012, unless extended. Marine renewable energy projects, though immature, are blossoming worldwide. AquaEnergy Group, with Clallam County PUD and the Makah Nation, has sought to begin a wave energy project in Makah Bay, WA since 2002 – the first proposal in the U.S. Tacoma Power is now considering tidal energy in the Tacoma Narrows.

The Coastal Energy Subcommittee recommends that Washington seek to extend the oil & gas moratorium beyond 2012, and actively support marine renewables by providing incentives for government-industry-academia to collaborate in demonstrating viable marine renewable technologies.

The Aquaculture Subcommittee

recommends further communication on aquaculture issues, leading towards a consolidation of a state position that takes all relevant stakeholder views into account. To pursue this goal, stakeholder meetings should be arranged to begin the process of gaining additional input on the issue of offshore aquaculture.

The Coastal Energy Subcommittee

recommends that Washington seek to extend the oil & gas moratorium beyond 2012, and actively support marine renewables by providing incentives for government-industry-academia to collaborate in demonstrating viable marine renewable technologies.

The Economic Development Subcommittee

recommends that strategic clusters of the coastal economy be identified by the Work Group, and that specific action plans for these clusters be developed that are tied to the state's economic development funding priorities. Local stakeholders should investigate opportunities to match local funds to state programs such as the Community Economic Revitalization Board and the Job Development Fund.

Economic Development

Washington State's coastal economy is experiencing acute impacts from the global economy, while also continuing to suffer widespread effects from timber and fish harvest levels that are much smaller than in previous decades. There remains a strong need to create or strengthen community foundations to support community initiatives to diversify the coastal economy, to invest in basic infrastructure, and to improve educational and workforce training opportunities. Building on local assets, heritage, and resources, local entrepreneurship and enterprise development can stimulate economic growth, engage young people and recreate community vitality.

Opportunities for economic diversification include

- increasing year-round ecotourism,
- enhancing the size and vitality of marine trades such as boat building and boat repair,
- marketing specialized agricultural and aquacultural products,
- improving small harbor navigation and dock facilities, and
- investing in building a strategic coastal knowledge cluster networked to entrepreneurship and enterprise development

The Economic Development Subcommittee recommends that strategic clusters of the coastal economy be identified by the Work Group, and that specific action plans for these clusters be developed that are tied to the state's economic development funding priorities. Local stakeholders should investigate opportunities to match local funds to state programs such as the Community Economic Revitalization Board and the Job Development Fund.

RECOMMENDATIONS

The budget proviso that outlines the tasks for the Ocean Policy Work Group made it clear that this interim report of the work group was to focus on those recommendations that were of the most immediate importance and provided clear opportunities for action. Because the work group has been operating for less than four months, many of these recommendations center on gaining additional input from the numerous stakeholders involved in the state's ocean and coastal affairs. The goal is to expand participation outside of state government and provide more comprehensive policy recommendations for the work group's 2006 report. Other recommendations outline specific actions the state must take to respond to external activities that will require a response prior to the completion of the 2006 report.

1. The Ocean Policy Work Group (OPWG), with concurrence from the Governor and legislative leaders, should develop a specific outreach program for the first half of 2006, including stakeholders from coastal regions of the State, with the aim of actively engaging them in the development of the State's ocean policy on topics from this report and topics to be included in the OPWG's second report (See Sec. VII. Plan for Year Two).

The outreach should give special attention to each of the following topics:

- a. Aquaculture: Opportunities to improve state policy (See Action #6, below)
- b. Coastal Economic Development: Ecotourism & Other Areas (See Action #7, below)
- c. Sustainable Fisheries: Current Status, Research Needs, Habitat Characterization (See Action #8, below)

2. The OPWG, through support from the Governor's Office, should publish and make available this year one summary report, so that it may be used for public input purposes in early 2006.
3. The OPWG should prepare a draft recommendation for an improved ocean governance mechanism by September 2006. The Governor, Legislature, and Agency heads should review this recommendation while gaining stakeholder input on this proposal from a wide range of interests. The theme of this recommendation will focus on use of a broad multi-stakeholder body, including state agencies and non-governmental agencies, as a means for ocean policy development for the State.
4. The OPWG, by early 2006, should initiate coordination with potential Puget Sound marine science consortium activities, while ensuring clear recognition and focus on ocean and coastal issues. This coordination would draw on efforts to discuss the approach the State shall take in order to further develop and refine research priorities for the State's ocean resources while gaining input from appropriate areas of State universities & academia, State agencies, NGOs, and private industry.
5. The Governor's Energy Policy, which focuses on reducing greenhouse gasses and development of renewable energies, should add a vibrant and highly-visible role for renewable ocean energy sources. This would include providing support for nascent marine renewable energy projects, pursuing opportunities for collaboration on new technology development (as done presently in Oregon), among other ways to build enthusiasm for such technology in the State.
6. The Legislature, with active participation from WDFW and DNR, should hold public meetings during its 2006 session to fully explore development and improvement of Washington's policies on aquaculture within the State, and to provide input on federal activities. These meetings should occur where aquaculture activities are proposed or currently prominent. Records of these meetings should be kept in order to provide a basis for future policy development.
7. The OPWG, in consultation with appropriate State and local agencies, should organize meetings with stakeholders to explore a variety of opportunities for marine-related economic development, such as ecotourism and other areas.
8. The OPWG should encourage meetings to get stakeholder input on appropriate fisheries-related research needs, funding sources, and scope. WDFW should get input on implementing sustainable fisheries policy within State jurisdiction, with particular focus on current status of coastal fishery stocks, evaluating current practices, habitat mapping and characterization, and improved fisheries management technology.
9. The Governor should propose active participation between the OPWG and the Olympic Coast National Marine Sanctuary and marine components of the National Park Service. This collaboration could potentially center on the areas of scientific research, education, and management policy. The Governor should commit the State to an active role in the OCNMS' and National Park Service's management program reviews.

PLAN FOR YEAR TWO

Timeline

- January – June, 2006** Outreach and meetings with coastal communities and stakeholders for input on Year 1 topics.
- June 15, 2006** Draft Report on Year 2 topics by UW research staff submitted to OPWG.
- September, 2006** Draft Final Report on OPWG work, including recommendations for key elements to be included in legislation to establish an ocean policy body.
- October - November, 2006** Request interim legislative hearings on policy actions, draft budget requests through Governor's Office and OFM, and recommend specific legislative actions.

Topics to be Addressed in Year 2

- Climate Change
- Ecosystem-based Management
- Marine Protected Areas
- Hazard Preparedness
- Ocean Observation, Research, and Education
- Hypoxia and Harmful Algal Blooms
- Marine Debris
- Regional Sediment Management / Erosion

APPENDIX A

GOVERNANCE POLICY MEMO

Washington State Ocean Policy Work Group

Phebe Drinker

John Hansen

INTRODUCTION

The Washington State Ocean Policy Work Group has chosen to pursue Governance as one area of its first report and early policy recommendations. Specifically, the work group is hoping to provide recommendations for a State-level ocean governance initiative that will allow for more effective management of the State's ocean and coastal resources.

The current ocean governance structure is briefly outlined in the following memo. From this assessment of current policies and implementation strategies for ocean governance, we have identified the relevant policy problems with Washington's ocean governance, issues that this Work Group will need to address when creating a new ocean governance initiative, and alternative strategies for such an initiative.

The information for the following memo was gathered from students working in each topic area of governance, agency and county websites, and conversations with agency and OPWG representatives.

Future research and collaborative efforts to continue the work done in this memo must include local, regional, tribal, non-profit, and industry input. Collaboration and consensus among most stakeholders in Washington's Ocean Governance efforts will be essential for OPWG to reach its goals.

Governance Memo

*For the full version of this memo, including all referenced appendices, please see:

[http://
courses.washington.edu/
oceangov/OPWG.html](http://courses.washington.edu/oceangov/OPWG.html)

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

1) Background

The Washington State Ocean Policy Work Group (OPWG) is considering whether the current ocean governance structure is sufficient given recently developing ocean issues. Recent developments include current federal actions, such as the U.S. Commission on Ocean Policy Report, as well as changes in fisheries, climate change research, and ocean energy developments. It should be noted that a previous effort to address Ocean Issues in Washington State, the Oceanographic Commission of Washington (1967-81), was limited in scope and has since expired. This new working group will address a broader range of ocean issues; whereas the Oceanographic Commission focused primarily on oil and gas transport, oceanographic research, and science and technology, the OPWG is focused on state fisheries, energy, economic development, research, aquaculture, and many other issues (see full list below).

The OPWG may determine that a new governing body is necessary to oversee and advise the state on ocean issues. Such a governing body would be focused on coastal ocean and straits issues, while maintaining communication and cooperation with Puget Sound structures, such as the Governor's Puget Sound Initiative and the Puget Sound Action Team (PSAT). In order to create this governing body, they must first understand the current governance structure, its piecemeal nature, and the players involved. A clearer understanding of current ocean policy governance will highlight agency interactions, enhance communication among agencies involved in the same area of ocean policy, and identify which agency(s) or parties "speak for the State" on certain issues. This last realization will aid in communication between the State and the Federal government. Finally, topic areas that are not covered under any one agency's jurisdiction, such as Washington State Ocean Research Priorities, will be identified. Filling such gaps will be of great importance to the OPWG. An agency or group to both govern and represent ocean policy can improve management, both at a State and federal level.

The OPWG has chosen to focus its preliminary efforts on six topic areas, with seven additional areas deferred to efforts in the coming years:

Immediate Focus

1. Coastal Energy
2. Economic Development
3. Sustainable Fisheries
4. Aquaculture
5. Research Priorities
6. Governance.

Defer to Later

1. Marine Reserves
2. Global Warming
3. Ecosystem-based Management
4. Hazard Preparedness
5. Ocean Observation, Research, Education
6. Hypoxia and HAB
7. Marine Debris
8. Regional Sediment Management

The following attempts to illustrate the Washington State legislation affecting these topic areas and the agencies active in carrying out that legislation.

2) Current WA State Law/Policy & Stakeholders

There are few legislative authorities directing ocean issues in Washington State. For instance, the Ocean Resources Management Act, created with a focus on offshore oil and gas and mineral resources, is not a comprehensive legislation on ocean resources since it does not address fisheries, aquaculture, development, etc. Various other laws have been created on an *ad hoc* basis and mainly pertain to inshore resources. State laws and codes that apply to the topic areas of interest to the OPWG, if sometimes only vaguely, are listed in Appendix I.

There are many varied stakeholders involved in Washington State ocean governance. State agencies are one arm of the system, carrying out, interpreting, and sometimes enforcing legislation. Also involved in this process are local county and city governments and federal agencies. Finally, the coastal tribal nations of Washington State hold strong interest in ocean issues and governing those areas that affect the tribes.

Washington State, Federal Agencies, and Coastal Tribes each have distinct and overlapping areas of jurisdiction in ocean waters and coastal lands. Through the Coastal Zone Management Act, Washington State manages coastal waters under its Shoreline Management Act. Other state-specific statutes pertain to coastal fisheries management, water quality, and wetlands, such as the State's Environmental Policy Act. Coastal Tribes maintain joint governance rights over tribal fisheries, such as salmon and steelhead, through treaties established in the 1850's, and re-affirmed in district court in 1974 (*U.S. v. Washington*).¹ Their jurisdiction continues with representatives sitting on the Pacific Fishery Management Council and the North of Falcon process, which govern fisheries in the Exclusive Economic Zone (EEZ) (3-200nm offshore) and inland Indian and non-Indian fishing, respectively. Coastal tribes also participate in research and aquaculture across the state. Finally, federal jurisdiction covers many areas, including the EEZ, through acts such as the Magnuson-Stevens Fishery Conservation and Management Act and the Coastal Zone Management Act. Agencies such as NOAA Fisheries and the Coast Guard oversee fishing in the EEZ.

Appendix II consists of two tables: Table A identifies those agencies and entities with management authority over the first 5 areas of ocean governance addressed by the OPWG; Table B is a list of stakeholders that have been identified *thus far* and their roles in carrying out legislation *where known*. (This is in no way a complete or hierarchical organization of groups and agencies).

3) Current Governance Structure Deficiencies

The Ocean Policy Work Group will be considering the structure, legislation and stakeholders relevant to current ocean policy in order to determine if changes are needed. From the information provided above, it is clearly a complex web of federal, state, local agencies, Native American tribes, communities, and task forces. The legislation governing ocean issues is sparse and for the most part created for inshore marine and aquatic governance.

Once a clear understanding of the various players or agencies is obtained, the OPWG will be able to identify where gaps exist in the governance of these topic areas, where no particular agency or party "speaks for the State." For instance, the work group has determined at this time that no agency or groups lead an effort to determine the State's Ocean Research Priorities. Nor are there any State mandates declaring one or more agencies in charge of determining the State's priorities. Instead, each agency and group currently conducting ocean research chooses that research based on agency priorities, funding, or state mandates specific to that agency. Coordination amongst agencies occurs on a project-by-project basis. Here it will be important to look further into other States' models for determining research priorities.

¹ <http://wdfw.wa.gov/factshts/comgrs.htm>

A type of advisory body for ocean governance mechanisms would benefit Washington State. It is the Ocean Policy Work Group's task to determine if Washington State Ocean Policy would be better off with one advisory body, such as an Ocean Policy Council, to oversee this important piece of Washington's jurisdiction. Several examples of such councils from other Pacific Coast states are described below. In addition to Washington State's internal discord on ocean governance, there is also a division between the State and the Federal agencies involved in the area. The Army Corps, EPA, NOAA and others play a major role in funding, research, regulations, and decision making when it comes to ocean issues. There is a need for stronger connections between the State and these federal agencies. A first step towards this goal would be for the State to develop a solid working relationship with NOAA's Olympic Coast National Marine Sanctuary (OCNMS) for several reasons: OCNMS consumes an enormous part of the outer coast; it is a multi-disciplinary, multi-function program that considers management, research, and education; it has its own mandate to work closely with both the state and local governments; and finally there exist many opportunities for collaboration which would benefit both Washington State and OCNMS.

