WASHINGTON COASTAL MARINE ADVISORY COUNCIL MEETING
AGENDA
Wednesday, January 7, 2015 9:30 am – 3:30pm
Location: Port of Grays Harbor Commissioners Chambers, 111 S. Wooding St. Aberdeen, WA

Council Members Present	
Brian Sheldon, Shellfish Aquaculture	Mark Plackett, Citizen
Casey Dennehy, Recreation	Michal Rechner, DNR
Carol Everst, Wahkiakum MRC	Michele Culver, Dept. of Fish and Wildlife
Dale Beasley, Commercial Fishing	Miles Batchelder, WA Coast Sustainable Salmon Partnership
David Fluharty, Educational Institution	Penny Dalton, WA SeaGrant
Doug Kess, Pacific MRC	Randy Kline, WA State Parks
Garrett Dalan, Grays Harbor MRC	Ray Toste, Commercial Fishing
Jeff Ward, Coastal Energy	RD Grunbaum, Conservation
Marc Horton, Ports	Rod Fleck, N. Pacific MRC
Mark Cedergreen, Recreational Fishing	Sally Toteff, Dept. of Ecology
	Steve Sewell, Dept. of Commerce

Council Members Absent	
Alla Weinstein, Energy Industry	Rich Osborne, Science
Charles Costanzo, Shipping	~~Steve Sewall, Dept. of Commerce~~
JT Austin, Governor's Office	

Liaisons Present	
Katie Krueger, Quileute Tribe	

Others Present	
Al Carter, Ocean Gold Seafoods	Kelsey Gianou, Ecology
Bridget Trosin, WA Sea Grant	Kevin Decker, WA SeaGrant
Dru Garson, Greater Grays Harbor	Key McMurry, PCMRC
Doug Fricke, Coalition of Coastal Fisheries	Libby Whiting, DNR
Garett Brennan, Context Partners	Michael Cornmen, Westport Seafood
Gus Gates, Surfrider Foundation	Mike Nordin, PCMRC, PCD
Guy Glenn, Port of Ilwaco	Molly Bogeberg, TNC
Jennifer Hennessey, Ecology (WCMAC Staff)	Tami Pokorny, NPC MRC
Jessi Doerpinghaus, WDFW	Tom Echols, Coalition of Coastal Fisheries
Joe Shumacker, Quinault Nation	Wil Kristin, Context Partners
Kara Cardinal, TNC	Dana Golden, Cascadia Consulting, Note-taker
Katie Wrubel, Makah Office of Marine Affairs	Susan Gulick, Sound Resolutions, Facilitator
Katrina Lassiter, DNR	

1. **Welcome and Introductions**

Garrett Dalan welcomed everyone to the meeting. Everyone introduced themselves, including attendees on the phone. Seventeen people were present with four attending via phone.

The WCMAC reviewed the October 22nd Meeting summary. Three changes were made:

- Under "Marine Protected Reserves", add Cedergreen to Mark under bullet number 2.
- On page 3, Penny intended that the coastal program's enforceable policies are limited to Ecology.
- Katie Krueger: Change fishing "habits" to fishing "habitats"

! The October meeting summary was approved with all three corrections. Page numbers will be added to future summaries.

2. **Presentation on Other New Uses**

Kelsey Gianou of Ecology was hired last summer to help with the writing and research of the plan. She presented a high level summary of her research on four of five potential new uses. The goal of the presentation was to provide information, present future trends and factors in Washington, and collect additional resources for research. WCMAC members discussed their questions, concerns, and ideas in breakout groups after the presentation.

I. **Marine Product Extraction (formerly bio extraction)**
    - Medicines and drugs, nutritional supplements

Clarifying Questions:

- Does aquaculture belong in the marine spatial plan if it would be upland aquaculture?
    - Kelsey Gianou: That is a good point. Some aquaculture to supply organisms for this use could occur in the area of the MSP. Upland aquaculture is a relevant alternative to wild harvest activities for marine product extraction supply.
- Doug Kess: In the California example, did they change from wild harvest to aquaculture due to regulations? Generally if you have a private company harvesting, their motive won't be sustainable.
    - Kelsey Gianou: I'm not sure what the motivation was for the switch from wild harvest to aquaculture for the California example.
- Dave Flaherty: The biomedical community has totally stopped doing bioprospecting, they are focusing on synthesis. We need to think about permitting and organizing to determine who owns genetic material, and who should get the benefit from it.
- The Pacific Northwest National Lab is looking at the feasibility of extracting uranium from seawater. It won't happen in the near future, but is a potential type of new use or extraction.

- Rod Fleck: It would be helpful if you could explain the resource ownership issues. Would it be owned by the state or the feds?
    - Kelsey Gianou: According to my current information, it would be dealt with by a harvest permit, just like fishing.

II. Offshore Aquaculture

- Any new aquaculture outside of coastal estuaries.

Clarifying Questions:

- How big are the long lines?
    - Kelsey Gianou: The Catalina Sea Ranch in California has 40 long lines that cover 100 acres in about 120 feet water depth, and is estimated to produce 2.5 million pounds of mussels.
- Is there an assumption of natural feeding?
    - Kelsey Gianou: I didn't come across anything about natural feeding for finfish operations.
- Brian: There continues to be interest in doing net pens inside the estuary which would be a new use.
- Dale Beasley: Are all of these things going to be permitted in the sanctuary, or excluded?
    - Kelsey Gianou: The sanctuary has its own process for review and authorization; they set a high bar for commercial operations.
- Casey Dennehy: Is the aquaculture using genetically modified organisms? I'm concerned about escapement.
    - Kelsey Gianou: I don't know; I will do some research.

III. Dredge Disposal in New Locations

- This is a current use which is being considered a potential expanded use.

Clarifying Questions:

- Michele Culver: Would re-opening an existing site count as a new use?
    - Kelsey Gianou: It's definitely a new use for completely new sites; I'm not sure how currently unused existing sites would work.

IV. Mining Gas Hydrates

Clarifying Questions:

- Penny Dalton: I am confused about the difference between mining and dredge disposal.
    - Kelsey Gianou: They are very similar because they use similar equipment. Dredge disposal is the need to dispose of dredge material driven by navigation dredging. Mining is extracting specific sand, mineral, or material for a particular use.
- Brian Sheldon: You should consider in your analysis that creating bird habitat isn't always a good thing. They devour salmon smolt.
- Michele Culver: Are you planning on looking at other mining of materials or elements?
    - Jennifer Hennessey: We haven't heard of any potential new uses other than the ones we've noted.
- Doug Kess: Have you looked at seafloor mining? It's going forward in Hawaii with new technologies.
    - Kelsey Gianou: It probably doesn't apply to Washington because of conditions. I can look further to see if it's something we should include.
- Dale Beasley: I don't think that gas hydrates will be an issue. There is a potential for banning oil and gas drilling in the entire state, and this doesn't seem very feasible.

3. **Small Group Exercise**

Small Group Exercise

The WCMAC divided into four small groups. Participants on the phone will do this exercise via phone at a later date. Four facilitators rotated between groups to discuss potential conflicts, compatibilities and benefits, and additional data and information that would be useful for each potential new use.

I. **Marine Product Extraction**

Potential Conflicts:

- Space Use
    - Trespassing on private property (shellfish beds)
    - Infrastructure would conflict with existing uses.
    - Cumulative impacts on all uses.
- Environmental
    - Extraction could harm ESA listed species, other native or unique species, and critical habitat of species such as groundfish.
    - Escapement from aquaculture could harm native species and ecosystems.
    - "Gold rush feel" attracts poachers and can cause rapid harm.
    - Unsustainable use of the resources.
    - Unintended environmental, ecosystem, and foodchain impacts from removing part of the ecosystem.

Compatibilities/Benefits:

- Social
    - Public health
- Economic
    - Taxes and fees for extracting public resources.
    - Net increase of jobs and financial benefits.
    - Large revenue potential: High dollar to extraction ratio
    - Sustainable harvest limits would be necessary to achieve benefits.
- Environmental
    - Mitigation for ocean acidification
    - Natural fertilizer

Additional Data/Information:

- Planning/Permitting
    - Who owns the resource?
        - How would it be managed?
        - Who permits the resource?
        - What are conditions for permitting seawater extraction?
        - How would you permit prospecting?
        - How do you ensure local benefits of discoveries?
    - How would Washington determine sustainable harvest limits?
    - What is the likelihood in Washington waters?
- Economics
    - What is the net gain of jobs from other examples?
- Environmental
    - Are there impacts to seawater intakes for upland aquaculture?
- Other
    - What is the existing research on this topic? Need to understand existing research, specifically Sea Grant's biotech research and Professor Carlos Duerte's research.

II. Offshore Aquaculture

Conflicts:

- Potential conflict with all existing marine uses: fishing, shellfish, crabbing, shipping, recreation, general navigation, dredging and dredge disposal
- Space Use:
    - Where would it be?
    - Would it be in the sanctuary?

    - To what extent might the activity be permitted?
- Environmental:
    - Disruption of natural ecosystems
    - Escapement
    - Genetic drift of farmed species, impacts on genetic diversity of native species
    - Anti-fouling: effects of introducing pharmaceuticals to nature,
    - Spread of diseases, sea lice and parasites,
    - Pollution,
    - Water quality, hypoxia
    - Current flow changes,
    - Aquaculture structures act as food aggregating devices
    - Changes in food chain dynamics
        - Competition between native and farmed species for necessary ecosystem services
- Other
    - Economic impacts on existing markets
        - Competition with existing fishing industries
    - Efficiency in the food chain of raising vs. harvesting various species
    - Government support of one type over another, or government subsidies that skew the cost/benefit analysis
    - Human health considerations of consuming the products (GMO, pesticides)

Compatibilities/Benefits

- Environmental
    - Reduce pressure on wild species
    - Water quality improvement
    - Remove carbon from the natural system, reduce ocean acidification impacts
    - Support organic fertilizer supply chain
    - Small geographic footprint
- Economic
    - New economic activity and new jobs (if sustainable)
        - Economic benefit is tied to species and culture method: there is an opportunity
    - Controllable, constant, and predictable product production
- Social
    - Increased food production

Additional data/information

- Technology
    - Is the infrastructure able to withstand winter coastal or offshore storms?
    - How could derelict gear impact the operation?

    - What happens to existing aquaculture infrastructure?
- Social/Economic
    - What are the impacts to tribal resources?
    - How would it benefit or impact local economies?
        - How might local communities be included in the investment?
        - What is the economic profile of investors?
        - Are there any local community-based operations?
    - Where is the money going?
    - Is there a market for the products?
    - Who is interested in pursuing aquaculture in Washington?
- Planning/Permitting
    - Are terminal fisheries included?
    - How do you control permitting?
    - What products are being discussed?
- Other
    - How are Washington's fish imports included in the "80%" projection?

III. Dredge Disposal in New Locations

Potential Conflicts:

- Environmental
    - Habitat impacts
        - Monitoring habitat before and after disposal
        - Crab communities
        - Nearshore ecological impacts
    - Contaminants
        - Release for contaminants
    - Change in wave amplification
    - Restricts flow of smaller channels
    - Change in flow dynamics: erosion vs. accretion
- Planning/Permitting
    - Need to identify sediment type from dredging before disposal
- Space Use
    - Intense fishing off southern Washington may conflict with disposal
    - Path of transport may conflict with other existing uses
- Economic
    - Collecting data and monitoring costs

Compatibilities/Benefits

- Economics

    - Benefit to the navigation industry: jobs, navigation safety, ability to move freight, economic benefit for shipping
- Environmental
    - Beach nourishment
- Social
    - Consider disposal as protection (such as Highway 105 and Wash Away Beach)
    - Valuable material can have a high degree of impact for multiple purposes
    - Change in wave amplification for recreation
- Other
    - Consider existing disposal sites over new ones
    - Enhanced dumping methods should be considered

Data/Information Needs

- Planning/Permitting
    - Estuarine aquaculture should be included in this definition.
    - Make a plan for future dredge disposal needs and map it out instead of a case by case basis
    - Create and understand long term (20-50 year) projections
    - Evaluate of bays, offshore, and upland disposal sites when considering all options
        - Understand cost/benefits of each location
        - Understand larger impacts than cost for each location
    - New disposal alternatives need to be evaluated and have a measurable contribution.
    - Evaluate the dredging process along with the disposal site
    - Develop a database to inform private and federal dredging
    - Introduce consistent monitoring to understand the cause and effect of dredge disposal
- Environmental
    - Understand impact to crab and other benthic organisms: crab population study
    - Nearshore sediment transport study
    - What is the cumulative impact of disposal with other impacts? (including climate change)
    - Understand contaminants in dredge material
    - Understand waves and circulation

IV. Mining

Potential Conflicts

- Space Use
    - Aerial military uses
    - Would it be allowable in the sanctuary? In estuaries?

    - To what extent would it be permitted?
- Environmental
    - Impact on ecosystem and habitat
    - Impact on shellfish
    - Change current flow in the estuaries
    - Cumulative impacts to ecosystem: This use could exacerbate existing concerns
    - Contamination or pollution
    - Rockfish essential fish habitat
    - Water quality
    - Fish aggregation
    - Create bird habitat
- Economic
    - Displace economic benefits
    - Effects to industry

Compatibilities/Benefits

- Environmental
    - Prevent or reduce erosion
    - Nourish beaches
    - Protect estuaries
- Economic
    - Potential economic opportunities

Data/Information Needs

- Investigate methane leaks
- Social
    - What would be the impacts to waves and therefore wave users?
    - What are the safety concerns and how might they be mitigated?
- Planning/Permitting
    - Where would this happen in Washington's waters?
    - What types of mining would be allowed?
- Technology
    - What is the mining method?
    - How deep are useful materials?
    - How is this related to beach mining?
    - Where do the mine tailings go?
- Economic
    - Is this economically feasible?
    - What is the demand for materials available in Washington?
- Environmental

    - Impacts on turtles and other species of concern

Comments and Questions

- Oil and gas should be included in this analysis.
- Doug Kess: Clearly we can't get answers to all of these questions. I think the point of this is to develop a general set of principles and questions that would need to be addressed for any new use. We want to know the ecological impact, the economic impact, and the general impacts on human welfare. And we want to know how they are going to be assessed and monitored.
- Mark Cedergreen: We also want to minimize unintended consequences.
- Susan Gulick asked Council members what they thought about the small group work.
    - Casey Dennehy: I think it was productive. People who don't speak as often had the chance to speak up.
    - Fluharty: It was good to incorporate people from the public. They provided valuable information.
    - Cedergreen: It would be nice to have separate spaces for the group discussions.
    - Sally Toteff: I liked how we had the presentation ahead of the discussions, so that we were all prepped with the same basic information.
    - RD Grunbaum: It would be nice to have fewer topics with more time for each.

4. **Use analysis**

Jennifer Hennessey noted that at the next meeting the WCMAC will discuss the draft assessment matrix. This discussion will include how data is categorized in the data viewer, and how existing uses should be treated when compared with potential new uses. That information will be used to create plan scenarios. After that, we will determine if our recommendations are compatible with existing authorities.

Michele Culver: We were able to get agreement with NOAA to release the commercial albacore data. We will be using that data in the analysis that we do. We are still working to determine what level of specificity we can display the data publicly.

5. **Updates**

Marine Spatial Planning Outreach to Fishing interests

Garrett Dalan discussed the request for outreach to fishing interests for the Marine Spatial Plan. The Steering Committee discussed it, and concluded that SeaGrant would have the capacity to do outreach to fishing interests with MSP money as part of their current contract. This outreach is not limited to fishing interests. WCMAC members are welcome to recommend particular groups or avenues for outreach by contacting Kevin from SeaGrant.

Comments and Questions

- Brian Sheldon: General outreach is important, but I don't want it to replace going to fishing communities and getting information on species and where they are fished to put into the data viewer.
- Michele Culver: We do have log books. For fisheries where we don't have logbooks, we've done interviews and sat down with charts. We also have data that we are using in from fishery independent surveys that informs the ecologically important areas. All of that information will be shared as we go through our analysis. If there are people that think their information isn't displayed in the portal, they can contact us.
- Garrett Dalan: Kevin can use the existing fishing data and vet it as he does outreach.

6. Review of Attendance Expectations

The vacancy in the energy seat has been filled, and the economic development seat is now empty. The WCMAC reviewed overall attendance which remained high in 2014.

