

WASHINGTON COASTAL MARINE ADVISORY COUNCIL MEETING

AGENDA

Wednesday, June 12, 2019 9:30 am – 3:30 pm

Location: Port of Grays Harbor Commissioners Chambers, 111 S. Wooding St. Aberdeen, WA

Call-in Instructions: Dial 712-770-4598; Access Code: 575383#

Coffee and Treats: Breakfast refreshments will be served at 9:15. Please come early to enjoy them. **The meeting will start promptly at 9:30 a.m.**

Time	Agenda Item (Action items are marked with "1")	Objective (Information, Discussion, Action?)	Presenter(s)
9:30 (15 min)	Welcome & Introductions, Agenda Review <ul style="list-style-type: none"> • Welcome and Introductions • Review agenda ! Adopt summary of March meeting 	Information <i>Reference Materials:</i> <ul style="list-style-type: none"> • Agenda • Draft Meeting Summary 	Garrett Dalan, WCMAC Chair Susan Gulick, Facilitator
9:45 (45 min)	Coastal Updates <ul style="list-style-type: none"> • MRC Updates, Agency Updates, Budget update, MRAC and General Coastal Updates 	Information	WCMAC Members Susan Gulick, Facilitator
10:30 (90 min)	Ruckelshaus Center COHORT Project <ul style="list-style-type: none"> • Update on findings from study • Reminding Key questions • Next Steps 	Information, Discussion <i>Reference Materials:</i> <ul style="list-style-type: none"> • COHORT Scope of Work • Implementing the Coastal Hazards Organizational Resilience Team 	Phyllis Shulman & Tye Ferrell Ruckelshaus Center
12:00 (15 min)	Work Group and Other Updates <ul style="list-style-type: none"> • Economic Workshop • Coastal Resilience Work Group • MSP Implementation Work Group • Other updates 	Information	Rod Fleck, WCMAC Member Bobbak Talebi, Ecology
12:15 (15 min)	Morning Public Comment	Information	Public/Observers
12:30	LUNCH		
1:15 (45 min)	Ecological Indicator Selection for Olympic Coast National Marine Sanctuary's 2020 Condition Report <ul style="list-style-type: none"> • Update from Jenny Waddell of NOAA • WCMAC Discussion 	Information, Discussion	Jenny Waddell, NOAA
2:00 (45 min)	Update on the Economic Dashboard for Coastal WA <ul style="list-style-type: none"> • Overview Kevin's current work • WCMAC Discussion 	Information, Discussion <i>Reference Materials:</i> <ul style="list-style-type: none"> • wacoasteconomist.com 	Kevin Decker, Sea Grant
2:45 (15 min)	WCMAC Workplan <ul style="list-style-type: none"> • Agenda Topics for Next Meeting • Agenda Topics for Future meetings 	Information, Discussion <i>Reference Materials:</i> <ul style="list-style-type: none"> • WCMAC Workplan 	WCMAC Members Susan Gulick, Facilitator
3:00 (15 min)	Afternoon Public Comment	Information	Public/Observers
3:00 (15 min)	Other Issues <ul style="list-style-type: none"> • Reminder of Dates and Times for Future Meetings • Other issues or announcements 	Information	WCMAC Members Susan Gulick, Facilitator
3:30	Adjourn		Garrett Dalan

Upcoming WCMAC Meetings

- Wednesday, September 18, 2019
- Wednesday, December 11, 2019

Meetings are held in Aberdeen unless otherwise noted

WASHINGTON COASTAL MARINE ADVISORY COUNCIL MEETING

Draft Summary

Wednesday, March 27, 2019 9:30 am – 3:30pm

Location: Port of Grays Harbor Commissioners Chambers, 111 S. Wooding St., Aberdeen, WA

All meeting materials and presentations can be found on the WCMAC website:

<http://www.ecy.wa.gov/programs/sea/ocean/advisorycouncil.html>

Council Members Present	
Brian Sheldon, Shellfish Aquaculture	Larry Thevik, Commercial Fishing
Crystal Dinger, Citizen	Mara Zimmerman, WA Coastal Salmon Partnership
Dale Beasley, Commercial Fishing	Mike Passmore, Wahkiakum MRC
David Fluharty, Educational Institution	RD Grunbaum, Conservation
Doug Kess, Pacific MRC	Russell Callender, WA Sea Grant
Garrett Dalan, Grays Harbor MRC	Randy Lewis, Ports
Jeff Ward, Coastal Energy	Rich Osborne, Science
Jay Carmony, State Parks	Rod Fleck, North Pacific MRC
Jennifer Hennessey, Governor's Office	Sally Toteff, Dept. of Ecology
Joshua Berger, Dept. of Commerce	

