A Case Study of the Washington Coast Marine Spatial Planning Process, 2010 - 2015



(Source: Washington Dept. of Natural Resources)

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This report is one of three marine spatial planning (MSP) case study reports produced by the Coastal Resources Center/Rhode Island Sea Grant College Program (CRC) at the URI Graduate School of Oceanography. It is part of CRC's broader ongoing research and capacity-building initiative to strengthen the network of marine spatial planning and coastal management practitioners. The purpose of the case studies is to document and share lessons learned from examples of marine spatial planning in the U.S. in order to build the capacity of MSP and coastal management practitioners. Research was conducted in three locations: Rhode Island, Washington State and San Francisco. The Rhode Island case focused on implementation of the Rhode Island Ocean Special Area Management Plan; the Washington case focused on the ongoing development of the Washington Coast Marine Spatial Plan; and the San Francisco study became a two-case analysis of two different Coast Guard-led waterways management initiatives. CRC has produced three technical reports summarizing case study research as well as a series of shorter publications highlighting key findings.

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List of Acronyms

BOEM: Bureau of Ocean Energy Management

CZMA: Coastal Zone Management Act

CZMP: Coastal Zone Management Program

DNR: Washington Department of Natural Resources
DFW: Washington Department of Fish and Wildlife

EPA: Environmental Protection Agency

FERC: Federal Energy Regulatory Commission

GLD: Geographic Location Description MRC: Marine Resource Committee

MSP: Marine Spatial Planning

NGO: Non-governmental organization

NOP: National Ocean Policy

NOAA: National Oceanic and Atmospheric Administration

OCNMS: Olympic Coast National Marine Sanctuary

ORMA: Washington Ocean Resources Management Act

RCW: Revised Code of Washington

SMA: Washington Shoreline Management Act

SAP: Science Advisory Panel

SEPA: State Environmental Policy Act

SMP: Washington Shoreline Master Program

SOC: Washington State Ocean Caucus USACE: U.S. Army Corps of Engineers

USCG: U.S. Coast Guard

WCMAC: Washington Coastal Marine Advisory Council

I. Introduction

The Washington State Pacific coast has a long history of its people making a living from its natural resources. Home to four coastal Treaty Tribes as well as communities that make a living from fishing, tourism, and logging, the people from this region have traditionally played a leadership role in the management of their coasts and offshore waters in partnership with state and federal government. Using tools, including community-developed shoreline management plans, national and state marine conservation areas, and formal agreements between government (including Tribes) and user groups, the people of this region have worked to protect the natural resources upon which they so greatly depend, while managing increased human activities. The most recent coastal management tool brought to this region is marine spatial planning (MSP). This began with the approval of a state law in 2010 that required the creation of regional non-regulatory marine spatial plans: "The state intends to augment the marine spatial component of existing plans and to improve the coordination among state agencies in the development and implementation of marine management plans."1 Spearheaded by a state Senator, this law was established with support from local individuals concerned about the impact offshore renewable energy would have on their fishing activity.

The first area for which a marine spatial plan is being completed is the Washington Pacific coast region (see Figure 1). Through the public scoping process, it was determined that the Washington Coast marine spatial plan would have the goal of ensuring "a resilient and healthy marine ecosystem on Washington's coast that supports sustainable economic, recreational, and cultural opportunities for coastal communities, visitors, and future generations."²

While the plan is not expected to be completed until the end of 2016, this case study communicates the story to date and presents observations and lessons learned that may be helpful to other coastal management practitioners. Key lessons learned identified through this study are these: the value of understanding the historical context of your place before you begin a plan, the need to manage expectations, and the need to adapt if the issues driving the MSP process cease to be relevant to stakeholders.

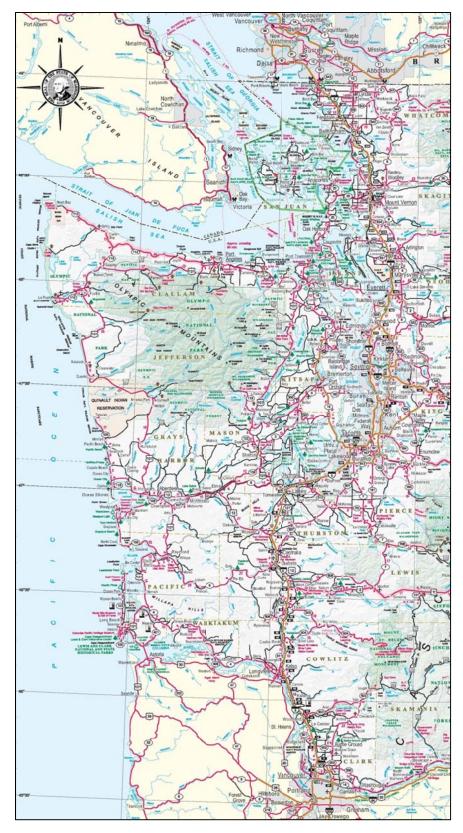


Figure 1. Map of Washington's Pacific Coast, Puget Sound and Columbia River Estuary (Source: Washington Dept. of Transportation)

II. Developing this Case Study

To develop this case study, researchers conducted 15 interviews with individuals representing MSP planning staff, industry experts, and local community leaders to better understand a range of perspectives and expectations for this MSP effort (see Table 1). Interviewees were identified with the guidance of the Washington Department of Ecology and Washington Sea Grant because of their active and dedicated participation in the Washington Coast MSP process. Through the interviews, case study authors sought to understand each individual's role in and perspective on the process. Interview questions included: How have participants influenced the plan's development and what do they expect from implementation? How have participants coordinated with each other and with planning leaders to conduct this work? How has history, both political and personal, played into the process? How have information sources like geospatial data and local knowledge been included into the process? Ultimately, how effective has the interviewee found the process to date? The findings, anecdotes and lessons learned reported in this case study are based on these interviews as well as a review of the public record on the Washington Coast MSP process to date.

Table 1. Interview Participants

| Name | Organization/ Industry | Role in MSP process | | | |
|---------------------------------------|--|---|--|--|--|
| Government and Tribal Representatives | | | | | |
| Carol Bernthal/ George Galasso | National Oceanic and Atmospheric Administration (NOAA)/Olympic Coast National Marine Sanctuary | Seafloor mapping, human use data, and other plan input; in general, exert direct management authority over uses within the Sanctuary | | | |
| Michele Culver/ Corey Niles | Washington Department of Fish and Wildlife (DFW) | State Ocean Caucus; DFW representative on the Washington Coastal Marine Advisory Council (WCMAC); fishermen outreach; developed ecologically important areas analysis and fisheries use GIS data layers | | | |
| Garrett Dalan | Grays Harbor County, WA (through mid-2015); late 2015-present, The Nature Conservancy | County Marine Resource Committee (MRC) Coordinator/Environmental Health Specialist; WCMAC chair and Grays Harbor MRC representative on the WCMAC | | | |
| Rod Fleck | City of Forks, WA | Forks City Attorney/Planner; North Coast MRC representative on WCMAC | | | |
| Katie Krueger/ | Quileute Tribe | WCMAC alternate liaison for Quileute Tribe | | | |

| Name | Organization/ Industry | Role in MSP process | | | | |
|---|--|--|--|--|--|--|
| Jennifer Hagen | | (Krueger); Quileute Tribe marine biologist assisting with MSP scientific/technical issues (Hagen) | | | | |
| Jennifer Hennessey/ Kelsey Gianou | Washington Department of Ecology | MSP Lead Planner; State Ocean Caucus coordinator; WCMAC staff support; will submit MSP to NOAA for inclusion in coastal program | | | | |
| Michal Rechner/ Katrina Lassiter | Washington Department of Natural Resources (DNR) | DNR representative on WCMAC; State Ocean Caucus; administers funding allocated for MSP; management of website and online data and tools | | | | |
| Joe Shumacker | Quinault Indian Nation | Quinault tribal technical staff | | | | |
| Stakeholders | | | | | | |
| Dale Beasley | Columbia River Crab Fishermen's Association | Commercial fishing representative on WCMAC | | | | |
| Casey Dennehy | Surfrider Foundation | Recreation representative on WCMAC | | | | |
| Paul Dye | The Nature Conservancy | Website support and community workshops | | | | |
| Arthur (R.D.) Grunbaum | Friends of Grays Harbor | Conservation representative on WCMAC | | | | |
| Rich Osborne | Researcher | Science representative on WCMAC | | | | |
| Brian Sheldon | Northern Oyster Company (oyster farm) | Shellfish aquaculture representative on WCMAC; liaison to other aquaculture sectors | | | | |
| University | | | | | | |
| Penny Dalton | Washington Sea Grant | State Ocean Caucus; WCMAC member; MSP Science Advisory Panel; MSP outreach; Social and Economic Indicator development | | | | |

III. A Brief History of the Place

The Washington Pacific coast and ocean are home to some of the most important marine resources in the state including commercially valuable finfish species and shellfish, many species of marine mammals, rare deep-sea corals, diverse seaweed colonies, and a migratory pathway for millions of sea birds. Washington's coastal geography is diverse. The north coast features rocky elevated shorelines and a series of relatively short major rivers flowing from the mountains and the Olympic Peninsula to

the coast. The south coast is characterized by low sandy shorelines and a series of large estuaries. The north coast is less developed than other areas of the state and includes a number of different types of conservation areas including the marine shoreline in the Olympic National Park, National Wildlife Refuges, and the Olympic Coast National Marine Sanctuary. Washington State Parks manages numerous state parks and the Seashore Conservation Area along much of the southern portion of Washington's coast (see Figure 2). Notably, 15 of Washington's 39 counties are adjacent to saltwater of some kind, whether the Pacific Ocean, the Columbia River, or Puget Sound.⁴

Washington is also unique in that its coastal zone includes all lands and waters from the coastline (ordinary low water line for ocean areas, seaward limits of inland water bodies) out to three nautical miles. The Washington Pacific coast, comprising four coastal counties (Jefferson, Clallam, Grays Harbor and Pacific), is primarily rural and supported by an economy based on tourism, recreation, and natural resources including commercial fisheries and timber. This region makes up only 2.9 percent of the state's population according to the 2010 U.S. Census. These four counties are currently struggling with higher unemployment and lower incomes than the state average. In November 2013, the state's average unemployment rate was 5.4 percent while the average for the four coastal counties was over 7.5 percent. In 2012, the average per capita income for the four coastal counties was \$37,781 compared to the state average of \$46,045. These counties also have above average retirement age population. In 2014, citizens over age 65 comprised less than 14 percent of the state population, while citizens over age 65 comprised between 18 and 30 percent of the population of each of the four coastal counties.