4) Potential Ocean Governance Mechanism

- i) Is new ocean policy action needed?
 - ▶ Is the status quo for Washington State sufficient, or is a new structure for ocean policy issues necessary for more effective ocean management?
- ii) If new policy action is initiated, what form will it take?
 - ▶ As simple as an advisor to Governor or a full policy coordination body (see v below)?
- iii) What will the express function of a new policy entity be?
- iv) Though formed at the State level, how will input from all relevant stakeholders (federal agencies, coastal tribes, local governments) be addressed?
 - ▶ Effective mechanism for input at these levels is necessary for implementation of policies and feedback.
- v) If an ocean policy coordinating body is formed, what model should Washington follow?

- ▶ California Model: Small Council of Top Agency and Legislative Leaders.

The California model follows a strong top-down approach, with voting power concentrated in three State agency representatives, and two legislative ex-officio members. California's model has allowed for rapid progress on policy actions through very efficient agreement in decision making. However, the council has highly concentrated power, while limited to certain policy areas, and lacks local or public representation, which might be perceived as a detriment to widespread acceptance of policies (dominance of Capitol over rest of State).

- ▶ Oregon Model: Large Membership Council of Public and State interests; State non-voting.

The Oregon model, which was recently reconstituted, is a bottom-up approach, with all State representation as ex-officio members, and all voting power in the hands of public, local, and NGO representation. This allows for more widespread viewpoints to be considered, with all approved decisions getting more extensive vetting from interested parties. However, the largest problem with this model is getting slowed down by personal politics and personality disagreements, which can keep substantive policy decisions from being made for some time.

- ▶ See Appendix III on California and Oregon's approaches for more detailed information.
- ▶ Washington State Models:

Puget Sound Action Team: A comprehensive work plan developed by the Action Team acts to coordinate efforts across stakeholders at all levels and provides a unique funding mechanism for its efforts. Through its funding mechanism, the Team ensures coordination and avoids duplication of efforts. See Appendix IV for details on PSAT.

Northwest Straits Commission (NSC)/Marine Resources Committees (MRC): Through county-level MRCs, citizens, county governments, tribes, and organizations work together to manage ocean and coastal issues in the Straits. The MRCs are a successful example of wide-ranging, local level participation in marine management. See Appendix IV for details on NSC.

vi) What are specific policy issues for a new ocean policy coordination body?

- ▶ Operating Plan: will this new body operate by a State ocean plan, or some variation?
- ▶ What will establish this group? Will its funding and structure be established by statute? (See App. IV: PSAT for further discussion)
- ▶ How will effective coordination of State agencies and other stakeholders be assured? (See App. IV: IAC for further discussion)
- ▶ How will public input to process be most effectively implemented? (See App. IV: Northwest Straits for further discussion)

5) Alternatives

The alternatives section includes three areas for possible recommendations regarding ocean governance for the State. The first recommendation is based on keeping the current situation of ocean governance for the State. The second alternative creates an ocean policy advisor for the Governor. The third alternative revolves around creating a new ocean policy coordination body. Under this alternative, there are specific issues on creating a charge for a new ocean policy body, in that before any body is formed it must know what its role is. Secondly, the form that the policy body will take must be decided. The final option under this alternative is based on whether the policy body will have an operating plan, such as an official ocean plan for the State. Preliminary analysis of Pros and Cons of the alternatives is provided.

A. Status Quo

1. No change to current ocean policy procedures, each relevant State agency would make decisions and coordinate as done so in the past.

PROS: efficiency; no changes to current structure or functions needed.

CONS: potential for conflicting policies; inability for State to speak with a single voice on ocean issues; inability for State to quickly and easily unify behind a single cause, initiative, or policy related to oceans and coasts.

B. Create Ocean Policy Coordination Body

- i) Ocean Policy Body Function

1) Advice to Governor

- a) Official advisory role to Governor; no authority to make policy decisions.

2) Advice to Executive & Legislature

- a) Official advisory role on ocean policy to Governor & Executive Agencies, and propose legislation to legislative members; no authority.

3) Decision-making Authority

- a) Authoritative body with power to make policy decisions for State, based on approval from body membership.

4) Implementation of State Ocean Plan

- a) Create State ocean plan and policy priorities, policy body as implementation structure.

- ii) Ocean Policy Body Form

1) Condensed State Council: core State agencies as voting members (DOE, DNR, WDFW, Governors Office) [CA Model]

- a) Official inclusion of additional interests as ex-officio members.

(or)

- b) Core responsibilities in council; additional input informal.

PROS: Condensed decision-making power allows for rapid progress on priority actions; State government interests as primary goals.

CONS: No official public representation, potential for alienating some viewpoints hindering progress.

2) Broad-based Council: local government, NGO, public-at-large interests as voting, State agencies on council as ex-officio [OR Model and/or WA State Models]

- a) Official inclusion of additional interests as ex-officio members.

(or)

- b) Core responsibilities in council; additional input informal.

PROS: Stronger potential for full public support of council actions, potential use of nominating process to ensure appropriate representation from wide range of stakeholders.

CONS: Voting power outside of State interests; likely slower activity due to diverse interests.

3) Combined Public & State Council: Core State agencies and public interests both as full voting members on council.

a) Majority of State representation, public reps as minority
(or)

b) Equal number of State and public interests
(or)

c) Majority of public representation, State as minority

PROS: full representation of State and public interests; increased support due to wide representation.

CONS: diverse interests increase likelihood of difficulty reaching agreement, slower action timeline.

4) Create Ocean Policy Advisor to Governor

a) Governor assumes responsibility for ocean policy affairs for the State, appoints a devoted advisor for ocean and coastal issues.

PROS: efficient and inexpensive way to establish clear, singular, voice on ocean policy for the State.

CONS: many different laws for different State agencies; operating conflicts between agencies; difficulty in responding to and unifying divergent viewpoints and feedback from all relevant stakeholders.

6) Recommended Alternative

At this time, the governance subcommittee is not ready to recommend a particular detailed alternative to be pursued for a new ocean governance mechanism for the State. However, the alternatives can be prioritized in order of initial preference, with further specifics to be discussed in the year two report.

Presently, the subcommittee recommends that the OPWG pursue recommending an ocean policy body, similar to the Oregon model of a 'bottom-up approach,' with numerous interests represented on a single council.

The details of this council, such as who will be on the council, how many members, what authority the body will have, amongst other issues, will be further studied in year two's report. Further study and agreement is needed on what stakeholders, both governmental and non-, can provide for the most effective ocean policy body for effective long-term management of the State's ocean and coastal resources. Secondly, issues such as operating guidelines, methods for public input, and funding sources for the council will need to be studied in greater detail in order to construct a comprehensive recommendation for a new governance mechanism for State ocean policy.

Presently, the subcommittee recommends that the OPWG pursue recommending an ocean policy body, similar to the Oregon model of a 'bottom-up approach,' with numerous interests represented on a single council.

APPENDIX B

RESEARCH PRIORITIES MEMO

Ocean Policy Work Group: Ocean and Coastal Research Priorities Group

Kate Litle
Theresa Mitchell
Kendra Nettleton

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Research Priorities Memo

*For the full version of this memo, including all referenced appendices, please see: <http://courses.washington.edu/oceangov/OPWG.html>

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

POLICY MEMO

Background

Washington State oceans and coastal areas are confronting many issues that affect marine ecosystem health and human health. Among problems identified are fisheries decline, habitat alteration, invasive species, hypoxia, chemical contaminants, reduced biodiversity, harmful algal blooms, coastal economic development and natural hazards prediction systems. As an example, recent news coverage proclaims the explosion of toxins found in shellfish, resulting in closures of shellfish beds. These closures are necessary to protect human health; however they deeply diminish the shellfish economy and disrupt recreational pursuits. Marine species that prey upon these toxic shellfish are not protected by the closures and the blooms continue. Are these toxic algal blooms linked to hypoxia or climate change? What are the long term economic effects on the coastal communities? Ocean and coastal research will identify the answers to these current unknowns by applying an established scientific method to the analysis of problems. This method provides credibility and structure by producing repeatable, fact based information.

Pursuant to their individual agendas, several private organizations and government agencies attempted to define necessary research addressing Washington State's ocean and coastal problems. These studies include Puget Sound Action Team (PSAT), Olympic Coast National Marine Sanctuary (OCNMS), Northwest Straits Commission (NWSC), Pacific Shellfish Institute, Washington Sea Grant, Southwest Washington Coastal Erosion Study, Department of Ecology (DOE), and Department of Fish and Wildlife (DFW) (Appendix A). At the regional level, the Ocean Resources Assessment Program (ORAP), the Pacific Northwest Regional Marine Research Program (RMRP), and the Pacific Northwest Coastal Ecosystems Regional Study (PNCERS) led efforts to identify research needs (Appendix B).

In 2003 and 2004, ocean research drew national attention from the publications of the Pew Oceans Commission and the United States Commission on Ocean Policy (USCOP). Both Commissions called for a regional approach to ocean governance as one of the crucial priorities for improved ocean policy in the United States. Additionally, they both recommended the creation of regional councils that would identify regional research priorities and data needs (Appendix C). (Pew Oceans Commission, USCOP)

In response to these Commission reports, the Bush Administration issued a Presidential Executive Order on December 17, 2004 creating a cabinet-level Committee on Ocean Policy to coordinate federal activities on ocean-related issues and assist in the coordination of federal, state, local, tribal, and private interests in ocean policy. In addition to the Committee on Ocean Policy, the National Science and Technology Council Joint Subcommittee on Ocean Science and Technology (JSOST) was directed to develop an Ocean Research Priorities Plan and Implementation Strategy by December 31, 2006. As a part of this development process, the Subcommittee on Integrated Management and Ocean Resources (SIMOR) has put together a Federal-State Task Team on Research Priorities comprised of representative from various coastal State agencies and ocean and coastal related federal agencies to provide input to JSOST on high priority ocean and coastal research needs, specific problem areas, and immediate needs for addressing resource management challenges. (Bush, Mace) As participants in the West Coast Region (California, Oregon, and Washington) to the Federal-State Task Team, the OPWG research priorities group has participated in conference calls and meetings to ensure Washington State's ocean and coastal research priorities are included in the regional inputs.

Current: Governance, Laws, Policy, Funding

Governance

Washington State does not currently maintain a coordinated ocean research priorities agenda. In addition, no governmental mechanism exists for determining State ocean research priorities. Several area specific groups, such as the Puget Sound Action Team, Pacific Shellfish Institute, Olympic Coast National Marine Sanctuary, and the Northwest Straits Commission developed their own research priorities. These priority lists are used within each organization, but are not integrated across disciplines nor maintained by one organization. Contrary to Washington's lack of overarching governance, California and Oregon established frameworks to address research priorities (Appendix E).

Laws

While research is mentioned in several Washington State laws and regulations, there is no particular law designating an overarching framework for research priorities, funding, and oversight in the State. Some examples of laws relating to ocean and coastal research issues are listed below.

- RCW 77.85.040 establishes an independent science panel under the Salmon Recovery statute to “help ensure that sound science is used in salmon recovery efforts.”
- The Ocean Resources Management Act (RCW 43.143.005 through 43.143.030) was enacted in 1989 by the Washington state legislature. WAC 173-26-360—Ocean management is the implementation of the Ocean Resources Act of 1989 and specifies ways in which ocean research should be conducted (e.g., “Ocean research should be encouraged to coordinate with other ocean uses occurring in the same area to minimize potential conflicts.”)
- RCW 43.30.800 in the establishment of the Olympic Natural Resource Center at the University of Washington, states that “it is the intent of the legislature to foster and support the research and education necessary to provide sound scientific information on which to base sustainable forest and marine industries, and at the same time sustain the ecological values demanded by much of the public.”
- In RCW 77.75.030 Pacific Marine Fisheries Compact-Provisions it is specified that the Washington fishery agency will collaborate with other signatory state fisheries agencies as the official research agency of The Pacific Marine Fisheries Commission.

Policies and Programs

There are two specific examples of Washington State legislative action to address broader science issues—the Governor's Forum on Monitoring Salmon Recovery and Watershed Health and the Washington Academy of Sciences. While not ocean or coastal specific, they do provide an example of what is possible within the current State legislative process.

Governor's Forum on Monitoring Salmon Recovery and Watershed Health

In 2001, the Washington State Legislature passed Substitute Senate Bill 5637 requiring a comprehensive look at monitoring needs throughout the state, specifically applicable to salmon habitat and recovery. The Monitoring Oversight Committee released its report “The Washington Comprehensive Monitoring Strategy and Action Plan for Watershed Health and Salmon Recovery” in 2002. Following from this, the Governor's Forum on Monitoring was established by Executive Order 04-03 to implement and coordinate monitoring efforts.

Washington Academy of Sciences

Engrossed Senate Bill 5381 passed on July 24, 2005 to establish a non-profit, independent Academy of Sciences "to provide scientific analysis and recommendations on issues referred to the Academy by the Governor or the legislature, including identifying past or present research projects in Washington State, or other, research institutions." RCW 70.220 Washington Academy of Sciences specifies that the presidents of the University of Washington and Washington State University co-chair an organizing committee to establish the Academy by April 30, 2007.