Council Members Absent	
Alla Weinstein, Energy	Michal Rechner, DNR
VACANT, Shipping	Mike Cassinelli, Recreational Fishing
Corey Niles, WDFW	Tiffany Turner, Economic Development

Others Present (as noted on the sign-in sheet)	
Bobbak Talebi, Dept. of Ecology	Marie Novak, Cascadia Consulting, Note-taker
Casey Dennehy, Dept. of Ecology	Phyllis Shulman, Ruckelshaus Center
Gus Gates, Surfrider Foundation	Susan Gulick, Sound Resolutions, Facilitator
Jackson Blalock, WA Sea Grant	Tye Ferrell, Ruckelshaus Center
Kevin Decker, WA Sea Grant	

Welcome and Introductions

Garrett Dalan welcomed everyone to the meeting. All attendees introduced themselves and were invited to provide updates. Susan Gulick reviewed the agenda. Mara Zimmerman is the new Executive Director for the Washington Coastal Salmon Partnership and is taking over Jessica Helsley's position.

December Meeting Summary

- Garrett asked for edits to the December meeting summary. Corrections/clarifications included:
 - Spelling corrections for Jay Carmony's name on page 6, and Russell Callender's name on page 1.
 - Change "taking out" to "impacting" in last bullet of page 3.
 - Strike "offshore" from Dale's comment under discussion and questions on page 5.
 - Change "explained" to "stated" on bullet 1, sub-bullet 1 of Rich's comment on page 8.
- ! The December Meeting Summary was adopted with above noted changes.

Coastal Updates

MRC Updates

- Pacific MRC is hosting a Science Conference April 27. They have several notable speakers lined up to talk about epigenetics, use of drones to identify vegetation, and the ecology of Willapa Bay. They are considering hosting a second Science Conference in the fall after fishing season.
- Grays Harbor MRC has a new Chair, Sarah Bisson from the City of Ocean Shores, and Vice Chair, Kyle Deerkop from Coast Seafoods. All MRCs are working on closing out projects for fiscal deadlines. The MRC will be hosting tide pool tours for approximately 300 students in May.
- Wahkiakum MRC is offering several fish processing, refrigeration, and marketing courses. They are also offering a workshop on wild food foraging April 6, which is sold out with a long wait list.
- North Pacific MRC is sponsoring RainFest April 19-20, 26-28 which will include a coast cleanup as well as a Rivers and Oceans Film Festival April 27-28.

Agency Updates

- Sally Toteff announced that the Lower Columbia Estuary Partnership will hold its annual Science to Policy Summit on June 21 focused on plastic pollution in the Columbia River system. The Grays Harbor Vessel Traffic Risk Assessment is complete and available [online](#). Sally could arrange a presentation on the study if WCMAC members are interested. She noted that the Contanda Terminals proposal (formerly Westway Terminals) to expand their existing methanol facility at the Port of Grays Harbor to allow crude oil was withdrawn and updated to instead bring in renewable fuels and other liquids. The proposal was submitted to the City of Hoquiam and is available on their [website](#). The Dept. of Ecology is identifying the SEPA process for environmental review; Sally will share updates.
- Jay Carmony shared that State Parks is developing a list of proposed temporary beach closures for vehicular access for July 4 celebrations to reduce problems from fireworks and other waste. The closures would be from June 28 – July 5; they recognize that this will be an unpopular decision and are working to ensure decisions are data-driven. Brian Sheldon objected to the closures but was supportive of fireworks limitations. Crystal Dingler asked to know as soon as possible about planned closures since that is their biggest time for tourism. Jay will follow up with Brian to include his input in the process.
- Joshua Berger announced that Brian Bonlender has stepped down as the Director of the Dept. of Commerce and was replaced by Dr. Lisa Brown, who is strongly attentive to rural economic development. Commerce has requested funds to support Associated Development Organizations (ADOs) to support community development projects.
- Jennifer Hennessey shared that the Governor's and House budget included funding to sustain WCMAC; they are waiting to see if the Senate budget also includes it.

MRAC

- The MRAC met on February 13 and discussed budget requests as well as research out of the Washington Ocean Acidification Center focused on acidification impacts to smaller and freshwater bodies, mostly in the Salish Sea. Garrett will send the MRAC newsletter soon.
- Garrett cannot attend the next MRAC meeting on April 10 in Olympia. Contact him if you would like to attend.