- Brian Sheldon: It's worth visiting at the beginning of the year, to see if people who haven't been attending still have interest.
- Garrett Dalan: I am willing to inquire on the WCMAC's behalf to see if people plan to participate in the future, or if there's a way their participation could be increased outside of the meetings.
    - The WCMAC agreed that this is a good idea.
- Casey Dennehy: I'm not sure if she's been involved in other ways, but we haven't had our appointment from the Governor's office here.
- Miles Batchelder: We are all busy, and the fact that the Governor's appointee isn't here factors into my decision about whether I should come to meetings.

7. WACD Resolution to Expand WCMAC membership

The WCMAC reviewed a resolution to add two new seats to the WCMAC for the Conservation Commission and the Washington Conservation Districts. WCMAC has not been asked to make a recommendation on the topic.

Comments and Questions

- RD Grunbaum: Why do they feel that they need two seats?
- Mike Nordin: The Association wants to have a seat, and the conservation districts are separate volunteer organizations. They provide a local hub to what's going on the ground.
- Michele Culver: How is having a county conservation district representative on the WCMAC different than having a county~~n~~ MRC representative?

    - Brian Sheldon: Conservation districts cover a broad area from uplands to shellfish beds. They bring in voluntary participation by landowners.
- Rod Fleck: Why isn't the liaison position being considered first? Do these groups have long standing participation with WCMAC?
    - Mike Nordin: The Commission was one of the groups that supported the original WCMAC legislation, and Conservation District employees have been coming to the meetings.
- An agenda item was requested for the next meeting to discuss the possibility of making a recommendation to the legislature or offering a liaison position.

8. Work Plan

Jennifer Hennessey went over the current workplan.

- A tentative meeting was added on September 23rd. WCMAC members should let her know if that doesn't work.
- There will be a work session around ecological important areas and a conversation like today on renewable energy at the next meeting.
- There will be more details presented on the use analysis process.
- There will be an update on ecological indicators.

Comments and Questions

- The forage fish report will be provided to DNR and posted on the website next week.
- Brian Sheldon: I would like to get a status update on the economic analysis before June 30th.
- Dale Beasley: I don't see anywhere in the workplan where we are considering how to protect and preserve existing and sustainable uses. I keep bringing this up because we have a unique situation. The marine sanctuary and tribal areas cover 70% of the coast, so that leaves us with only a small amount of area to discuss.
    - This is part of the use analysis process, where we categorize uses as low, medium, and high. The state agencies will take first crack at categorizing low medium and high, and then present it to the WCMAC for review.
- Sally Toteff: There's a concern that what comes out of this spatial plan is going to allow things to happen. The MSP defines certain things that can be allowed, and a proposal has to come in and it has to go through a long process of permits and environmental assessment. In the future, it might be helpful to speak to an example and talk about if there is a proposal for a new use, what the process would be.
- Dave Fluharty: It's a big deal to recognize and document what existing uses are in this plan. That is our job.
- Ray Toste: We need to think about how to communicate to the Federal government. They think we have endless space.

9. **Technical Committee**

1. Visual assessment – The Technical Committee recommends using the same model as Oregon used. Susan will resend this discussion guide.
2. Renewable energy information needs – Staff is working on a written overview of permitting requirements to present in a written format. Staff will also try to organize a presentation(s) on the known impacts of renewable energy to human uses

10. **Data Viewer**

Libby Whiting provided an update on the data viewer along with a complete list of all current layers. Layers in yellow are not currently working. The server is approaching capacity, so it may be necessary to verify that all layers add significant value.

Comments and Questions

- Dale Beasley: Could we increase the server size?
    - Libby Whiting: It would technically be possible. We have 133 layers which is more than any other MSP.
- Brian Sheldon: What about the missing invasive species?
    - We are re-evaluating what to do with invasive species. Originally we included mud snails because it was the only one available.

11. **Governor's Budget Request**

The WCMAC's request for $925,000 was put in the Governor's budget.

12. **MRAC Update**

The MRAC requested $3 million which was included in the Governor's budget. All meeting notes are on the MRAC website.

13. **Project Updates**

Katrina Lassiter presented project updates. All projects highlighted in red have updates since the October meeting.

14. **Selection of Chair/Vice-Chair**

No new nominations were made for Chair or Vice-Chair. Garrett Dalan and Doug Kess agreed to continue.

- ! The WCMAC agreed to re-elect Garrett Dalan and Doug Kess as Chair and Vice Chair for 2015.
- Brian Sheldon: Thank you for all of the work and effort you have put in to the Council.

Agenda topics for Upcoming Meetings

- Conservation District and Conservation Commission liaison discussion
- Discuss what protect and preserve entails for the use analysis
- Get an update from the economic assessment
- Garrett Dalan will report back from attendance conversations
- Potential discussion about coal by rail. Someone from the Spills program will present, probably at the April meeting. Sally passed out a fact sheet on the spills program.

Public Comment:

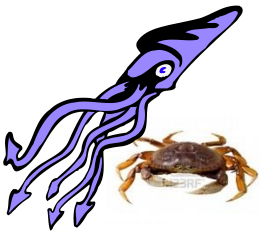
- Key McMurray: I think you should consider naval military use as another potential new use. There could be bombing sites, cables, and sonar activities. Also, the data viewer should be a living resource. Isn't more data going to be added over time? There should be enough server space for future additions.
- Mike Nordin: Next week on January 13th the Grays Harbor Conservation District is having long term planning meeting at 2:00pm. Also, the MRC Science Conference is Saturday May 16th. It's a celebration of the year, and lunch and dinner are provided. Everyone is invited to both events.
- Libby Whiting: We have started a section on the Marine Spatial Plan Website with frequently asked questions. It is located in the news blog section of the website.
- Randy Kline: Washington State Parks is in the process of considering a rule change to allow wind powered vehicles on our beaches. It would allow them year round rather than through a special events permit for a specific time. Randy will send out a press release to the WCMAC about this process.

Upcoming Meetings

- February 25, 2015
- April 22, 2015
- June 24, 2015

Meetings will be held in Aberdeen unless otherwise noted

Attachment: Statement from the Coalition of Coastal Fisheries, distributed at the meeting.



Coalition of Coastal Fisheries

Coastal Office: PO Box1448, Westport, WA 98595 – 360 642 3942, Cell 360 244 0096
Administrative Office: 806 Puget St. NE, Olympia, WA 98506 – ofc: 360 705 0551, Fax 360 705 4154

…….Serving the needs of the coastal fishing industry and coastal fishing communities……

Officers
Dale Beasley, President
David Hollingsworth, VP
Libie Cain, Secretary
Doug Fricke, Treasure, Coordinator

Directors
Bob Alverson
Bob Kehoe
Mark Cedargreen
Bob Lake
Kent Martin
Scott McMullen
Dick Sheldon
Butch Smith
Ray Toste
Louie Hill
Brian Allison
Carl Nish

Organizations

American Albacore Fishermen Association

Bandon Submarine Cable Council

Columbia River Crab Fisherman's Association

Fishing Vessel Owner Association

Grays Harbor Gillnetter's Association

Ilwaco Charter Association

Puget Sound Crab Association

Purse Seine Vessels Owners Association

Salmon For All

Washington Dungeness Crab Fishermen's Association

Washington Trollers Association

Western Fishboat Owners Association

Westport Charterboat Association

Willapa Bay Gillnetter's Association

Willapa-Grays Harbor Oyster Growers Association

Executive Director
Tom Echols, CEO
Echo Enterprises NW
Cell: 360 951 2398

Attention Washington Coastal Marine Advisory Council and the State Ocean Caucus:

The PRIMARY LEGACY of the Washington Coastal Marine Spatial Plan must be one focused on the sustainable well-being and economic stability of coastal water dependent communities as its primary outcome that clearly defines how "Existing Sustainable Uses" are protected and preserved as a first PRIORITY as supported in the Washington State Ocean Resources Management Act.

The Ocean Resources Management Act (ORMA) RCW 43.143.030 (2) (e) All reasonable steps are taken to avoid and minimize adverse social and economic impacts, including impacts on aquaculture, recreation, tourism, navigation, air quality, and recreational, commercial, and tribal fishing;

The Council SHALL consider RCW 43.143.060 (2) (b) The protection and preservation of existing sustainable uses for current and future generations, including economic stakeholders reliant on marine waters to stabilize the vitality of the coastal economy.

These citations were put in ORMA centered on beneficial job retention in hard pressed, rural, natural resource dependent, coastal communities where few – if any – economic development efforts can or would occur that will be beneficial to enhancing the coastal economic base.

The Washington Coastal Marine Spatial Plan is fast approaching a tipping point in producing legacy marine water policy decisions influencing impacts to existing sustainable uses and coastal communities' well-being for decades to come. This plan must begin to FOCUS on specifics identifying steps to AVOID "reasonably foreseeable adverse impacts" and initiate PROTECTIONS to insure the stability of the coastal water dependent stakeholders in its work plan over the next several months that fully accounts for Washington's UNIQUE coastal situation involving significant irrevocable federal obligations which no other state in the nation must navigate. The Olympic National Marine Sanctuary and tribal treaties affect 70% of the coast that will have limited, "if any" industrial scale new use development. These federal obligations have concentrated major fishing effort south of Westport. The REALITY of Washington's UNIQUE situation is that AVOIDING "reasonably foreseeable adverse impacts" to existing marine water economic stakeholders is highly problematic for siting any new exclusionary uses where the only place available is located in high value fishing grounds which poses a substantial unacceptable risk to the stability of the coastal economy. This risk especially poignant when considering the Brookings Institute's recent finding based on NOAA data that Pacific County is the 4th most SEAFOOD DEPENDENT COMMUNITY in the nation adding emphasis to the coastal communities'

substantial reliance on adjacent marine waters where RISK of "reasonably foreseeable adverse impact" from industrial development is considerable.

The WCMAC identified new use footprint as an important metric to understand space required to make new use economically viable at industrial scale with resulting impact to existing uses. Understanding future new use footprint is vital to understanding the appropriateness or **inappropriateness** of placing any new use into Washington coastal marine waters. This CMSP is not about placing a token publically funded small new use in the water. This Washington CMSP is about avoiding considerable pending "reasonably foreseeable adverse impacts" to the coastal peoples' well-being that is rooted in existing marine water JOBS that require stability of ACCESS to marine waters that are already highly restricted and concentrating existing use intensely. Industrial scale footprints requirements to achieve low cost are "reasonably foreseeable severe adverse impacts" to the existing coastal economy where space conflict will be excessive.

Work plan materials indicate existing use levels will be categorized as "high, medium, low" without any explanation of what this means in practical terms or how these designations will be related to protecting and preserving existing sustainable use or how decisions will be made. This is way too loose criteria to move forward without additional clarification so that the decisionmaking process is much better defined in such a manner that everyone understands how existing use will be preserved from "reasonably foreseeable adverse impacts" as required by law.

'Ocean Energies' capacity to dream are weakening all over the world where the REALITIES of obtaining reasonable costs are unachievable and governments are finding their ability to continue to subsidize development extremely challenging. Two more ocean energy casualties occurred in the NW in 2014. OPT withdrew the only wave energy permit in the nation at Reedsport, Oregon and Snohomish PUD stopped their current energy development project for lack of additional subsidies. Washington Coastal Marine Spatial Plan must become more pragmatic and focus on what really matters, the well-being, health and safety, economic stability, and needs of this state's citizens as a fundamental outcome. Fisheries and shellfish aquaculture anchor the economic lifeline of the coastal communities providing thousands of sustainable JOBS for over 150 years and if necessary stewardship is applied can be easily be sustained indefinitely. Sacrificing existing sustainable marine water use to overly optimistic new use that relies on heavy public subsidies and assumptions that are conspicuously underperforming expectations worldwide needs a major course correction as all our flowers of tomorrow are in the seeds we sow today that should be empowering communities to achieve a higher quality of life which deteriorates rapidly when their JOBS begin to disappear when we fail to meet the needs of the people that definitely rests on a substantial statewide maritime economy and does not need re-invention or system transformation where good intentions are landing sideways with substantially increased energy costs "reasonably foreseeable adverse impact" that will be disproportionately shifted to low income coastal families is not an acceptable outcome. Who pays and how much are necessary FACTS before BILLS.

Washington has a great electric rate and the people want to keep it.

It is not rocket science to project the footprint of multiple new ocean energy devices to equal the equivalency of just 1 Bonneville Dam required to make an equivalent amount of energy in any given year. The footprint of ocean energy to make any significant impact on Washington's FUTURE energy needs is astronomical, even the most efficient ocean energy extraction devices known today will require all the available space in the southernmost 38 miles of coastal Washington waters from Westport south to the Columbia River and out over 15 miles from shore displacing every existing sustainable use is a "reasonably foreseeable adverse impact". We have spent close to $5 million of Washington CMSP budget allocations and this reality has been selectively omitted from the "process" as this plan continues to forge forward without all reasonable and necessary FACTS or other better ALTERNATIVE use of taxpayer or ratepayer dollars put on the table to be examined to make informed decisions about "if" new use is HONESTLY in the best public interest of the citizens of Washington state as a whole or the "reasonably foreseeable adverse impact" to the coastal economic base. Just because other states that have dramatically denser populations that have limited land based alternatives have pushed ocean energy to the forefront does not necessarily mean that the low density population of western Washington requires or desires similar outcomes of CMSP where hundreds of square miles of ocean real estate is surrendered and existing use is snuffed out by a predetermined and unsubstantiated assumption

that new use is the desired outcome of the Washington CMSP process as outlined in April 2014 staff draft outline where the decision appears to have already been made before all the FACTS are placed on the table for open transparent collaborative informed decisionmaking.

FACTS before BILLS,
Concerned for coastal community well-being,

Dale Beasley, Fisheries representative WCMAC

MSP Potential New Use Summary:
Marine Renewable Energy

What is Marine Renewable Energy?

Marine renewable energy includes any technology that converts potential energy from wind, waves or tides into electricity. Currently, researchers are developing different technologies and testing devices in research labs and waters throughout the United States to provide clean energy alternatives for the nation. No devices are permitted for the marine waters along Washington's coast.

Current and Emerging Technologies

- **Offshore Wind Energy**
  - Uses technology adapted from land-based wind turbines and applies the technology to floating or anchored support structures that vary according to water depth. Turbines used in offshore installations can be up to 500 feet tall to gain access to reliable wind resources.
  - Classified by base structures including fixed bases for shallow and floating bases for deep waters.
- **Wave Energy**
  - Extracts energy from ocean wave movements or from changes in pressure below the surface.
  - Classified by type, including point absorber, wave overtopping reservoir, attenuator, oscillating water column, and inverted pendulum.

Mercator Media 2014

- **Tidal Energy**
  - Extracts energy from a steady water flow typically through an existing narrow channel.
  - Classified by type, including horizontal and vertical axis turbines, oscillating hydrofoil, and venturi effect turbine.

Why Marine Renewable Energy?

International interest in marine renewable energy is growing. The U.S. Department of Energy provides matching funds for industries and grants to developers that invest in marine renewable energy technology. Washington signed the renewable portfolio standards, which require large energy utilities to migrate at least 15 percent of their electricity load to renewable resources (excluding dams) by 2020. In response, some local utilities are providing customer incentives to support locally-produced sustainable energy.

Potential Benefits and Use Compatibilities

- **Increase Washington energy portfolio** by harnessing some of the energy available through offshore wind and wave resources.
- Models estimate a wide range and variety of **jobs created** for each phase of a project.
- Increase **independence** from the grid through locally-produced sustainable energy production.

Environmental Concerns

- **Injury to whales or other marine mammals** during construction for certain types of installation including sound from pile driving and direct strikes to marine species during operation for in-water devices.
- Injury to species from **electromagnetic fields** associated with undersea transmission lines.
- **Effects on fish** including concerns ranging from reefing effects around mooring lines or buoys to driving fish away and altering current fish interactions.
- Issues related to **lighting the structures** (especially wind turbines) that can affect birds and fish.
- **Chemical contaminants** such as lubrication for joints or oil that spills from vessels during installation and operation.

Potential Use Conflicts

- **Conflicts with other users** especially including the shipping, fishing, and aquaculture industries.
- Potential conflicts with **cultural and historic resources**.

Other Concerns

- Unknown **demand for locally-produced power** and the possible need to **update infrastructure** for grid connections.
- **Unknown effects on market factors** such as electricity prices and development costs. Some of the emerging technologies are currently not cost competitive.
- Unknown requirements for **monitoring protocols** and mitigation measures.