Puget Sound Action Team

The Puget Sound Action Team was created by the Puget Sound Water Quality Protection Act (RCW 90.71) in 1996. The Legislature was responding to the vast number of challenges facing Puget Sound and recognized the need for a coordinated agenda to address management and research needs to protect Puget Sound. PSAT is a 17-member governing body, which includes directors from state agencies, representatives from federal agencies, tribal governments, and local governments. PSAT submits a coordinated plan and action items which are then considered by the Governor and Legislature in the budget process.

NEPTUNE and NANOOS

NEPTUNE is a joint United States-Canada regional cable observatory project located in the northeast Pacific Ocean. The University of Washington mainly administers the United States portion. The network of cables will enable regional-scale, long-term, real-time observations and experiments with the ocean, seafloor, and subseafloor. Still in the development process, the Canadian portion of the cable is projected to be operational by 2008; the United States portion by 2012. In parallel is the Northwest Association of Networked Ocean Observing Systems (NANOOS), a part of the Integrated Ocean Observing System (IOOS) administered by NOAA. Using a network of buoys and moorings, NANOOS will collect and disseminate coastal ocean and estuarine data and products that can be used to identify ocean and coastal issues. NANOOS primarily focuses on environmental long term sustained observations while NEPTUNE will provide essential data through basic science research. Both programs represent an important component of research in the State of Washington.

Funding

Within the State budget process, research priorities and funding are addressed in a piecemeal fashion. Each state agency (WDFW, WDNR, WDOE, etc.) submits individual budget requests that reflect the mission and priorities of the agency. These budget requests are reviewed and analyzed within the Office of Financial Management (OFM) and feed the Governor's budget process. In the last five to ten years, the State budget has not included any package specific to ocean issues (Skalski, Wilburn).

The OFM also participates in the Priorities of Government (POG) process. One of the 11 established priorities of government for the 2005-2007 budget cycle is to "improve the quality of Washington's natural resources." During this process, representatives from each agency (generally Deputy Directors) come together for a multi-agency discussion of priorities. In this process, the group is generally given a target dollar amount and asked to prioritize activities across all agencies. This process results in a prioritized activity purchase plan, which is also used to inform the Governor's budget (Skalski, Wilburn).

Funding directives can also come through the federal budget process. As an example, the current hypoxia issues in Hood Canal received a federal allocation which the State supplemented with additional funds to address the problem (Skalski, Wilburn).

Unlike most coastal states, Washington State does not provide matching funds for Sea Grant research or education activities, nor is there a pool of funds available from industry sources. Washington State does support part of Sea Grant's outreach effort through funding of several water quality-related activities. In addition, the University of Washington's funds provide a substantial part of the operating base for the Washington Sea Grant Program.

Stakeholders, Scientists, and Managers

The range of subjects covered when dealing with marine issues all but ensures a broad mix of representatives with a stake in the outcome of research priorities. These groups can be separated into three broad categories: stakeholders, scientists, and managers. It is important to establish an inclusive process to understand each of these groups' goals and priorities in the initial identification of management issues that research priorities need to address.

- Stakeholders:
 - ▶ Local citizens are directly affected by the health of coastal and ocean ecosystems. In addition, they recreate in the coastal areas through such uses as fishing, boating, and bird watching.
 - ▶ Environmental groups conduct research on and advocate for the health of the marine environment.
 - ▶ Industry representatives include those that have an economic interest in marine resources such as fisheries, biotechnology, and businesses in the coastal communities.
- Scientists:
 - ▶ Scientific community includes those in academia, tribes, private industry, environmental groups, and government organizations. These individuals are conducting the research and are direct recipients of funds.
- Managers:
 - ▶ Tribal governments directly manage coastal and ocean natural resources and have interests in protecting their sovereignty and developing their economies.
 - ▶ Local governments including ports, cities, and counties, are delegated responsibility for execution of state policies.
 - ▶ State governments include state agencies such as Department of Ecology, Department of Fish and Wildlife, and Department of Natural Resources that have management authority over various areas and activities in the marine and coastal environment.
 - ▶ Federal entities include the Olympic Coast National Marine Sanctuary, the Olympic National Park, the National Marine Fisheries Service, and the Navy who have interests in various areas and activities in the marine and coastal environment of Washington State.

With many other states advancing their agendas, everyone in Washington State has a direct stake in the process of establishing research priorities. The USCOP and Pew Reports laid the tracks for the ocean research train; Washington can hop on board or be left behind.

Policy Problem

- *Washington State faces a number of problems affecting marine ecosystem health and human health in the ocean and coastal region.*
- *Washington State does not have clearly defined, coordinated ocean research priorities to assist in solving these problems.*
- *Washington State does not have a coordinated assembly that determines the ocean and coastal management and research priorities, and distributes funds.*

Ocean and coastal research is currently fragmented in Washington State. As described above, no coordinated public or private institutions are responsible for setting an ocean research agenda, allocating funds, and overseeing the results. Consequently, a majority of research projects are short term, narrowly focused, reactive, and not considered within a larger research context. Public outcry focuses research attention and funds on the issue of

the month or year – currently salmon habitat restoration and hypoxia. Additionally, mission-oriented agencies request funds and steer research priorities towards their individual goals as opposed to considering collective goals at the state level. The current Washington State budget process awards the squeaky wheel.

Wise resource management decisions come from comprehensive, sound scientific information. The USCOP and Pew Commission both called for a turn toward ecosystem-based management which by definition requires an integrative approach. Integrated research and monitoring will allow for the detection of trends—hypoxia on the outer coast and Hood Canal or domoic acid on the outer coast and in the Strait of Juan de Fuca. With this information, commercial fisheries and shellfish aquaculture enterprises can anticipate changes in ocean processes and can be regulated accordingly. Coordinated research will also provide the scientific basis for making important economic decisions, such as establishing marine based biotechnology firms or ecotourism developments on the outer coast. In sum, a coordinated ocean and coastal research agenda will ensure the highest return on investment in ocean research, exploration, and marine operations in the State of Washington, reduce redundancies, provide guidance to Washington Sea Grant and other funding agencies, and enable Washington to compete effectively for federal research funds.

Addressing Washington State's ocean and coastal research priorities problems is a two step process. First, an institution must be established, and a framework identified, to successfully implement ocean and coastal research priorities. Second, an initial list of research priorities must be determined. Identifying research priorities will be ineffective without an oversight body in place to ensure their implementation. This memo identifies alternatives for the institution and the framework portion of the process. The second step is included as Appendix D.

Policy Criteria

A policy addressing Washington State's ocean and coastal research must fulfill the following criteria:

- Improve marine ecosystem health and human health.
- Include input from all concerned stakeholders, including state agencies, tribal governments, academia, scientists, and local community members.
- Focus primarily on priorities affecting the outer coast of Washington State and the Strait of Juan de Fuca while recognizing and directly cooperating with ongoing efforts in Puget Sound.
- Encompass broad ocean research topics instead of focusing on specific research projects.
- Respond to management issues in a long term perspective instead of an immediate reactive viewpoint.
- Establish benchmark criteria to evaluate progress.
- Coordinate with requests from the western region representative for input to the Federal-State Task Team on Research Priorities established by SIMOR.

Research Priorities

Washington State

The following Washington State research priorities were compiled through interviews with tribal representatives, academia, and agency personnel. The short list presented here represents areas most often referred to by the interviewees. The priorities are not ranked in any way and serve as a starting point for the broader stakeholder inputs mentioned above.

DRAFT—Washington Research Priorities

- Commercially Valuable Marine Resources
- Nearshore Systems
- Climate Variability and Climate Change
- Invasive Species
- Physical-Biological-Chemical Processes

Regional

The Washington priorities were provided as input to the Pacific Region of the Federal-State Task Team for SIMOR. Communication with Oregon and California resulted in the submission of a provisional list of Pacific Coast Regional Priorities. These priorities are listed briefly below. Regional coordination efforts are continuing. The National Sea Grant program recently put out a call for proposals for the development of regional research priorities. Washington, Oregon, and northern California are a region under this scheme and the Washington, Oregon, and California Sea Grants intend to submit a joint proposal to pursue the identification of regional research priorities, which would likely include mechanisms for broad stakeholder input. The proposal deadline is in early February. As such, details are still emerging.

DRAFT—Pacific Coast Regional Priorities for Ocean and Coastal Research

- Fisheries, Conservation of Living Marine Resources, and Implementation of Ecosystem-Based Management
- Watershed, Estuarine, Nearshore, and Pelagic Ecology
- Anthropogenic Effects on Coastal Ecosystems
- Hazards, Shoreline Processes, Beaches, and Tsunami Readiness
- Regional Ocean Processes, Climate Change, and Atmospheric Forcing
- Sustainable Coastal Communities

Complete lists and more details on both the State and regional research priorities can be found in Appendix D.

Alternatives

The following alternatives are listed in order of preference. Regardless of which alternative is selected to establish, maintain, and coordinate the State's ocean and coastal research priorities, three procedural recommendations are put forth at this time. First, the Ocean Policy Work Group should continue to address research priorities under its current mandate. Second, the list of Washington State research priorities determined through interviews should be expanded and commented upon by broader, inclusive stakeholder processes, such as workshops and more interviews. There may be potential to work in conjunction with the regional stakeholder input process being developed at the regional level mentioned above. Third, the selected alternative should focus on ocean and coastal issues primarily, while recognizing and directly cooperating with ongoing efforts in Puget Sound.

1. *WA Ocean and Coastal Research Stakeholder Alternative.* This alternative would form a governing board and council with representatives from management, scientific communities, and stakeholder groups. These members would establish management needs, align research priorities, and monitor the progress through specific work plans based on a strategic framework. Funding requests from the state would come from these priorities and would be integrated into the structure of the state agencies. Establishment of clearly defined state research priorities would also allow Washington State to better compete for federal funding. Additional funding could be pursued from private grants and donations. This alternative excels at its involvement of stakeholders and establishment of long term benchmarks. It has the potential to respond to

- management issues and orchestrate the determination of priorities and allocation of funds without conflicting with the authority of state agencies.
2. *WA Academy of Science Subcommittee Alternative.* This alternative proposes creating an ocean and coastal research subcommittee within the recently established WA Academy of Sciences. This subcommittee would have an expanded scope to maintain, collect, and coordinate Washington State's ocean research priorities and subsequent state funding. The current conceptual stage of the Academy of Sciences allows for modifications to its mission with relative ease. In addition, using this group's expertise would eliminate the redundancy of convening another scientific council. However, this group is not specifically focused on the oceans and, given its primary mission, may be subject to the governor's agenda.
 3. *Amplified Sea Grant Alternative.* The Washington Sea Grant program currently facilitates ocean research by individuals and organizations in the areas of living marine resources, ecosystem health, ocean technologies, and economic and coastal development. This alternative would expand the existing organization to include an oversight committee to maintain Washington State's research priorities. This committee would determine the research priorities, evaluate research proposals, disseminate funds, monitor research progress, and apply findings to management issues. For these purposes, Sea Grant's committee would submit budget requests to the state and receive state funds according to the established priorities. This alternative draws upon Sea Grant's extensive contacts and knowledge of local issues. However, Washington Sea Grant's federal foundation could cause difficulties within the state environment. Allowing Sea Grant to determine the research priorities for, and allocate funds to, state agencies puts a federal entity in a position of influence over the state entities.
 4. *Lead State Agency Alternative.* In the terrestrial realm, RCW 76.09 calls for the coordination of forest related activities, including research, throughout the state and designates the Washington Department of Natural Resources to make an annual assessment of research and make recommendations to the governor. This alternative proposes enacting similar legislation for ocean and coastal issues in the state and designating a single agency to review and recommend research priorities. The advantage of this alternative is applying an already functioning model, familiar to the state stakeholders, to the ocean regime. The danger of this alternative is that ocean and coastal issues cut across multiple agency authorities and putting control into one state agency may unfairly centralize control.
 5. *Maintain Status Quo.* Washington State does not currently maintain a coordinated ocean research priorities agenda or have a designated ocean research oversight committee. Research priority lists and strategic plans are used within individual organizations, but are not integrated across disciplines nor maintained by one organization. Continuing with this method resolves target problems and specific issues important to local stakeholders. However, haphazard allocation of funds and a lack of interdisciplinary research are the detriments to this method

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APPENDIX C

SUSTAINABLE FISHERIES MEMO

Improving the sustainability of fisheries off Washington's outer coast; need for benthic habitat mapping and characterization.

*Jennifer Kassakian
Maggie Ostdahl*

Background

Washington State citizens and communities are heavily reliant upon Pacific Ocean fisheries. The act of fishing is also a way of life for many Washington citizens and has been for many generations. Fisheries provide a source of revenue to individual commercial fishing participants, coastal communities, and local businesses. Fisheries also provide state consumers with fresh fish and fish products. Sport fishing opportunities also provide citizens with a source of recreation and fresh fish for consumption. Dependence on natural resources requires sound management practices with the goal of sustainability, to ensure that the resource will be available for future generations. A fishery comprises at a minimum the targeted marine species as well as the people engaged in harvesting them by various fishing gears. Achieving sustainable fisheries, therefore, must address goals of maintaining fish stock size and structure as well as the economic stability of fishing communities. Examples of the potential consequences of not taking action towards sustainability have been seen elsewhere, such as on the East Coast, where prolonged overfishing led to a collapse in groundfish stocks and severe economic hardship for many fishing communities. This is obviously a scenario to be avoided. For all of these reasons, it is important to address action areas for State involvement towards sustainable fisheries in its development of a Washington State Ocean Policy.