Historically, Washington State was economically dependent on its once-plentiful natural resources, like timber, which have experienced periods of intense extraction. For example, interview participant R.D. Grunbaum, a stakeholder from Grays Harbor, explained that: "Grays Harbor, since the settlers came in the early 1800s, has focused on business and extractive industries like logging." He further explained how the people who make their living off of these resources, and comprise a large percentage of those living on the coast, have lived through and experienced this cyclically, where their livelihood is characterized by a "boom and bust" economy. "There was a big boom when they first took the trees, and then they couldn't get to the trees because of lack of roads — so, big bust. So they put in roads and they put in railroads and there was a big boom again. Then they cut all the trees and all the trees were gone and there was a bust. So that's the history and it's repetitive to today." This history is one of several factors that explain the persistently high levels of unemployment facing these coastal counties.

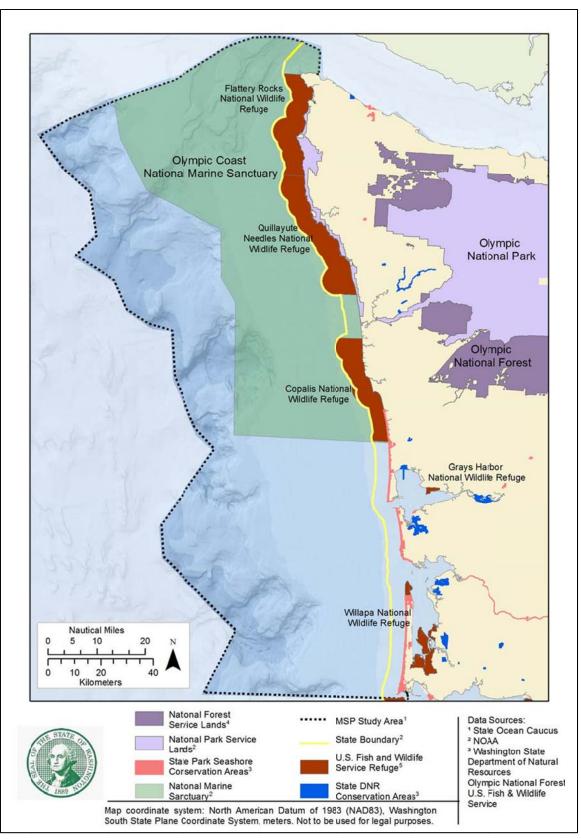


Figure 2. Existing conservation regions within the Washington Coast MSP study area (Source: Washington DNR)

The Washington coast is also home to four Coastal Treaty Tribes: the Hoh, Makah and Quileute Tribes and the Quinault Indian Nation (see Figure 3). These Tribes are different from other federally-recognized Tribes because they signed treaties with the federal government that allowed the peaceful settlement of Western Washington in exchange for continued rights to fish, gather shellfish, hunt and exercise other sovereign rights. These treaties, known as the Stevens Treaties, restricted Tribes to very limited reservation areas compared to the territory they originally occupied but reserved the Tribes' right to fish and hunt in "usual and accustomed areas" outside of the reservations. These include both terrestrial and marine areas. ¹⁰ Specifically, after long legal battles, these Coastal Treaty Tribes are recognized with the right to take fifty percent of all naturally occurring shellfish and finfish in tribal "usual and accustomed areas" in accordance with tribal law and fishery management responsibilities. 11 In addition, each Tribe maintains its own fisheries management and enforcement staff, enters into management agreements with other co-managers, and engages in a wide variety of research, restoration and enhancement activities to improve the scientific basis for resource stewardship.

Several state government agencies are responsible for administering different management programs for Washington's marine environment (see Appendix I). Chief among these are the Department of Ecology, the Department of Natural Resources (DNR) and the Department of Fish and Wildlife (DFW). These agencies have multiple different responsibilities. The Department of Ecology houses the state's federally-approved coastal zone management program; the DNR manages leases for submerged lands and performs numerous other functions; and the DFW manages state fish and shellfish resources. As in other states, a host of federal government agencies also have authority over managing various aspects of Washington's marine environment ranging from federally-managed fisheries and the National Marine Sanctuaries (the National Oceanic and Atmospheric Administration/NOAA) to offshore energy development (the Bureau of Ocean Energy Management/BOEM and the Federal Energy Regulatory Commission/FERC).

ⁱ For additional information see generally the Northwest Indian Fisheries Commission, http://nwifc.org/ or the Washington Governor's Office of Indian Affairs, www.goia.wa.gov.

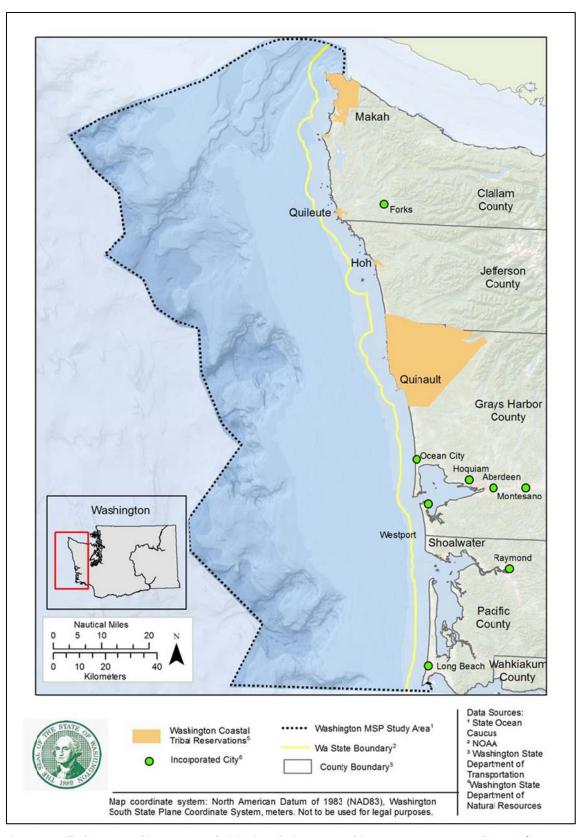


Figure 3. Tribal areas and incorporated cities in relation to Washington Coast MSP Study Area (Source: Washington DNR)

IV. Laying the Groundwork for Washington State Marine Spatial Planning

A. Drivers for Marine Spatial Planning

In 2002, AquaEnergy, i a renewable energy company, submitted a Declaration of Intent to the FERC, asking whether or not their renewable energy pilot project off the Pacific coast of Washington State would require a license. FERC replied that it would. This proposal, involving wave buoys off the Makah reservation, was designed to develop a local source of energy for the Tribe. AquaEnergy received a license from FERC in 2007, the surrendered the license in 2009 citing an unfavorable economic climate and restrictions on capital necessary to continue project development. Thus, this project did not come to fruition.

In 2007, a local investor also started a company called Grays Harbor Ocean Energy and developed a proposal to place a renewable energy facility off the Washington coast in the heart of prime crabbing ground. Interview participants explained how this created tension among local communities who were worried about the impacts on existing uses and the environment, as well as the absence of a proactive plan to address how and where this new use should occur.

Following these renewable energy proposals and discussions, Washington State Senator Kevin Ranker began championing marine spatial planning as a way to strategically plan for new uses and protect existing uses. Local stakeholders met with their local representatives and helped outline the key components of the Washington MSP law. Interview participants reported how many of these stakeholders saw marine spatial planning as a way to prevent displacement and protect existing sustainable uses from new uses.

In 2010, due in part to Senator Ranker's leadership, the Washington State legislature enacted law that acknowledged the challenge: "These multiple uses as well as new emerging uses, such as renewable ocean energy, constitute a management challenge for sustaining resources and coordinating state decision-making in a proactive, comprehensive and ecosystem-based manner." Additionally, it promoted the development of marine spatial plans "to build upon existing statewide Puget Sound, coastal, and Columbia River efforts . . . [and] to augment the marine spatial component

URI Coastal Resources Center/Rhode Island Sea Grant, January 2016

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ⁱⁱ AquaEnergy was later purchased by Finavera Renewables, who saw the project through the later permitting stages.

of existing plans and to improve the coordination among state agencies in the development and implementation of marine management plans."¹⁶ Dale Beasley, a crab fisherman and President of the Columbia River Crab Fishermen's Association, described this series of events that led to the writing of the MSP law:

"In 2010, we had Senator Ranker from San Juan Island have this vision of what he thought we should do with MSP, and he's a pragmatist in the legislature; he understood that if he didn't come to the coast and get the coastal legislators on board, it wasn't going to happen. So, they had the first coastal MSP meeting in Aberdeen, and our coastal legislators were all there, and there were probably ten of us from the fishing community, no one else was there. And we sat down with those legislators to draft the first piece of MSP, and the reason we did that was because Burt Hamner of Grays Harbor Ocean Energy had just put his vision of what the ocean should look like in twenty to thirty years. And, that was enough ocean energy devices on the coast between Westport and the Columbia River to lower the wave climate by eleven percent. . . . There'd be no room for anything else in the ocean. [It would] be 100 percent ocean energy. And our legislators said absolutely that is not the vision for this state."

Spatial management tools are not new to the Washington coast and have, in fact, served as an effective tool to respond to conflict. In addition to a number of spatial designations such as special fisheries management areas and essential fish habitats designated under the authority of the federal Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et. seq.), Washington has two other spatial management tools in place that were designed with the specific purpose of avoiding conflict between existing uses. They include the Olympic Coast National Marine Sanctuary and the Crabber-Towboat Lane Agreement. Both tools have successfully achieved their set goals and balance protection of the natural and living resources with appropriate human use (discussed below).

Previous Washington Coast Spatial Management Tools

Olympic Coast National Marine Sanctuary "Area to be Avoided"

In 1994, the Olympic Coast National Marine Sanctuary worked with the International Maritime Organization to designate an "Area to be Avoided" off of the Olympic Coast in order to reduce the risk of marine casualty and pollution damage from another ship-related oil spill. The "Area to be Avoided" guides ships over 400 gross tons traveling in and out of the Strait of Juan de Fuca to stay a safe distance offshore to mitigate the potential impact from spills by increasing the time before the oil reaches sensitive habitat in the Sanctuary. Since 1998, the Sanctuary has been monitoring compliance with the "Area to be Avoided," and in 2014 reported a 97.8 percent compliance rate. 17

Crabber - Towboat Lane Agreement

The conflict between oceangoing tugs and commercial crabbers became a major problem off Washington's coast in the 1970s. As tugs traveled between ports, they ran over crab pots – causing the tugs to foul their propellers in the fishing gear, thus creating a navigational hazard, and causing crabbers to lose their crab pots and thus suffer economic hardship. In order to address this conflict, the two industries developed a non-regulatory, informal agreement that provided navigable towboat and barge lanes through crabbing grounds. Washington Sea Grant later got involved to help facilitate these negotiations. ¹⁸ Crabber Dale Beasley explained:

"We've tried to encourage all of these uses because we've learned to live together over the years. In our area, we've got what's known as a Crabber [Towboat Lane] Agreement; it's been in place for 45 years. Where we sit down at the table with our industry partners and they tell us what they need and we tell them what we need and then we say 'ok, you need a place to tow, we need a place to fish, let's agree on what we can set up so you can tow and we can fish 'cause tow gear through crab gear doesn't work.' We still meet twice a year and talk about how things are going and what we can do to improve them, and if someone's needs have changed, what we can do to address those new needs. We've done this for 45 years, and it's worked really well. Over the years, we've had some difficulties, but we've always been able to sit down and work those out without any government intervention."