Other Coastal Updates

- Rich Osborne shared that they had a good razor clam opening over the weekend. Olympic Region Harmful Algal Bloom (ORHAB) Network has been tracking blooms and working with NANOOS and UW on their HAB bulletin.
- Brian announced that the Dept. of Ecology denied a pesticide permit for burrowing shrimp control and that a bill for more research also died in committee. He noted that he will have to reduce farmed area by 30% due to loss of ground, similar to other family oyster farms. He expressed frustration about the permitting process and emphasized the economic importance of oysters to coastal communities.

- Crystal shared that the City of Ocean Shores met with the US Army Corps of Engineers (USACE) to begin permitting for north jetty maintenance to combat erosion, estimated for 2021. Their razor clam festival was successful, and they are also working on wetland delineations and noxious weed removal for a new trail. The House capital budget included funding for a tsunami vertical evacuation tower.
- Larry Thevik shared a photo of the west side of Damon Point showing three creosote pilings sticking up out of the sand which were completely buried in the 1970's to visually demonstrate erosion issues of north Grays Harbor.
- Russell Callender announced that the Washington Sea Grant budget was reinstated at \$80 million for the current fiscal year after the government shutdown, which is the highest allocation to date. They are leading trainings for a volunteer citizen science effort to track European green crabs, however they might not have funding to continue the program after this sampling season. They have a site review scheduled November 5-7 with NOAA as part of their grant funding and may ask for members to participate.
- Randy Lewis noted that the Port of Grays Harbor is working with USACE on a study of the Rennie Island channel sedimentation rates and dredging costs. He expects the report will be released in 4-6 months and will provide updates.
- Garrett announced that The Nature Conservancy will be presenting their small business awards to ten coastal small businesses in Sequim. He will have more updates at the next meeting about these projects to increase economic impact of locally caught seafood on the coast.
- Bobbak Talebi shared that the Dept. of Ecology received a beneficial use project in Westport to nourish dunes using dredged material from the channel. They are working with USACE to support funding for implementation. George Kaminsky is also working to expand the Grays Harbor erosion hazard profile to the whole Pacific coast.

Ruckelshaus Center COHORT Project

Phyllis Shulman and Tye Ferrell of the Ruckelshaus Center led a discussion on next steps for the COHORT project. This project stemmed from the recommendation related to resiliency to develop a multi-agency network providing backbone support services to help WCMAC advance resilience work focused on hazards, as well as broader issues like economic resilience. The Ruckelshaus Center is contracted to do this work through June 30.

- The COHORT will address social, economic, ecological, and natural hazards in terms of resilience, and include new positions based on the outer coast. Funding for operations and projects would be separate.
- The Ruckelshaus team will be developing recommendations about the structure, mission, and operations of this proposed group through the following:
 - Task 1 – information gathering around issues to consider re: organization, structure, and implementation; models for inspiration and lessons learned from collaborative multi-agency efforts that are reflective of community interests. They will be interviewing WCMAC members as well as conducting outside research.
 - Task 2 – working with WCMAC subcommittees and cohort agencies (Ecology, Emergency Management, WA Sea Grant, and WSU Extension) to develop options for organizational design and funding mechanisms.
 - Task 3 – developing recommendations to present at June meeting.
- Potential models include regional transportation networks, Washington Coastal Salmon Partnership, MRCs, Emerald Edge, Washington Coast Restoration & Resilience Initiative, and Coastal Protection & Restoration Authority (Louisiana).
- The Ruckelshaus team will meet with representatives from the four COHORT agencies next. Contact Bobbak if you are interested in joining the subcommittee on this work, which will meet two more times before the team presents their recommendations to WCMAC in June.

Discussion and questions

- Members suggested using or enhancing existing structures that already function well but could use support and capacity for greater regional coordination, such as the MRCs, rather than inventing something additional.

- Greater coordination among MRCs could be beneficial to share information about projects, although Rod noted that MRCs might not have the resources to address the larger issues of social and economic sustainability and resilience. MRCs could provide technical support and help develop priorities and project lists.
- Several members emphasized the importance of outcomes over process that help identify threats and implement the actions needed to increase resilience and keep coastal communities viable.
- Several members raised questions about logistics and governance related to how these agencies would interact and make decisions. Many were concerned that a multi-agency approach could be problematic without a designated lead.
- Brian expressed interest in seeing more detail on how this entity would be engaging with and including communities, as well as a more explicit focus on economic resilience.
- Several members suggested adding capacity to and working through existing entities already in communities, such as MRCs, lead entities, conservation districts, etc. to reduce the potential for confusion.
- Joshua suggested letting projects and needs drive the process for engaging communities and agencies.
- Doug commented that the Ruckelshaus report noted that resilience is built by connecting communities so they respond to problems together. Enhancing communication and coordination, facilitating connections, and building leadership capacity that already exists in these communities should be a priority.
- Dale and others cautioned that similar processes can often devolve into fights over funding between participants.
- Larry questioned what the WCMAC's role is in defining threats and strategies for coastal resiliency and whether it should be performing the ostensible function of this proposed COHORT.