The state of Washington has very limited authority over commercial fishing activity occurring off its outer coast. The Washington Department of Fish and Wildlife (WDFW) has jurisdiction via the Sustainable Fisheries Act of 1996 to manage Dungeness crab to the outer limit of the Exclusive Economic Zone (200 nm). The State also shares responsibility for salmon management with the Federal government through the Fishery Management Council process. However, all other commercial fisheries, including those for groundfish, coastal pelagics (e.g. sardines), and highly migratory species (e.g. albacore tuna), take place seaward of three nautical miles and are managed by NOAA Fisheries via the Pacific Fishery Management Council (PFMC or the Council), with authority from the Magnuson-Stevens Fisheries Conservation and Management Act of 1976. The Council is one of 8 regional fishery management councils and is comprised of the States of Washington, California, Oregon, and Idaho. The Council through its advisory bodies and technical teams also works with NOAA Fisheries scientists to collect data and perform analyses for stock assessments. For further information on the PFMC, see **Attachment 1** and/or visit the Council website, <http://www.pcouncil.org>.

Dungeness crab, albacore tuna, and groundfish are consistently the most valuable coastal fisheries in terms of revenue brought into the State. **Attachment 2** shows the ex-vessel revenue generated in Washington in 2004 by various fisheries, as well as the relative values

Sustainable Fisheries Memo

*For the full version of this memo, including all referenced appendices, please see:

<http://courses.washington.edu/oceangov/OPWG.html>

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

of the fisheries for that year. At present, the Dungeness crab fishery is considered relatively sustainable and both commercial and recreational harvest is regulated by WDFW (see **Attachment 3**). There is concern over some tuna stocks, but because of their migratory nature and because many nations fish for tuna, the State of Washington is especially limited in its ability to directly contribute to the conservation and management of these stocks (see **Attachment 4**). Groundfish species are much less migratory, and there are over 80 species of groundfish off the West Coast that are managed by the PFMC under the Pacific Coast Groundfish Fishery Management Plan (see **Attachment 5**). Many of these stocks have not been fully assessed and some of them may be facing fishing pressure greater than what is sustainable in the long term. Most of the groundfish stocks that have been assessed are considered healthy; however, accessing those healthier stocks has become increasingly difficult because they intermingle with depressed (overfished) stocks (Culver, personal communication).

There are many components that need to be addressed to achieve sustainable fisheries. Although stock assessments of fisheries important to the State are being conducted, there is a perpetual need for the most current and accurate information about the fish. There is also the need for complete and accurate socioeconomic information concerning those fishing. A recent report by the NMFS and Pacific States Marine Fisheries Commission Fisheries Economics Data Program briefly profiles the fishing industries in 21 Washington counties, as well as counties in Oregon and California (see **Attachment 6**). In addition, the Pacific Fishery Management Council (PFMC) is in the process of creating a 'communities document' detailing fishing communities along the West Coast. A comprehensive review of the current status of Washington's fisheries and an evaluation of current fishery management practices, as well as suggested alternatives for improvement, will be included in the second report of the Washington State Ocean Policy Working Group. This initial report focuses on the importance of and need for improved benthic habitat research.

Benthic Habitat Characterization and Mapping

One relevant and plausible way the State can contribute to the conservation and enhancement of groundfish and other stocks is through benthic habitat mapping and characterization. Benthic habitats are seafloor environments with distinct physical, biological and geochemical characteristics (NOAA CSC, 2005). Groundfish have been shown to rely on a variety of specific habitats throughout their life cycle. Species of particular concern, such as the many varieties of rockfish found off the Washington coast, tend to congregate near particular habitat types. Certain habitats, such as those that include corals and sponges, are especially sensitive to fishing gears. A better understanding of the preferences of fish for specific habitats, as well as detailed information on the location of special and sensitive habitats, can contribute to the sustainable management of groundfish fisheries. In addition, there is interest in whether and how to establish marine reserves off the coast of Washington; any such designations should be based on scientific studies and good information. Fishing gear types that are particularly destructive to sensitive habitats, such as bottom trawls, can be limited or restricted where those habitats are located. Fishing activity in general can be directed away from areas with habitat important to vulnerable species. If we do not have information on the location and characteristics of fish habitat, we cannot manage for their protection. Finally, research on benthic habitat is necessary to adequately make recommendations for or designate Essential Fish Habitat (EFH), considerations that are required by law of federal Fishery Management Plans (FMPs) (see **Attachment 7** for detail on the importance of and legal requirements for habitat identification and conservation).

There are many fishery management tools available, which have been explored by state and federal fishery managers, research scientists, and academia. Benthic habitat characterization and mapping has been among the list of items needed to establish a baseline of the current status of ocean resources. As such, the Ocean Policy Working Group decided to focus on benthic habitat characterization and mapping as priority for the short-term.

How the State of Washington can benefit from benthic habitat research

Increased characterization and mapping of benthic habitats on which groundfish rely will allow fishery managers at both the federal and state level to better plan for the conservation and enhancement of the stocks that depend on the habitat. In addition to its importance to managing fisheries, benthic habitat characterization and mapping is useful for a number of other areas of interest to the state, including the siting of aquaculture facilities, the dredging and aquatic disposal of marine sediments, and in determining the presence and extent of contaminated sediments in coastal waters (NOAA CSC, 2005). In addition, information on benthic habitat types can be useful in making Coastal Zone Management Act consistency determinations for federal actions likely to affect Washington's coastal resources, including any activity performed by a federal agency, requiring a federal permit, or undertaken with federal funding (for more details on Washington's Coastal Zone Management Program and the federal consistency requirement under the Coastal Zone Management Act see Attachment 8).

Current Washington State Law and Policy

Chapter 77 of the Revised Code of Washington (RCW) covers the majority of state statutes relevant to commercial fisheries management. Chapter 77.04 RCW mandates that WDFW is tasked with conserving wildlife, fish and shellfish resources of the state. Chapter 77.55 RCW (the "Hydraulic Code") deals with habitat in the sense that it advises construction projects in state waters (see Attachment 9). The state has no specific jurisdiction over groundfish management; although specific chapters of Title 77 pertain to salmon and crab fisheries. Chapter 43.143 RCW, the Ocean Resources Management Act, briefly mentions the significance of habitat to marine species (see Attachment 9), but the state has no specific legislative mandate to conduct research on benthic habitat for the purpose of fisheries management.

Stakeholders

People and organizations that stand to benefit from further benthic habitat research include various government entities, non-governmental organizations, and the public at large. Some stakeholders, especially government entities, will be looked to as funding sources for the work to occur. Any decision to pursue additional research in habitat mapping and characterization will be of interest to the following stakeholders:

Primary

- WDFW - They have identified benthic habitat characterization and mapping as a priority for sustainable fisheries management. In 1989 WDFW began its Priority Habitats and Species (PHS) Program, at which time this program was identified as the agency's highest priority to fulfill its responsibility of providing comprehensive fish, wildlife and habitat resources important to Washington (see Attachment 10). In addition, they will be looked to as a source of funding and/or human resources to do some of this research.
- Coastal Tribes – The Treaty Indian Tribes of Washington are co-managers with the State over fishery resources, with Northwest Indian Fisheries Commission (NWIFC) acting primarily as a coordinating body for member tribes. The NWIFC has a Habitat Services Division which presently coordinates with WDFW for salmon management, and may also be interested in offshore benthic habitat.

- NOAA Fisheries - Under the Magnuson-Stevens Act Amendments of 1996 NOAA Fisheries, through the regional management councils, are required to identify EFH within each of their FMPs. Although the Pacific Fishery Management Council (PFMC) has identified Essential Fish Habitat (EFH) for groundfish, their determinations were based on admittedly insufficient data. In addition, any information collected by outside sources regarding benthic habitat will contribute to the science on which they base EFH.

Secondary

- Olympic Coast National Marine Sanctuary – The Sanctuary has prioritized habitat mapping for the past few years and is interested in working together with the state on shared research goals. In addition, the Sanctuary Program feels it is important to establish appropriate partnerships with States.
- WA DNR – The Department of Natural Resources has conducted habitat mapping in the nearshore and within the Puget Sound. They could provide some technical input and may be interested in some level of collaboration if it does not already exist.
- Research institutions - Should more funding become available to do research on habitat mapping and characterization it is possible to attract the interest of graduate students and research scientists. However, this type of non-hypothesis driven science has not historically been of great interest to academia.
- People of the state of Washington - The groundfish fishery is among the top three revenue-generating commercial marine fisheries in the State. Any benefit to the groundfish fishery generated by habitat mapping and characterization will be passed on to the citizens of Washington, whether directly or indirectly through local governments or citizen conservation groups.
- Sea Grant - May be looked to as a possible source of funding for small-scale projects or for participation in jointly-funded research projects on habitat mapping.
- Fishing industry – Both the commercial and recreational fishing industries will certainly be interested in any changes in fishing regulations that may come as a result of increased knowledge of benthic habitat locations (e.g., areas closed to certain gears or all together). However, at present the fishing industry has no incentive to assist in funding benthic habitat research.

Policy Problem

At present, some limited research on benthic habitat identification and mapping has been done on Washington's outer coast and offshore regions (see **Attachments 10-11**). As identified by the PFMC, current information on benthic habitat characterization and mapping falls far short of what would be necessary to adequately designate and protect EFH (see **Attachment 12** for research needs and data gaps identified by the PFMC). Although responsibility for evaluating EFH falls on the Federal government, the state has a strong interest in the protection of the resource given the value of the fishery to the state. Neither the federal or state government currently has the funding or human resources required to conduct this research independently. There exists a need to identify specific data needs and to develop a plan for how and by whom additional research can be funded and executed.

Policy Issues and Criteria

There are two elements associated with obtaining additional information on the benthic habitats of Washington's outer coast. The first, and the focus of this memo, is to identify who should fund and execute this type of research. The second, and an issue to be addressed in the future, is to develop a research priorities plan.

Finding partners and funding opportunities

Benthic habitat mapping and characterization require a multidisciplinary effort to collect and compile data such as substrate type, topography, and species compositions. Habitat mapping techniques include satellite imagery, aerial photography, and shipboard acoustic surveys (although the first two are only applicable in shallow environments) (NOAA CSC, 2005). Due to the complexity of the research and the technology and shipboard time required, benthic habitat mapping and characterization research require significant financial and human resources. In addition, there are not currently many academic institutions interested in funding or conducting extensive habitat mapping projects, as their focus typically is on more hypothesis-driven research. Therefore, if more benthic habitat work is to happen, it is likely that the primary sources of funding will need to be the government, and that collaboration between entities may be beneficial.

Develop a research priorities plan

As mentioned previously, benthic habitat characterization and mapping work can be extremely resource-intensive. The State will need to develop a research priorities plan that will provide useful information at a reasonable expense. The cost of doing this type of research is extremely variable and dependant upon the extent of habitat mapping and characterization desired, the level of detail of the data to be generated, as well as practical considerations such as survey equipment and ship time required. The particulars of a research plan will vary depending on the geographic and technical scope of the work to be done. A research plan will allow the state to evaluate the priorities for research and to target their search for partners and funding sources.

Key elements of a research priorities plan may include:

- Geographic scope – how much of the state waters along the outer coast should be mapped?
- Specific habitat types – will there be special attention or priority placed on surveying for and characterizing particular habitats or locations? For instance, the identification of corals, anemones, sponges, sea pens and sea whips is especially of interest to WDFW.
- Technical scope – which instrumentation or survey technology (multibeam and/or sidescan sonar, visual surveys, benthic samples) is appropriate? What level of detail in the habitat characterization is required?
- Research protocol - What is the appropriate protocol for research, based on existing benthic research methods? Issues of Note: currently the PFMC Scientific and Statistical Committee does not have an established standard for research methods for habitat mapping. In other realms of NOAA, including the OCNMS, determining standards for habitat mapping is an active area of research for the National Marine Sanctuary Program. A related question is “how can previous and ongoing benthic habitat mapping and characterization projects done elsewhere (i.e. California) serve as models for Washington?”
- Cost – Based on the above factors, what are cost estimate ranges for habitat mapping and characterization projects?

Benthic habitat characterization and mapping research to date

In order to consider both funding and collaboration opportunities and the development of a research priorities plan, it is useful to consider some of the work that has been done to date along the West Coast.

California

California appears to have had the most extensive research on benthic habitat characterization and mapping of the three West coast states. The California Sea Grant

program has provided some funding in recent years for research related to benthic habitat mapping and characterization off the California coast. This research is summarized in **Attachment 13**. There are a number of other key entities that have funded, participated in, or conducted a significant amount of mapping work on the California coast. These entities include the California Department of Fish and Game, Moss Landing Marine Research Lab's Center for Habitat Studies, and the Seafloor Mapping Lab and California State University at Monterey Bay (see **Attachments 13-15** for descriptions). In addition, there are two large-scale, multi-agency projects currently underway, lead by USGS and the National Marine Sanctuaries Program, that could serve as models for such a project in Washington (see **Attachments 16-17**).

Oregon

The Oregon Department of Fish and Wildlife has for a number of years funded research related to mapping nearshore habitat, particularly the nearshore rocky reef (see **Attachment 18** for a list of related publications). In addition, Oregon Sea Grant has provided some funding for graduate student work on benthic habitat mapping, as well as for a collaborative project with PMEL (Malouf, personal communication). **Attachment 19** provides further detail on these projects.