It is estimated that this agreement has saved more than \$1 million dollars annually for both industries. Each year, Washington Sea Grant facilitates negotiations between the groups, updates charts and distributes charts to industry members. ¹⁹ Washington Sea Grant Director Penny Dalton described the Crabber-Towboat agreement as a successful example of marine spatial planning in Washington state: "If you think about it, it's kind of classic MSP. And it was very successful, noncontroversial, and very effective at reducing the costs associated with the interactions between the two sectors."

Around the same time, the concept of marine spatial planning was gaining traction at the federal level. In 2010, President Obama issued Executive Order 13547 which established the National Ocean Policy with nine strategic priorities and called on federal agencies to coordinate to implement these priorities through a new National Ocean Council.²⁰ One of these priorities was the development of regional Coastal and Marine Spatial Plans. The associated guidance documents²¹ called for these plans to be developed for large marine ecosystems, with the option for some planning efforts to be divided into plans for smaller sub-regions. The West Coast planning region covers the California Current Large Marine Ecosystem within the U.S. Exclusive Economic Zone, which encompasses offshore areas of Washington, Oregon, and California. In addition, the guidance documents acknowledged the role of state plans to serve as a building block for larger regional planning efforts. ²² These federal actions brought with them the hope that federal funding and support would be provided to develop marine spatial plans. Because of this, state leaders saw a state-led MSP process as a way to favorably position Washington to engage in and influence future broader regional planning efforts.

B. The Marine Waters Planning and Management Law

The law that was spearheaded by Senator Ranker (RCW 43.372), officially named "Marine Waters Planning and Management," defines marine spatial planning as "a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives. Often this type of planning is done to reduce conflicts among uses, to reduce environmental impacts, to facilitate compatible uses, to align management decisions, and to meet other objectives determined by the planning process." The law's stated purposes are to build upon existing efforts by augmenting their marine spatial components, improve coordination among state agencies in marine management, and establish policies to guide state and local agencies in exercising jurisdiction over proposed uses and activities in marine waters.²⁴

The law then called for the coordinated development of a "comprehensive marine management plan" which must recognize existing uses and tribal treaty rights; promote protection and restoration of ecosystem processes; address potential impacts of climate change and sea level rise; foster and encourage sustainable uses; preserve and enhance public access; protect and encourage working waterfronts and support associated infrastructure; foster public participation in decision-making; and integrate and make recommendations for aligning existing plans and authorities. ²⁵ Finally, it

stipulates that all state agencies with marine waters planning and management responsibilities are authorized to include marine spatial data and MSP elements into their existing plans and ongoing planning; establishes a "marine interagency team" to lead this work; and permits the state to conduct marine spatial planning in distinct geographic sub-regions such as the Pacific Coast.

Two foundational elements of marine spatial planning described in the law include a series of maps and an ecosystem assessment. Specifically, the law calls for:

- "A series of maps that, at a minimum, summarize available data on the key ecological aspects of the marine ecosystem, including physical and biological characteristics, as well as areas that are environmentally sensitive or contain unique or sensitive species or biological communities that must be conserved and warrant protective measures; human uses of marine waters, particularly areas with high value for fishing, shellfish aquaculture, recreation, and maritime commerce; appropriate locations with high potential for renewable energy production with minimal potential for conflicts with other existing uses or sensitive environments,"
- "An ecosystem assessment that analyzes the health and status of Washington marine waters including key social, economic, and ecological characteristics and incorporates the best available scientific information, including relevant marine data. This assessment should seek to identify key threats to plan goals, analyze risk and management scenarios, and develop key ecosystem indicators. In addition, the plan should incorporate existing adaptive management strategies underway by local, state, or federal entities and provide an adaptive management element to incorporate new information and consider revisions to the plan based upon research, monitoring, and evaluation."

As originally passed, the law was not accompanied by a budget for MSP development, in part because, within the context of President Obama's Executive Order establishing the National Ocean Policy, it "anticipated that federal cooperation and support will be available to coastal states that are engaged in marine and coastal resource management and planning." Thus, in March 2012, the Legislature amended the law to revise requirements on expenditures from the state account, including prioritizing work on the Pacific Coast marine spatial plan. The amendment also removed a required two-year timeframe for completing the plan and clarified that marine spatial planning could proceed in separate geographies on different schedules.

The state law also directs the development of a non-regulatory marine spatial plan. To achieve this, the law requires the state to use existing state and local authorities: to guide decision-making among proposed uses, to develop an implementation plan²⁹ and to be consistent with existing state laws and programs.³⁰ Finally, Washington's law does not create new authority for the state and prevents the plan from interfering with already permitted activities or those under development during the planning process.³¹

Washington's law requires the Washington Department of Ecology to submit the completed plan to NOAA for approval as part of the state's Coastal Zone Management Program (CZMP) and to implement the plan using existing state authorities. Therefore, the plan will be implemented, in part, using the existing enforceable policies of the Washington CZMP. Washington's federally approved CZMP contains enforceable policies from six state laws. Of these, the Shoreline Management Act (SMA) and the Ocean Resources Management Act (ORMA) contain policies focused most closely on the management of ocean resources and associated human uses of those resources.³²

When completed, the Washington Coast marine spatial plan will include studies of federal waters, including a substantial amount of environmental, ecological, and human use information. This information will be useful for environmental reviews and other planning and regulatory decisions. The Washington Department of Ecology will be able to use the MSP data and maps to assess coastal effects from a proposed project in federal waters, which will be helpful for conducting federal consistency reviews under Washington's CZMP.³³

C. Marine Spatial Planning and Existing State Laws

Washington's marine spatial plan relies on and builds upon the SMA and the ORMA. Under the SMA, each city or county government with shorelines creates and locally adopts a Shoreline Master Program (SMP) according to state guidelines. This involves a public process that enables comments from the public, agencies and the Tribes. After the Department of Ecology approves an SMP, local governments implement the program. These programs have become the cornerstone of Washington's CZMP and are the primary means of regulating shoreline development and use throughout the coastal zone. SMPs include goals, policies and regulations for development and use that occur within the shoreline of a county or city jurisdiction. The same county or city jurisdiction.

Local jurisdiction extends landward 200 feet of the ordinary high-water markⁱⁱⁱ and seaward to the extent of the boundary of the county or city. The jurisdiction of counties and cities along Washington's Pacific Coast extends offshore three nautical miles. Cities with coastal shoreline each prepare their own SMP, which covers the full extent of their shoreline jurisdiction. The cities do not defer to county plans. However, cities and counties can work together, if they choose.³⁶ Interview participants explained that there is significant buy-in at the local level for these plans.

The ORMA outlines a set of policies which are administered by the state's coastal programs and enforceable under the federal Coastal Zone Management Act (CZMA). These include a series of policies and guidelines for state and local management of Washington's coastal waters, out to three nautical miles. ORMA requires that ocean uses meet a number of broad policies and also receive state approval. These policies are required to be incorporated in local SMPs through the Ocean Management Guidelines (WAC 173-26-360). However, ORMA does not have a clear, consistent mechanism for implementation across all state and local agencies. ORMA policies include avoiding and minimizing significant adverse impacts on the environment, economy, and society.³⁷

Coastal planners anticipate that the marine spatial plan will be able to assist implementation of ORMA's policies by identifying and analyzing important resources and uses upfront, including spatial recommendations for these areas. This, in turn, will provide the information needed for Washington to evaluate, through its federal consistency authority, whether a federal action may have reasonably foreseeable effects on the state's coastal uses or resources. In addition, the marine spatial plan will provide a common framework for integrating ORMA policies and for providing information for other state and local agencies to use in their decision-making.³⁸

Regarding the SMA, the SMPs and the marine spatial plan for Washington's Pacific Coast share many common traits and are compatible planning processes that can be mutually beneficial. When completed, the marine spatial plan can provide information and analysis on ocean resources and uses and policy recommendations for local SMP comprehensive updates or future local program amendments. SMPs can be a

[&]quot;" "Ordinary high water mark" on all lakes, streams, and tidal water is "that mark that will be found by examining the common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971." Source: Revised Code of Washington 90.58.030(2)(b), available online at http://www.ecy.wa.gov/programs/sea/sma/st_guide/jurisdiction/OHWM.html

source of information for and provide a detailed implementation mechanism for the marine spatial plan in state waters through local shoreline permitting.³⁹

The data and information products from the initial stages of developing the marine spatial plan can contribute to the ocean component of a local coastal shoreline inventory, analysis, and characterization. Once the draft marine spatial plan is completed, the resulting informational maps, recommended environment designations, and policies can be assessed and further refined by a local jurisdiction for the SMP's policies and regulations, and for use in the cumulative impacts analysis. Further, local SMPs on Washington's Pacific Coast are required to address the Ocean Management Guidelines pursuant to ORMA. These guidelines are state regulations that provide specific guidance on how to address ocean uses within a local SMP. Since the MSP law requires the integration and use of existing authorities, the Ocean Management Guidelines policies will also be incorporated into the information, analysis and recommendations in the final marine spatial plan.⁴⁰

V. Developing the Washington Coast Marine Spatial Plan

A. Planning Area Boundary

The boundary for the Washington Pacific Coast sub-region, which is the first MSP area for Washington, includes state waters out to three nautical miles and federal waters out to a depth of 700 fathoms (4200 feet) (See Figure 4). This boundary was selected based on agency, stakeholder, and public input, as explained in the summary report produced for the workshop based on this topic. ⁴¹ The boundary follows the continental shelf off the coast and ranges from 40 to 60 nautical miles offshore, and extends from Cape Disappointment at the mouth of the Columbia River North to Cape Flattery and includes the estuaries of Willapa Bay and Grays Harbor. The study area covers 7,700 square nautical miles of marine waters. The study area does not include the Strait of Juan de Fuca, the Lower Columbia River Estuary, or Puget Sound.