Salmon Harvest: Questions for Future Discussion

The Washington Dept. of Fish and Wildlife was not able to attend today's meeting to discuss salmon hatcheries and harvest and its impacts to the Washington coast. Susan solicited questions to provide WDFW staff before the June meeting so that the appropriate staff can come prepared for a discussion with WCMAC members.

Questions/Requests

- What are the different hatchery policies on the west coast, including Tribes in different states, and what physical conditions (rivers, wild/non-wild fish) drive implementation of those policies? How does Washington compare? (Doug)
- What are the economic impacts of not having the same historic levels of production and catch of fish that have existed in the past? What is the cost of producing a fish vs the economic, social, and recreational benefits of having those fish, to humans as well as other species (orcas, etc.)? (Larry)
- What is the cost of producing a hatchery salmon (both the fish going out as well as those coming back)? (Larry)
- What are federal mitigation requirements for dams on the Columbia River? Is Washington meeting those requirements and if not, why not? (Mike Passmore)
- A history of recreational and commercial catch rates and hatchery production. There seem to be data gaps. (Brian)
- List of Mitchell Act hatcheries. Has the original intent of the hatcheries (to mitigate losses to commercial fishing and coastal communities) been affected by state laws and decisions? (Brian)
- Hatchery fish have been derided but more recently are seen as important for orca recovery. How can those two things be reconciled? (Rod Fleck)
- Discuss the role of subsistence fishing (Tribal and non-Tribal fishing) and its role in coastal communities. (Rod)
- Quantify the number of Washington communities benefiting from commercial and recreational fishing over time. It seems to have diminished to just a few, since many are relying on other sectors out of necessity. (Crystal)
- What drives dumping of hatchery fish and what does it do to waterways? (Crystal)
- How successful has the Hatchery Scientific Review Group (HSRG) policy been in maintaining adequate viable fish populations? (Larry)
- What fish stocks do we have to enhance to specifically address economic needs of coastal communities? (Dale)
- What policies are necessary to deliver benefits of enhancing those stocks to rural and coastal communities? (Dale)

- What can be done to get some of the salmon mitigation funding from Bonneville Power Administration back to benefit coastal communities while still acknowledging ESA listing? (Dale)
- How have coastal ocean conditions been affecting returns in recent years? (Rich)
- What's the worst-case scenario for salmonids? (Rod)
- What is the biggest bang for the buck strategy to get fish in the ocean from WDFW's point of view? (Brian)
- Is there any information linking fish consumed by orcas to specific hatcheries? Which fish are orcas able to access and eat, and can we use that to determine which hatcheries might be of higher value? (Brian)
- What is the available spawning habitat over the last four decades? What did it look like after dams were established, and what does it look like today? (Jay)
- With significant changes in the aquatic environment (warming temps in oceans and rivers, pollution, etc.), what is the return on investment for habitat restoration? Are there specific watersheds that are higher priority? (Jay)
- What are the most effective strategies to reduce salmon predation (avian, pinniped, etc.) so that habitat restoration and salmon recovery efforts aren't wasted? (Dale)
- How would WDFW explain permitting of a dam on the upper Chehalis, and what does it expect in terms of loss/gain of fish all the way down to the estuary since it will interrupt the natural flow of the river over time? (RD Grunbaum)
- From what areas of the state are we seeing reduced return rates (wild and hatchery), and from what areas have we not seen a change in return rates over time? (Mara Zimmerman)
- What accounts for the observed lower success rates for smolts released from hatcheries? (Dave Fluharty, Larry)

Susan will work with WDFW and WCMAC staff to refine the list of questions related to salmon production.

Public Comment #1

- Gus Gates shared that the House budget included a line item for \$593,000 for an offshore energy demonstration project in Grays Harbor. Randy clarified that this funding would be for studies and a demonstration project to harness wave energy to produce hydrogen fuel. Dr. Vladimir Shepsis presented to the WCMAC last year on this proposal.