Washington

Washington Sea Grant has not conducted or funded any research relating to benthic habitat characterization and mapping on Washington's outer coast in the recent past. WDFW has conducted some limited benthic habitat work off the outer coast, however neither entity has plans to conduct new research in the immediate future (Copping, personal communication and Eisenhardt, personal communication). One potential explanation for the lack of interest is that the Puget Sound, which is heavily populated and one of the largest estuaries in the country, has not yet been mapped and is a much higher priority for the State (Copping, personal communication). However, the Olympic Coast National Marine Sanctuary is very interested in this line of research and has an active habitat mapping program (see again **Attachment 11** for details on research done to date).

Goals and Criteria

Any alternatives to the status quo of limited benthic habitat characterization and mapping research in Washington waters will need to be evaluated in terms of their ability to address the following criteria:

- What is the availability of funding for research;
- Will new projects and/or initiatives sufficiently build upon existing or ongoing work;
- To what extent will a project/ initiative encourage collaboration between institutions; and
- Will the project or initiative adequately address Washington State's needs?

Potential Alternatives

The state does not have a mandated responsibility to fund or conduct research on benthic habitat characterization and mapping. Washington may decide to rely on work done at the federal level or in other venues to produce information that will benefit them, and while this would incur no monetary expense to the state, there is no guarantee that information produced will be of the type the state hopes to collect, or that it will in any way be beneficial to Washington groundfish resources. Alternatives to the status quo of limited benthic habitat research in Washington waters fall into two broad categories:

Increased communication among and collaboration between entities

1. Increase the level of communication between state and federal agencies, research institutions, and other bodies that have been involved in habitat characterization and mapping and other research on Washington's outer coast. For example, DFW may initiate a meeting or workshop aimed at gathering experts in the field to share information and research on the topic (a potential model being the Headwaters to Oceans Conference held in Huntington Beach, CA, http://www.coastalconference.org/h20_2005/2005_h20_conference.htm).
 - Pros: Relatively low cost to the State in comparison with conducting original research. Increased communication and coordination provides an opportunity for those in the field of habitat research to 'compare notes,' and potentially generate more active benthic research projects.
 - Cons: Stressing coordination of information may be unlikely to procure actual funds, and busy agency personnel and researchers are already time-constrained without the goal of information-sharing. It is also possible that increased communication may not result in more active benthic habitat research projects.
2. Investigate the possibility of collaboration between the state and OCNMS.
 - Pros: OCNMS has already done a significant amount of work on the topic and are very eager to collaborate with the state on this research. They also have access to additional funding sources from which the state may not benefit if working independently.
 - Cons: OCNMS covers a significant portion of Washington's outer coast, but there are many areas that are outside of the Sanctuary's boundaries. It is unclear the extent to which they would be willing to focus efforts outside of Sanctuary boundaries, potentially leaving a large gap in the research. Additionally, the State and the Sanctuary may differ on specific priorities for benthic habitat research.
3. Promote regional cooperation along the West Coast for benthic habitat characterization and mapping work. Within this effort it may be useful to consult with relevant entities in Alaska as well as British Columbia to find out what habitat work has been done by our neighbors to the north.
 - Pro: Sharing of knowledge, expertise and/or funds can benefit all. States with more experience (e.g., CA) can provide valuable guidance to Washington.
 - Con: Priorities between states for benthic habitat mapping and characterization research may be very different.
4. Look to other government agencies that may have an interest in the benthic habitat and/or Washington's outer coast to collaborate on large-scale mapping efforts. Examples of these types of projects include the Pacific Benthic Habitat Study lead by USGS and the SiMON project in California (see again Attachments 16-17). Agencies without direct fisheries interests but with interests in the benthic environment, including Minerals Management Service and the Army Corps of Engineers, should not be overlooked.
 - Pro: Funding and expertise of numerous agencies can facilitate the types of large-scale habitat mapping that generates a great deal of information and detail.
 - Con: Interest in the outer coast of Washington by some of these entities is currently unclear.

Seek additional funding for increased benthic habitat characterization and mapping off Washington's coast

5. Evaluate the extent to which the state is willing to budget for additional research into benthic habitat characterization and mapping, information from which will benefit ocean policy interests beyond sustainable fisheries management.
 - Pros: If the DFW can fund the project they have total control over setting geographic and habitat type priorities for the research to meet their needs and objectives.
 - Cons: It may be difficult to convince the State at large that habitat mapping and characterization should be prioritized over all of the other issues affecting the state. It is unlikely that other programs would be willing to accept budget cuts for research that will not create any immediate benefit to the state or to their program directly.
6. Investigate funding sources outside of WDFW, such as WA Sea Grant
 - Pro: WA Sea Grant may be interested in funding or being involved with funding smaller or discrete habitat research
 - Cons: WA Sea Grant does not have the capacity to fund large-scale habitat mapping projects. Additionally, academic institutions are generally not interested in funding this type of non-hypothesis driven science.

At this time, it is the finding of the subcommittee on Sustainable Fisheries that both alternatives of increasing communication and collaboration between entities, and seeking additional funding can be pursued concurrently. Ideally the working group should move forward on both of these.

Towards the goal of achieving sustainable fisheries over the long-term, the second report of the Ocean Policy Working Group will further address the need for habitat characterization and mapping, but will also include:

- 1) an evaluation of current fisheries management—both state and federal on a fishery-by-fishery basis;
- 2) a more comprehensive list of research and data needs, to include biological data to support stock assessments and socioeconomic data to analyze whether limiting measures in a given fishery are creating economic hardship for any fishing communities in the State;
- 3) a description of an “ecosystem approach to sustainable fisheries;” and
- 4) an overall process to review the status of fisheries and move forward toward sustainability.

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2. Washington Marine Fish and Shellfish Ex-Vessel Value in 2004
3. The Dungeness Crab Fishery in Washington
4. Highly Migratory Species – Albacore Tuna Fishery
5. West Coast Groundfish Assessment and Management – Overview (with relevance to Washington State)
6. Fishing Communities Profiles
7. A Brief History of Essential Fish Habitat (EFH) designation for West Coast Groundfish
8. Washington's Coastal Zone Management Program and Federal Consistency
9. Current Washington State Law somewhat relevant to benthic habitat research
10. WDFW Benthic Habitat Characterization and Mapping
11. Benthic habitat characterization and mapping by Olympic Coast National Marine Sanctuary (OCNMS)
12. PFM. 2005. Research Needs and Data Gaps Analysis for Groundfish Essential Fish Habitat. Appendix B Part 7 to the Pacific Coast Groundfish Fishery Management Plan for the California, Oregon, and Washington Groundfish Fishery. Available at: <http://www.pcouncil.org/groundfish/gffmp/gfa19.html>.
13. Benthic habitat characterization and mapping work funded by California Sea Grant
14. Abstracts of Projects conducted by the Seafloor Mapping Lab at the California State University – Monterey Bay
15. Description of the Center for Habitat Studies at Moss Landing Marine Labs – Habitat Mapping and Fisheries Research
16. Description of the USGS Western Coastal and Marine Geology division "National Benthic Habitat Studies – Pacific" project
17. Description of the SiMON-Monterey Bay National Marine Sanctuary Project "Multi-agency Seafloor Mapping Project in Monterey Bay, Cordell Bank and Gulf of the Farallones National Marine Sanctuaries
18. Oregon Department of Fish and Wildlife Habitat Publications
19. Research on benthic habitat characterization and mapping funded by Oregon Sea Grant

APPENDIX D

AQUACULTURE MEMO

Offshore marine aquaculture policy and shellfish policy Ocean Policy Work Group

*Aquaculture subgroup
Sarah McAvincey*

Background:

Aquatic farming has been producing quality products in Washington State for over a century and has regulations and protocols in place with State and Federal agencies.

These protocols and regulations have served agencies, protected the general public and public resources and the aquatic farmer well. There is however room for improvement, especially with the possible expansion of aquaculture into the offshore area due to growing global demand for aquaculture products. Many current protocols meet international requirements for foreign trade, as well as, European Union and other various US Trade Agreements.

Aquaculture worldwide is an expanding industry. In 2001 aquaculture accounted for about one-third of the world's seafood supply and it continues to grow (www.pacaauq.org). Due to the plateau that wild capture fisheries have reached, aquaculture development, policy and marketing will be necessary issues for nations, states and municipalities to address. The primary rationale for moving aquaculture operations offshore is the theoretically greater availability of sites with fewer user conflicts and environmental impacts than in coastal waters closer to shore (Cicin-Sain et al 2001).

Washington's shellfish aquaculture industry is the leading producer of farmed bivalves generating an estimated \$77 million in sales in 2004 which accounted for 86% of the west coast production. As of 2003 there were seven operating marine finfish aquaculture sites in Washington, the sites are in Puget Sound and the Strait of Juan de Fuca (<http://www.wdfw.wa.gov/factsheets/aquaculture.htm>). They mainly produce Atlantic salmon, worth an estimated \$40 million annually. The potential need for legislative and regulatory action is highlighted by the conflicts aquaculturists may experience with other uses of the ocean such as commercial fishing, navigation, tribal, and recreational uses. As many aquaculturists realize, the absence of regulations can impede development as much as too many regulations impede other land industries (Fletcher and Weston). This means that without regulation there is a tendency to be leery of getting into development for fear that once the regulations catch up with the development they will harm the industry by over or inappropriately regulating.

While expanding Washington's current aquaculture production into offshore waters has the possibility to generate revenue for the state there is debate regarding the next steps that Washington should take in either promoting or opposing that development, or landing somewhere in between. There are a wide variety of stakeholders that will be interested in the development of offshore aquaculture in Washington and their views must be taken into account as Washington begins to examine the possibility of aquaculture development off its coast.

Aquaculture Memo

*For the full version of this memo, including all referenced appendices, please see: <http://courses.washington.edu/oceangov/OPWG.html>

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

With the introduction of the National Offshore Aquaculture Act of 2005, aquaculture issues have been brought to the federal level. There is also a push for more aquaculture development in the US EEZ from reports such as the US Ocean Commission and PEW Commission Reports (Appendix A). The National Offshore Aquaculture Act of 2005 is currently in the process of being considered by Congress. Several amendments have been made by members of Congress and are listed in Appendix B. Below are the highlights and the purpose of the bill.

National Offshore Aquaculture Act of 2005

Purpose: To provide the necessary authority to the Secretary of Commerce for the establishment and implementation of a regulatory system for aquaculture in Federal waters.

This bill will:

- Authorize the Secretary of Commerce to issue offshore aquaculture permits and establish environmental requirements where the current law is inadequate.
- Exempt offshore aquaculture from legal definitions of fishing that restrict size, season and harvest methods
- Authorize research and development programs to support offshore aquaculture
- Require the Secretary of Commerce to work with other federal agencies in the coordination and development of the permitting process
- Authorize funds as necessary
- Provide for enforcement of the Act
- Ensure that operations do not interfere with wild stock conservation and management
- Require consistency with state plans

Current Washington State Law and Policy:

In the state of Washington the guidance for aquaculture policy comes from the Washington Departments of Fish and Wildlife (WDFW), Washington Department of Health (WDOH), Ecology (WDOE), Agriculture (WSDA), and Natural Resources (WDNR) (Appendix C).

WDFW has regulatory authority which is restricted to disease control, escape prevention, enforcement of harvest, mitigation and protection of wildlife (www.wfga.net/conduct.asp) and the newest 2003 marine finfish aquaculture policies (Appendix D). Currently there are regulations for marine finfish aquaculture and aquaculture in general, shellfish regulations are concentrated on tidal areas. More specifically in the Washington Administrative Code title 220, which regulates WDFW, the following issues, and others (Appendix C) are dealt with as they relate to marine fin fish aquaculture: aquatic farm registration, disease control, approval permits for marine finfish aquaculture. This title does not specifically state that the regulations are for open ocean aquaculture within state waters. In the case of shellfish aquaculture, a majority of lands under cultivation are owned privately. The authority for leasing state-owned tidelands for shellfish aquaculture is with the WDNR. In some cases there are also certain permits required from counties or municipalities, and also the Army Corps of Engineers for facilities that are in navigable waters. Under current state law the WDOH manages cultivated shellfish harvesting in terms of water quality and food safety regulations. Shellfish growers must register with WDFW as "aquatic farmers," and provide the department of quarterly production reports. As this list of possible permit actions shows, this is a complicated system which is in need of consolidation and coordination.

Washington State also has a role to play in aquaculture management when the site is to be in the 3-200 mile EEZ that joins the state waters. The state would have influence over the certain issues surrounding the siting of federal water projects under the Coastal Zone

Management Act (CZMA) and would have certification power for Clean Water Act (CWA) water quality issues.

Stakeholders:

We have listed the stakeholders in the development of offshore marine aquaculture policy in Washington

- I. State / local governments, state agencies and Tribal governments
- II. Aquaculture farmers and associations
- III. Wild catch fishermen
- IV. Non-governmental organizations (especially environmental organizations)
- V. Private industry and public citizens

State agencies and local and Tribal governments will have the most interest in the development of offshore marine aquaculture because they will be the ones designing, implementing and enforcing rules and regulations. Aquaculture farmers and associations will also have a significant role because the members of these associations are economically tied to any changes in aquaculture policies and will be the most effected by those changes. Groups such as the Pacific Aquaculture Caucus, Pacific Coast Shellfish Growers Association and Washington Fish Growers Association will be important collaborators in the development of Washington's marine aquaculture policies and would like to see Washington have a clear policy on the development of aquaculture in our waters. Wild catch fishermen are next on this list because they are an important stakeholder when dealing with fisheries issues and should have input regarding the development of aquaculture especially when it is a species they are economically tied to or may compete with a species they harvest. There is a great potential for wild catch fishermen and aquaculturists to work together on the development of offshore aquaculture in the state. This collaboration could work to the mutual advantage to eliminate seasonality in wild products and secure a broader portion of the market with greater variety of products. Finally, non-governmental organizations and private industry need to be included in the development of offshore aquaculture because they represent a large sector of the public which should have a voice in this process.