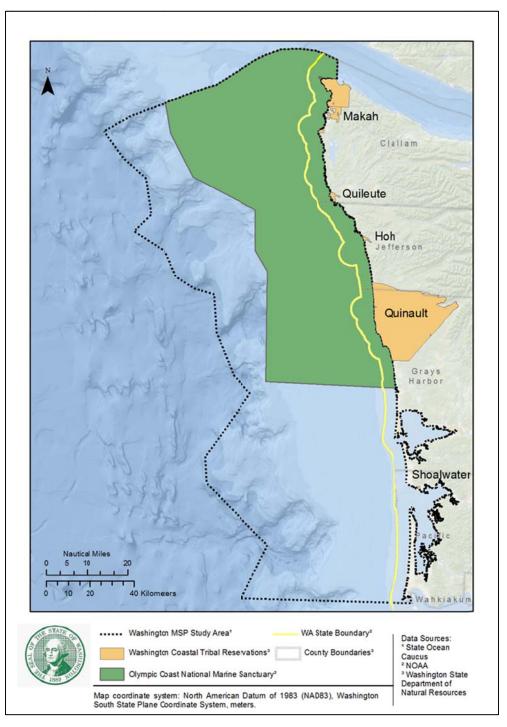


Figure 4. Washington Coast MSP Planning Area Boundary (Source: Washington DNR)

B. Timeline and Resources

While the MSP law was passed in 2010, planning did not begin in earnest until \$2.1 million in funding was allocated in the 2012 legislative session. ⁴² To date (late 2015), pre-planning work has been completed as has the "Understanding Impacts" stage (see Figure 5 below).

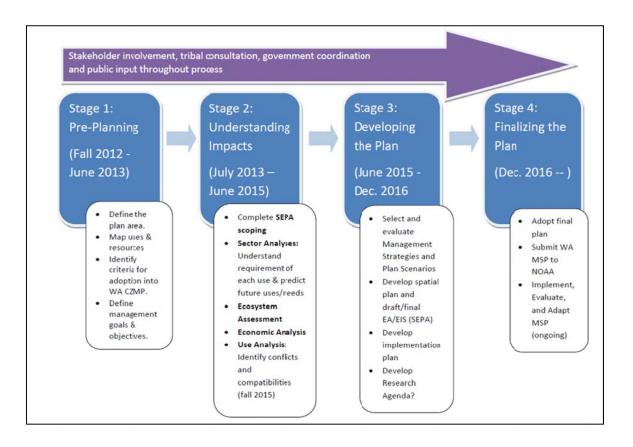


Figure 5. Washington Coast MSP Timeline (Source: Hennessey, 2014)

In 2012, once the budget was in place, state agencies began designating staff to participate in the process. The Governor's office designated the Washington Department of Ecology as the lead for this process, as specified by the law. The Department of Ecology has been strongly supported by the Washington DNR, which manages the account designated to support the marine spatial plan, and the Washington DFW, which manages fish and shellfish resources in marine waters. Officially, the planning process is led by the State Ocean Caucus (SOC). The SOC is an interagency team of state agencies — including the Department of Ecology, DNR, and DFW — that coordinates on the management of Washington's ocean resources, and meets monthly to coordinate state agency MSP-related activities.

To facilitate discussion and planning among state agencies or between state agencies and stakeholders, the state used several existing groups and also formed new groups to accomplish this goal. These include the SOC, the Washington Coastal Marine Advisory Council (WCMAC), a new Science Advisory Panel, and existing county Marine Resource Committees (MRCs). Other key partners who have participated through these groups and through other mechanisms include the tribes and environmental nongovernmental organizations (NGOs). See Appendix I for a table listing all participants.

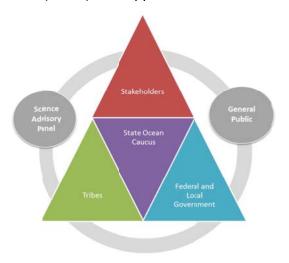


Figure 6. Washington Coast MSP Participants (Source: "Washington Marine Spatial Planning" website, n.d.)

C. Implementing the Timeline

During the first half of the pre-planning phase in 2012, the WCMAC was operating under the Washington Department of Ecology and included representatives from various interest groups, industry, and the MRCs. The goal and objective-setting workshops took place in the spring of 2013 and community outreach presentations and conversations began with community organizations up and down the coast during that time. State agencies worked with WCMAC, federal agencies, and tribes to identify and gather existing datasets that could be added into the newly developed MSP viewing tool and website. These parties also worked to identify the appropriate entities to conduct the work. This often involved selecting the best entity through a request for proposal (RFP) process, or collaborating with existing experts in various federal or state agencies, tribal governments, academic institutions or NGOs to conduct new work given their specific knowledge, skills or abilities, or to expand existing datasets or upcoming projects to include Washington State coastal waters (Hennessey pers. comm. December 22, 2015). In the fall of 2013, legislation prompted the transition of the WCMAC into the

Governor's office with some new members, including voting seats for each of the state agencies that had not been on the original council.

In 2013, during Stage 2, "Understanding Impacts" (see Figure 5), the language of the goals and objectives and the boundary of the MSP were finalized through a scoping process. The Sector Analyses, which identified the current state and future projections for each sector, were conducted for the shipping, fishing, aquaculture, recreation and tourism and renewable energy sectors and concluded in 2014. 44 The Ecosystem Assessment continued over the 2013-2015 biennium with the development of ecological, social and economic indicators. New datasets such as recreational data and a cohesive data set that identifies ecologically important areas off the Washington coast also were developed. Ecological modeling produced information on predicted at-sea distribution for seabirds and marine mammals. Additional work was done to bring existing data from seafloor mapping together into a seafloor atlas and to document all existing economic information for the four coastal counties. At the time of this writing, the Washington Coast MSP process is finishing up the "Understanding Impacts" stage and is in the middle of conducting the use analysis to summarize data on current uses, assess the potential spatial interactions between existing uses and potential new uses, and inform the development of spatial recommendations (Hennessey pers. comm. December 22, 2015).

D. Developing the Goals and Objectives

One of the Department of Ecology's earliest plan development activities was to work with stakeholders and partners to develop planning goals and objectives. In 2013, with funding and guidance from the state agencies, The Nature Conservancy and Surfrider Foundation hosted local, community-based workshops with each of the coastal MRCs. These local workshops helped prepare the MRC members and local industry representatives for the state-led, goal-setting workshops where they would represent their county or industry interests. These workshops resulted in a workshop report, *Coastal Voices*, which synthesizes stakeholders' ideas and concerns regarding the marine spatial plan. Following these workshops and later that same year, local government, state and federal agencies, Tribes, and the WCMAC came together for a series of three separate day-long workshops to develop the goals and objectives of the Washington Coast marine spatial plan (see Appendix II). These workshops built upon the earlier local MRC workshops, with the goal of incorporating stakeholders' ideas and concerns into the goals and objectives.

Study interview participants explained how, during both the community-level workshops hosted by Surfrider and The Nature Conservancy, and the larger workshops with local, state, federal and tribal governments, industry representatives and MRC members, many local participants repeatedly brought up one phrase which they felt represented their goals for their own coastal communities: "Protect and preserve existing sustainable uses." Some commented that this language, which echoed considerations included in the 2010 MSP law, became the mantra of industry and MRC members on the coast. After extensive dialogue between local stakeholders and state agencies, these exact words were integrated into both Goal 1 and Objective 1 of the official Washington Coast MSP goals and objectives. ⁴⁶ Subsequently, the SOC, WCMAC, and MRCs worked together to draft and recommend a list of actions to help refine the goals and objectives. ⁴⁷

E. Collaboration between Agencies, Tribes, and Stakeholders

Marine spatial planning is designed to integrate decision-making. Therefore, the planning process requires collaboration with many different groups, including stakeholder representatives, state agencies, tribes, and federal agencies. For Washington Coast's MSP effort, to date, the WCMAC has served as a primary forum for discussions between state agencies and diverse stakeholder representatives. The WCMAC provides an opportunity for stakeholder representatives to provide advice to the state agencies on ocean policy and provides an opportunity for discussions between various stakeholder representatives. In the MSP process, WCMAC meetings provide a space for discussion, clarification and voicing concerns from both state agencies and stakeholder representatives. A sub-group of the WCMAC, referred to as the Steering Committee, has monthly calls with the DNR and Department of Ecology representatives to develop the WCMAC agenda and deal with operational issues.

Another subgroup, the Technical Committee, discusses more detailed issues related to MSP projects and develops draft recommendations for WCMAC consideration at subsequent WCMAC meetings. All WCMAC members are invited to participate on the Technical Committee calls. However, the WCMAC group's two co-leads and a group of five or six members routinely participate. Interview participant Joe Schumacker of the Quinault Indian Nation explained how, because the WCMAC meets only four times per year, the Technical Committee calls provide additional time to work through any lingering issues that were not fully discussed at the previous WCMAC meeting.

It is uncertain whether the WCMAC will continue to be convened, and if so what its role will be, once the plan is completed. When interviewed for this study, WCMAC

Chair Garrett Dalan explained his hope for how the WCMAC could function if it continues into the future, beyond the development of the plan: "My hope would be that regardless of the marine spatial plan, if something comes in and is a major project in the ocean or on the coast, the WCMAC is there to review it and comment to whoever needs to be commented to. So, if [the Department of] Ecology's got permits on it, BOEM's got permits on it, if the governor's funding it, if there is legislation to subsidize it, the WCMAC is a resource for all of those."

The SOC, as described earlier, has served as the primary forum for coordination among state agencies on the MSP process, development of the plan and other ocean policy issues. The state established two working groups, the planning team and the outreach coordination team, to provide additional time to coordinate MSP activities among planning staff. Department of Ecology staff explained how the planning team meets as needed and coordinates the next steps of the overall process, projects and timeline. The outreach coordination team meets monthly to discuss current and near-term outreach needs and works to ensure consistent messaging and language are used by SOC members (Hennessey pers. comm. December 21, 2015). Michele Culver of the Washington DFW, who represents her agency on the SOC, explained:

"Through the State Ocean Caucus, we've been able to . . . communicate/collaborate a lot more and have been able to develop some contacts within those agencies. Very much similar to my role within this agency, [the other agencies are] . . . not only focused on the marine, but all of the land issues that go along with it, so I have been able to make those same contacts with [the Washington Department of] Ecology, DNR, and Parks and Recreation. So that's been good, and we've been able to coordinate on projects or initiatives that another agency is lead for. And, I think [we coordinate] more on an informal basis as well . . . probably we'll get anywhere from 10-20 emails from . . . [Ecology and DNR] folks during the week on unofficial stuff . . . There's a lot of that that goes on behind the actual meetings."