Orca Task Force Recommendations Update

Susan provided an update on legislation proposed in response to the Orca Task Force recommendations. In June, the Task Force will get a status report from agencies on legislative updates as well as how they are implementing recommendations. She reviewed a handout with information about orca legislation, including bills that have died (denoted by grey cells), as well as those still alive. Contact Susan if you have more specific questions. Highlights included:

- SHB 1578 which would require a tug escort for oil tankers of a certain size is likely to pass.
- 2SHB 1579 aimed at increasing Chinook and forage fish abundance is also likely to pass.
- 2SHB 1580 related to reducing whale disturbance from vessels was controversial due to proposed limitations on whale watching. The current version includes compromises and is moving forward.
- Three other bills not specifically related to Task Force recommendations but that address orcas and are still alive include HB 1341 related to drones, SSB 5135 related to reducing toxics, and SB 5918 related to boater safety education.
- WDFW has an omnibus bill pending which would allow them to implement several recommendations.
- The Governor's budget included a line item for a facilitated process with eastern Washington communities to discuss removal of the lower Snake River dams.

Discussion and questions

- Dale and Larry clarified that SSB 5617 was originally drafted to eliminate all non-Tribal gill netting in the state and then amended to include just the Columbia River.

- Brian commented that during hearings for bills related to the whale watching industry, there seemed to be little scientific evidence referenced. Rich added that the whale watching industry is an important protection for orcas and that more risks to orcas result from recreational boaters who are unaware of safety guidelines or regulations.

Maritime Blue 2050 Initiative Update

Joshua Berger provided an update on the Maritime Blue 2050 Initiative, an economic development strategy for a sustainable and innovative maritime industry. Through a multi-stakeholder engagement process, the Governor's Advisory Council developed a framework and strategic plan for the blue economy based on five strategic goals:

- High caliber workforce
- Low carbon industry
- Global innovation hub
- Competitive gateway
- Competitive cluster

The strategic plan includes policy recommendations and is available [here](#).

Discussion and questions

- Rich asked how maritime clusters deal with competition, patents, and technology transfer. Joshua responded that while it depends on the project, instances of cooperative competition have been very successful. This initiative provides a structure and framework for cooperative competition to encourage innovation.
- Russell asked how an organization like Sea Grant could coordinate with and help support this effort. Joshua responded that they can help act as conveners and help to define challenges or find opportunities for projects. WCMAC can also support this initiative by providing input on projects that would benefit coastal communities and ways for clusters to support them.
- Jay asked about how this initiative is supporting ecosystem recovery work. Joshua responded that the initiative is focused on driving innovation and then developing markets for them. There are opportunities for technology innovations to serve recovery purposes, but it is not an explicit strategy other than generally supporting healthy marine and coastal ecosystems. There are only economic benchmarks at this time, not ecological, though the decarbonization goal aims to reduce future environmental harm.
- Brian commented that Washington has some burdensome regulations and suggested that WCMAC review what regulatory barriers to innovation exist currently. Joshua responded that the strategy reviewed regulatory and permitting barriers and makes recommendations around regulatory predictability in permitting processes, as well as pilot permitting opportunities.

Work Group Updates

Bobbak provided an update on work group activities. The Coastal Resilience work group has been focused on the COHORT project and the erosion/sea level rise workshop will be postponed due to capacity. Additionally, the NOAA grant proposal that Ecology submitted was approved, so there will be an effort over the next 18 months to coordinate with WCMAC and complete the scope of work.

The Dept. of Ecology has hired a staff person to support the Science-Policy work group and an 18-month position to help with next steps of the Marine Spatial Plan.

Dept. of Ecology now has the capacity to also follow through on the ecosystem indicators work. NOAA was going to help with modeling but is not available before work needs to be completed in June. The work group can build on the process outlined for prioritizing a list of indicators identified in the MSP in the next biennium in coordination with other efforts in the region (i.e., OCNMS Condition Report).

Discussion and questions

- Rich commented that developing ecosystem indicators should be completed before identifying data gaps, as those indicators will inform performance measurement. If this work is funded as requested, it will be included in the next biennium's budget.
- Larry posed a question to the group regarding the coastal resilience work group – what role does the WCMAC play in building resilience (identifying threats, etc.)? If there is no significant role, why not? If there is a significant role for WCMAC, what should it look like? He requested a deeper discussion of resilience work as a future agenda item, and Bobbak added that the projects that are underway will help clarify this role and responsibilities.

WCMAC Workplan

Susan reviewed the updated WCMAC workplan and opened a discussion about future agenda items as part of implementing the workplan.