Future Trends and Factors in Washington

Some states throughout the nation have permitted small-scale projects intended to test or validate new technologies while on the East Coast, some states have started permitting large-scale projects. Washington has significant potential offshore wind and wave resources. In the last decade there has been some interest in marine renewable energy in Washington's marine waters, but there are no projects currently under development or in the permitting process. While the majority of the state's energy currently comes from hydropower, it is not included in the criteria driving the demand for increased renewable energy generation. The major barriers to entry include cost and permitting complexity. The Marine Spatial Plan will include a state agency framework to coordinate ocean planning and maps to summarize the existing geographic information on sensitive areas and human uses of marine waters. According to the Marine Renewable Energy Sector Analysis[1] offshore wind is the most viable candidate, but the likelihood of any marine renewable energy development in the next 20 years is limited.

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[1] Industrial Economics Inc., *Marine Sector Analysis Report: Marine Renewable Energy* (http://msp.wa.gov/wp-content/uploads/2014/03/EnergySectorAnalysis.pdf, 2014).

Marine Renewable Energy Permitting: Briefing Report

February 2015

Purpose

This permitting brief provides an overview of the federal, state, local, and tribal authorizations and coordination that may be required for marine renewable energy project proposals off of Washington's Pacific coast. This permitting brief was created for the Washington Coastal Marine Advisory Council (WCMAC). Summaries of the primary federal "lead" authorities (BOEM, FERC, and Corps) are summarized in Table 1 and subsequent section starting on page 2. Maps of federal lead agencies by project type and location are on pages 5 and 6. Other federal, state, and local authorizations are summarized in Table 2 beginning on page 8, and federal consultations are summarized in Table 3 on page 10.

To date, no projects have been constructed along Washington's Pacific coast. The information presented in the brief is what is understood at this time. Some authorities and processes may shift as the agencies learn more about these projects and adjust their cooperating agreements and implementing procedures. This is not a legal document. For specific requirements please contact the agencies.

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Regulatory Context: Government Involvement in Permitting

Marine renewable energy projects require several authorizations including licenses, leases, permits, and consultations. These actions are performed by several federal, state, and local agencies, often in coordination. This is a complex process that varies depending on the type of proposed project (wind, tidal, or wave) and location (state, federal, or marine sanctuary waters). To help describe the regulatory requirements that accompany marine renewable energy projects, this section summarizes the main federal, state, and local authorizations, and participating agency actions (consultations, etc) for marine renewable energy projects. The information below highlights key differences in lead agencies or authorities that may vary between project types and locations.

Primary Federal Authorizations

Table 1. Main Federal Lead[1] Authority Summary

Action	Agency	Primary Authority	Focus Area/Purpose
Lease	BOEM	Energy Policy Act of 2005	Responsible for leasing outer continental shelf seabed for renewable energy development
License	FERC	Federal Power Act	Responsible for licensing construction and operation of wave and tidal projects
Section 10 Permit	Corps	Rivers and Harbors Act	Addresses navigation impacts

Bureau of Ocean and Energy Management (BOEM)

BOEM has the authority to issue **leases, easements, and rights of way** for all renewable energy development (including **wind, wave, and tidal**) on the Outer Continental Shelf (OCS). The OCS lies between the State's jurisdiction (3 nautical miles) and the Economic Exclusive Zone (200 nautical miles). BOEM has a flexible process for establishing leases for renewable energy which generally occurs in four phases. Figure 1 outlines the lease authorization process for offshore wind energy.

The Outer Continental Shelf Renewable Energy Program does not give BOEM the authority to issue a lease within the National Marine Sanctuary System.[2,3] However, this does not necessarily mean that marine renewable energy projects cannot occur within the OCS of the Olympic Coast National Marine

[1]Possible project permit lead/NEPA lead agencies
[2]Bureau of Energy Management, Hooker, B. (Nov. 16, 2012) *Bureau of Ocean Management Fishing and Offshore Energy – Best management Practices.*
[3] Renewable Energy and Alternate Use of Existing Facilities on the Outer Continental Shelf, 30 CFR 585.204

Sanctuary. Other federal agencies, such as the Federal Energy Regulatory Commission (FERC) and U.S. Army Corps of Engineers (Corps), are able to issue authorizations for marine renewable energy projects in Sanctuary waters.

BOEM can be the National Environmental Policy Act (NEPA) **lead agency** for preparing Environmental Impact Statements/Environmental Assessments for proposed projects on the OCS.[4,5] This means that, on the OCS, outside of the Marine Sanctuary, BOEM is the lead agency for evaluating and coordinating environmental review to ensure that the lease will not significantly affect the environment. BOEM coordinates with several federal, state, and local authorities, as well as the public, throughout the NEPA process. The NEPA process is completed prior to authorizing any lease, easement, or right of way. BOEM and FERC have agreed to cooperate on the NEPA process for wave and tidal energy projects within the OCS (see footnote 5). Figure 2 and Figure 3 show general federal lead agencies by project location for wind power and hydrokinetic power, respectively.

Authorities: Energy Policy Act of 2005; National Environmental Policy Act

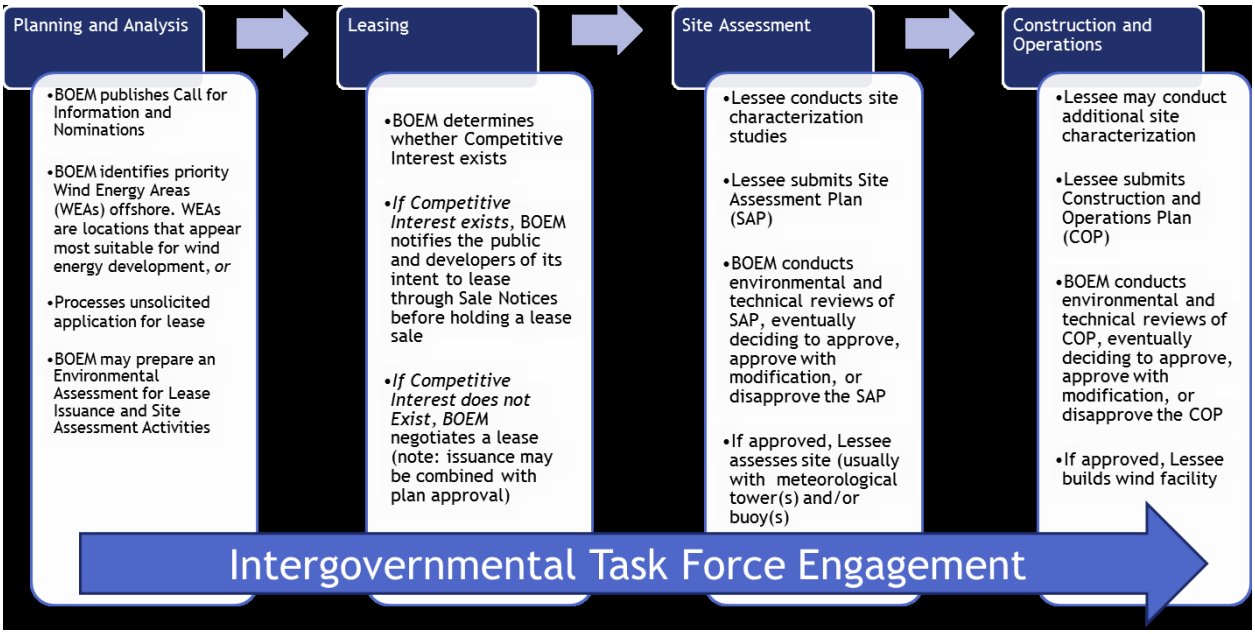

Figure 1. BOEM's general outline for offshore wind energy lease authorization. Source: Bureau of Ocean Energy Management. (2014). *Wind energy commercial leasing process* (Fact Sheet). Bureau of Ocean Energy Management. Retrieved from http://www.boem.gov/Commercial-Leasing-Process-Fact-Sheet/

Federal Energy Regulatory Commission (FERC)

FERC is an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC is responsible for **licensing** the construction and operation of hydrokinetic projects (**wave and tidal**) in state and federal waters. Some types of projects may conduct limited testing without

[4] NEPA Implementing Regulations, 40 CFR Parts 1500-1508

[5] Memorandum of Understanding (2009) Department of Interior and Federal Energy Regulatory Commission. Retrieved from http://www.boem.gov/Renewable-Energy-Program/DOI_FERC_MOU.aspx

obtaining a FERC license.[6] FERC does not have authority over wind power projects. FERC does have the authority to issue licenses for wave and tidal projects within Marine Sanctuaries.[7]

FERC is the NEPA **lead agency** for wave and tidal projects in State waters (0 to 3 nautical miles), and wave and tidal projects within Marine Sanctuaries. FERC and BOEM have an agreement to work together in the NEPA process for wave and tidal projects within the OCS. Environmental analysis during the license phase of the project may be led by FERC with BOEM as a cooperating agency or with FERC and BOEM as co-leads. The two agencies have agreed that FERC will not issue a license in the OCS until BOEM has issued a lease to the applicant (see footnote 5).

Authorities: Federal Power Act; Energy Policy Act of 2005; National Environmental Policy Act

U.S. Army Corps of Engineers (Corps)

The Corps is responsible for issuing permits under Section 10 of the Rivers and Harbors Act for any construction that will affect the navigable capacity of any waters of the United States. This includes wind, wave, and tidal projects in state and federal OCS waters. It is possible that a project authorized by FERC may not require a Section 10 permit from the Corps.[8]

Under Section 10 authority, the Corps is likely the NEPA **lead agency** for marine renewable energy projects that do not fall under BOEM or FERC federal authority. An example of this may be any offshore wind projects that are proposed within State waters, or possibly any offshore wind projects proposed within the Marine Sanctuary (since BOEM does not have the authority to offer leases within Marine Sanctuaries, and FERC does not have authority for wind projects). Federal agencies do have the option to choose which agency is the NEPA lead (see footnote 4). Therefore it is possible that another federal agency may take the lead when BOEM or FERC does not have authority.

The Corps is also responsible for issuing permits under Section 404 of the Clean Water Act for dredge and fill actions in any waters of the United States. Approval may be required to install marine renewable energy structures or devices in the marine environment.

Authorities: Section 10 of the Rivers and Harbors Act; National Environmental Policy Act; Section 404 of the Clean Water Act

[6] Regulations under the Federal Power Act, 18 CFR Parts 4 and 5

[7] Bureau of Ocean Energy Management. (2012). BOEM/FERC guidelines on regulation of marine and hydrokinetic energy projects on the OCS (Version 2, July 19, 2012). Bureau of Ocean Energy Management. Retrieved from http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/pdf/mms080309.pdf

[8] Investigation and supervision of hydropower projects under the Federal Power Act, 33 CFR Part 221.1(f)(1)

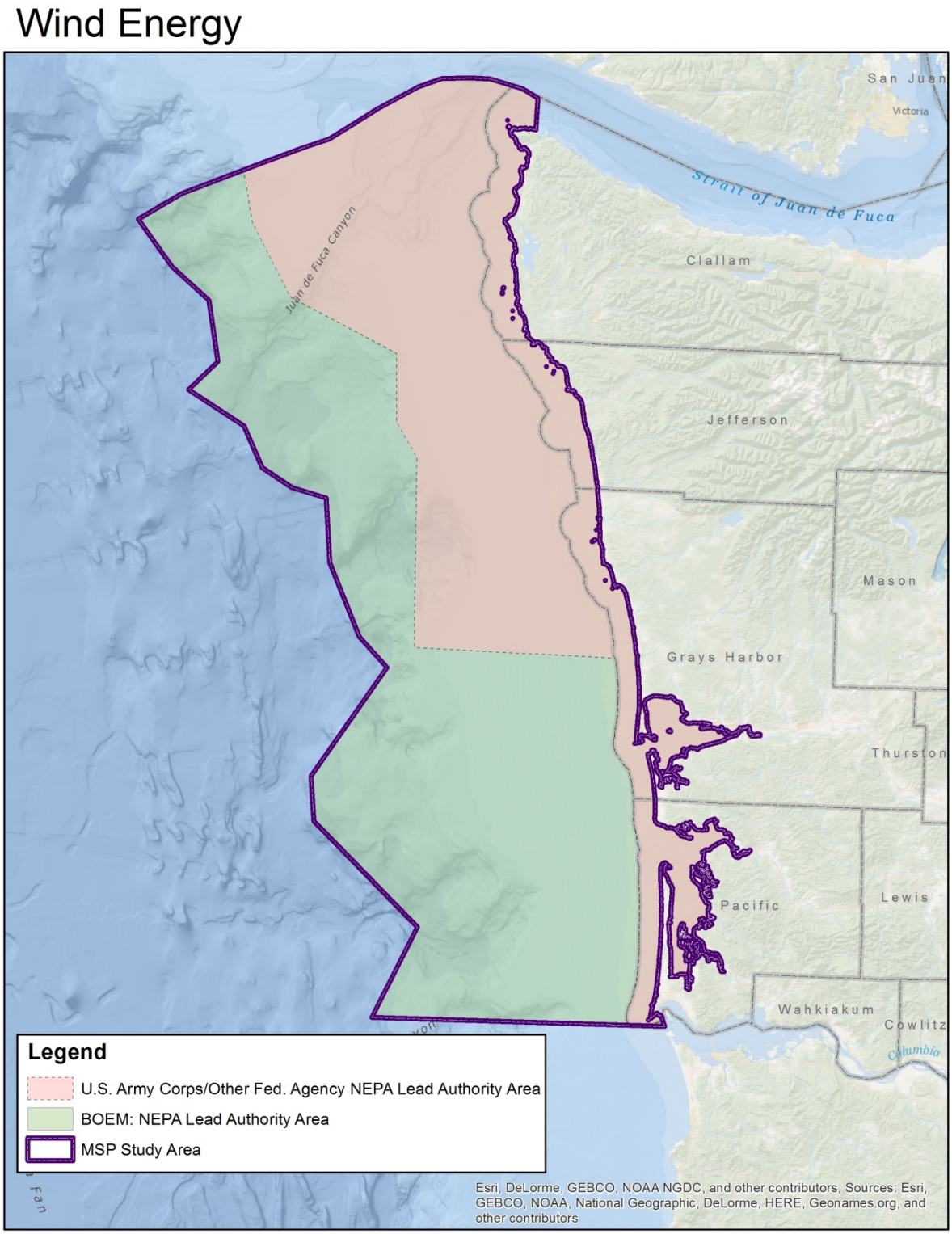

Figure 2. Federal lead agency map for offshore wind energy. This map displays the likely NEPA lead agency for offshore wind energy permitting based on location and our current understanding of federal authorities and agreements.