In Washington, state-tribal protocols, as well as certain federal court decisions, require state agencies to work with tribes on a government-to-government basis as comanagers. The Coastal Treaty Tribes and the state DFW also co-manage fisheries. The state coordinates with tribal governments on the development of the plan, research, document review protocols for including tribal data into the spatial analysis, and projects that would benefit from tribal expertise and input. Quileute Tribe staff participants Katie Krueger and Jennifer Hagen explained that this typically involves the

state holding separate meetings with tribal technical and policy staff. Krueger, who has worked with the WCMAC in 2015, observed that state staff have made every effort to include tribal positions during this process.

The Department of Ecology, as lead of the MSP process and the organization that administers the state's coastal program, has taken the lead in coordinating with federal agencies — NOAA, BOEM, the Environmental Protection Agency (EPA), the Department of Energy, U.S. Army Corps of Engineers, U.S. Coast Guard, and the U.S. Navy — all of which have been involved in the state's process in several ways: by providing, collecting or analyzing data such as NOAA's National Center for Coastal and Ocean Science inventorying and assessing existing seafloor data and performing ecological modeling for seabirds and marine mammals; by participating in workshops, forums, and meetings such as the goals and objectives workshops; by contributing to the ecological indicators process, and seafloor mapping prioritization effort; by reviewing contextual information for the plan; and by providing feedback on how to analyze use data (Hennessey pers. comm. December 22, 2015).

Because it is a requirement of the MSP law to adopt the plan into the state's coastal program, the Department of Ecology has worked with NOAA's federal consistency staff in the Office of Coastal Management (OCM) to ensure the adoption of the marine spatial plan into the state's federally-approved coastal management program goes smoothly. Another key federal partner is the Olympic Coast National Marine Sanctuary. Both the Department of Ecology and DNR sit on the Olympic Coast Sanctuary Advisory Council and the Sanctuary presented to the group on several occasions to provide information and receive feedback on the plan. The Sanctuary staff members have been involved in several MSP projects, including producing a seafloor atlas, providing vessel traffic data, and the seafloor mapping prioritization process.⁴⁹

F. Engaging Stakeholders and the Public

Since the beginning of Washington's MSP process, the planning team has worked to foster public participation in the process – both because it is required by the state MSP law and because this is typically considered a best practice in marine spatial planning and in coastal management. Regular meetings of the WCMAC, described previously, have been the primary means of formally engaging stakeholders and, to a limited extent, have allowed for some public comment to date. WCMAC meetings take place four to five times a year and have included presentations on process and content; status reports; structured discussions on topics like the marine spatial plan development

process, upcoming actions, and specific studies; and updates on matters like budgets and timelines.⁵⁰

Soon after funding was allocated by the state legislature for marine spatial planning in 2012, one of the first issues addressed by the SOC was how the state would communicate and provide information to the public. The SOC considered many options but settled on creating a data portal that would both display GIS-based spatial data and serve as a primary resource for the public to learn about marine spatial planning, access outreach materials and learn about upcoming outreach events. Interview results suggest that MSP practitioners and stakeholders have made use of this tool to date, but that this tool could be used in much greater ways in the future. For example, WCMAC Chair Garrett Dalan described his vision of the tool's future uses: "There is a tool, and this information does get updated and built upon, and maybe in some private ways too, that people can use. This information just becomes useable for folks, and it's up-to-date and it's there as a resource, and it becomes a little bit of an encyclopedia for people to go to, to find out about ocean uses and what they might do."

Given that stakeholder outreach and engagement was identified as a fundamental need, the SOC also decided to support a range of other engagement mechanisms, including the MSP Website. The planning team also made the decision to engage Washington Sea Grant to lead a number of outreach and engagement initiatives. These included a Science Advisory Panel review of existing research for Ecologically Important Areas, and social indicators development workshops with the county MRCs. Additionally, Washington Sea Grant developed a range of outreach and engagement materials, including printed informational materials, an "MSP 101" short course for the public, and public presentations by scientists of research findings. See Appendix III for a full list of outreach approaches used in the Washington MSP process.

Another discussion that took place early on in the planning process was how to successfully manage expectations of what marine spatial planning is and what it is not. Washington Sea Grant, the Department of Ecology and Washington DNR developed a shared communications strategy to help all planning staff communicate about marine spatial planning using the same language. The strategy also identified key stakeholders to engage in the process. This agreed-upon language was used in outreach materials, presentations and on the website to provide consistent messaging on marine spatial planning. For example, the outreach team discussed how to communicate the definition of marine spatial planning to the public in printed materials, presentations, on websites and across all agencies (Hennessey pers. comm. December 22, 2015).

G. Research and Data Analysis in support of MSP

Soon after a budget for the MSP was allocated, state agencies also began working with stakeholders, the Tribes, MRCs, and the WCMAC to identify data gaps and research needs, and to issue RFPs for external support in meeting these needs. A broad range of organizations, including federal and state government agencies and programs, the Washington Tribes, universities, private consulting firms, and environmental NGOs were brought on board to meet these diverse needs. ⁵⁵

Prior to the marine spatial planning process, many of Washington's marine datasets were housed in different locations based on the authority of each state and federal agency, and not all spatial data were available in GIS format. As part of the planning process, Washington's marine data is now available in one location through the state MSP <u>website</u> viewing tool, and existing data has been converted to GIS format.

Numerous research projects are being conducted in order to integrate similar data, and to collect new data to address data gaps, for marine spatial planning. Some of these projects are designed to provide contextual information and do not have a spatial component, but are important for understanding the current state of the ecosystem required by the 2010 law. Contextual projects include an economic analysis, ecosystem indicators, and a sector analysis of the five major sectors of the Washington ocean economy. Mapped data layers include data sets that have been converted to GIS format or new spatial data layers that were developed using GIS tools. Examples include bathymetric surveys, oceanographic modeling, seabird and marine mammal modeling, characterizations of commercial and recreational fishing, data on vessel traffic patterns, and identification of ecologically important areas (see Appendix IV for a full list of research projects). ⁵⁶

VI. Potential Plan Outcomes and Implementation

A. Recommendations for New Uses

At the time of this writing, the Washington Coast MSP is still being developed and it is not yet clear what the final plan might look like or what types of outcomes or recommendations it might include.

At a minimum, as required by the MSP law, the marine spatial plan will identify areas that: 1) new uses should avoid, and 2) may be more suitable for new uses. The MSP law requires the plan to specifically include maps that identify areas of high

potential for renewable energy with minimal potential for conflicts with existing uses or sensitive environments.⁵⁷ The plan will evaluate and include recommendations for the following new uses: marine renewable energy (e.g. wind, wave); dredge disposal in new locations; aquaculture in new locations including offshore; mining or mineral extraction (e.g. sand, gravel, gas hydrates); and marine product extraction for cosmetic or pharmaceutical uses.⁵⁸

The use analysis that will inform these plan components is underway, but has not yet been completed at the time of this writing. From spring 2015 through winter 2016, the state will use GIS tools to conduct a use analysis to assess the potential spatial interactions between existing and possible new uses. ⁵⁹ This analysis will help inform spatial recommendations to include in the plan. Throughout the process, the planning team will provide updates to the WCMAC and solicit their recommendations and feedback for adjusting the analysis. Key steps for the use analysis include:

- Ocean use representatives will provide input on the spatial data for their sector;
- Using GIS tools, each of the data layers for individual existing ocean uses and important ecological areas will be compiled by sector into two sets of maps – intensity of use (where available) and footprint of use;
- The sector data will be combined to produce overall maps of (1) intensity of existing uses, and (2) total number of uses; and
- The existing use data will be compared to data for renewable energy potential to inform spatial recommendations.

Once draft maps are available, the planning team will seek additional feedback from the public. ⁶⁰

B. The Future: Plan Implementation, Monitoring, and Adaptive Management

Research for this report was conducted during the ongoing planning stage of the Washington Coast MSP process — long before the implementation stage. Accordingly, this section presents planned future steps in the process and the planning team's anticipated outcomes.

Planners anticipate that, when finished and approved, the Washington Coast MSP will be implemented using existing state authorities and regulations. Department of Ecology staff interviewed for this study explained that, since the MSP will include a series of recommendations generated by the WCMAC on siting new uses, and will be a

source for the best available science, it is likely to be used in decision-making for future project proposals. In the event of a project proposal in the MSP study area, Department of Ecology staff explained that the state intends to use the plan as a supporting document that identifies key issues and data gaps as well as the state's authorities for that project area. The specific implementation framework measures are still under development. However, Department of Ecology staff Jennifer Hennessey explained that one possible approach to ensure state agencies incorporate the plan in their decision-making is to sign a memorandum of understanding.

Interviews with both MSP planning leaders and WCMAC representatives indicated that they will plan to use the best available data to make recommendations in the marine spatial plan. However, as new information about the marine environment and specific project proposals becomes available, it will need to be considered and significant changes in information could prompt the state to revise and update the plan. ⁶¹

An adaptive management strategy is a requirement of the MSP law and thus will be included in the plan. The MSP law states: "Subsequent to the adoption of the marine management plan, the [marine interagency] team may periodically review and adopt revisions to the plan to incorporate new information and to recognize and incorporate provisions in other marine management plans. The team must afford the public an opportunity to review and comment upon significant proposed revisions to the marine management plan." WCMAC Chair Garrett Dalan concurred that updating the plan will be important:

"And even if everybody agrees that this is the good place for everything . . . how long? One year? Five Years? Ten years? How far out is a wind energy project if the energy companies are saying they aren't interested and you've got all these other pushbacks, [so] we've got some time there. Meanwhile, what's shown up off the coast? A great white shark shows up off the coast. Well, that's kind of odd. Somebody catches this swordfish or marlin off Oregon. There's some ocean changes going on. They could be global, they could be decadal, you've got El Nino, you've got the Pacific Decadal Oscillation, general climate change possibilities . . . all these things that come into play and change so many things. . . . So it [the plan] could lose its value really quick. Its determinations could be bunk or misguided because of when they got their information. I can't think of a comparable plan that has to be as dynamic."