Current Governance Gaps:

Shellfish: Lack of centralized application process for tidal farms and information for development. The Aquaculture subcommittee would like to highlight the fact that current Washington regulations for shellfish have been developed with farmers input and have made it possible for the state of Washington to produce high quality products for many years. Changes in the regulatory structure for aquaculture should be based on a demonstrated need for those changes in order to administer current aquaculture activities in a more effective manner.

Offshore finfish: The current system is complicated and decentralized for finding information on development, permits and laws. While new regulations from the WDFW have tried to bridge the gap for regulation of offshore fin fish aquaculture, there is still more to be done in the way of consolidating the permitting process.

Federal waters: No clear state policy to guide a response to the National Offshore Aquaculture Act 2005. This Act however has not been approved and so immediate next steps for the OPWG and the Aquaculture subgroup should focus on getting stakeholder involvement and input and investigation into the pros and cons of siting offshore aquaculture facilities in Washington's waters and other aspects of the federal proposals.

As the broad scope and range of these three categories highlights, there is a need for a comprehensive state plan equipped to deal with multiple technologies, species and locations.

Governance Structure Issues:

Examples from other states are a useful device to highlight possible improvements to Washington's offshore marine aquaculture policy. In California for example there is an aquaculture coordinator within the Department of Fish and Game, who chairs the Aquaculture Development Committee. The major function of this committee is to update the permit guide. This committee was designed by the Interagency Committee for Aquaculture which worked with the Industry Advisory Committee to provide guidance regarding the aquaculture permitting process. Other states such as Florida also have a lead agency for aquaculture issues and Florida has a best management practices (BMPs) provision in its state administrative code. Organizational responses are one of the many tools available with the possibility to make Washington's aquaculture policy framework more comprehensive and the development positive for those involved.

Issues surrounding offshore marine aquaculture include siting, disease control, technology development, feed sources and depletion, pollution control and escapement, commerce and navigation. Other possible issues surrounding the development of offshore marine aquaculture include the impact on wild fisheries, health and safety issues for consumers and economic and physical feasibility of using Washington's coast for aquaculture development.

In developing Washington's marine offshore aquaculture policies the following criteria and goals should be considered when evaluating alternatives (Cicin-Sain et al 2001):

- Employs precautionary approach to avoid and minimize environmental impacts
- Promotes communication between all agencies and local governments involved
- Is consistent with existing laws and agency responsibilities
- Is consistent, to the maximum extent possible, with the coastal, water, environmental, and aquaculture policies of adjacent coastal states
- Encourages technological development and improvement
- Interferes minimally with transportation routes and services
- Produces a fair return to the public for the use of open water
- Promotes opportunities for scientific inquiry

Conclusion and Next Steps:

Oregon's legislature has drafted Joint House Memorial 37 (Appendix F) as a response to the National Offshore Aquaculture Bill 2005. This may aid Washington's response to this bill by highlighting some of the issues which Washington may want to comment on or consider such as allowing for State opt out, prohibition of offshore aquaculture sites in the 3-200 mile EEZ adjacent to State waters, rules placing priority on maintenance of naturally occurring resources, public comment periods, permits that balance conservation concerns against economic benefits.

Aquaculture worldwide is the fastest growing agriculture sector accounting for a large portion of the United States trade deficit, \$6 billion - \$11 billion in imported seafood products and increasing domestic production is the most effective way to reduce that trade imbalance (www.pacaqua.org). The state of Washington, as a leading producer of shellfish already has a part of that seafood market. However, before the state promotes offshore aquaculture there needs to be an evaluation of the issues associated with having the facilities in Washington such as siting, disease control, technology development, feed sources and depletion, pollution control, escapement, impact on wild fisheries,

health and safety issues for consumers and economic and physical feasibility of using Washington's coast for aquaculture development. These concerns need to be discussed with the involvement of stakeholders in an open dialogue with legislators and agency staff. Because of this need the subcommittee on Aquaculture is not prepared to propose large administrative structural changes at this time. We have however, prepared possible alternatives that may be explored later (Appendix E). In light of the need for stakeholder meetings the Aquaculture subcommittee of the OPWG recommends the following:

- Legislative representatives to organize stakeholder hearings on all issues of offshore aquaculture
 - ▶ Stakeholders should be from a wide range of areas such as labor representatives, public citizens, fish and shellfish growers associations, NGO's, federal and state representatives and scientists, and other as identified
- Be prepared to make comments on the National Offshore Aquaculture Bill 20005

Appendices

- A. Summary of federal actions, USCOP Report, and PEW Commission Report
- B. National Offshore Aquaculture Act of 2005 and Amendments
- C. Current WA Agencies involved in Aquaculture and their duties
- D. Washington Department of Fish and Wildlife fact sheet for 2003 Marine Finfish Aquaculture policy
- E. Possible policy alternatives for Washington state aquaculture consolidation and coordination
- F. Oregon Legislative House Joint Memorial 37
- G. Literature and web resources and work cited

APPENDIX E

COASTAL ENERGY MEMO

Coastal energy and ocean policy in the State of Washington Ocean Policy Work Group

Alex Erzen
erzen@u.washington.edu

Background

The term *coastal energy* here encompasses two separate but related energy fields:

1. Offshore hydrocarbons (oil and natural gas)
2. Marine renewable energy technologies (wave, tidal/current and offshore wind)¹

Both are affected by the recent passage of the national Energy Policy Act of 2005 and both fall under the federal management purview of the U.S. Department of the Interior's (DOI) Minerals Management Service (MMS) and a variety of state and federal laws and agencies; such coastal energy projects will also fall under both state and federal jurisdiction depending on their location. Yet while there is overlap and interaction, they are different energy technologies at different stages of development with different histories and constituencies.

Offshore oil and gas

In 1990, President Bush declared a 10-year moratorium on outer Continental Shelf (OCS) oil and gas leasing off Washington (among other areas), in accordance with the wishes of Washington and Oregon reached under the DOI's Pacific Northwest Outer Continental Shelf Task Force (see Appendix C for the Resolution of the 1990 PNW OCS Task Force to the Secretary of the DOI). Since then, successive annual Congressional appropriations bills for the DOI have also prohibited OCS oil and gas leasing and related activities. And, in 1998, President Clinton extended Bush's Executive Order until June 2012. The current Bush Administration supports these moratoria. As well, the Shoreline Management Act of 1971 (RCW 90.58.160) prohibits drilling for oil and gas in state waters, while the Ocean Resources Management Act (RCW 43.143.010 (2)) has prohibited leasing of Washington State's tidal or submerged lands for oil and gas activities since 1989. Hence, there has been no offshore oil and gas activity in Washington in the last fifteen years. Additionally, the vast majority of known and potential offshore oil and gas reserves are in the Gulf of Mexico: the Washington OCS is a low priority for oil and gas exploitation. However, the MMS will be deciding on post-2012 leasing activities in the next few years and this will have important consequences for Washington.

Coastal Energy Memo

*For the full version of this memo, including all referenced appendices, please see:

[http://
courses.washington.edu/
oceangov/OPWG.html](http://courses.washington.edu/oceangov/OPWG.html)

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

¹ I use the terms "marine energy, marine renewable energy, ocean energy, and ocean renewable energy" interchangeably here to refer to electricity derived from devices located in a marine environment (onshore, nearshore, offshore and in-stream) that harness the flow of natural, renewable energy: *wave, tidal / marine current, offshore wind, and ocean thermal energy conversion* (though the last is feasible only in tropical waters and not relevant to Washington State). The sun and gravity provide the inexhaustible source of these energies: the sun heats the earth and causes *wind*, which forms *waves* by blowing over vast expanses of open ocean; this heat also warms the tropical waters making *ocean thermal energy conversion* possible and creating *marine currents*, like the Gulf Stream; and the gravitational pull of the sun and moon on our rotating planet makes the *tides* flow.

Marine renewables

Research and development into so-called "alternative" or non-traditional energy (marine or ocean energy) reached its peak in the US a quarter-century ago, with the passage of the Ocean Thermal Energy Conversion Act of 1980.² However the price of oil soon fell, and while oil and gas exploration and development blossomed through the 1980s, all renewable energy technologies languished in the U.S. European interest in marine renewables returned in the 1990s, with the growing acknowledgement of the climate impacts of fossil fuels, and the United Kingdom and Portugal³ are leading the way today with demonstration-scale and one commercial-scale marine energy project (both wave-powered). Renewal of interest in US marine energy development has been more recent. Makah Bay, near the most northwest point of Washington State, is the proposed location of the first wave energy demonstration project in Washington and one of the first in the U.S.⁴

With fluctuating oil and gas prices, a desire to lessen dependence on fossil fuels, and an increasing awareness of the risks of accelerated global warming⁵, diversification of energy supply through the development of renewable, non-fossil fuel based sources is gaining more attention. The U.S. Commission on Ocean Policy and the Pew Oceans Commission made recommendations for strengthening and clarifying the regulatory frameworks of ocean policy, particularly from renewable energy sources.⁶ The issue of state, regional and national 'energy security' suggests that the energy resources available off our coasts need to be evaluated. Both marine renewable energy and offshore hydrocarbons have potential for Washington as sources of energy supply. The clarification of regulatory authority and policy goals will aid Washington's progress in managing its coastal energy resources.

Current Law

The Energy Policy Act of 2005 calls for an inventory of offshore renewable (Section 201) and non-renewable energy resources (Section 357), provides incentives for oil and gas development, and extends production and investment tax incentives to marine renewables ("ocean energy" was not even recognized as an 'eligible' renewable prior to this). The Act amends the Outer Continental Shelf Lands Act (OCSLA) to provide clarification on OCS energy permitting and licensing. Section 388(b) calls for a "Coordinated OCS Mapping Initiative" to improve understanding of the OCS and its feasibility for energy development. MMS will present its plan to address these issues in the coming months and promulgate rules in 2006. (See Appendix B for coastal energy-related sections of the Energy Policy Act of 2005.)

Washington's Ocean Resources Management Act (ORMA) specifies in RCW 43.143.005 (4) the jurisdictional domains of federal-state coastal zone management, in accordance with the federal Coastal Zone Management Act of 1972 (CZMA): "The state of Washington has primary jurisdiction over the management of coastal and ocean natural resources within three miles of its coastline. From three miles seaward to the boundary of the two hundred mile exclusive economic zone, the United States federal government has primary jurisdiction." However, ORMA then asserts that "Since protection, conservation, and development of the natural resources in the exclusive economic zone directly affect Washington's economy and environment, *the state has an inherent interest in how these resources are managed*" (emphasis added). Though RCW 43.143.020 (2) defines "coastal waters" as seaward to two hundred (nautical) miles, the extent to which Washington state authority extends into the exclusive economic zone remains untested and is sure to be an issue of import for coastal energy development.

The CZMA, the ORMA, and the Washington Shoreline Management Act of 1971 (SMA) connect federal, state and local interests and responsibilities for coastal management: the CZMA allows state review of federal activities that will impact state coastal resources (in Washington State's case, by the CZMA-approved, Department of Ecology's Shorelands

2 While OTEC Act of 1980 dealt specifically with OTEC (using the 20+ °C difference in surface and deep water temperature in the tropics as a heat pump to drive a turbine), which received federal R&D support in Hawaii, there was little support for or interest in other ocean (or marine) energies (wave, tidal / marine current) R&D in the US. Offshore wind, classifiable as a marine energy, utilizes the wind technologies developed on terrestrial wind farms and the experience of offshore oil and gas operations.

3 Ocean Power Deliver Ltd.: <http://www.oceanpd.com/> and Wavegen: <http://www.wavegen.co.uk/>

4 In 2001, AquaEnergy Group Ltd. (<http://www.aquaenergygroup.com/>) applied for a license through the FERC Alternative License Process (as this was the first of its kind in the U.S.) for a demonstration wave energy project with the Makah Nation and Clallam County PUD. The project is currently undergoing the EIS process. AquaEnergy received support from the Washington PUD Association and the Northwest Energy Innovation Center (comprised of the Bonneville Power Administration, public power provider Energy Northwest, Battelle / U.S. DOE Pacific Northwest National Laboratory and Washington State University Extension Energy Program) as well as grants from Snohomish County PUD and Puget Sound Energy, and financing from Finavera Ltd., an Irish green energy company.

5 Refer to the ongoing work of the UW's Climate Impacts Group (<http://www.cses.washington.edu/cig/>) and the recent King County Dept. of Natural Resources and Parks sponsored climate change conference (<http://dnr.metrokc.gov/dnrrp/climate-change/conference-2005.htm>)

6 "Managing Offshore Energy and Other Mineral Resources," Chapter 24 of USCOP's Final Report (An Ocean Blueprint for the 21st Century) addresses coastal energy with six recommendations: <http://www.oceancommission.gov/>; The Pew Oceans Commission: <http://www.pewoceans.org/>

and Environmental Assistance Program) under the so-called *federal consistency provision* of the CZMA (Section 307), intended to improve and facilitate cooperation and coordination between state and federal agencies; and the SMA is a cooperative, state-local partnership program between local governments and the Washington Department of Ecology whereby local governments develop their own *shoreline master programs* to manage and protect shorelines according to Ecology's guidelines. These laws ensure that the approval of any coastal energy project requires consideration by multiple agencies.