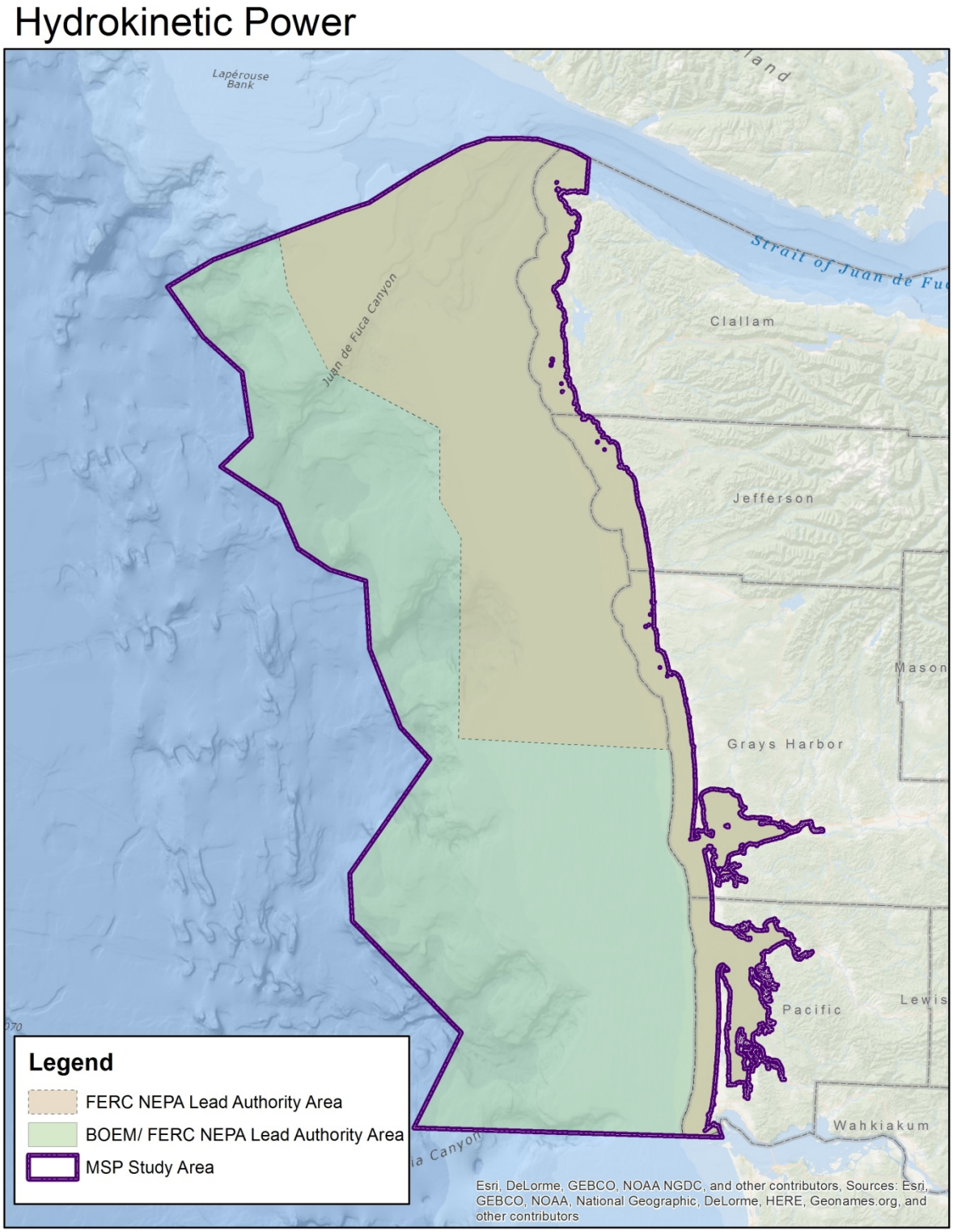

Figure 3. Federal lead agency map for hydrokinetic energy. This map displays the likely NEPA lead agency for hydrokinetic (wave and tidal) energy permitting based on location and our current understanding of federal authorities and agreements.

National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) was enacted to ensure that federal agencies evaluate the potential environmental impacts of a proposed action and reasonable alternatives to those actions before authorizing the action. NEPA provides a framework to identify and assess environmental effects and reasonable alternatives to the proposed actions. The federal action agency (lead agency) is expected to analyze alternatives and/or mitigation to avoid or minimize impacts so that the purpose and need for the proposed action is accomplished in a manner that does not result in significant environmental effects. The federal action agency is the agency issuing the license, lease, or permit.

The federal action agency either prepares an Environmental Assessment (EA) or a more detailed environmental review called an Environmental Impact Statement (EIS). Based on the project scope and specific issues identified, the lead federal agency will determine whether to prepare an EA or an EIS. Other federal, state, tribal, and local agencies with expertise or legal jurisdiction can become cooperating or participating agencies within the NEPA process. Many of the federal consultations listed in Table 3 are coordinated through the NEPA process. The public and other organizations have opportunities throughout the NEPA process to comment on scoping, licensing applications, and the draft EA/EIS.[9]

Other Possible Required Permits and Authorizations

In addition to the permit requirements listed above, there are additional federal, state, and local permits and authorizations that may need to be issued for a marine renewable energy project. See summary in Table 2.

State Agency Authorities

Washington state agencies have regulatory authority over the seabed and marine waters up to 3 nm from Washington's shoreline. Infrastructure and development anywhere on or within the area requires the authority of various state agencies,[10] including the development of renewable energy infrastructure such as transmission lines, substations, and devices. Under the Coastal Zone Management Act, Washington's Coastal Zone Management Program[11] can request to review a federal action outside of state waters under federal consistency provisions. To do that, Ecology must demonstrate that "coastal effects" are reasonably foreseeable to coastal uses or resources in Washington's coastal zone.

Local Government Authorities

Under the Shoreline Management Act, local governments can regulate shoreline development within shorelands, marine waters, and the seabed within their respective jurisdictions. For ocean coastal jurisdictions, this authority includes state waters out to 3 nm and extends landward 200 feet from the Ordinary High Water Mark. Coastal jurisdictions create policies and regulations for shoreline

[9] Hampton, T. (2009). Wave energy development in Oregon: Licensing and permitting requirements. Oregon Wave Energy Trust.

[10] Washington State Department of Ecology. (May, 2014). *Marine Shorelines.* Retrieved from http://www.ecy.wa.gov/programs/sea/sma/st_guide/jurisdiction/marine.html

[11] Washington Department of Ecology administers Washington's Coastal Zone Management Program

development within their Local Shoreline Master Programs. Infrastructure that crosses into designated critical areas or floodplain areas may also be subject to local government regulations.

Table 2. Other Federal, State, and Local Permits and Authorizations[12]

	Action[13]	Agency	Primary Authority	Focus Area/Purpose
Federal	Section 404 Permit	Corps	Federal Clean Water Act	Regulates placement of dredge and fill activities
	Private Aids to Navigation Permit	United States Coast Guard	Federal Navigation and Navigable Waters Regulations	Ensures safety of the boating public
	Marine Sanctuary Permit	NOAA Office of National Marine Sanctuaries	National Marine Sanctuaries Act	Ensures any permitted activity will not substantially injure marine sanctuary resources or qualities
State	Section 401 Certification	WA Dept of Ecology	Federal Clean Water Act	Certifies that the project will comply with state water quality standards and other appropriate State laws
	CZMA Federal Consistency Determination	WA Dept of Ecology	Coastal Zone Management Act (WA's CZM Program enforceable policies are: Shoreline Management Act; Clean Water Act; SEPA[14]; Ocean Resources Management Act; Clean Air Act; EFSEC[15])	Evaluates federal actions to ensure consistency with CZM Program's enforceable policies. Allows state to evaluate federal actions that will affect state's coastal resources.
	NPDES Construction Stormwater General Permit[16]	WA Dept of Ecology	Federal Clean Water Act Section 402	Prevents or minimizes sediment, chemicals, and other pollutants from entering surface water as a result of clearing, grading, and excavation activities
	Aquatic Use Authorization	WA Dept of Natural Resources	Public Lands Act RCW 79.105	Administers leases, easements, and rights-of-entry to authorize use of the seabed and Washington's marine waters
	Hydraulic Project Approval	WA Dept of Fish and Wildlife	Hydraulic Code RCW 77.55	Protects fish, shellfish, and their habitats

[12] These permits MAY apply. Requirements for these actions will depend upon the specific project type and location.

[13] As a part of these various processes there are formal and informal consultations among various federal, state, local, and tribal authorities. The coordination process will vary by permit and lead agency.

[14] State Environmental Policy Act (SEPA)

[15] Energy Facility Site Evaluation Council (EFSEC)

[16] This permit is triggered if more than 1 acre of upland lands is disturbed.

Table 2 continued

	Action[17]	Agency	Primary Authority	Focus Area/Purpose
State	Right of Way Permit	Washington State Parks and Recreation Commission	Seashore Conservation Area RCW 79A.05.605	Protects conservation areas for public recreation, cultural, and educational experiences
Local	Shoreline Master Program Permits[18]	Local County or City	Shoreline Management Act; Local Shoreline Master Program	Protects shoreline natural resources and public access while encouraging water dependent uses
	Critical Areas Ordinance Permits	Local County or City	Growth Management Act	Protects locally designated critical areas such as wetlands, habitat conservation areas, and frequently flooded areas
	Floodplain Development Permit	Local County or City	Flood Plain Management RCW 86.16	Reduces social and economic loss caused by flood events. Project may no increase potential for damage from flood waters.
Other considerations	SEPA	State agency or local government depending on project	State Environmental Policy Act	Requires state and local agencies to review proposals to identify environmental impacts

Olympic Coast National Marine Sanctuary

The Olympic Coast National Marine Sanctuary regulations do not explicitly prohibit marine renewable energy projects. However, project components that would disturb or place a constructed object on the seafloor within the Sanctuary would require a Sanctuary permit. The Sanctuary has the authority to issue permits for marine renewable energy projects, if the proposal will not substantially injure Sanctuary resources and qualities and is found to satisfy the Sanctuary's criteria for permitted activities. The Sanctuary could also consider an application to authorize, and potentially condition, other federal or state authorizations.[19] For more information go to: http://olympiccoast.noaa.gov

Agency Consultation Requirements for Federal Permits, Leases, and Licenses

The NEPA lead agency consults with several federal agencies on specific environmental impacts according to their legal authorities. While these are **consultations** and not permits, they are still required by law and consist of formal consultation periods and procedures. Table 3 summarizes common federal environmental review and consultation requirements for marine renewable energy projects.

[17] As a part of these various processes there are formal and informal consultations among various federal, state, local, and tribal authorities. The coordination process will vary by permit and lead agency.

[18] Permits may include Exemptions, Shoreline Substantial Development Permits, Conditional Use Permits, or Variances.

[19] National Marine Sanctuary Program Regulations, 15 CFR Part 922

Table 3. Federal agency environmental review and consultation actions[20]

Authorization	Agency	Primary Legal Authority	Focus Area/Purpose	Participating Agencies
NEPA Documentation (EA/EIS)	BOEM; FERC; ACOE[21]	National Environmental Policy Act	Requires federal agencies to evaluate the environmental effects of proposed federal agency authorized actions	Federal, state, and local agencies and tribes
Section 7 ESA Consultation	NMFS, USFWS	Endangered Species Act	Protects and conserves endangered and threatened fish, marine mammals, turtles, wildlife, plants and their habitats	BOEM, FERC, Corps, USCG
Marine Mammal Consultation	NMFS, USFWS	Marine Mammal Protection Act	Must assess and authorize any "take"[22] of any marine mammal	None specified
Essential Fish Habitat Consultation	NMFS	Magnuson-Stevens Act	Consultation to protect essential fish habitat	Pacific Fisheries Management Council
Fish and Wildlife License Conditions	USFWS, NMFS	Fish and Wildlife Coordination Act	Provides recommendations to prevent the loss or damage to fish or wildlife resources	Federal and state resource agencies
Migratory Bird Consultation	USFWS	Migratory Bird Treaty Act	Consultation to avoid and minimize impacts to migratory birds and can include enhancement, monitoring, and adaptive management commitments	BOEM, FERC, Corps, WDFW
Section 106 NHPA Consultation	State Historic Preservation Office; Tribal Historic Preservation Office	National Historic Preservation Act	Consultation process requiring federal agencies to identify and assess the effects of authorized actions on historic resources	Advisory Council on Historic Preservation, BOEM, FERC, Corps, Tribes
USCG Navigation Consultation	United States Coast Guard	Outer Continental Shelf Lands Act	Reviews BOEM lease applications or other NEPA lead agency action for impacts to navigation	BOEM, FERC, Corps, or other lead agency
EPA review	EPA Office of Federal Activities	Clean Air Act	Reviews EISs and some EAs; summarizes comments for the public	BOEM, FERC, Corps, or other lead agency

[20] Adapted from Hampton, T. (2009). *Wave energy development in Oregon: Licensing and permitting requirements.* Oregon Wave Energy Trust.
[21] See Primary Federal Permits and Licenses for lead agency descriptions.
[22] "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal.

Federal and State Coordination

Marine renewable energy is a new activity. Federal and state agencies are actively working to establish procedures for cooperation and responsibilities to reduce redundancies and barriers within the permitting process while improving effective engagement of stakeholders, including the public. BOEM has adapted their leasing process to allow for coordination and communication on renewable energy development, including agreements with other federal agencies. FERC has also entered into an agreement with Washington State for licensing hydrokinetic projects.[23]

BOEM's Intergovernmental Task Force Coordination

BOEM has created intergovernmental task forces in states with lease applications to communicate and coordinate between federal agencies and affected state, local, and tribal governments. Forums are used by the agencies to educate each other about roles and responsibilities, discuss public comments on specific issues, exchange data and resources, and continue a dialogue throughout the leasing process. BOEM considers the input of the task force in renewable energy leasing decisions (see Figure 1). To date, no task force has been established in Washington State, but could be established upon the request of the Governor.[24]

Tribal Involvement

Tribal governments also have a role to play in the permitting process for marine renewable energy projects. Washington state agencies and tribes have government-to-government agreements through the Centennial Accord and subsequent Millennium Agreement to consult with each other on matters that may affect one another.[25] Also, a 2012 state law established state agency procedure requirements for the government-to-government relationship.[26] Therefore, consultations will occur between state agencies and the tribal governments for marine renewable energy projects for which either party is taking action.

The federal government has a federal trust responsibility to federally recognized tribes. The federal government is obligated to work directly with tribes as separate governments. The exact implementing procedures may vary between the federal agencies, but the federal trust obligation includes consulting with tribal governments prior to taking actions that may affect federally recognized tribes and treaty rights.[27] Therefore, these government-to-government consultations between tribes and federal agencies should occur for marine renewable energy projects. The federal and state government-to-government consultations with tribes take place in addition to the comment periods for NEPA, SEPA, and permit authorizations.

Furthermore, projects that occur on Tribal reservation land will likely require authorization(s) from the respective tribe.

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[23] FERC/Washington MOU available at: http://www.ferc.gov/legal/mou/mou-wa.pdf
[24] California and Washington Activities. BOEM http://www.boem.gov/State-Activities-California-and-Washington/
[25] Governor's Office of Indian Affairs http://www.goia.wa.gov/Relations/Relations.html
[26] Government-to-government relationship with Indian Tribes, RCW 43.376
[27] The President memorandum of April 29, 1994, government-to-government relations with Native American tribal governments. (2014). The White House. Retrieved from http://www.denix.osd.mil/na/upload/Clinton-1994-Indian-Policy.pdf

Marine Spatial Planning and Marine Renewable Energy Permitting

The Marine Spatial Planning process is an opportunity to foster an understanding of activities that take place in ocean areas, where resources are located, and assess the implications of changes in uses of those resources. It is the aim of the Marine Spatial Plan to ensure that future developments related to marine activities and uses are appropriately sited so that existing activities and new development (such as marine renewable energy) can successfully coexist, while maintaining a productive, healthy marine ecosystem. Therefore, the plan will seek to evaluate and identify areas that these potential new uses should avoid, areas that are potentially suitable for new uses, and preferred areas for these potential new uses. The plan can influence where and how projects are proposed in the first place. The Marine Spatial Plan will also include a framework for coordinating state agency and local government review of proposed renewable energy development uses.[28] For more information go to: http://www.msp.wa.gov/

Public Involvement in Marine Renewable Energy Development

People have opportunities to be involved in the development and siting of a marine renewable energy project in many ways:

- NEPA and/or SEPA process comment periods: scoping, environmental review (draft EA/EIS)
- Federal, state, local permit public comment periods
- Public meetings, hearings, or forums

Public comment periods may be published in state and/or federal registers as well as in local newspapers or other forums such as websites. Many agencies also maintain an interested parties list that keeps these parties informed of pending permits and public involvement opportunities. Public meetings or hearings are often held for large and high profile projects. Some agencies may be required to respond to comments submitted during a public comment period, while others consider the comments when issuing their authorizations.

Another avenue for stakeholder and public involvement for siting of marine renewable energy projects is through the development of the Marine Spatial Plan. As described above, the state planning process will analyze potential spatial conflicts using data from existing uses and stakeholder and public input.

How Long is the Permitting Process?