While a specific evaluation method has not yet been developed for the marine spatial plan and the MSP process, it is a requirement of the MSP law. The law states: "The director of the Department of Ecology, in coordination with the team, shall periodically review existing management plans maintained by the state agencies and local governments that cover the same marine waters as the marine management plan under RCW 43.372.040, and for any substantial inconsistency with the marine management plan the director shall make recommendations to the agency or to the local government for revisions to eliminate the inconsistency." The law also states that, within four years following adoption of the marine management plan, the Department of Ecology, in coordination with the SOC, will provide a report to the Senate and House of Representatives that describes where existing management plans are inconsistent with the marine spatial plan and provide recommendations for eliminating any inconsistencies.

Finally, marine spatial planning offers the state an opportunity to collect the information and provide the analysis needed to establish a Geographic Location Description (GLD). The GLD is a tool outlined in the federal CZMA through which states can enhance their federal consistency review over federal license or permit activities in a geographically defined area of federal waters. In a GLD, a state lists the federal licenses or permits for activities in a defined area that will be automatically subject to state CZMA review. Otherwise, a state would have to request approval from NOAA to review a proposed project in federal waters on a case-by-case basis. ⁶⁵ By collecting information for the marine spatial plan, the state is compiling strong evidence to show the state's interest in federal waters within the MSP area and to demonstrate the reasonably foreseeable effects that federal licenses or permits could have on state coastal resources and uses. Interviews with the Department of Ecology staff indicate that the state plans to develop a GLD as part of the MSP process and submit it to NOAA for approval after the plan has been adopted by the state (Hennessey pers. comm. December 21, 2015).

VII. The MSP Process to Date: Planning Challenges and Stakeholder Concerns

A. The Functioning of the WCMAC

Many stakeholders interviewed for this study spoke about the challenges of working within the WCMAC, and some expressed skepticism about its ability to facilitate meaningful stakeholder engagement. Some attributed these challenges to the group's change in status so soon after its establishment, and others attributed it to the fact that both stakeholders and government agency staff participate in the group. However, others noted that there have also been successes, and many credited the group's chair with his ability to make things work. For example, Washington Sea Grant Director Penny Dalton commented, "The head of it [the WCMAC] is terrific; I think he's been responsible for a lot of the success."

B. Stakeholder Concerns

Case study interviews suggested that one of the stakeholders' primary concerns is that existing uses will be displaced as a result of new uses on the coast. The existing uses of fishing and shellfish aquaculture are a strong part of Washington's coastal culture and economy. These uses largely contribute to how these communities define themselves —both their history and future. Stakeholders that are active in the MSP process have developed the phrase "Protect and preserve existing, sustainable uses" when describing the primary benefit they hope to gain from participating in the MSP process. WCMAC member Brian Sheldon explained: "I mean great, you've got a wind turbine out there, how are you going to get it [the electricity] to shore, and what it is going to displace? When I see maps like that, where you've basically displaced fishing, we don't have a lot of fishing ground around here to displace anymore." Interviews with planning team members indicate how they have tried to be very clear about setting expectations for the marine spatial plan and have let stakeholders know that continued participation in the process allows concerns to be reflected in the recommendations that are provided through the WCMAC (Hennessey pers. comm. December 21, 2015).

Another concern from stakeholders in the southern part of the coast that was revealed during interviews is that uses will be compressed into a smaller and smaller area due to new uses. Stakeholders interviewed for this study provide several observations and considerations to support this concern, including the following:

- Some stakeholders observed that the tribal "usual and accustomed areas," which
 occupy most of the northern half of the coast, are closed to non-tribal
 commercial fishermen for segments of the fishing season. This tends to
 concentrate non-tribal fishing in the southern half of the coast.
- Some stakeholders expressed concern that the presence of the Olympic Coast National Marine Sanctuary in the northern half of the coast could direct proposed offshore energy and other development to the southern half of the coast. DFW staff Michele Culver explained this stakeholder concern: "This [southern] area is already not protected within a Sanctuary, so by showing that that would be the most suitable area for energy development, it's causing some concern." DFW Staff Corey Niles elaborated, "And that's also the area where the Dungeness Crab fishery happens."
- Some stakeholders observed that renewable energy investors may be more likely to select a southern port – where the terrain is less rugged than the northern half of the coast – for easier access to power centers and population centers.

C. National Priorities at the Expense of Local Communities

Interviews also revealed that many stakeholders in local communities are generally skeptical of the federal government — particularly regarding issues related to natural resource management. Local communities are concerned that new uses on the coast will benefit regional urban centers with little or no measurable benefits to local, rural communities. Some stakeholders also fear that new uses may even harm an already economically poor region of the state.

WCMAC member Rich Osborne explained the distrust of government in both the northern and southern portions of the coast: "There's one component on the coast, one cultural group that's so anti-government that I think it's impossible for them to be able to work together . . . Up North, there's a lot of sanctuaries and national parks that have decreased in value over the generations. So, there's a generational distrust of federal government up north related to those projects. So, down South they hate the state government, whereas up North they're more against the federal government."

Interviews with both stakeholders and planning leaders indicated that this history continues to be an important factor in the Washington MSP process. Interviews with state planning team members illustrate staff members' knowledge about the historical factors that influence trust in the process and included discussion about their

continued efforts to strengthen relationships within communities to the extent that they are able (Hennessey pers. comm. December 21, 2015).

D. Bottom-up planning

Finally, interviews revealed that some stakeholders would like to see more decision-making power at the local level, and would like to participate in more of a "bottom-up" process. Interviews revealed that some local stakeholders believe that state agencies fail to address local concerns and tend to drive the process to meet legislative requirements while dismissing local knowledge. For example, crabber Dale Beasley explained: "Community needs are often the same across the nation. When you come from that perspective, when you run into agencies that want to build their own empires, you knock heads, because they're not serving the needs of the people. Let the people tell you what their needs are and then address that. Because if you don't, you're going to have a piss-poor MSP. You can't do it if you don't know what the needs are."

Other interviews illustrated that some stakeholders, including environmental NGOs, have played a leadership role in making the MSP process a bottom-up, stakeholder-driven one. For example, Paul Dye from Washington's chapter of The Nature Conservancy noted that "The Conservancy played a leading role in establishing the Washington Coastal Marine Advisory Council. That was a ground-up, stakeholder-driven process that eventually resulted in state legislation that sort of recreated that council as an advisory tool to the governor's office. But earlier than that, it was really a stakeholder-driven process and it sparked a period of collaboration, and collaboration that has persisted amongst stakeholder groups on the Washington coast."

VIII. Conclusion and Lessons Learned

The MSP process for Washington State's coast has not yet concluded. Data collected and interviews conducted to develop this case study were collected in early 2015, five years after the state's marine waters planning and management law was passed and three years after planning began in earnest. The process is expected to conclude, and a plan to be finalized, by late 2016. Arguably, Washington's MSP practitioners and stakeholders are engaged in the most difficult phase of the process – they've put in the lion's share of the required effort, and are justifiably fatigued, yet have many more miles to cover before the finish line. Thus, lessons learned presented here are based on the researchers' analysis of Washington State's experience to date,

and incorporate Washington stakeholders' and practitioners' perspectives as individuals actively engaged in an important yet long and complex planning process.

Lesson #1: Understand Where You're Starting From

History matters, and if there is a history of tension or conflict between groups, or no history of collaborative multi-sector planning, then planning goals and expectations must be set accordingly. Review and understand what planning efforts worked and didn't work in the past. Why did or didn't they work? How were successful decisions made in the past? Who was involved in making these efforts successful or unsuccessful? Could you consider starting with a smaller geographic area or fewer issues? Perhaps if the scale is smaller or issues are more defined, you may not need to have such a complex process? Perhaps your community is not ready to bite off such a big task and you are setting yourself up for failure? Perhaps your team or stakeholders need to forget about the plan for a bit and focus on understanding what is important to each entity and how to work with each other? It is likely, that even when you do that, at least one person won't work well within the team. Perhaps you ensure that others who are good collaborators join the effort to minimize that person's obstructive ways. Learn from and build on past successes – avoid repeating the same mistakes.

Lesson #2: Manage Expectations

Setting realistic expectations for marine spatial planning can be complex. Many invited to serve on committees may assume they have more authority than they actually do. Others may consider this planning exercise an opportunity to cover a topic that really isn't appropriate for this venue. You may want to develop clear bylaws, explaining roles and responsibilities, for each committee member to sign. You may consider developing a handout or a slide presentation, stating what the plan is and what it is not and emphasizing that you share responsibility. You may consider having other planning leaders communicate this message both in public and in private to individuals who do not understand their role or the expectation of the plan. The key to managing expectations is outlining realistic goals and a process, committing to clear communication and transparency, and having more than one person communicate them. This can be facilitated by a public outreach and engagement program that communicates with multiple groups.

Lesson #3: Apply Flexibility and Adaptability to Keep Your Driver Compelling

An effective planning driver – a pressing issue or proposed project – "stirs the blood" and brings diverse stakeholders to the table as they recognize the value of using this process as a means to respond to their priority issues. If a driver ceases to become relevant — for example, if an issue becomes less pressing or a project is abandoned — then stakeholder participation and engagement will likely dissipate. Stakeholders may no longer view the plan as compelling and beneficial to them and, like all of us, will prioritize their use of limited time. If this happens, you need to identify another compelling and relevant driver. This is not something you should do independently. Speak with the stakeholders to determine if there are other plans or priority issues that would benefit from this planning exercise. If necessary, adjust the planning process and, if possible, some of the goals and products to ensure that they respond to stakeholders' priorities, while also meeting your legal requirements. If a new driver cannot be identified, then consider focusing on the completion of tangible stand-alone products which stakeholders can use.