- ! Rod proposed a WCMAC-sponsored one-day workshop on coastal economic resilience in May 2020. One member was neutral, and all others approved.
 - o Rod volunteered to chair the planning committee. Dale Beasley, Tiffany Turner, Joshua Berger, Garrett Dalan, Crystal Dingler, Larry Thevik, Mara Zimmerman and Kevin Decker will serve on the committee. Additional non-WCMAC members with expertise in other fields (e.g., housing, workforce development, etc.) are welcome.
 - o The COHORT work should be integrated into planning for this workshop.
 - o The planning committee will develop a draft scope and budget for review and feedback.
 - o Susan will add this item to the workplan and send out a revised version.
- The WCMAC Workplan timeframe needs to be updated.
- The group discussed ways to expand the concept of coastal resilience beyond natural hazards resilience, which this group has mostly focused on to date. Members would like to supplement the expertise of the WCMAC with other organizations focused on economic vitality and workforce development, and want to know what efforts, tools, and agency initiatives exist for this purpose. Joshua provided several examples of efforts currently going on in this arena, including Economic Opportunity Zones, a new program that Commerce will be rolling out soon focused on targeted community assistance, tools from the Community Economic Revitalization Board (CERB), and others. Associated Development Organizations (ADOs) and Economic Development Corporations (EDCs) are similar in some ways to MRCs, though members agreed that there hasn't been a concerted effort or body looking at coastal community economic issues similar to WCMAC to date. This is a gap and should be a key element of the workshop.
- Topics for the June meeting include:
 - o Update from Marine Sanctuary on ecosystem indicators
 - o Salmon harvest issues presentation from WDFW
 - Larry requested ample time for this agenda item beyond simply a Q&A session to allow for discussion of the benefits of rebuilding the salmon fishery.
 - o Coastal Economic Resilience Workshop proposal discussion
- Topics for the September meeting include (or include one of them in June if there is space in the agenda):
 - o Potash Terminal proposal update
 - o European green crab invasive species briefing

Public Comment #2

- Gus Gates shared a notice of proposed rulemaking from NOAA related to procedural changes to the Coastal Zone Management Act Federal Consistency Process. Public comment period goes through April 25. WCMAC members may want to provide comments supporting the protection of states' role and ability to influence projects in decision-

making processes. The notice is available [here](#). He will share a draft local government resolution. The Dept. of Ecology is coordinating a letter from the State, though it is not conducting a public process to gather comments. Individuals can submit comments to NOAA directly.

Upcoming Meetings & Other Announcements

- The Steering Committee developed a process for projects requesting WCMAC funding. The Coastal Economic Resilience Workshop committee will develop a proposal for the workshop and request that the Steering Committee add it as a future agenda item.

Announcements

- Larry shared that NOAA just released its updated [report](#) on the nation's seafood-based economy. In Washington, the seafood-based economy generates nearly \$9 billion annually and employs 55,000 people.
- The Orca Task Force plans to have a future meeting on the coast. Contact Susan with any suggestions for venues in Aberdeen or Ocean Shores.
- Meeting adjourned at 3:15 pm.

Summary of Decisions

- ! The December Meeting Summary was adopted with noted changes.
- ! WCMAC members agreed to add a Coastal Economic Resilience Workshop to the workplan with a proposed date of May 2020.

<p style="text-align: center;">Upcoming Meetings</p> <ul style="list-style-type: none">• Wednesday, June 12, 2019• Wednesday, September 18, 2019• Wednesday, December 11, 2019 <p style="text-align: center;"><i>Meetings will be held in Aberdeen unless otherwise noted</i></p>
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Follow-up Items

- Garrett will send the MRAC newsletter.
- Susan will forward Dale's emailed document from last week.
- Susan will work with WDFW and WCMAC staff to refine the list of questions related to salmon production.
- Susan will update the workplan with the coastal economic resilience workshop and send to the group.
- Susan will forward the draft local government resolution from Gus re: NOAA's rulemaking notice.

DRAFT Options and Considerations for Implementing the Coastal Hazards Organizational Resilience Team (COHORT)

As of 06-05-19

For discussion

Why Focus on Improving Coastal Resilience?

The Washington coast and coastal communities are at an extraordinary confluence of cultures, unique ecosystems, influences, and threats. The coast is home to several tribes, is a gateway to iconic natural treasures, and the people are stewards of distinctive ecosystems that support shellfish growing, fishing, cranberry growing, and timber production. The area is also at the epicenter of potentially catastrophic impacts from a Cascadia earthquake and tsunami and is at the frontline of impacts from extreme weather, waves, and ocean changes. These threats are compounded by limited and changing economic opportunities, and emerging issues such as sea-level rise and ocean acidification.