The permitting process will vary depending upon the project and the required permits, leases, licenses and authorizations, as well as the amount of environmental information available for a proposed project site. Permits and authorizations generally have timeframes, but these can vary and coordination is often happening in addition to official permit and consultation review, which can add to the time required. In

[28] Marine Waters Planning and Management, RCW 43.372.040(f)

2009, BOEM estimated that an offshore wind leasing process could take up to about 7 to 9 years, and is working to adapt the process to reduce the timeframe.[29]

Other Resources

BOEM/FERC Permitting Guidelines for Outer Continental Shelf:
http://www.ferc.gov/industries/hydropower/gen-info/licensing/hydrokinetics/pdf/mms080309.pdf

Wind Energy Commercial BOEM Leasing:
http://www.boem.gov/Commercial-Leasing-Process-Fact-Sheet/

National Sea Grant Offshore Renewable Energy Regulatory Primer:
http://nsglc.olemiss.edu/offshore.pdf

Marine Renewable Energy Sector Analysis:
http://msp.wa.gov/wp-content/uploads/2014/03/EnergySectorAnalysis.pdf

NEPA Citizen Guide:
http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-CitizensGuide.pdf

[29] Navigant Consulting, Inc. (October 17, 2013) *Offshore Wind Market and Economic Analysis.* Retrieved from page 102 of report. http://www1.eere.energy.gov/wind/pdfs/offshore_wind_market_and_economic_analysis_10_2013.pdf

Appendix A: Pacific Northwest Project Examples

Washington's Past Buoy Project: Makah Bay Pilot

Finavera Renewables Ocean Energy, Ltd. applied for and received a pilot project conditional license from FERC for a floating wave buoy project offshore from Makah Bay. The proposal projected that each of the four wave energy conversion buoys would produce 250 kilowatt maximum, potentially producing 1500 megawatt hours (MWh) per year- enough to power about 150 homes on the Makah Indian Reservation near Neah Bay, Washington. The devices would occupy a 625 x 450 foot mooring area. The proposed project was located within the Sanctuary.[30,31]

The license approved a 3.7 mile transmission cable and an onshore energy hub to transport energy from the turbines to the Clallam County Public Utility District (PUD) once the applicant acquired all state and federal licenses. The Clallam County PUD planned to connect the project to the electrical distribution system and purchase the generated electricity for its delivery within the Clallam County PUD service territory, including the Makah Tribe (see footnotes 30 and 31).

Finavera intended to use the pilot project as a demonstration of the economic and environmental benefits of wave energy conversion to a coastal community. Instead, Finavera surrendered the rights to the project in April 2009. The company stated that it was no longer economically viable to continue the permitting process.[32]

Washington's Tidal Project: Admiralty Inlet

The Snohomish County Public Utility District #1 (SnoPUD) filed for its first preliminary permit with FERC for a tidal energy pilot project in Admiralty Inlet off Whidbey Island, Washington in 2006, which reserved the site while they conducted environmental studies. SnoPUD received a FERC pilot project license in March, 2014. SnoPUD proposed installing two OpenHydro tidal energy turbines at a depth of about 190 feet to operate for three to five years. The Governor's Office for Regulatory Innovation and Assistance (ORIA) helped SnoPUD navigate the permitting process by facilitating coordination among state and federal agencies, researchers, stakeholders, tribes, and developers. Since SnoPUD started taking steps applying for a license in 2007, key environmental issues for the specific project were identified and SnoPUD, along with other agencies and stakeholders, has been working to gather information about the top potential impacts on the area. Findings from these studies were used to prepare the permit applications and plans for the project.[33]

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[30] Order issuing conditioned original license project no. 12751-000. (2007, December 21). Federal Energy Regulatory Commission. Retrieved from https://www.ferc.gov/whats-new/comm-meet/2007/122007/H-1.pdf

[31] Federal Energy Regulatory Commission. (2006). *Preliminary draft environmental assessment* (Draft Environmental Assessment). Washington D.C.: Federal Energy Regulatory Commission. Retrieved from http://www.marinerenewables.ca/wp-content/uploads/2012/11/Preliminary-Draft-Environmental-Assessment-Makah-Bay-Offshore-Wave-Energy-Pilot-Project.pdf

[32] Order accepting surrender of license project no. 12750-006 (2009, April 21). Federal Energy Regulatory Commission.

[33] Tethys. (May, 2014). *Admiralty Inlet Pilot Tidal Project.* Retrieved from http://mhk.pnnl.gov/annex-iv-sites/admiralty-inlet-pilot-tidal-project

Examples of potential impact issues identified:

- Turbine blade strikes on marine mammals and fish
- Noise disturbance and displacement of Southern Resident Killer Whale (SRKW)
- Electromagnetic field effects on SRKW and listed rockfish
- Habitat alteration for listed rockfish
- Navigation impairment by towboats

Studies performed included:

- Baseline conditions including physical environment and benthic habitat
- Acoustic effects on fish and marine mammal observations
- Substrate and water quality surveys

In September 2014, SnoPUD issued a press release stating that they have suspended the tidal pilot project, citing a decision by the U.S. Department of Energy not to share the rising costs of the next stage of the project.[34] However, SnoPUD has not surrendered its FERC license at this time.

Coos Bay WindFloat Pacific project

In May, 2014, the U.S. Department of Energy selected the WindFloat Pacific project to receive up to $47 million in grant funding to plan and permit five deep-water floating wind devices offshore of Coos Bay, Oregon. BOEM issued a determination of no competitive lease interest and is proceeding with the leasing process. The project will be in about 1,200 feet water depth at about 18 miles offshore and is predicted to generate up to 30 MW. A 2 MW WindFloat prototype has been in operation off the coast of Portugal since 2011, where it has delivered over 9 gigawatt hours (GWh) of wind energy to the local grid.[35] The Oregon devices are scheduled to be commissioned in 2017.

Oregon has established a BOEM taskforce which meets regularly to coordinate on the leasing process for the project, to exchange information and data, and to identify various issues, needs, and concerns.

[34] Snohomish County Public Utility District No. 1. (2014, September 30). Press Release: PUD tidal project not to advance. Snohomish County Public Utility District No. 1. Retrieved from http://www.snopud.com/PowerSupply/tidal/tidalpress.ashx

[35] Principle Power (May 7, 2014). *Press Release: U.S. Department of Energy Supports Oregon Offshore Wind with Grant Accelerating Development of WindFloat Pacific Project.* Retrieved from http://www.principlepowerinc.com/news/press_PPI_DOE_DSLCT.html.

Appendix B: BPA and Energy Distribution

What is BPA?

The Bonneville Power Administration (BPA) markets wholesale electrical power from 31 federal hydro projects in the Columbia River Basin, one nonfederal nuclear plant, and several other small nonfederal power plants. BPA also provides ancillary services to help the region maintain and deliver an adequate, efficient, economical, and reliable power supply. BPA owns and operates 75% of the Pacific Northwest's high voltage electrical transmission system including more than 15,000 miles of transmission line and 285 substations.[36] BPA coordinates with owners of the high voltage transmission owned by local utilities through the Northwest Power Pool, Western Electricity Coordinating Council, and Columbia Grid.

How does energy distribution work?

BPA is responsible for transmitting power throughout its service territory including Washington, Idaho, Oregon, western Montana and small parts of eastern Montana, California, Nevada, Utah, and Wyoming. This involves planning and maintaining a balance between creating power and distributing it at the time and location the customer needs it. BPA is also responsible for integrating power created from other sources into the transmission system (or the grid).

The potential for marine renewable energy to connect to BPA's transmission grid will require significant investment by marine and energy developers and the utility community. Typically, the integration of marine renewable energy would be through a connection to a local host utility (e.g. Local Public Utility District) or a BPA substation within BPA's service territory (see footnote 36). The northwest has significant experience integrating large scale land-based wind generation into the grid and is working to improve integration of new renewable energy. Most of this new generation has been accommodated through upgrades to the existing transmission system. Marine renewable energy will require significant transmission investment to connect to the grid because the coastal area is currently the end of the line and not an on ramp for new power production.

Energy Distribution and Permitting

The main role of BPA and local utilities in marine renewable energy development is to purchase and transmit the energy generated from these devices. While these organizations have an interest and role in marine renewable energy planning and infrastructure requirements for energy transmission, they have no direct authority in the siting and permitting of these projects in ocean waters. BPA/local utilities will be involved in permitting and siting for new or upgraded land transmission systems and grid connections for marine renewable energy projects.

[36] Bonneville Power Administration (April, 2014). *BPA Transmission Services*. Retrieved from http://www.globalmarinerenewable.com/images/pdf/Presentations_VII/Infrastructure/John_Schaad_Bonneville_Power.pdf

Washington's Pacific Coast
MSP Actions List
July 9, 2014

The MSP actions list describes the next level of detail for the goals and objectives of Marine Spatial Planning on Washington's Pacific Coast. The actions list describes information and analyses the state will incorporate in the general content of the marine spatial plan (MSP) or in the activities that the state will pursue as part of the process for developing the plan. The list does not include implementation details such as specific methods used.

The term "significant adverse impact" as used below is meant to be the same as it is used in the context of the State Environmental Policy Act (RCW 43.21C) and its rules (WAC 197-11).[1] This law also prescribes the approach to identifying mitigation measures.

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 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.

- 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, reviewing data and maps of their use, 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.

[1] See Revised Code of Washington 43.21C.031; and Washington Administrative Code for definitions of "impact" WAC 197-11-752 and "significant" WAC 197-11-794, and "scope", including types of "impacts" WAC 197-11-792.

- 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.

- 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. Where possible, document information on ecosystem services and values.
- 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.

- 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 all phases of 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.

- Understand potential new uses and their potential 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 bioextraction.
- 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.

Stakeholder involvement, tribal consultation, government coordination and public input throughout process

Stage 1: Pre-Planning

(Fall 2012 - June 2013)

- Define the plan area.
- Map uses & resources
- Identify criteria for adoption into WA CZMP.
- Define management goals & objectives.

Stage 2: Understanding Impacts

(July 2013 – June 2015)

- Complete **SEPA scoping**
- **Sector Analyses:** Understand requirement of each use & predict future uses/needs
- **Ecosystem Assessment**
- **Economic Analysis**
- **Use Analysis:** Identify conflicts and compatibilities (fall 2015)

Stage 3: Developing the Plan

(June 2015 - Dec. 2016

- Select and evaluate Management Strategies and Plan Scenarios
- Develop spatial plan and draft/final EA/EIS (SEPA)
- Develop implementation plan
- Develop Research Agenda?

Stage 4: Finalizing the Plan

(Dec. 2016 --)

- Adopt final plan
- Submit WA MSP to NOAA
- Implement, Evaluate, and Adapt MSP (ongoing)

Use Analysis Process Update
February 25, 2015

Purpose: To provide an update on the Use Analysis Process and introduce the Use Matrix exercise & template.

Background:
At the October 22, 2014 meeting WCMAC agreed to participate in the Use Analysis Process. The attached table outlines these tasks in more detail and the role for agencies and WCMAC in this process. WCMAC can play an important role in advising on the criteria for the process and recommended actions for the outputs of the Use Analysis.

Creating a Marine Spatial Plan requires compiling and evaluating spatial, or mapped, data including existing uses and potential new uses. The state has outlined its approach to this process called a "Use Analysis". The Use Analysis involves three main activities:

- Assessing spatial data
- Performing the spatial analysis
- Identifying recommendations and alternatives

Because the state has access to more detailed, confidential data, the state proposes to produce the Use Analysis using this data, where available and appropriate. The resulting maps would be able to be shared as aggregated outputs when completed.

Use Assessment Matrix Exercise:

The Use Matrix is a tool to help assess the spatial interaction between existing and new uses. It will provide a basis for the inputs to analyzing the GIS data on existing and new uses. It will help WCMAC develop spatial recommendations for potential new uses (summer/fall), including protection of existing uses and sensitive resources.

The matrix will focus on identifying the level of interaction in terms of spatial incompatibilities, or conflict, of potential new ocean uses with existing uses and ecological resources.

- High Conflict:
    - High frequency or intensity of interaction
    - Permanent displacement of high use area
    - Potential for high impacts to highly sensitive area
- Moderate Conflict:
    - Moderate frequency or intensity of interaction
    - Permanent displacement of moderately used area
    - Potential for moderate impacts to moderately sensitive areas
    - Temporary displacement at critical time or place
- Low Conflict:
    - Low frequency or intensity of interaction
    - Permanent displacement of less used area
    - Temporary displacement of less used area
- Unknown:
    - Data does not allow assessment of level of conflicts or compatibility

Use Analysis Process Next Steps:

The table provides the full schedule of tasks for the Use Analysis. At the April 22nd WCMAC meeting:

- Agencies will provide the list of spatial data and how the level of activity was characterized for each category of existing uses.
- WCMAC will review a draft Use Matrix and provide any recommended changes to the draft levels assigned.

Use Analysis Process & Draft Schedule

The draft schedule below shows major proposed tasks in the Use Analysis Process by agencies and WCMAC. It does not indicate additional consultation and coordination with tribes, which the state will pursue throughout the process.

Timeframe	Entity	Process step	Task
Fall 2014	State agencies	Assess Use Data	• Develop list of data for each use category; identify source of data • For uses with little to no data, contact appropriate source/expert and verify sector data. If needed refine use data or adjust display of data.
January 7, 2014? February 25, 2015 April 22, 2015	WCMAC	Spatial Analysis	• Introduce use assessment matrix template • Review and provide feedback on draft use assessment matrix (high/medium/low) and process for spatial analysis.
Winter – Spring 2015	State agencies	Identify Alternatives and Recommendations	• Characterize, for each category of existing uses, the level of activity (high, med, low, unknown). • Identify, for each category & level, the recommended general actions to take, if a project were proposed for that type of area (e.g. do not permit, get more data, or permit the activity).
April 22, 2015 June 24, 2015	WCMAC	Identify Alternatives and Recommendations	• WCMAC members review & provide their recommended actions for each of the 5 potential new uses (matrix); these actions become alternatives.
Fall 2015	State agencies	Identify Alternatives and Recommendations	• Identify pros/cons for each alternative and steps needed to accomplish WCMAC recommendations under existing authorities vs. those that require revisions to current laws and/or authorities.
Sept/Oct (TBD)	WCMAC	Identify Alternatives and Recommendations	• Feedback from WCMAC on alternatives analysis.
Spring 2015 – Dec 2015 **Note: Some data is being generated by current projects & will be available after June 2015 & some data is already available.*	DNR	Spatial Analysis	Perform GIS Analysis: • Overlay a standardized grid on top of use data. • Categorize existing use data (unknown; low, medium, or high use). • Evaluate existing use GIS data in each cell with data on potential new uses. • Outputs provide areas: most existing uses/fewer uses, for which conflict is unknown, with no conflicts, have fixed infrastructure, etc.
Winter 2015-16	State agencies	Identify Alternatives and Recommendations	• Revise alternatives analysis and include WCMAC recommendations and relationship to current laws &/or authorities as part of the draft plan.
Winter 2015-16	State agencies	Identify Alternatives and Recommendations	• Based on above steps, develop draft spatial options for marine spatial plan.

WACD

WASHINGTON ASSOCIATION OF CONSERVATION DISTRICTS

Resolution No. 2014-06

Title: Washington Coast Marine Advisory Council to include representative from WACD and WSCC Staff, adding two new seats.

Problem:

In the creation of the Washington Coast Marine Advisory Council natural resource agencies were included in the formation of the council, however WACD and WSCC were excluded in seating. When dealing with natural resource issues, WACD and WSCC are leaders in solving problems and need to be at the table that represents ¼ of Washington State.

Other agencies that already have seating on the council also are on the Conservation Commission and should not be double up, therefor the WSCC seat should be represented by WSCC staff.

When a similar resource group was created by the office of the Governor, the Marine Resource Advisory Council (MRAC), this problem did not occur.

Recommendation:

WACD and the Washington State Conservation Commission to work with the Washington State Legislature and the Governor's office to add two seats, one WACD and one WSCC Staff, on the WCMAC.

Presented by: Pacific Conservation District

Approved as amended by the Southwest Area Association 10/8/2014

Assigned To: Legislative Committee

Larry Helm, Whatcom
2nd Dave Guenther, Central Klickitat
Passed

RECOMMEND DO PASS.

February 25, 2015

Washington Coastal Marine Advisory Council
Draft Work Plan: Meetings through September 2015

The WCMAC work plan is a living document. It will be continually updated and used as a guide for planning WCMAC meetings. WCMAC members are encouraged to identify agenda requests as early as possible.

Governor's charge to the Washington Coastal Marine Advisory Council is to focus on providing advice for marine spatial planning process through June 2015, particularly:

- Funding priorities for key data gaps and information.
- Information for and expert team review of draft sector analyses.
- Data quality of existing data (by expert teams).
- Issues and concerns for impacts of proposed activities to aid development of scenarios and draft Environmental Impact Statement and Marine Spatial Plan.

Meeting	Information	Advice/Action
Feb 25	• Work Session: Ecologically Important Areas Analysis (WDFW) • Renewable energy issues/concerns discussion • Use Analysis Process – Uses matrix template • Project updates – economic analysis and ecological indicators	• WDFW Ecologically Important Areas analysis
April 22	• Work Session: Ecologically Important Areas Analysis (WDFW) • Use Analysis Process – review draft use matrix and begin discussion of recommended actions • Coast-wide Economic Analysis (consultants) • Report on social science indicators? (WSG/NWFSC)	• WDFW Ecologically Important Areas analysis • Feedback on Uses matrix & process for spatial analysis
June 24	• Use Analysis Process – continue to discuss alternatives and recommended actions • Ecological modeling and seafloor mapping results (NCCOS)? • Discuss framework for research agenda?	• Recommended actions for potential new uses (matrix) – Use Analysis • Process and timeline for research agenda
September 23?	• Use Analysis Process feedback	• Feedback on alternatives analysis (Use Analysis)

Other information needs to fit in:

- Background on spills program and state vs. federal jurisdiction.
- Background on BOEM/FERC roles in planning, licensing/leasing for marine renewable energy.
- Lessons-learned from other planning processes.