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Appendix I. State Agencies Involved and Their MSP Roles

Source: Adapted from Hennessey and Washington State Ocean Caucus, 2011

| Washington State Agency | Marine Management Activities | Primary Role |
|---------------------------------------|--|--|
| Department of Commerce | Growth management Energy policy division International trade and economic development | Grow and improve jobs in Washington State |
| Department of Ecology | Lead on marine spatial planning Coastal zone management program and federal consistency certifications Coastal erosion monitoring Floods and floodplain management Marine monitoring program State Environmental Policy Act (SEPA) Shoreline management and shoreline master programs with local governments Water quality certifications and discharge permits Watershed planning Oil spill prevention, preparedness and response planning | Protect, preserve and enhance Washington's environment, and promote the wise management of our air, land, and water for the benefit of current and future generations |
| Department of Fish and Wildlife | Fishing and shellfishing management-state and regional, co- management with tribes Hydraulic project approvals State endangered and threatened species Wildlife management Consultation and review of project impacts on fish and wildlife | Preserving, protecting and perpetuating the state's fish and wildlife resources: Protect and enhance fish and wildlife and their habitats Provide sustainable, fish and wildlife-related recreational and commercial opportunities |
| Department of Health | Shellfish health programBeach program (w/ Department of Ecology) | Improve the health of people in Washington State by ensuring fish and shellfish are safe to eat, beaches |

| | Wastewater management programFish consumption advisories program | are safe for swimming, and on-site sewage and reclaimed water systems are properly managed |
|--|--|--|
| Department of Natural Resources | Fiscal manager for marine spatial planning Leases and use authorizations for state-owned aquatic lands Aquatic reserve program Derelict vessel removal program Dredged materials management program Geology division maps hazards Harbor line commission Nearshore habitat program Ports program Spartina control Wild stock geoduck fishery program | Steward of state-owned aquatic lands on behalf of the public Ensure productive, healthy, and sustainably managed lands |
| State Parks and Recreation Commission | Operates and manages numerous underwater and coastal state parks, the Seashore Conservation Area, upland access sites, and water trail sites and associated marine and coastal infrastructure. Resource stewardship program: park classification and management planning; resource inventory and assessment Interpretive program Boating program | Acquires, operates, enhances and protects a diverse system of recreational, cultural, historical and natural sites The Commission fosters outdoor recreation and education statewide to provide enjoyment and enrichment for all and a valued legacy to future generations |
| Washington Sea Grant | Washington Sea Grant is a non-regulatory entity partnered with NOAA and the University of Washington to provide neutral, science-based marine and coastal information and technical support to the people of Washington. | Serves communities, industries and the people of Washington state, the Pacific Northwest and the nation through research, education, and outreach by identifying and addressing important marine issues; providing better tools for management of the marine environment and use of its resources; and initiating and supporting |

| strategic partnerships within the |
|--|
| marine community. In particular, |
| Washington Sea Grant sponsors |
| scientific research, conducts outreach |
| to local communities and user groups |
| and educates the workforce and |
| public about marine resources. |
| |

Appendix II. Goals and Objectives

Source: Quoted directly from Washington Department of Natural Resources, 2014

Overarching Goal: To ensure a resilient and healthy marine ecosystem on Washington's coast that supports sustainable economic, recreational, and cultural opportunities for coastal communities, visitors and future generations.

Goal 1: Protect and preserve healthy existing sustainable uses to ensure economic vibrancy and resource access for coastal communities.

Objective 1: Protect and preserve healthy existing natural resource-based economic activity on the Washington Coast.

Actions:

- Better understand, define and document all existing marine activities taking place in the study area (commercial, recreational, cultural, ecological) through scientific research and traditional knowledge research. Document context for existing uses and current and future trends of existing uses, including information on present conflicts and potential future conflicts for existing uses.
- Assess economic contributions of existing marine uses to the local and state economy.
- Identify and assess indicators of economic health.
- Following existing laws, protect and preserve existing uses by first avoiding
 and then minimizing significant adverse impacts from potential future
 activities, including impacts on aquaculture, recreation, tourism, navigation,
 air quality, and recreational, commercial, and tribal fishing. Identify policies
 and recommended actions that enable the implementation of the plan.
- Involve individuals and organizations representing existing uses in planning
 process such as documenting current and future trends of existing uses,
 understanding potential impacts and evaluating scenarios and plan
 recommendations. Goal 2: Maintain maritime coastal communities from now
 into perpetuity.

Objective 2: Sustain diverse traditional uses and experiences to ensure continuity of WA's coastal identity, culture, and high quality of life.

Actions:

- Understand culturally important uses of the marine environment, including documenting areas and uses of historical and cultural significance and current visual resources.
- Provide recommendations for uses that protect and enhance the aesthetic quality of marine environment, maritime activities, marine culture and sense of place.
- Document vulnerability of coastal communities to coastal hazards as they relate to proposed future activities.
- Identify and assess indicators of social well-being within coastal communities.

Goal 3: Ensure that our marine ecosystem is preserved for future generations.

Objective 3: Foster healthy and resilient marine ecosystem functions, biodiversity and habitats.

Actions:

- Understand current status of the natural resources, ecosystem conditions, and impacts of natural variability and natural stressors on the marine ecosystem over the short and long-term.
- Understand the implications of various human activities to the marine ecosystem including documenting species and habitats that face higher potential risk or impact from proposed activities.
- Identify and assess areas of ecological importance or particular sensitivity.
- Identify and assess ecological indicators of ecosystem health on Washington's Coast.
- Following existing laws seek to avoid first and then minimize adverse environmental impacts, with special protection provided for the marine life and resources of the Columbia River, Willapa Bay and Grays Harbor estuaries, and coastal areas of Olympic National Park.

Goal 4: Develop an integrated decision-making process which supports proactive, adaptive and efficient spatial planning.

Objective 4: Develop a locally supported and collaborative process that is coordinated with existing authorities for aligning management decisions.

Actions:

- Synthesize information on climate change and predicted impacts to marine resources and existing uses in the study area. Address how climate change may influence plan scenarios and potential impacts of new uses.
- Engage local, state, federal and tribal governments in all phases of the marine spatial planning process to ensure relevant management information and requirements are integrated into the process. The use or activity must comply with all applicable local, state, and federal laws and regulations.
- Coordinate with neighboring states and provinces to share technical information across all sectors, enhance management of coastal ecosystems.
- Recommend approaches for improving the efficiency of the permitting process, where and if appropriate.
- Involve individuals and organizations representing existing uses and proposed new uses as well as individuals working elsewhere on similar issues in the planning process.
- Describe the management and implementation framework, including existing state laws, policies, and regulations and how they address existing and proposed uses. The plan will articulate a strategy for ongoing interagency communication, adaptation, implementation and review of the Marine Spatial Plan, including aligning MSP with other state management plans and goals and incorporating it into state plans and processes.
- Provide opportunities for public engagement and input throughout the
 planning process including public education, workshops, and meetings.
 Identify barriers to participation and work with local stakeholders to address
 and reduce barriers to public participation. Document comments and provide
 responses, as appropriate.
- Engage scientific experts in review of data and methods. Develop data standards for data collection and analysis.
- Use best available science and information throughout the planning process and drafting of the plan. Provide a common information base to assist management decisions, including through the use of Geographic Information Systems.

Goal 5: Encourage economic development that recognizes the aspirations of local communities and protects coastal resources.

Objective 5: Enhance sustainable economic opportunities to achieve a resilient economy and improved quality of life.

Actions:

- Understand potential new uses and their benefits and potential significant adverse impacts on existing uses and the environment. Evaluate direct, indirect and cumulative impacts in environmental review documents for the plan.
- Develop coastal decision-making tools, analyses, & recommendations to determine appropriate and compatible roles for future activities within the study area, including siting of offshore renewable energy, new locations for dredge disposal or aquaculture, and other potential new activities such as mining and bio-extraction.
- Identify appropriate mitigation measures to address significant adverse impacts posed by proposed future uses of Washington's coastal waters.
 Develop mitigation measures in accordance with state laws and regulations.

Appendix III. Outreach and Engagement Methods

Source: Trosin, 2013a

Website

The Department of Natural Resources, in coordination with the State Ocean Caucus, Washington Coastal Marine Advisory Council and the public developed a website to post up-to-date information on the marine spatial planning (MSP) process. The website (www.msp.wa.gov) provides detailed information on past and current research and outreach projects as well as an interactive mapping tool, news blog, and events calendar, and access to data downloads. In addition, interested parties can sign up for an email listserv to receive notices and updates about the MSP process, projects, events and Washington Coastal Marine Advisory Council meetings.

Mapping tool

The interactive mapping tool, available through the website, www.msp.wa.gov/explore/mapping-application provides a singular access point to all relevant mapped data from various authoritative databases. Mapped data layers from recent projects contracted specifically for marine spatial planning are also available through the mapping tool. The easy-to-use map allows users to select and display different types of data in the map. The mapping tool helps users view and interact with data such as the location of marine habitats and marine resources, the areas important for human uses such as shipping and fishing, and locations of marine infrastructure. This type of mapped information is essential to assist stakeholders, planners, and managers in identifying and understanding areas of conflict and compatibility off Washington's coast.

Trainings

To gather input on the development and use of the mapping tool, The Nature Conservancy and agencies provided a series of webinars and in-person presentations along the Washington Coast to engage managers, local governments, planners, and stakeholders. They presented on the functionality of the tool, provided time for hands-on learning and collected feedback on ways to improve the tool to make it user-friendly.

Print media

Washington Sea Grant, in coordination with the State Ocean Caucus, developed a Frequently Asked Questions fact sheet and a general MSP brochure to communicate information to the public. These printed materials provide an overview of marine spatial

planning in Washington, answer common questions and describe where to find additional information. These materials were made available in local government buildings, local libraries, ports, recreational areas and handed out at all other outreach events.

MSP 101 short course

Washington Sea Grant held a series of locally focused meetings with economic development councils, chambers of commerce and local government entities to introduce marine spatial planning, answer questions and provide additional points of contact to help participants stay informed in the MSP process. The primary focus of the short course was to broaden the awareness of and participation in marine spatial planning by engaging new audiences on the basics of the public planning process.

Research results presented to local organizations

Several new projects were funded as part of the MSP process. To increase the use and accessibility of the new information, Washington Sea Grant arranged for scientists and project leaders to present their project results to local organizations. For example, the recreation study collected new information on the economic contribution and distribution of recreational activities on the coast. Surfrider Foundation staff presented information on their findings to the Olympic Peninsula Visitors Bureau and the Long Beach Visitor's Center.

Community festivals

Washington Sea Grant attended local festivals such as Fish and Brew, Salmon Festival, Chehalis Watershed Festival and Come and Play on Labor Day. At these events, an MSP booth was set-up to distribute MSP brochures and engage the public in MSP discussion.

Open house

Tables with information on fisheries, a mapping tool, and general MSP information were available along with several planning staff to answer questions on the process. This type of outreach is meant to reach the general public and provides an opportunity for those not yet engaged in the process to learn more.

Workshops and Forums

Workshops and forums were conducted to foster discussions, provide information, and gather information from experts in the community and government entities. The state held a series of workshops in spring of 2013 to draft the boundary, goals and objectives for the plan. Government officials and local stakeholders with a vested interest or

management authority over Washington's marine resources and waters were invited to attend the workshop.

The Marine Resource Committees partnered with The Nature Conservancy to host another series of forums and workshops to engage their local community members in marine spatial planning. The goal of the workshops was to discuss local priorities, interests and expectations for the plan.