Offshore oil and gas

MMS is currently preparing its 5-year plan for the 2007-2012 OCS oil and gas lease sale period, as required by law. The period of solicitation of public comment from affected states occurred in October and the MMS will be issuing a preliminary lease plan in the coming months. This plan will address the Energy Policy Act requirement of inventorying offshore oil and gas (Section 357) and identify Washington State rules that constrain offshore oil and gas development. The Office of the Governor responded to the MMS request for comment on October 7, 2005, expressing continued support for the current leasing moratorium (which is due to expire in 2012) and reiterating the condition of the 1990 DOI PNW OCS Task Force Resolution requiring that oil and gas leasing not be considered until the completion of environmental studies (see Appendix D).

In regards to hydrocarbon exploration and development off Washington, federal regulations promulgated by the National Oceanic and Atmospheric Administration (NOAA) in administering the National Marine Sanctuaries Act specifically prohibit "exploring for, developing or producing oil, gas or minerals within the" Olympic Coast National Marine Sanctuary (OCNMS, an area of 2500 square nautical miles off the central and northern coast of Washington),⁷ while Washington's Shoreline Management Act of 1971 prohibits drilling in state waters.⁸ Additionally, Section 388(a) of the Energy Policy Act amends the OCSLA to grant leases, easements, or rights-of-way for energy and related purposes *except* in areas prohibited by a moratorium. Therefore, the MMS decision on whether or not to extend the 2012 offshore oil and gas leasing moratorium will be significant: though the OCNMS is exempt from such potential hydrocarbon activity, the OCS area around the Sanctuary could be impacted. This will be an important issue for resolution.

Natural gas, a 'cleaner' and more efficient fuel than oil, is projected to grow in use. The requisite expansion in its infrastructure and the permitting of liquefied natural gas (LNG) receiving facilities will be an issue of import in the coming years. Section 311(c)(2) of the Energy Policy Act amends the Natural Gas Act to grant "exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal" to the Federal Energy Regulatory Commission (FERC). There has been recent interest in siting facilities in California, Oregon, and British Columbia.⁹

Marine renewables

Washington State legislature support for renewable energy in the form of wind, solar and biofuels has increased in recent years and there is a burgeoning interest in renewable energy development from a diffuse array of parties: universities, private companies, local government and nonprofit organizations. The proposed AquaEnergy – Makah Bay wave energy pilot project would be one of the first of its kind in the nation, while three tidal projects are under consideration in the region.¹⁰

The Energy Policy Act authorizes the appropriation of funds for renewable energy research and development, through the Department of Energy, for fiscal years 2007-9 (Section 931(b)), and sets a non-binding goal for a federal Renewable Portfolio Standard (7.5% of federal energy use by 2013). With the State identified as a favorable location for wave and tidal energy, and several projects under consideration in the Pacific Northwest region, Washington is in a position to foster collaboration and become a marine renewable energy leader.

7 15 CFR 922.152(a)(1) NOAA regulations under the National Marine Sanctuaries Act for the OCNMS

8 RCW 90.58.160 (from the Shoreline Management Act of 1971, RCW 90.58): "Prohibition against surface drilling for oil or gas: surface drilling for oil or gas is prohibited in the waters of Puget Sound north to the Canadian boundary and the Strait of Juan de Fuca seaward from the ordinary high water mark and on all lands within one thousand feet landward from said mark."

9 Proposed LNG terminals in BC, WA, OR: <http://www.energy.ca.gov/lng/projects.html>; As of 11/14/05, FERC's Office of Energy Projects lists as "potential sites identified by sponsors:" Coos Bay, OR (Energy Projects Development), St. Helens, OR (Port Westward LNG LLC), and Astoria, OR (SkipanonLNG – Calpine): <http://www.ferc.gov/industries/lng/indus-act/horizon-lng.pdf>; And Bradwood, OR (Northern Star LNG – Northern Star Natural Gas LLC) is a "proposed site:" <http://www.ferc.gov/industries/lng/indus-act/exist-prop-lng.pdf>

10 Tacoma Power / EPRI tidal (August 8, 2005 Tacoma Power news release): <http://www.ci.tacoma.wa.us/tpu/whatsnew/default.htm#Releases>; Clean Current Tidal Power Project at Race Rocks (B.C.): <http://www.racerocks.com/racerock/energy/tidalenergy/pressbackgrounders.pdf>; possibly the U.S. Navy at Bremerton

- 11 "It is the policy of the state of Washington that:
- (1) The development and use of a diverse array of energy resources with emphasis on renewable energy resources shall be encouraged;
 - (2) The supply of energy shall be sufficient to insure the health and economic welfare of its citizens;
 - (3) The development and use of energy resources shall be consistent with the statutory environmental policies of the state;
 - (4) Energy conservation and elimination of wasteful and uneconomic uses of energy and materials shall be encouraged, and this conservation should include, but is not limited to, resource recovery and materials recycling;
 - (5) In energy emergency shortage situations, energy requirements to maintain the public health, safety, and welfare shall be given priority in the allocation of energy resources, and citizens and industry shall be assisted in adjusting to the limited availability of energy in order to minimize adverse impacts on their physical, social, and economic well being;
 - (6) State government shall provide a source of impartial and objective information in order that this energy policy may be enhanced; and
 - (7) The state energy strategy shall provide primary guidance for implementation of the state's energy policy."

- 12 <http://www.efsec.wa.gov/council.html>
 "siting large natural gas and oil pipelines, thermal electric power plants that are 350 megawatts or greater and their dedicated transmission lines, new oil refineries or large expansions of existing facilities, and underground natural gas storage fields. In addition, energy facilities of any size that exclusively use alternative energy resources (wind, solar, geothermal, landfill gas, wave or tidal action, or biomass energy) can opt-in to the EFSEC review and certification process. EFSEC's authority does not extend to hydro based power plants, thermal electric plants that are less than 350 megawatts, or to general transmission lines." Authority under RCW 80.50, WAC 463.

- 13 "Survey and Characterization of Potential Offshore Wave Energy Sites in Washington" 21 pp. PDF: http://www.epri.com/attachments/297213_003_Washington_Site_Report.pdf

- 14 Oregon State University has proposed a U.S. Ocean Energy Research and Demonstration Center ("wave park") for streamlined testing and development of wave energy technologies: <http://eecs.oregonstate.edu/msrf/> and <http://eecs.oregonstate.edu/news/story/1317>

Stakeholders

Washington State agencies:

Department of Community Trade and Economic Development (CTED) Energy Policy Division: Guidance for activities of the Energy Policy Division comes from RCW 43.21F.015:¹¹ "it is the policy of the state of Washington that the development and use of a diverse array of energy resources with emphasis on renewable energy resources shall be encouraged." Less involved with oil and gas-related policy.

Energy Facility Site Evaluation Council (EFSEC - part of CTED). Considers applications to license major non-hydro energy projects as a "one-stop shop for licensing."¹² Consists of Governor-appointed Chair and representatives from five agencies: Ecology, DNR, Department of Fish and Wildlife (DFW), CTED, Utilities and Transportation Commission (UTC).

Department of Ecology: Shorelands and Environmental Assistance Program (WA Coastal Zone Management Program), deriving authority from the Shoreline Management Act, State Environmental Policy Act, Clean Water Act, Clean Air Act, Ocean Resources Management Act, Energy Facilities – Site Location Act (EFSEC).

Department of Natural Resources: Aquatic Lands and Resources Division, and Geology and Earth Resources Division: Primary Washington agency involved in offshore oil and gas leasing and development, also mining and geologic mapping.

Washington State University Extension Energy Program (Renewables): provides technical assistance and energy services to industry, businesses, government, residents and utilities (with funding from the federal government).

Office of the Governor: Governor Gregoire's Executive Policy Advisor for energy (state lead).

Local:

The Makah Nation: Makah Bay – AquaEnergy, Ltd. wave project, partnering with **Clallam County Public Utility District** for the generation of electricity from a demonstration wave project.

Tacoma Power: City of Tacoma public utility partnering with the **Electric Power Research Institute (EPRI)** (with support from the Dept. of Mechanical Engineering at U.W.) on assessing the Tacoma Narrows for a tidal power project, with funding from CTED and the **Bonneville Power Administration** (see citation '13').

EPRI authored a 2004 report assessing wave energy potential in Washington¹³ (also reported on Oregon) and is collaborating with **Oregon State University**, the **Oregon SeaGrant Program**, and the **Oregon Dept. of Energy** on wave energy development.¹⁴ EPRI is also proposing collaboration with the US Dept. of Energy's National Renewable Energy Lab's (**NREL**) Wind Energy Technology Center (WETC) on wave-wind energy hybridization potential.

Organizations:

The Olympic Coast Alliance: non-profit organization working to protect the OCNMS and educate the public. **The Surfrider Foundation**¹⁵ and other environmental non-governmental organizations are very likely to make public strong opposition or support to any policy changes.

Pacific Northwest Economic Region (PNWER): a public-private partnership between elected officials and business leaders in the PNW (AK, WA, ID, MT, OR, BC, Alberta, Yukon), which has addressed ocean energy in the last two of its annual meetings.¹⁶

Prosperity Partnership: a coalition of Puget Sound government, business, labor and community leaders developing a strategy for long-term economic prosperity; the Clean Technology Cluster includes recommendations for the promotion and diffusion of renewable energy.¹⁷

Northwest Energy Technology Collaborative (NWETC): a joint effort of business, government, nonprofit and educational institutions accelerating the growth of the PNW energy technology industry, including renewables.¹⁸

Federal Agencies:

U.S. Department of the Interior's **Minerals Management Service**:¹⁹ lead agency for both offshore oil and gas and marine renewable energy regulation and development (Energy Policy Act of 2005, OCSLA).

Also the **Department of Energy** (Energy Policy Act of 2005), **Federal Energy Regulatory Commission** (Federal Power Act – for LNG and tidal projects), **Army Corps of Engineers** (Rivers and Harbors Act), **OCNMS** (National Marine Sanctuaries Act), **NMFS**, **USFWS**, **EPA**, **U.S. Navy**, **Coast Guard** (CZMA, NEPA, ESA, MMPA) will have roles in coastal energy projects; and the Dept. of Energy's National Renewable Energy Laboratory (**NREL**) and Wind Energy Technology Center for potential future marine renewables assessment, research and development.

Policy Issues

Issue 1: Offshore oil and gas

Not knowing if the offshore oil and gas leasing moratorium will be extended by the MMS beyond 2012:

- Should the state start preparing now for potential leasing of offshore oil and gas?
- What input will Washington contribute to the MMS's inventorying initiative?
- Is the 1990 DOI-Oregon-Washington PNW OCS Task Force still operative?
- And if the moratorium is not extended, are the Task Force's requirements for pre-leasing environmental impact studies still applicable?

Issue 2: Marine renewable energy

What direction does Washington State wish to take regarding the development of marine renewable energy and what are the policy responses necessary for such a direction?

Should the state propose a mandatory Renewable Portfolio Standard (RPS) requiring minimum renewable energy purchasing requirements?

The embryonic nature of marine renewable energy means it lacks a precedent for proper review and regulation. The experience of renewables support and development elsewhere provide valuable knowledge (see Appendix D for more on other marine energy projects). Washington can follow the example of Scotland²⁰ and the proposal of Oregon (see citation "17" below) in developing a marine renewables testing center or a center of renewable energy excellence.

15 The Surfrider Foundation: http://actionnetwork.org/campaign/stop_oil

16 PNWER: <http://www.pnwer.org/>

17 Prosperity Partnership consists of leaders from King, Kitsap, Pierce, and Snohomish counties: <http://www.prosperitypartnership.org/>

18 NWETC: <http://www.nwetc.com/>

19 MMS Offshore Energy: <http://www.mms.gov/offshore/>

20 The European Marine Energy Centre (EMEC) in the Orkney Islands is a testing center for wave and tidal power devices: <http://www.emec.org.uk/>

Policy Options

Offshore Oil and Gas

Option 1: Status quo: Monitor the MMS lease planning process for 2007-2012 now and for the upcoming 2012-2017 period. Respond to future developments as required by the OCSLA if lease sales are proposed off the PNW region.

Option 2 (Preferred Option): Seek to maintain Washington's waters and adjacent OCS as a hydrocarbon exploration-free zone through an extension of the moratoria on offshore oil and gas activity beyond the current 2012 Executive Order date. Engage the MMS, ensuring state participation in the inventory of offshore oil and gas resources and thorough environmental assessments of the impacts of such activities. Prepare to assert and defend the environmental, biological, and economic interests of the State in working with the MMS should leasing and exploration be proposed off Washington's coast. Monitor Oregon's potential interest in a "gas only" OCS policy, and British Columbia's consideration of offshore oil and gas development.

Marine renewables

Option 1: Status quo: Allow the energy market to determine the feasibility of renewable projects and follow the federal lead.

Option 2 (Preferred Option): Support marine renewable development: encourage collaboration between government, industry, and academia on assessing and demonstrating viable marine renewable energy technologies. Identify current incentives and provide, if appropriate and applicable, additional economic and policy incentives at least comparable to those given to other industries, to promote clean technologies such as marine renewable energy.

- Increase state involvement in and support for current projects in Washington State (AquaEnergy – Makah Bay – Clallam County wave; Tacoma Narrows – EPRI – Tacoma Power tidal; U.S. Navy – Bremerton tidal).
- Increase collaboration in and involvement with nearby projects (OSU – EPRI Oregon Dept. of Energy wave demonstration and testing facility in Reedsport, OR; Clean Current Power – EnCana – Race Rocks, Vancouver Island, BC tidal pilot project).
- Support technology transfer and foster further collaboration between parties with expertise (UW, WA SeaGrant, WSU Energy, Battelle – PNNL).
- Communicate with other coastal states considering marine renewable projects (MA: offshore wind and tidal, RI: wave, NJ: wave, NY: offshore wind and tidal, CA: wave and tidal, OR: wave, TX: offshore wind).