Other topics, issues, or recommendations may be addressed through the process set up by the Council and as time and resources allow.

MSP Active Data (2/17/15)	Yellow = Replace or improve	Green = Changes	Meta	Download
Data Being Formatted	**Data owner**	**Notes**		
Area to be Avoided	NOAA Olympic Coast National			
State Parks Areas	Wa Parks Commission			
Energy Suitability				
Tidal Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Deepwater Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Mid-depth Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Nearshore, M3 Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Deepwater Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Mid-depth Energy Devices	PNNL and Parametrix		x	x
Wave Energy: Nearshore, M3 Energy Devices	PNNL and Parametrix		x	x
Wind Energy: Turbines Mounted on Jacket/Tri F	PNNL and Parametrix		x	x
Human Uses: Empirical Evidence				
Aquaculture Districts	Wa Dept. of Fish and Wildlife			x
Commercial Albacore Fishing	Wa Dept. of Fish and Wildlife			
Commercial Dungeness Fishery	Wa Dept. of Fish and Wildlife			x
Commercial Groundfish Fishery	Wa Dept. of Fish and Wildlife			x
Commercial Pacific Whiting (Hake) Fishery	Wa Dept. of Fish and Wildlife			x
Commercial Pink Shrimp Fishery	Wa Dept. of Fish and Wildlife			x
Commercial Salmon Fishery	Wa Dept. of Fish and Wildlife	Broken.		
Commercial Sardine Fishery	Wa Dept. of Fish and Wildlife			x
Commercial Shellfish Growing Areas	Wa Department of Health		x	x
Commercial Waterways (Deep Draft)	Bureau of Transportation		x	x
Crabber and Towboat Lanes	Washington Sea Grant	Added.		
Marinas	Wa Department of Ecology			
Marine Supply	Wa Department of Ecology		x	
Military Practice Areas	NOAA Nautical Charts	Replace with Navy data		x
Ocean Disposal Sites	NOAA Office of Coast Survey	Combine data		x
Population Demographics	US Census Bureau			
Ports	US Army Corps of Engineers	Combined.		x
Public Access	Wa Department of Ecology		x	x
Recreational Albacore Fishery	Wa Dept. of Fish and Wildlife			x
Recreational Bottomfish and Lingcod Fisheries	Wa Dept. of Fish and Wildlife			x
Recreational Halibut Fishery	Wa Dept. of Fish and Wildlife			x
Recreational Salmon Fishery	Wa Dept. of Fish and Wildlife			x
Recreational Shellfish Beaches	Wa Department of Health			
Seafood Processors	Wa Department of Ecology			
Shipping Density	US Coast Guard/TNC			x
Wrecks	NOAA Office of Coast Survey		x	x
Infrastructure				
Beacons	NOAA Office of Coast Survey			x
Buoys	NOAA Office of Coast Survey			x
BPA Transmission Assets	Bonneville Power Administration	Broken.		

MSP Active Data (2/17/15)	Yellow = Replace or improve	Green = Changes	Meta	Download
Confirmed Outfall Locations	U.S EPA	Replace w/Ecology data		x
Marine Structures	Wa Department of Natural			x
Point Source Discharge: Dairy	Wa Department of Ecology		x	x
Submarine Cables	NOAA Office of Coast Survey			x
Marine Boundaries				
Catch Reporting Area	Wa Dept. of Fish and Wildlife			x
Cities	Office of Financial Management		x	x
Coastal National Wildlife Refuges	US DFW		x	x
County Boundaries	Wa Department of Ecology		x	x
Groundfish Essential Fish Habitats	NOAA NMFS	Add "Groundfish" to title		x
Exclusive Economic Zone	NOAA National Ocean Service		x	x
Federal Lease Blocks	Bureau Ocean & Energy Mgmt.			x
Fishing Management Area	Wa Dept. of Fish and Wildlife			x
Marine Protected Area (Fish Inventory)	NOAA NMFS	Remove "Fish Inventory"	x	x
MSP Study Area	Wa Dept. of Natural Resources			
Natural Resources Conservation Areas	Wa Dept. of Natural Resources		x	x
Northwest National Marine Fisheries Service Reg	Bureau Ocean & Energy Mgmt.			x
Olympic Coast National Marine Sanctuary	National Marine Sanctuaries			x
Oyster Reserves	Wa Dept. of Fish and Wildlife	Fixed.		x
Oyster Tracts	Wa Dept. of Natural Resources	Fixed.	x	x
Pacific Fishery Management Council Region	Bureau Ocean & Energy Mgmt.			x
Seashore Conservation Area	Wa Parks Commission	Fixed.	x	x
Shoreline (Ownership Boundaries)	Wa Dept. of Natural Resources		x	x
Washington State ShoreZone Inventory	Wa Dept. of Natural Resources	Separate features, move "Marine Life & Habitat"	x	x
State Owned Aquatic Lands	Wa Dept. of Natural Resources	Fixed.	x	x
Territorial Sea	NOAA National Ocean Service		x	x
Marine Life and Habitat				
Benthic Habitat	The Nature Conservancy			x
Estuaries of Concern	The Nature Conservancy		x	x
Green Sturgeon Critical Habitat	NOAA		x	x
Invasive New Zealand Mud Snails	Wa Department of Ecology		x	x
Kelp	Wa Dept. of Natural Resources	Fixed.		x
Large Marine Ecosystems	NOAA, NMFS			x
Marbled Murrelet Critical Habitat	US Fish and Wildlife Service			x
Rocky Reefs	The Nature Conservancy			x
Salmon and Steelhead Critical Habitat	NOAA	Show sockeye only	x	x
Summer Chlorophyll	The Nature Conservancy			x
Summer Whale Density	Duke University/NOAA SWFSC		x	x

MSP Active Data (2/17/15)	Yellow = Replace or improve	Green = Changes	Meta	Download
Physical Oceanography				
Bathymetry (25m contours)	Oregon State University/TNC			x
Rivers	Wa Department of Ecology			x
Upwelling	The Nature Conservancy			x
Water Quality Monitoring	Wa Department of Health			x
Human Uses: Participatory Mapping	NOAA and Bureau of Ocean and Energy Management			
Extractive/Fishing Uses				
Commercial Dive Fishing				x
Commercial Fishing with Benthic Fixed Gear				x
Commercial Fishing with Benthic Mobile Gear				x
Commercial Intertidal Harvest				x
Commercial Pelagic Fishing				x
Kayak Fishing				x
Recreational Dive Fishing				x
Recreational Fishing From Boats (Benthic Species)				x
Recreational Fishing From Boats (Pelagic Species)				x
Recreational Fishing From Shore				x
Recreational Intertidal Harvest				x
Recreational Subsistence Fishing and Harvest				x
Industrial Uses				
Commercial Shipping				x
Mariculture				x
Marine Debris				x
Military Operations				x
Mining and Mineral Extraction				x
Ocean Dumping				x
Renewable Energy Past Projects				x
Underwater Pipelines				x
Underwater Transmission Cables				x
Non-Extractive Uses				
Beach Uses				x
Cruise Ships				x
Cultural Uses				x
Motorized Boating				x
Paddling				x
Permanent Research Areas				x
Sailing				x
SCUBA/Snorkeling				x
Surface Board Sports				x
Swimming				x
Tide Pooling				x
Wildlife Viewing at Sea				x

MSP Projects Status Report
2012-2015

Mapping projects
Ecosystem assessment projects
Data and technical projects
Stakeholder engagement projects

***Projects updated since the January 2015 meeting**

WASHINGTON STATE DEPARTMENT OF Natural Resources

	Project	Contractor	Project Description	Deliverables	Contract cost	Progress as of February 18, 2015	Status
1	**Nearshore multibeam survey**	DNR and ECY	High resolution multibeam bathymetric and sediment characterization survey of nearshore subtidal, intertidal, and coastal areas around river mouths to assess sediment stability and natural resource limitations to laying power cables	*Summary report on all new data collected including multibeam backscatter, and lidar; *Processed data and data products including maps and images	$ 386,000.00	Ecology and DNR completed multibeam surveys of the northern outercoast rivermouths and surrounding areas (Quillayute and Elwha) and submitted a final report that is available on the project page of the website.	Completed June 2013
2	**Intertidal wave runner survey**	DNR and ECY	Single beam cross-shore transects (wave runner) of intertidal nearshore areas around river mouths and priority nearshore regions. There will be survey transects set up to get a general sense of the bottom types.	*New nearshore bathymetry and beach topography profiles; *A report on data collection and recommendations for future work; *Provision of exisitng bathymetry and beach topography data		Ecology and DNR completed nearshore waverunner bathymetry data collectionin the tributaries in Wahkiakum County, and they surveyed the mouth of the Columbia with the multibeam and waverunners. They and submitted a final report that is available on the project page of the website.	Completed June 2013
3	**Data evaluation and seafloor mapping strategy**	NCCOS Biogeography Branch	Scientific and technical assistance to the state to standardize and evaluate spatial data in support of marine spatial planning. Development of a seafloor mapping strategy for Washington's offshore waters.	*Identification and sharing of useful datasets; *A technical report to evaluate no more than 10 key physical and biological datasets based on how the datasets have been used by other marine spatial planners, potential alternatives, and advantages and disadvantages of using the particular dataset to meet state goals. *Geospatial data viewer for existing bathymetric geospatial data layers; *Strategic planning roadmap for prioritization of bathymetric data colelction.	$ 75,000.00	The Biogeography team provided DNR with a final report that evaluated 10 key physical and biological datasets. They also created a geospatial data viewer for bathymetric data and a blueprint for future phases of spatial prioritization.	Completed June 2013
4	**Seafloor mapping prioritization and marine mammal and seabird modeling**	NCCOS Biogeography Branch	Seafloor mapping and Marine mammal/seabird modeling	*Development of seabird and marine mammal species distribution models; *Evaluation of marine mammal datasets; *Spatial prioritization of outer coast for future seafloor mapping needs	$ 207,000.00	*NCCOS held a seafloor mapping prioritization workshop with scientists and coastal managers on October 27th, 2014 to share the seafloor mapping inventory and discuss the seafloor prioritization process. From January through March 2015, NCCOS will be conducting a web-based excercise for scientists and coastal managers to identify their seafloor mapping priorities. NCCOS is planning a final workshop in May 2015 to finalize the participatory GIS mapping and discuss the results of the prioritization excercise. *NCCOS will be funding the marine mammal species distribution component of the modeling project. The deliverables of this project will be completed in September 2015.	Will be completed June and September 2015
5	**Human use mapping**	NOAA	Mapping human uses through the BOEM/NOAA Pacific Regional Ocean Uses Atlas program	*Two participatory human use mapping workshops in April 2013 held in Aberdeen and Pt. Angeles and *Final maps (funded by NOAA)	$ 6,500.00	Workshops were held in Port Angeles and Aberdeen in April 2013. Data and maps were delivered to DNR during the summer and autumn of 2013.	Completed October 2013
6	**Tribal catch mapping**	Northwest Indian Fisheries Commission	Mapping Tribal Commercial Marine Catch Data	*GIS data layers and shape files of the four Coastal Tribes' tribal commercial catch for the years 1980-2011	$ 65,000.00	The NWIFC collected, analyzed, and reconciled tribal data. NWIFC staff developed GIS layers by management area, species, gear, catch, month and year.	Completed June 2013
7	**Tribal cultural use mapping**	Northwest Indian Fisheries Commission	Mapping tribal traditional and cultural areas: a) Marine fishing areas, b) Intertidal fishing and gathering locations, c) Culturally significant areas/locations	*GIS data layers and shape files of the four Coastal Tribes' traditional fishing and cultural areas along the outer coast		The NWIFC compiled data on utilized and significant species, including species of finfish, shellfish, plants, birds and mammals. Project staff developed a GIS layer of utilized species and sensitive species sites. Staff from the four coastal tribes were consulted to verify and expand upon these GIS layers.	Completed June 2013

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***Projects updated since the January 2015 meeting**

	Project	*Contractor*	*Project Description*	*Deliverables*	*Contract cost*	*Progress as of February 17, 2015*	*Status*
8	**Sanctuary Seafloor Atlas**	Oregon State University	Synthesis and stitching together of benthic habitat data from the northern portion of the Olympic Coast National Marine Sanctuary	*GIS data layers of benthic habitat data in the northern part of the National Marine Sanctuary and a scalable online Seafloor Atlas	$ 50,000.00	The Santuary delivered the data to OSU in October 2014. The OSU team has completed a review of the data in December 2014 to determine how much the data would need to be processed and they have begun processing and analyzing the Sanctuary data. The team will add bathymetry data from the NOAA ships Rainier and Okeanos Explorer to the analysis to ensure the most current data is incorporated. The Sanctuary and OSU will have a conference call in January 2015 to review the data assessment, the initial processing steps, and the plans for the map product.	Will be completed by June 2015
9	**Marine renewable energy suitability study**	Pacific Northwest National Laboratories	Develop marine renewable energy suitability data layer that compiles information on energy resource potential (wave, tidal), energy industry needs, various technology types, and suitability factors such as economic, physical, and infrastructure preferences and requirements.	*Suitability data for wave, tidal, and offshore wind devices; conceptual models for energy device suitability; *8 final concept models (4 wave, 2 tidal, 2 offshore wind) with scoring models for each attribute; database, GIS dataset, and maps showing suitability for up to 8 energy device types; *Presentation to WCMAC and each of the MRCs	$ 100,000.00	PNNL developed suitability models for wave, tidal, and offshore wind energy technologies - these are available on the projects page of the website and the data can be viewed on the mapping application.	Completed June 2013
10	**Oceanographic modelling**	UW Oceanography	Mapping and modeling of coastal oceanographic conditions and trends	*Spatial data on plankton productivity and bottom oxygen levels (hypoxia); *Seasonal maps of speed over the coast; *Map of bottom bathymetry gridded to 1km; *Presentation of relevant data to WCMAC as needed	$ 211,000.00	The UW team finalized models using the oceanographic data and formatted the data into GIS layers. These models and data were provided to DNR and the summary report can be found on the projects page of the website.	Completed June 2013
11	**Pacific County mapping**	UW Olympic Natural Resources Center	Pacific County projects - mapping shellfish growing areas, mapping beneficial use areas, mapping invasive species, mapping shoreline designations, integrating seafloor mapping and shellfish areas	*GIS data on commercial, private, tribal, and public shellfish growing areas; *GIS layers of beneficial use areas; *GIS data of invasive species (spartina, knotweed, japanese eelgrass, burrowing shrimp); *shapefile of shoreline designations; integration of existing seafloor mapping data	$ 76,000.00	The ONRC digitized the Shoreline Environmental Designation maps from Pacific County; generated a spreadsheet of all relevant datasets currently in our archives and have contacted local collaborators to compile as wide a list of readily available datasets as possible; and are assisted the UW Coastal Study Group in converting their model output into ARC GIS format.	Completed June 2013
12	**Student economic baseline project**	UW Program on the Environment	Marine economic baseline for the coast - basic update and assessment of current status of coastal marine based economy	*Final report that provides a high level look at the marine based economy of the outer coast; *webinar of the study findings available to the public; *project website with webinar presentation and downloadable copies of reports generated by the project	$ 150,000.00	The student team completed their project, which included interviewing coastal stakeholders, compiling economic data from the coastal counties, developing a project website, and writing a report with recommendations. The report can be found on the project website at http://wa-working-coast.wix.com/wa-workingcoast.	Completed April 2013
13	**Commercial fishing mapping**	WDFW	Mapping Commercial Fishing and Fish and Wildlife Resources	*Comprehensive GIS maps of coastal commercial fishing activities	$260,000.00 *includes year 1 forage fish survey	Data collected and incorporated into the MSP mapping tool.	Completed June 2013
14	**Recreational fishing mapping**	WDFW	Mapping recreational fishing data	*GIS data layers and maps of fishing locations and areas of importance (for specific trip types) for recreational fisheries		Data collected and incorporated into the MSP mapping tool.	Completed June 2013