The National Oceanic and Atmospheric Administration (NOAA), the Bureau of Ocean Energy Management (BOEM) and the Washington Departments of Ecology and Natural Resources partnered to hold a series of participatory human-use workshops to capture the knowledge of community experts about patterns and locations of ocean uses.

Washington Sea Grant conducted workshops with each of the Marine Resource Committees on the coast to provide feedback and discuss the development of social indicators of human well-being as part of the ecosystem assessment. The workshops provided an opportunity for communities to identify social indicator data needs and provide input on priority areas.

Engaging scientists

The state held a workshop to engage scientists and provide feedback on the development of ecosystem indicators for the Washington coast ecosystem assessment. The Northwest Fisheries Science Center developed draft conceptual models to better understand the ecological relationships off the coast, identified a list of potential indicator criteria, and provided initial evaluation results with a draft list of candidate indicators.

The Science Advisory Panel, coordinated by Washington Sea Grant, provides a review of existing data sets such as the benthic habitat data. The panel provided iterative feedback in the development of the Ecologically Important Areas data layer and a formal review of the final product. The Science Advisory panel also provided a review of the ecological, economic and social indicators used in the ecosystem assessment.

Public comment

As part of the SEPA scoping process, the Department of Ecology made the goals, objectives, boundary, and scope of the plan available for public comment. A scoping summary document reviewed key changes based on public comments, recapped the

comments received and provided responses. Another public comment period will occur when a draft plan is available (Hennessey pers. comm. December 21, 2015).

Appendix IV. Research Projects Supporting Washington Coast MSP

Table 2. Research Projects Providing Contextual Information (Source: "Washington Marine Spatial Planning" n.d.)

| Project Title | Description | Contracted Organization |
|-------------------|--|-----------------------------------|
| Economic Analysis | Provides an in-depth analysis of the ocean economy using existing | Cascade Economics |
| | economic data and collecting | |
| | new information with interviews | |
| | and focus groups | |
| Ecosystem | Develop ecological, social and | NOAA Northwest Fisheries Science |
| Indicators | economic indicators of | Center conducted the ecological |
| | ecosystem health; provide an | indicators, Washington Sea Grant |
| | overview of status and trends of | conducted the social and economic |
| | coastal indicators | indicators |
| Sector Analysis | Profiles of five major sectors of the coastal economy including aquaculture, fishing (commercial and recreational), marine renewable energy, recreation and tourism, and shipping. The profiles synthesize past, current and future trends from publications and reports | Industrial Economics (iEc) |

Table 3. Research Projects Providing Mapped Data Layers (Source: "Washington Marine Spatial Planning" n.d.)

| Project Title | Description | Contracted Organization |
|----------------------|---------------------------------|-----------------------------|
| Bathymetric, | High resolution multibeam | Washington Dept. of Ecology |
| sediment | bathymetric, single beam | |
| characterization and | bathymetric, and topographic | |
| topographic surveys | LIDAR mapping in shallow | |
| | intertidal and subtidal coastal | |
| | areas and around river mouths | |
| | | |
| Bird and mammal | Convert existing data into GIS | DFW |

| geodatabase | format and create a geodatabase | |
|---|--|---|
| Commercial fishing, fish and wildlife resources and recreational fishing | Comprehensive GIS maps of coastal commercial fishing activities including data layers that represent fishing locations areas of importance for recreational fisheries. Forage fish distribution was mapped based on 500 beach spawning surveys | DFW Forage fish surveys: DFW, Hoh Tribe, Quileute Tribe, Quinault Indian Nation, Makah Indian Tribe |
| Development of marine renewable energy data | Marine renewable energy suitability data layers for information on energy resource potential including wave, tidal and offshore wind | Pacific Northwest National Laboratories |
| Identifying ecologically important areas | Using an iterative process, a single data layer will identify the most ecologically important areas off the Washington coast | Washington Dept. of Fish and Wildlife (DFW) |
| Oceanographic conditions and trends | Developed spatial data related to plankton productivity and bottom oxygen in order to map and model ocean conditions and trends | University of Washington School of Oceanography |
| Recreational Use Patterns | Provides intensity map of recreational activities and associated economic contribution of activities to the coastal economy | Surfrider Foundation |
| Seabird modeling and evaluation of marine mammal and seafloor data | Develop species distribution models for key seabird species and evaluate marine mammal datasets and prioritize areas for future seafloor mapping activities | NOAA Biogeography branch |
| Seafloor Atlas | Create composite seafloor atlas, | Oregon State University & Olympic |

| | <u> </u> | , |
|-----------------------|--------------------------------------|-------------------------------------|
| | including sediment composition, | Coast National Marine Sanctuary |
| | habitat, geology, and bathymetry | |
| | maps from existing high- | |
| | resolution surveys collected | |
| | primarily by Olympic Coast | |
| | National Marine Sanctuary | |
| Shellfish growing | GIS data layers on commercial, | University of Washington's Olympic |
| areas, invasive | private, tribal and public shellfish | Natural Resources Center |
| species, shoreline | growing areas including areas for | |
| designations, | beneficial uses and layers for | |
| integrating existing | invasive species and shoreline | |
| seafloor mapping | designations | |
| and shellfish area | | |
| data | | |
| Tribal cultural areas | Create GIS layers of the four | Northwest Indian Fish Commission, |
| and marine catch | Coastal Treaty Tribes' traditional | Hoh Tribe, Quileute Tribe, Quinault |
| | fishing and cultural areas, | Indian Nation, Makah Indian Tribe |
| | including marine and intertidal | |
| | fishing areas, commercial catch | |
| | from 1980-2011 and other | |
| | culturally significant locations | |
| | | |
| Viewshed | Visually characterize Washington | University of Washington's Olympic |
| assessment | Coast viewshed and evaluate | Natural Resources Center |
| | visibility of offshore structures | |
| | (e.g. energy) at various distances | |
| | from shore | |
| | | |
| | | |

END NOTES

¹ Washington State Legislature, "RCW 43.372.005," 2013.

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<sup>2</sup> Washington State Ocean Caucus, "What are the goals," n.d.
<sup>3</sup> Olympic Coast National Marine Sanctuary, 2011.
<sup>4</sup> Washington Department of Ecology, 2001, 18-19.
<sup>5</sup> Washington Department of Ecology, 2001, 19.
<sup>6</sup> U.S. Census Bureau, 2015.
<sup>7</sup> Washington State Employment Security Department, 2015.
<sup>8</sup> Taylor et al., 2015, Chapter 2.
<sup>9</sup> Taylor et al., 2015, Chapter 2.
<sup>10</sup> Treaty of Neah Bay, 1855; Quinault Treaty, 1856.
<sup>11</sup> United States v. State of Washington, 1974 ("the Boldt Decision").
<sup>12</sup> Federal Energy Regulatory Commission, 2015.
<sup>13</sup> Federal Energy Regulatory Commission, 2015.
<sup>14</sup> Hydroworld.com, 2009.
<sup>15</sup> Washington State Legislature, "RCW 43.372.005(1)(b)," 2013.
<sup>16</sup> Washington State Legislature, "RCW 43.372.005(2)," 2013.
<sup>17</sup> Olympic Coast National Marine Sanctuary, 2015.
<sup>18</sup> Washington Sea Grant, 2015.
<sup>19</sup> Washington Sea Grant, 2015.
<sup>20</sup> The White House Office of the Press Secretary, 2010.
<sup>21</sup> National Ocean Council, 2013; The White House Council on Environmental Quality, 2010.
<sup>22</sup> National Ocean Council, 2013; The White House Council on Environmental Quality, 2010.
<sup>23</sup> Washington State Legislature, "RCW 43.372.060(6)(c)," 2013.
<sup>24</sup> Washington State Legislature, "RCW 43.372.005(2)-(3)," 2013.
<sup>25</sup> Washington State Legislature, "RCW 43.372.040(4)," 2013.
<sup>26</sup> Washington State Legislature. "RCW 43.372.060(6)(a)." 2013.
<sup>27</sup> Washington State Legislature, "RCW 43.372.060," 2013.
<sup>28</sup> Washington State Legislature, "RCW 43.372.005(1)(g)," 2013.
<sup>29</sup> Washington State Legislature, "RCW 43.372.040(6)(e)," 2013.
<sup>30</sup> Washington State Legislature, "RCW 43.372.040(6)(b)," 2013.
31 Washington State Legislature, "RCW 43.372.040," 2013.
<sup>32</sup> Washington State Legislature, 2015; Washington State Legislature, "RCW 43.143," 2013
33 Washington Department of Ecology, 2015c.
Washington State Legislature, "RCW 43.143," 2013.
<sup>35</sup> Washington State Legislature, 2015.
<sup>36</sup> Washington State Legislature, 2015.
<sup>37</sup> Washington State Legislature, "RCW 43.143.005 to RCW 43.143.030," 2013.
<sup>38</sup> Washington Department of Ecology, 2015c.
<sup>39</sup> Washington Department of Ecology, 2015c.
<sup>40</sup> Washington Department of Ecology, 2015c.
<sup>41</sup> Trosin, 2013b.
<sup>42</sup> Washington Department of Natural Resources, 2012.
<sup>43</sup> Surfrider Foundation, 2013.
44 Washington State Ocean Caucus, "Progress Report," n.d.
<sup>45</sup> Surfrider Foundation, 2013.
<sup>46</sup> Washington Department of Ecology, 2014.
<sup>47</sup> Washington Department of Ecology, 2014.
48 Washington Department of Ecology, 2015a.
<sup>49</sup> Washington State Ocean Caucus, "Progress Report," n.d.
<sup>50</sup> Washington Department of Ecology, 2015a.
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⁵¹ Washington Department of Natural Resources, 2012, 6.

⁵² Washington State Ocean Caucus, "Progress Report," n.d.

⁵³ Washington State Ocean Caucus, "Progress Report," n.d.

⁵⁴ Washington State Ocean Caucus, "Progress Report," n.d.

⁵⁵ Hennessey et al., 2010; Washington State Ocean Caucus, 2011.

⁵⁶ Washington State Ocean Caucus, "Progress Report," n.d.

⁵⁷ Washington State Legislature, "RCW 43.372.040(6)(c)," 2013.

⁵⁸ Washington Department of Ecology, 2015b.

⁵⁹ Washington Department of Ecology, 2015d.

⁶⁰ Washington Department of Ecology, 2015d.

⁶¹ Washington State Legislature, "RCW 43.372.040(6)(a)," 2013.

⁶² Washington State Legislature, "RCW 43.372.040," 2013.

⁶³ Washington State Legislature, "RCW 43.372.040," 2013.

⁶⁴ Washington State Legislature, "RCW 43.372.040," 2013.

⁶⁵ United States House of Representatives, 1992.