Coastal Energy and the Ocean Policy Work Group in 2006

In the OPWG's continuing work, further consideration of coastal energy is warranted, particularly the inclusion of marine renewable energy as an integral part of any climate change policy to reduce greenhouse gases. The OPWG should:

Consider the establishment of a specific function for the State to interact with the MMS on energy issues, and to coordinate a comprehensive and integrated policy amongst the coastal energy-related agencies of the State. Evaluate providing financial incentives, and other policy tools, for the promotion of marine renewable energy development, to supplement and secure existing energy supplies for the State, and identify present disincentives to marine energy development in the State (such as regulatory and environmental uncertainty). Solicit further and expanded input from concerned parties, including stakeholder groups listed above and those involved in collaborations in Oregon and British Columbia.

Appendices (attached online)

Appendix A: Other marine energy projects (p. 10-11)

Appendix B: Energy Policy Act of 2005 (p. 12)

Appendix C: 2001 Letter of comment to the Secretary of the DOI from the WA and OR Governors on OCS oil and gas lease planning with the 1990 Resolution of the Pacific Northwest OCS Task Force (p. 13-20)

Appendix D: 2005 Letter of comment to the MMS from the Governor on OCS oil and gas lease planning (p. 21-22: last two pages)

APPENDIX F

ECONOMIC DEVELOPMENT MEMO

Coastal Economic Development and Ecotourism in the State of Washington

Ocean Policy Working Group - SMA 550A

Dianna Jones

diannaj@u.washington.edu

There are a variety of ocean-related options for economic development in coastal communities. For example, coastal agriculture, fishing, boat building, vessel repair, renewable energy development, aquaculture and commerce through ports¹ are all viable research areas. This memo is focused on coastal marine ecotourism because the Governor has identified tourism as important industry in Washington State and has asked CTED to take the leadership role in advancing ecotourism in the state.²

Background

Tourism in Washington State is an \$11 billion industry that supports 126,800 jobs and 30,000 small businesses.³ The term *ecotourism* (defined by the International Ecotourism Society as "responsible travel to natural areas that conserves the environment and improves the well-being of local people."⁴) is often used interchangeably with *nature-based tourism*. Washington State defines *nature-based tourism* as "a sustainable economic activity that relies on an appreciation of natural and cultural resources, a desire to learn more about them, and behavior that promotes their conservation."⁵ *Marine ecotourism* is defined as "ecotourism activities that take place in the coastal zone, in the marine environment, or in both."⁶

While no economic data has been gathered specifically on marine or coastal ecotourism, a June 1999 report by The Research Group in conjunction with the Pacific Northwest Coastal Ecosystems Regional Study (PNCERS) indicates that tourism is growing steadily in coastal counties. Specifically,

- Tourist-related industry wages and salaries totaled \$183 million for the four coastal counties studied (Coos and Tillamook in OR and Grays Harbor and Pacific in WA);
- These wages equate to 8,133 annual jobs in the tourism industry;
- The personal income generated by these tourism industries is \$43.5 million in Grays Harbor County and \$15.5 million in Pacific County (\$69.3 million in Coos County, OR and \$18.4 million in Tillamook County, OR).⁷

Economic Development Memo

*For the full version of this memo, including all referenced appendices, please see:

[http://
courses.washington.edu/
oceangov/OPWG.html](http://courses.washington.edu/oceangov/OPWG.html)

Scroll down to the policy memo title, and download a single file with memo and all appendices and attachments.

- 2 According to the Washington Ports Association, Washington State is the most trade-dependent state in the Nation. See the 2004 WPPA Marine Cargo Forecast at <http://www.washingtonports.org/trade/tradecover.htm> for more information.
- 2 From Day 2 plenary session of Governor's 2005 Tourism Summit (proceedings and recap not yet available), 18 Nov. 2005.
- 3 Experience Washington, Industry Site, <http://www.experiencewashington.com/industry>, October 12, 2005.
- 4 The International Ecotourism Society, www.ecotourism.org, October 12, 2005.
- 5 Experience Washington, Industry Site, www.experiencewashington.com/industry, October 12, 2005.
- 6 Bristol Group for Tourism Research, Planning for Marine Ecotourism in the EU Atlantic Area: Good Practice Guide. University of the West of England, Bristol: 2001.
- 7 The Research Group, Economic Description of Selected Coastal Oregon and Washington Counties: Part I. Prepared for the Pacific Northwest Coastal Ecosystems Regional Study, June 1999.

Current Washington State Policy and Initiatives

The Washington State Department of Community, Trade, and Economic Development (CTED) is responsible for promoting economic development within the state “by assisting the state’s communities to increase the quality of life of their citizens and their economic vitality, while maintaining a healthy environment.”⁸ RCW 43.330.090 specifically tasks CTED with coordinating an expansion of the state’s tourism industry “in cooperation with the public and private tourism development organizations.”⁹ A piece of this expansion includes promoting the state as a destination for “nature-based and wildlife viewing tourism.”¹⁰ The CTED Tourism Development Program is advised by a committee made up of four legislators and eleven representatives of the travel industry, appointed by the director of CTED.¹¹

‘Watchable Wildlife’ is a major ecotourism initiative in Washington State. Over \$1.7 billion is spent annually in the state on wildlife watching activities, and most of this is spent in rural areas.¹² (See Appendix E for the strategic plan presented to the State Legislature in 2004.) Coastal tourism is also supported by ports¹³, Chambers of Commerce,¹⁴ Visitor & Convention Bureaus,¹⁵ and local Economic Development Councils.¹⁶

Policy Problem

Washington State’s coastal economy (defined here as outer coast – Pacific and Grays Harbor counties, western parts of Jefferson and Clallam counties) is in poor condition and the state’s cultural and natural resources are assets that can provide revenue and jobs to coastal communities. Both Pacific and Grays Harbor Counties have experienced “serious cutbacks” in fishing and timber industry employment due to changes in industry, environmental concerns and protection of endangered species.¹⁷ Also, over fifty percent of residents in both counties believed that the economic factors of housing costs and overall cost of living were getting worse in coastal resident survey research conducted by PNCERS in 2000 (see Appendix A for Grays Harbor and Willapa Bay survey reports). Fishing and timber are expected to remain important contributors to both counties’ economies,¹⁸ but an opportunity exists to explore marine ecotourism as a means for improving the economies of the coastal communities.

Issues

Coastal marine ecotourism development in Washington State is facing the following issues:

- Funding¹⁹ is scarce for tourism-related improvements, design of strategic plans and marketing
 - ▶ Washington State ranks 13 out of 13 western states in terms of state tourism budgets; nation-wide Washington State ranks 44 out of 47 states for which 2004-2005 data was available (see Appendix B: Travel Industry of America 2004-2005 Projected State Tourism Office Budgets by Rank)²⁰
- Coastal marine ecotourism development is hindered by challenges with infrastructure and access
- Coastal marine ecotourism is perceived as a seasonal activity by local residents, public and private entities and tourists
- Coastal marine ecotourism is currently a missed opportunity in Washington State – the state’s natural resources could serve as a source of economic development for communities looking to supplement declining industries

Additionally, Bristol Group for Tourism Research identified several issues with marine ecotourism planning for the EU that can be applied world-wide (see chapter 2 in Appendix C).²¹

8 RCW 43.330.050

9 RCW 43.330.090 § 2

10 RCW 43.330.090 § 2(a)

11 Tourism Advisory Committee, http://www.w.experiencewashington.com/industry/IndustryPage_pid-115200.html, October 26, 2005.

12 WDFW – The Watchable Wildlife Industry, <http://wdfw.wa.gov/viewing/watchwld/watchwld.htm>, 21 Nov 2005.

13 According to RCW 53.06.070, a purpose of the Washington public ports association is to “assist in the efficient marketing of the state’s trade, tourism, and travel resources.”

14 See, for example, the Washington Coast Chamber of Commerce at <http://washingtoncoastchamber.org/>.

15 See, for example, the North Olympic Visitor & Convention Bureau at <http://www.northwestsecretplaces.com/vcb/>.

16 See, for example, the Grays Harbor EDC at <http://www.ghedc.com/>.

17 The Research Group, Economic Description of Selected Coastal Oregon and Washington Counties: Part I. Prepared for the Pacific Northwest Coastal Ecosystems Regional Study, June 1999.

18 Ibid.

19 The Tourism Advisory Committee, chaired by Duane Wollmuth, has conducted research comparing CA, FL, ME, MN, NV, OR, TX and WA with respect to state tourism organization and funding structures. This research and recommendations will be presented to the Governor in December and will therefore not be discussed in this memo.

20 Travel Industry Association of America, http://www.tia.org/pressmedia/pdf/state_budgets_04_05.pdf, October 25, 2005.

21 Bristol Group for Tourism Research, Planning for Marine Ecotourism in the EU Atlantic Area: Good Practice Guide. University of the West of England, Bristol: 2001.

Stakeholders

There are many stakeholders interested in the development of ecotourism in Washington State's coastal counties. Coastal county residents and coastal tribes stand to be affected economically, culturally and environmentally by any policies that encourage or discourage ecotourism. Local business owners will be interested in the economic and regulatory impacts of the policies. Local and state government will be interested in economic impacts and public perception, and state agencies (WDFW, DNR, CTED, etc.) will be concerned with regulatory aspects. Port officials have a stake in the land-use aspects (industrial v. tourism) and the potential for joint projects, and non-local citizens and environmental organizations will be concerned with the impacts of ecotourism on the natural environment and resources. Also, the federal government will be interested in how the policies interact with the Olympic Coast National Marine Sanctuary and Olympic National Park.

Alternatives to Current Policy on Coastal Marine Ecotourism in Washington State

The following alternatives will be explored and prioritized in year two of the OPWG, after the opportunity to gather input from private, public and NGO stakeholders.

Alternative	Pros	Cons
<i>State Strategy:</i> Include coastal marine ecotourism in the state’s strategic plan for tourism marketing; provide tools and strategies for coastal ecotourism development (see chapters 3-5 of Appendix C for an example)	“Gets the word out” to a larger audience about coastal ecotourism in WA; provides blueprint for local communities; experiences are seamless for the ecotourist from one community to the other.	Does not reconcile funding issue for local communities.
<i>Strategic Partnering:</i> a. Partner across state agencies (e.g., CTED with the Interagency Committee for Outdoor Recreation to provide grant money to tribal, local and county governments with plans for coastal marine ecotourism development b. Partner across local communities to plan for regional tourism and pool funds c. Partner across urban and rural areas to promote coastal ecotourism to city visitors	Creative partnering can spread limited funds further and increase communications among and between levels of government as well as between private and public entities.	May be difficult to spread an already-thin work force to outside projects; may create resistance due to uncertainty and novelty.
<i>Alignment:</i> Adopt a standard definition of ‘ecotourism’ that can be used throughout the state in planning, marketing and labeling activities	A standard definition would lend direction to local government strategies and may also provide an opportunity for labeling activities under a familiar term for marketing purposes.	Does not reference the “new travel trend” of geotourism, ²² but similar concepts can be incorporated into the ecotourism definition. ²³
<i>Infrastructure:</i> Pursue alternative funding options for coastal ecotourism-related infrastructure improvements and development • Examples of infrastructure include but are not limited to water, sewer, roads and technology	May provide creative solutions to funding issues and create innovative partnerships.	May be difficult to spread an already-thin work force to outside projects; may create resistance due to uncertainty and novelty.
<i>Local communities.</i> Empower local communities to prioritize, evaluate amenities, set a vision and implement. ²⁴	Strong local communities may create strong tourism programs with limited state funding.	Would need to find funding and resources for programs.

22 According to The Travel Industry Association of America, geotourism is defined as “tourism that sustains or enhances the geographical character of the place being visited, including its environment, culture, aesthetics, heritage and the well-being of its residents.” <http://www.tia.org/Pubs/pubs.asp?PublicationID=101>, October 28, 2005.

23 The International Ecotourism Society identifies the following “guidelines” of ecotourism: “Build environmental and cultural awareness and respect,” “Provide financial benefits and empowerment for local people,” “Raise sensitivity to host countries’ political, environmental, and social climate,” and “Support international human rights and labor agreements.” <http://www.ecotourism.org/index2.php?what-is-ecotourism>, October 28, 2005.

24 An example of this empowerment is WSU’s Rural Entrepreneurship program (<http://www.nationalcoalition.wsu.edu/>).

APPENDICES

- A. PNCERS Coastal Resident Survey Reports: Grays Harbor and Willapa Bay
- B. Travel Industry of America 2004-2005 Projected State Tourism Office Budgets by Rank
- C. Excerpt from Planning for Marine Ecotourism in the EU Atlantic: Good Practice Guide
- D. Oregon Tourism Structure and Policy (Summary and 2005-2007 Strategic Plan)
- E. Wildlife Viewing Activities in Washington: A Strategic Plan, 2004.

1 According to the Washington Ports Association, Washington State is the most trade-dependent state in the Nation. See the 2004 WPPA Marine Cargo Forecast at <http://www.washingtonports.org/trade/tradecover.htm> for more information.

2 From Day 2 plenary session of Governor's 2005 Tourism Summit (proceedings and recap not yet available), 18 Nov. 2005.

3 Experience Washington, Industry Site, <http://www.experiencewashington.com/industry>, October 12, 2005.

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8 RCW 43.330.050

9 RCW 43.330.090 § 2

10 RCW 43.330.090 § 2(a)

11 Tourism Advisory Committee, http://www.experiencewashington.com/industry/IndustryPage__pid-115200.html, October 26, 2005.

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