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	Project	Contractor	Project Description	Deliverables	Contract cost	Progress as of February 18, 2015	Status
15	**Forage fish mapping**	WDFW	Mapping forage fish distribution	*GIS map of forage fish distribution based on approximately 500 spawning beach surveys; *2012-2014 Forage fish survey GIS layers; *first year survey report; *final report	$ 350,000.00	WDFW submitted the forage fish survey and data to DNR in mid-January. It was reviewed by the participating tribes prior to submission. WDFW and the tribes found that smelt eggs are deposited and/or distributed on the outer coast across a broad tide range, unlike Puget Sound where eggs are deposited along a narrow substrate band near the high tide mark. A suite of beach physical characteristics have been correlated to egg abundance and survival. The final report is available on msp.wa.gov at http://msp.wa.gov/wp-content/uploads/2014/02/ForageFishReport.pdf.	Completed January 2015
16	**Seabird and marine mammal database**	WDFW	Create seabird and marine mammal geodatabase	*Seabird colony and haul out geodatabase data layers; *species density GIS layers; *coastal winter bird abundance GIS layers	$ 74,000.00	WDFW staff obtained, verified, and integrated data into the WDFW seabird catalog from various sources and provided the data to the NOAA Biogeography Team in September. Additionally, staff have delineated marine mammal haulout sites using data from 1998 through 2014 for the Columbia River, outer coast, and Puget Sound. WDFW is using these seabird and mammal data in developing the EIA, and they are in the process of completing the final report for this project.	Will be completed by June 2015
17	**Marine mammal aerial surveys**	WDFW	Conduct marine mammal aerial surveys	*Pinniped haul out and sea otter concentration areas GIS layers and *final report	$ 77,000.00	WDFW staff conducted several surveys throughout the coastal area during the summer and fall of 2014. They completed the process of reviewing video and counting digital images, which was time-intensive, and they are error-checking the data to finalize maps for the portal.	Will be completed by June 2015
18	**Ecologically important areas**	WDFW	Identify Ecologically Important Areas	*Map and analysis of Ecologically Important Areas off the Washington coast	$ 149,000.00	WDFW staff met with the Tribal Technical Group and led a discussion with the WCMAC Science Panel in November 2014 to describe data they have and are lacking for fish, wildlife, habitat, connections/relationships, and ecological effects and to solicit input on how to develop criteria to use the existing data to identify these areas. The WDFW team is categorizing the data for various fish and wildlife, some of which is more robust and/or at a refined scale than others. From this, they will develop a suite of preliminary maps, which they shared with the Tribal Technical Group and the State/Tribal policy level group in early February 2015. They will present preliminary maps at the WCMAC meeting on February 25th.	Will be completed by June 2015
19	**Shipping sector analysis**	BST Associates	Sector analysis	*Sector analysis report for shipping	$ 15,000.00	Contractor presented draft findings at July 2014 WCMAC meeting. Project is now completed.	Completed August 2014
20	**Recreation/tourism, fishing, renewable energy, and aquaculture sector analysis**	Industrial Economics	Sector analyses	*Sector analysis reports for recreation/tourism, fishing (commercial/recreational), marine renewable energy, and aquaculture	$ 60,000.00	Contractor presented draft findings at July 2014 WCMAC meeting. With the exception of the aquaculture sector report, the project was completed in August 2014. The contract was amended to allow the contractor to conduct interviews with 4-5 additional members of the aquaculture industry, and the aquaculture sector analysis was completed in October 2014.	Completed October 2014
21	**Ecosystem indicators: phase I**	NOAA Northwest Fisheries Science Center	Ecosystem indicator and conceptual models; ecosystem indicator workshop	*Ecosystem indicator workshopto result in a broad understanding of ecosystem indicators; *a draft conceptual model; *a process for establishing indicators; *identification of information gaps	$ 50,000.00	This workshop was held for scientists and managers on May 13th, 2013. The Northwest Fisheries Science Center developed draft conceptual models of the marine waters of the Washington coast, a list of potential ecosystem indicators, and a process for evaluating candidate indicators.	Completed June 2013
22	**Ecosystem indicators: phase II**	NOAA Northwest Fisheries Science Center (NWFSC)	Ecosystem Indicators and Modeling	*Conceptual models for Washington coastal and estuarine habitats; *candidate indicators for the coast and estuaries; *maps linking habitat attributes and indicators on the seascape; *presentations to SOC and WCMAC; *report on status and trends of ecological indicators; *PDFs of each model and map	$ 250,000.00	The scientists at the NWFSC have created new conceptual model graphics (all habitat types to be completed soon), received and incorporated feedback on coastal estuary indicators, and calculated weightings for indicator evaluation criteria. The NWFSC has begun the status and trends assessment by assembling time series data across all components of each habitat. See attached for details and graphics.	Will be completed by June 2015

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	Project	*Contractor*	*Project Description*	*Deliverables*	*Contract cost*	*Progress as of February 18, 2015*	*Status*
23	**Social science indicators**	Washington Sea Grant	Social science indicators and conceptual model development	*Document analysis of local human values and activities; *candidate social science indicators and draft conceptual model; *ecosystem assessment outreach materials	$ 93,000.00	Social Indicators lead, Melissa Poe, met with the science panel expert with the plan for selecting and evaluating indicators. In January, the social indicator team will begin the indicator evaluation phase for each of the 4 coastal counties. A comprehensive set of quantitative social indicators will be assessed from existing data (on aspects such as basic conditions, health, education, infrastructure, safety, government, housing, access to social services, social cohesion, use of natural resources) for each of the counties. Draft summaries of indicator performance will be presented to communities in each county in early Spring with opportunities to provide input and feedback. After panel review, final reports will be written and submitted in June 2015.	Will be completed by June 2015
24	**Economic analysis**	Cascade Economics	Economic analysis of the Washington coast	*Scoping process and *economic analysis with details TBD	$30,000 plus TBD	Cascade Economics gathered publicly available data to being the profiles of the Washington coast and of the tribal communities. They are analyzing commercial fishing data from WDFW and began focus group interviews with vessel operators with a meeting on February 19th in Illwaco. The contractors are developing a profile of aquaculture production and processing and had focus group meetings with growers and processors on January 16th and February 16th. The recreational fishing profile is under development using WDFW and public data, and are further supported by meetings with charter boat operators that occurred the week of February 16th. Additional details about these and other components of the eonomic analysis are attached.	Will be completed by June 2015
25	**Recreational use study**	Surfrider	Recreational Use Study	*A baseline characterization of coastal recreation participation rates and trip expenditures and *a spatial baseline of coastal and ocean recreation use patterns on the outer Pacific coast of Washington	$ 170,000.00	Presented project to Pt Angeles Chamber of Commerce in December 2014 and project was covered in Peninsula Daily News; planning outreach presentations with WA Sea Grant and the Olympic Coast National Marine Sanctuary; analyzing opt-in spatial and survey data; finalized ecosystem services value survey for the 2nd panel survey; and launched 2nd panel survey to 3,000 participants.	Will be completed by June 2015
26	**MSP mapping tool**	DNR	MSP mapping tool - provide a decision support tool to access data.Viewable in a map format and accessible without GIS expertise.	*An interactive map system, accessible through the website to view and manipulate GIS data layers; *subscription to ArcGIS Online to allow for secure users	$ 130,000.00	The state completed its first wave in the development of the mapping application in June 2013 and is now working on functionality. In April 2014, the state hosted a webinar on how to use the mapping tool.	Phase I complete. Further development Will be completed by June 2015.
27	**Data catalog**	DNR	GIS data catalog for Marine Spatial Planning to provide access to raw datasets and complete metadata for data that are in the mapping tool	*A data catalog for accessing MSP datasets	$ 150,000.00	The data catalog allows users to access and download the datasets that populate the mapping application. New data becomes available on the data catalog when it is added to the mapping application. The data catalog is available on the Explore page of the website.	Phase I complete. Further development Will be completed by June 2015.
28	**MSP website**	DNR	Public website for Washington marine spatial planning (with TNC)	*A public website with all relevant information about MSP in Washington - including news, projects, background documents, and upcoming events		The website was launched and demonstrated to the WCMAC in April 2013. Updates and edits to the website content are ongoing.	Completed June 2013
29	**Website management and planning support - project position**	DNR	Coastal and marine planner position	*Website management; *mapping tool outreach; *planning support	$ 177,000.00	Position in place since January 2014. Planner has made updates and improvements to the website, conducted contextual research, developed draft outreach materials, and participated in the state planning team. Planner has tracked down datasets to fill data gaps including the crabber tow boat lanes, state and federal boundaries, oceanography data, albacore tuna data, and others.	Will be completed by June 2015

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	Project	Contractor	Project Description	Deliverables	Contract cost	Progress as of February 18, 2015	Status
30	**Plan research and development - project position**	ECY	Plan research and writing position	*Research for plan development (ie. providing socioeconomic use and environmental contexual information) and *draft chapters of the plan	$ 100,000.00	Position began in mid-June 2014.	Will be completed by June 2015
31	**Identification of data standards and gaps**	Washington Sea Grant	Facilitation of scientific input from issue based groups to provide technical input on development of data tools	*Identification of area-specific experts; *formation of technical committee to provide scientific feedback; *teaching of a course on MSP that utilizes expertise of UW experts and graduate students to provide feedback on data standards and data gaps	See WA Sea Grant items in yellow	Washington Sea Grant organized a graduate course for the Spring 2013 quarter in which the students looked at existing and new data, and contacted issue area experts to review the data and identify data gaps. Students reported to the state agencies and the WCMAC in June 2013. The report is available on the projects page of the website.	Completed June 2013
32	**Scientific input coordination**	Washington Sea Grant	Science coordination through a Science Advisory Panel	*2 - 4 Science Advisory Panel meetings per year and *ongoing feedback from the Science Advisory Panel	$ 60,000.00	On November 25, 2015, Washington Sea Grant convened the science panel via webinar to solicit feedback on WDFW's methods and approach to identifying ecologically important areas off Washington's coast. On January 20, 2015, Sea Grant will hold a second meeting with WDFW to review the ecologically important areas project . Sea Grant also convened the secience panel on December 19, 2014 to discuss the approach to developing the social indicators.	Will be completed by June 2015
33	**Website and data catalog development and data tool outreach**	The Nature Conservancy	Data tool outreach and training to stakeholders and tribes; assitance with website and data catalog development; participation in technical and planning committees	*TNC participation on GIS tool development committees; *design and launch of public website; *integration of data catalog into the website; *outreach on the GIS tool; *data from TNC's Pacific Northwest Coast ecoregional assessment	See Nature Conservancy item in green	TNC worked with DNR, Ecology, and the rest of the State Ocean Caucus on planning tool development, the website, and outreach throughout 2013. TNC and Ecotrust designed and launched the website, and collaborated with the state to help develop the mapping application.	Completed June 2013
34	**MRC workshops on goals and objectives**	The Surfrider Foundation	Coastal marine resource committees (MRCs) workshops to gather community input on the MSP goals and objectives, with staff support from Surfrider and The Nature Conservancy.	*Summary report that captures input from the public that can inform the MSP goals and objectives setting process, and will be available as a public record.	$ 19,000.00	The MRCs conducted outreach in April 2013 and Surfrider produced a summary report that is available on the project page of the website.	Completed June 2013
35	**MSP 101**	Washington Sea Grant	Coordination of MSP short course (MSP 101)	*MSP outreach materials and standard curriculum and *outreach activities on the coast	$ 125,000.00	In 2013, Washington Sea Grant produced outreach materials and conducted a series of MSP 101 outreach events in coastal communities.	Completed June 2013
36	**Goals and objectives workshops**	Washington Sea Grant	Coordination and faciliation of work sessions to draft marine spatial planning objectives	*Coordination and planning of a series of three workshops to engage stakeholders in the development of objectives for the MSP process		Washington Sea Grant held three objective setting workshops in the spring of 2013. The final workshop report is available on the projects page of the website.	Completed June 2013
37	**General MSP outreach**	Washington Sea Grant	Coordination and facilitation of marine spatial planning outreach	*Summary of 2012-2013 outreach activities; *10 public outreach meetings; *10-15 MSP short courses; *outreach materials; *summaries of outreach meetings	$ 149,000.00	Sea Grant is planning conducted outreach meetings with the Westport/Grayland Chamber, the WIllapa Harbor Chamber, Puget Sound Anglers, Gary Grahn and the recreational anglers, and the Long Beach Visitor's Bureau, and Friends of Willapa NWR. At these meetings, Sea Grant is distributing MSP brochures and FAQs. Sea Grant staff are coordinating separate research presentations with scientists and MRCs: 3 social indicator workshops in April and May, an ecological indicator presentation in April, 2 recreational study presentations in April, and 1-2 fisheries open houses. Kevin Decker has organized 2 viewings of Ocean Frontiers II, March 17th in Aberdeen and March 24th in Ilwaco.	Will be completed by June 2015

Marine Spatial Planning Economic Analysis

Cascade Economics

Status of the Studies (17 February 2015)

The Team is responsible for ten different tasks, all focused on developing a profile of the economy of the coast and tools for analyzing impacts. Among those tasks are the following:

- **Economic Profile of the Washington Coast** – We are in the process of collecting economic and demographic statistics from public sources, and reviewing published reports. We are also preparing profiles of the five participant counties, including some details of individual communities.
- **Economic Profile of Tribal Communities** – We have collected public information on tribal communities and their economies, and have made contact with the five affected coast tribes (Hoh, Makah, Quileute, Quinault, and Shoalwater Bay). We anticipate two or three on-site meetings during the week of February 23, additional ones to follow.
- **Economic Models** – Regional impact models are being constructed to measure the economic contribution (sales, income, jobs) of key sectors to (1) the overall economy of the coast, and (2) contribution to the state. Key sectors being analyzed include: commercial fishing, shellfish aquaculture, recreational fishing, and recreation and tourism.
- **Commercial Fishing (Tribal and Non-Tribal)** – We recently (late January) obtained from WDFW commercial landings data by species and port, and are in the process of sorting and analyzing the data. This will be enhanced and adjusted by direct focus group interviews; one took place on Thursday, February 19, in Ilwaco with five or six vessel operators.
- **Shellfish Aquaculture** – We are in the process of developing the profile of aquaculture production and processing, enhanced largely by focus group meetings with growers and processors. One meeting took place in South Bend on January 16th. A second meeting took place with six growers the week of February 16th.
- **Recreational Fishing** – We are developing a profile of the recreational fishing sector, including angler participation, spending patterns, and support businesses. We have obtained WDFW data for analysis. Two meetings with charter boat operators took place the week of February 16th.
- **Recreation and Tourism** – We are developing a profile of recreation and tourism, including groupings of outdoor and non-outdoor recreation, and participation rates and spending patterns. Our team has reviewed approximately 30 reports so far. We are also coordinating with Surfrider on their recreation study; they have said their data will be available soon.
- **Ecosystem Services** – We are in the process of collecting and reviewing a number of existing studies, some with particular relevance to the Coast, and others that are coast-based but reference studies conducted elsewhere.

- **Social and Cultural Profiles** – We are coordinating with the concurrent “Social Indicators” effort being conducted by Sea Grant (Melissa Poe), and plan to meet in mid-late February to identify areas that remain to be addressed.