All along the coast individuals, groups, communities and tribes are striving to sustain their livelihoods, environment, and option to live in places they love. Increasing their ability to thrive and be more resilient has ramifications for the economic and environmental health of the state and nation as a whole. There are important and innovative efforts to increase resilience along the coast that could be instructive for others throughout the coast, state, and nation. Supporting and strengthening these efforts and provide opportunities to expand and deepen their impact will have lasting benefits for generations beyond the coast itself. For example, resilience efforts on Washington's coast are likely to be an important reference for the recently approved Washington State Natural Disaster and Resiliency Activities Work Group's (SSB 5106) recommendations.

The well-being of communities and the coastal natural environment are intimately linked. Increasing the resilience of coastal communities will require working at the intersection of economic prosperity, community health, ecology, infrastructure, and governance. This in turn will require multi-disciplinary approaches, creativity, and nimbleness as new partnerships are formed, joint strategies are developed, and collaboration is increased among governments, researchers, local communities, and other partners.

Importance of the Next Step: Develop and Fund a Coast-Wide Resilience Initiative to Enhance and Integrate Efforts

In 2016, coastal entities in Grays Harbor County, in partnership with the office of U.S. Representative Derek Kilmer's Office, and the Washington State Department of Ecology contracted with the William D. Ruckelshaus Center (the Center) to conduct an assessment that explores long-term resilience opportunities in response to growing concerns about the impact on coastal communities, infrastructure, and the natural environment from erosion, flooding, and

landslides; the number and severity of storms; predictions about rising sea levels; and a potentially large earthquake and tsunami. For the purposes of the assessment, the coast was defined as the outer Pacific coast.

Through conducting 104 interviews with coastal tribes, coastal residents, elected officials, federal, tribal, state, county, and city government agency staff, researchers, scientists, engineers, NGOs, and other interested parties the *Washington State Coast Resilience Assessment Final Report* examined the dynamics, interests, challenges, and opportunities related to coastal resilience in Washington State. The assessment provided a mechanism for the experiences and viewpoints of the participants to inform the next generation of strategies for enhancing coast-wide resilience. The assessment began to identify existing efforts so that new efforts build upon what is already established. It also identified approaches, processes, structures, and resources needed to enhance and support coast-wide resilience efforts.

While coastal communities have shown grit and self-reliance, increasing uncertainty poses a threat to lives, lands, and future livelihoods. New approaches to the growing challenges are needed that connect the wisdom and experience of those living on the coast with the expertise of governments, nonprofits, and academics. The relative lack of resources on the coast requires new funding partnerships and opportunities for local revenue generation.

The ability for coastal communities and the environment to thrive into the future requires the ability and will to support and design novel local approaches and new partnerships that incorporate the complexity and unique aspects of life in each place. It will require increased collaboration and a willingness to envision new potential and to address conflicts. It will also be important to strengthen and create the local conditions and assets that enhance the ability to adapt to change. Improving resilience will require a commitment to the ecological, economic, and social health of the coast and the recognition that the health of the coast is an important component of the well-being of the whole State.

There have been a number of individual efforts to address resilience along the coast. The participants in the assessment highlighted the need to collaboratively develop strategic priorities, reduce competition among jurisdictions, and create a long term sustained effort to increase the capacity of coastal communities to address resilience, not just response to disasters after they occur. They recognized the need for the development of creative funding strategies and the need to utilize the knowledge within multiple agencies to identify and weave together potential sources of funding. Developing a coast-wide resilience initiative can help to address the disproportional capacity for communities along the coast to develop and implement projects that improve resilience. By being proactive, communities and the State can reduce exposure, risk, and cost compared to the cost of damages once a disaster has occurred. Integration of effort can increase the cost effectiveness of projects.

The Need for the COHORT

In March 2018, Governor Jay Inslee requested the assistance of the Washington Coastal Marine Advisory Council (WCMAC) to prioritize needs and actions to carry out the recommendations in the *Washington State Coast Resilience Assessment Final Report*.

After a year of learning and investigation, the WCMAC decided that a priority should be placed on implementing the recommendation to “Establish a Coast-Wide Resilience Initiative to Enhance and Integrate Efforts.” According to the Ruckelshaus Center’s Assessment Report:

A coast-wide approach would elevate existing resilience efforts, mobilize new efforts, and weave together local initiatives while providing a systems approach to issues, risk analysis, project evaluation, and shared strategy development. The initiative could be developed in a way that builds on the efforts and leadership of coastal tribes, Conservation Districts, government agencies, existing organizations, communities, groups, and individuals while also providing a vehicle to bridge government, non-governmental, and academic analysis and research.