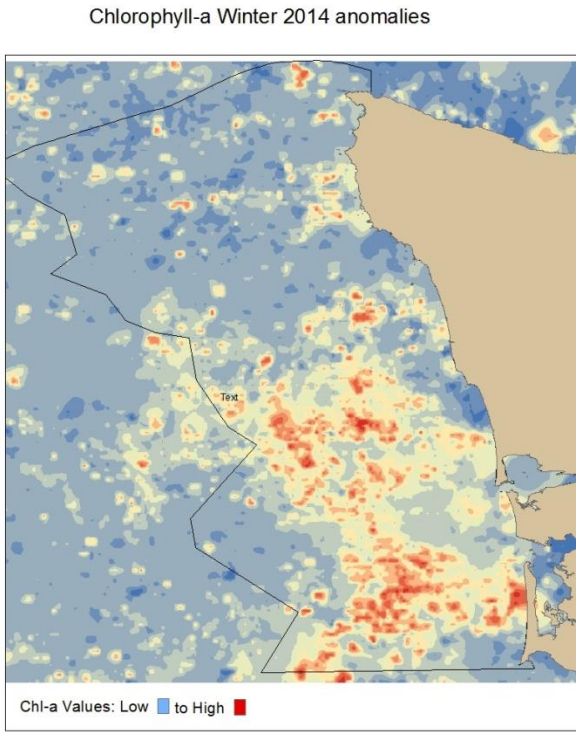
Update on development of ecosystem indicators for Washington State MSP

Kelly S. Andrews, Jill Coyle, and Chris J. Harvey, NOAA's Northwest Fisheries Science Center

Conceptual models and indicator development

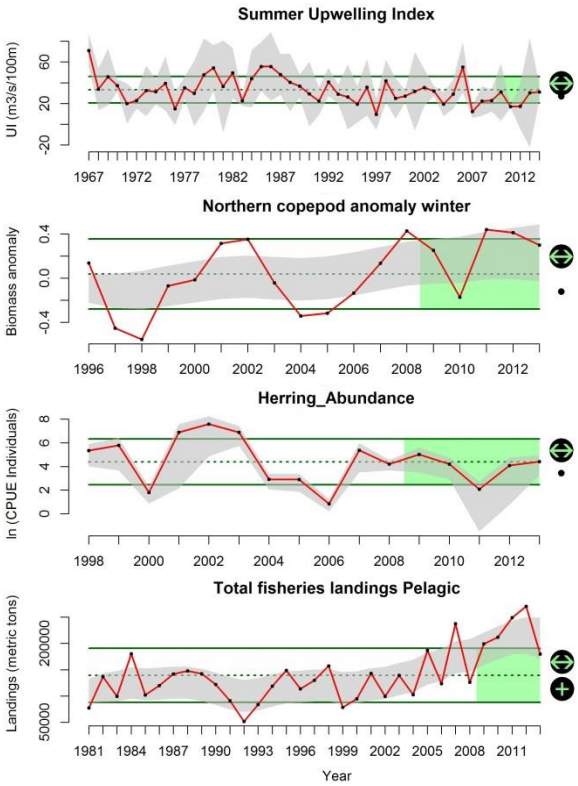
Indicators of environmental drivers, habitat quantity and quality, population size and condition of fisheries and focal species, broad-based food web processes, and human activities within each of the six coastal habitats (coastal estuaries, rocky shorelines, sandy beaches, kelp forest, seafloor, and pelagic zone) continue to be evaluated and we are on track to be completed by June 30, 2015. A few specific items we completed since last presenting to WCMAC include:

1. Developing better conceptual model graphics for each habitat (see attached conceptual models for the rocky shorelines habitat). All habitats to be completed soon.
2. Presented and received feedback during a webinar describing our indicator selection framework and potential indicators for coastal estuaries.
3. Calculated indicator evaluation criteria weightings from responses from 35 scientists and managers familiar with Washington State ecosystems.

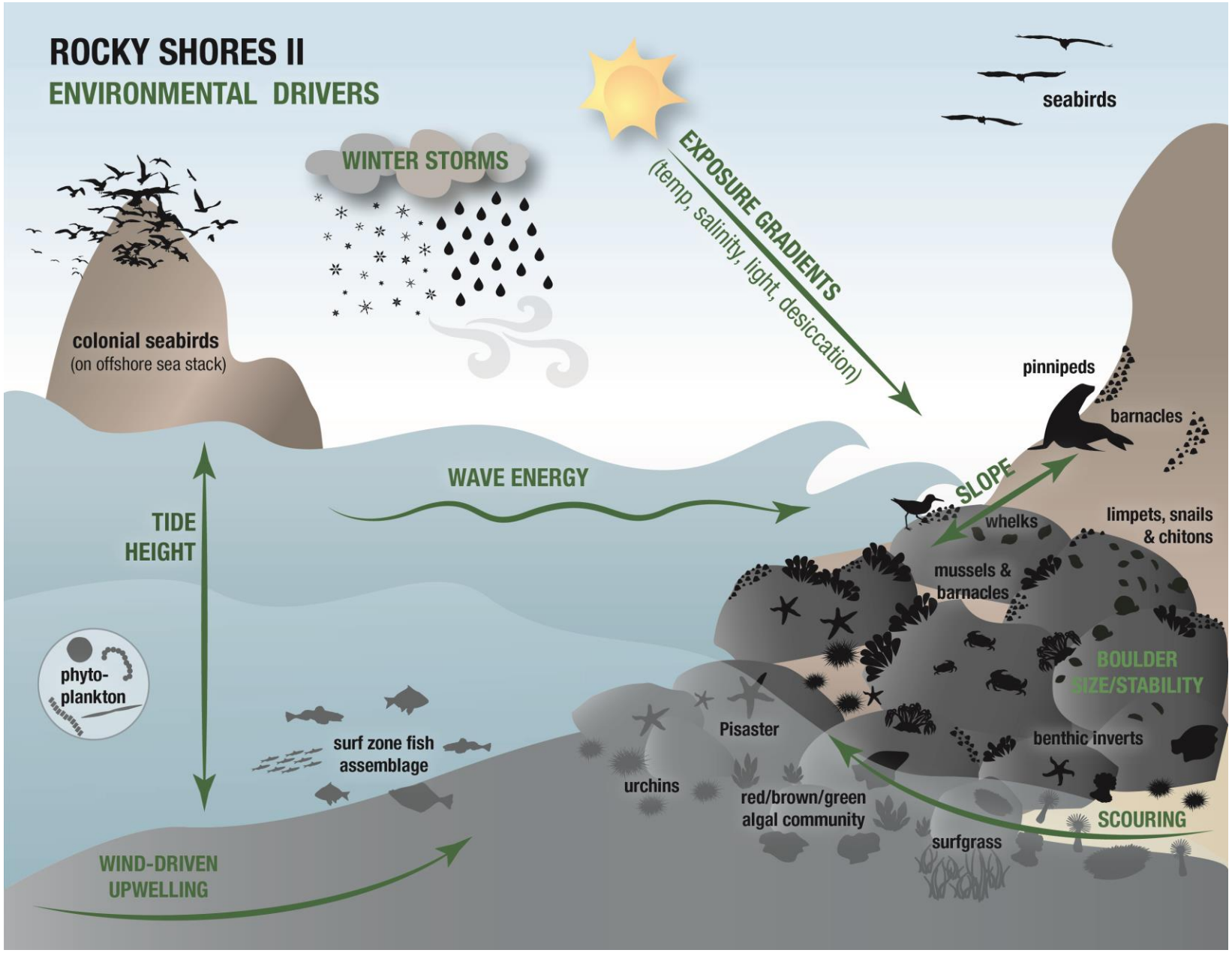


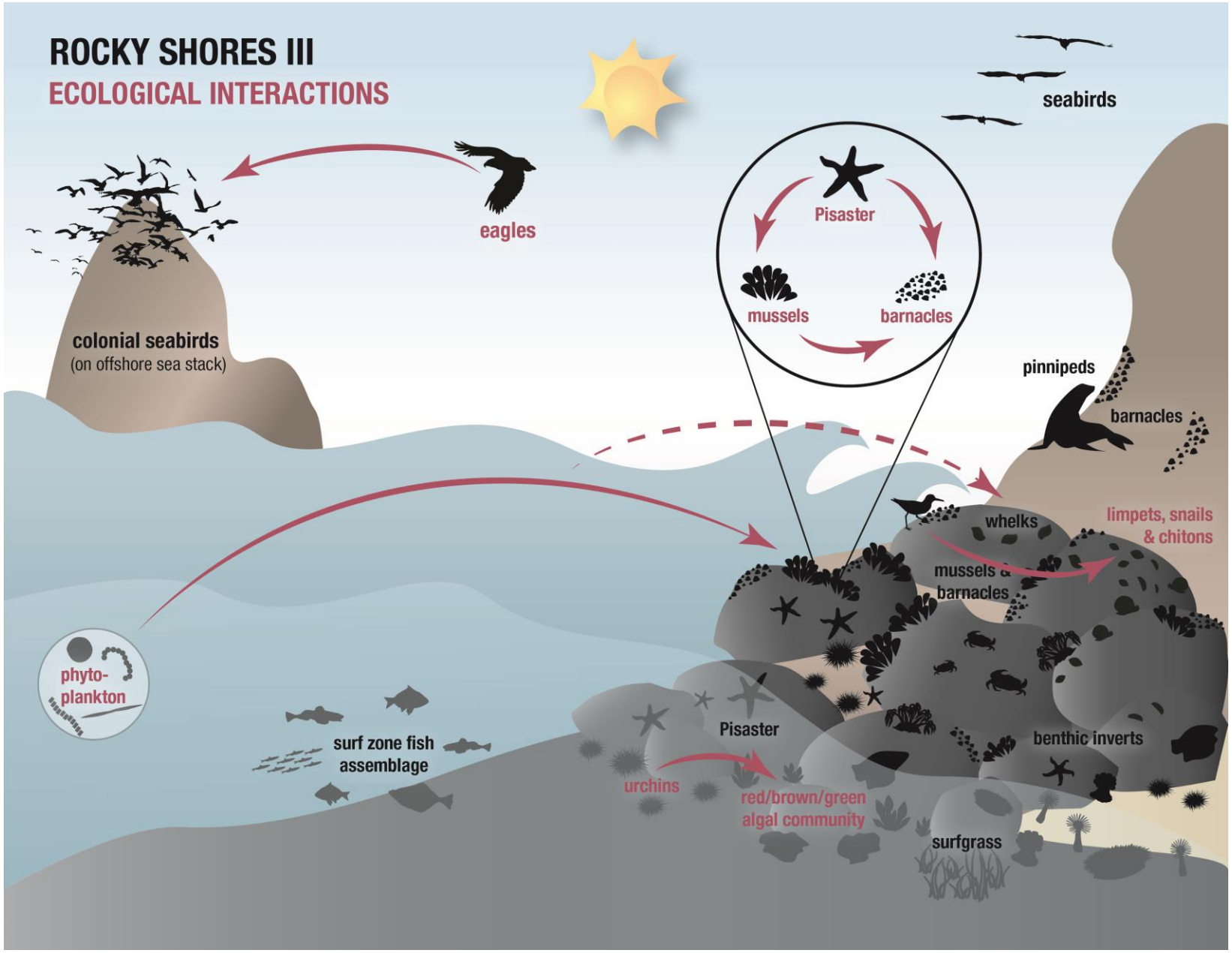
Status and trends assessment

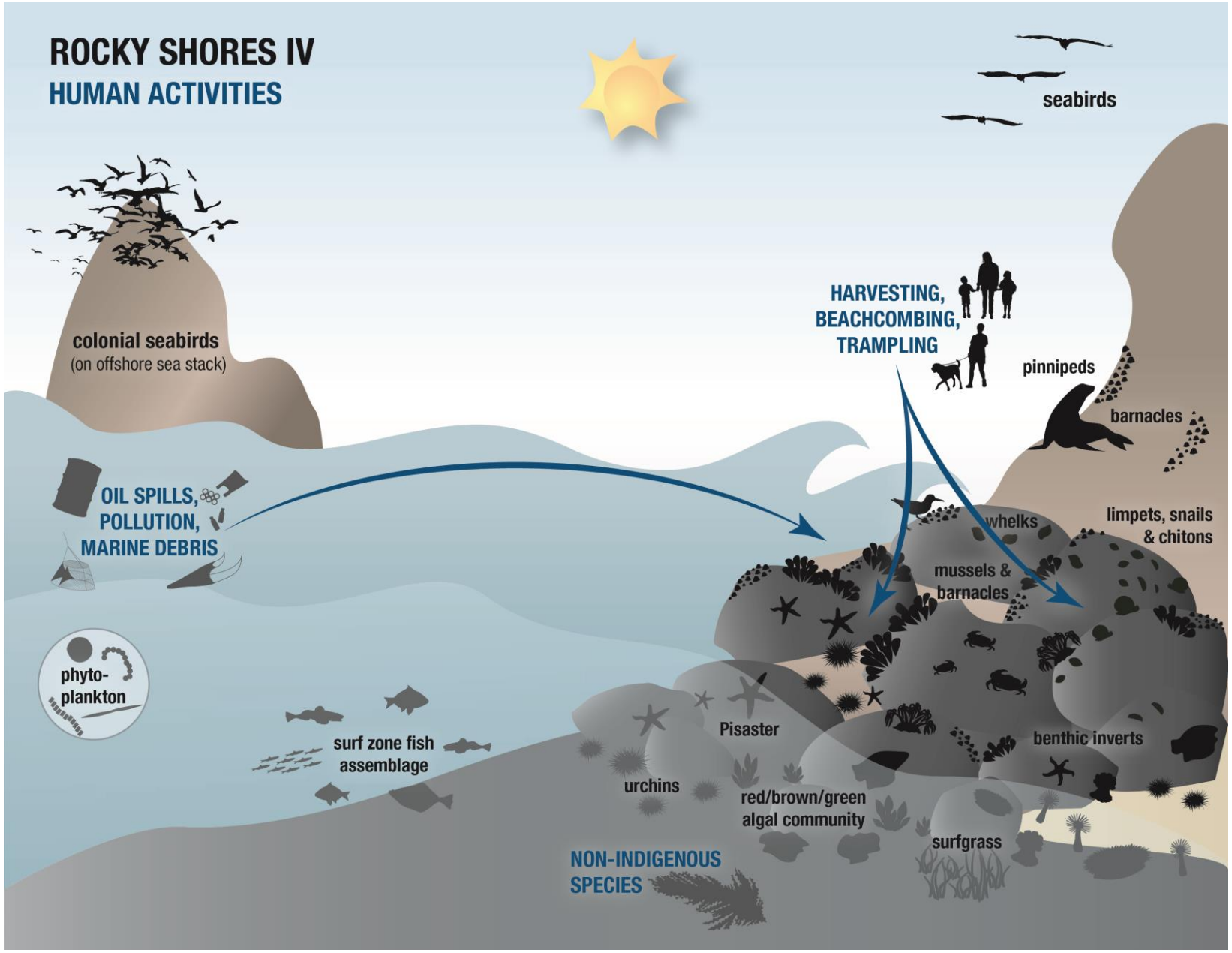
Time series data are currently being assembled across all components of each habitat. Examples of status and trends for a few of the highly-ranked indicators in the pelagic habitat are shown below. Most indicators are temporal only and are meant to convey information across all WAMSP waters for that habitat type. Some indicators have both spatial and temporal data suitable to calculate status and trends (see chlorophyll-a figure above, though status and trends will be added to this figure in the final assessment).



Figures. Time series of indicators for Washington State MSP pelagic habitats (ALL TIME SERIES DATA ARE PRELIMINARY). Dark green horizontal lines show the mean (dotted) and ± 1.0 SD (solid line) of the full time series. On the right side of each graph, the upper symbol indicates whether the trend over the last five years increased (↗) or decreased (↘) by more than 1.0 SD, or was within 1.0 SD (↔) of the long-term trend, and the lower symbol indicates whether the mean of the last five years was greater than (+), less than (-), or within (•) 1.0 SD of the long-term mean. Gray shading represents error associated with each of the time series data. Note differences in years of data available for each indicator.


ROCKY SHORES II
ENVIRONMENTAL DRIVERS
WINTER STORMS
EXPOSURE GRADIENTS
(temp, salinity, light, desiccation)
seabirds
colonial seabirds
(on offshore sea stack)
pinnipeds
barnacles
WAVE ENERGY
SLOPE
TIDE HEIGHT
whelks
limpets, snails & chitons
mussels & barnacles
phyto-plankton
BOULDER SIZE/STABILITY
Pisaster
benthic inverts
surf zone fish assemblage
urchins
red/brown/green algal community
SCOURING
surfgrass
WIND-DRIVEN UPWELLING


ROCKY SHORES III
ECOLOGICAL INTERACTIONS
seabirds
eagles
Pisaster
mussels
barnacles
colonial seabirds
(on offshore sea stack)
pinnipeds
barnacles
whelks
limpets, snails
& chitons
mussels &
barnacles
phyto-
plankton
surf zone fish
assemblage
Pisaster
benthic inverts
urchins
red/brown/green
algal community
surfgrass


ROCKY SHORES IV
HUMAN ACTIVITIES
seabirds
colonial seabirds
(on offshore sea stack)
HARVESTING,
BEACHCOMBING,
TRAMPLING
pinnipeds
barnacles
OIL SPILLS,
POLLUTION,
MARINE DEBRIS
whelks
limpets, snails
& chitons
mussels &
barnacles
phyto-
plankton
Pisaster
benthic inverts
surf zone fish
assemblage
urchins
red/brown/green
algal community
surfgrass
NON-INDIGENOUS
SPECIES