To best address this need, the Ruckelshaus Center’s report highlighted that there needs to be a core group of entities who would partner together as integrators, provide backbone services, and work as a team to address resilience issues coast-wide. The Center recommended the formation of a “Coastal Hazards Organizational Resilience Team” (COHORT):

Create an integrated coast-wide effort to strengthen coastal resilience that is staffed by Washington Sea Grant, Washington State University Extension, Washington State Department of Ecology, and Washington State Emergency Management Division. There are significant capacity constraints at the local level. The small numbers of local government staff do not allow for additional planning efforts that could improve local conditions and better prepare the community for future events. Likewise, universities and agencies often have limited resources or ability to collaborate effectively with local communities. Parties involved in coastal resilience efforts would benefit from uniting around a common definition and vision of resilience. A coast-wide approach would elevate existing resilience efforts, mobilize new efforts, and weave together local initiatives while providing a systems approach to issues, risk analysis, project evaluation, and shared strategy development. The initiative could be developed in a way that builds on the efforts and leadership of coastal tribes, Conservation Districts, government agencies, existing organizations, communities, group, and individuals while also providing a vehicle to bridge government, non-governmental, and academic analysis and research. To support the initiative there needs to be a core group of people who partner together as integrators, provide backbone services, and work as a team in addressing resilience issues coast-wide... The COHORT would establish a formal partnership that would assist in aligning key resources and expertise, spearheading cross-fertilization of ideas, enhancing collaboration, and coordinating strategic investment in projects and programs.

The COHORT will assist coastal communities in prioritizing coastwide projects and accessing federal dollars. Changes to federal disaster mitigation funding guidelines will likely increase the amount of money available for predesign and planning and this effort will give communities a leg up in applying and making the case for those funds. The

COHORT can help communities develop project priorities in a coordinated way that can improve opportunities for funding.

The increase in capital investments anticipated from the COHORT's work will help to reduce risk and mitigate the damage from hazard events. The best time to build resilient communities is before the disaster happens, not after.

The make-up of the COHORT was based upon the findings in the report that identified that these 4 entities would have the expertise and mission to provide integration and elevation of coastal resilience efforts.

Coastal communities are asking for more proactive and collective investment to reduce and respond to risk. The COHORT concept emerged as a key recommendation of the Ruckelshaus Center's assessment. It responds directly to the needs expressed by coastal communities for additional capacity, increased funding, and improved access to information. It places emphasis on place-based support to help communities generate resilience strategies and projects that carry out coast-wide priorities. By funding projects and plans conceived and supported by local interests, local knowledge can be utilized, and sound projects can be implemented. This effort will pay dividends in terms of mitigating or avoiding damage to communities, infrastructure, lives, and livelihoods in the future in the event of an emergency and over time as climate impacts increase. The work of the COHORT in collaboration with coastal communities can also help inform the work of the new Statewide Resilience Initiative signed into law (SB 5016) and can provide a model for regional collaboration for other areas of the State.

(Add Goal Statement)

Overall Proposal

- 1. Establish and fund the foundation of an integrated coast-wide effort to strengthen coastal resilience through funding the operational costs of a Coastal Hazards Organizational Resilience Team (COHORT), a formal partnership staffed by Washington Sea Grant, Washington State University Extension, Washington State Department of Ecology, and Washington State Emergency Management Division. Provide initial funding for a minimum of 5 years.**
- 2. Provide initial funding for priority resilience projects identified by the coastal communities.**

The ability to provide seed funding and/or matching funding to local governments, nonprofits, tribes, or other entities to support their work on the resilience priorities of coastal communities is important for furthering the objectives of the Coastal Resilience Initiative.

Funding for the COHORT could come as a request for operational and capital funds from the WCMAC and other coastal entity/ies to the Governor's Office in 2019, for funding in 2020. The request could be championed by WCMAC in partnership with a wide range of coastal entities who could sign on to show their support.

In the interim, the Department of Ecology received a \$247,000 grant to implement “A Coast-Wide Approach to Implementing Community Resilience Recommendations to Shoreline Natural Hazards” from the National Oceanic and Atmospheric Administration this year. The grant is being implemented by Sea Grant and will support coastal communities in coming to agreement about project priorities, achieving new successes to bolster their case, and in solidifying the rationale for a COHORT.

Mission and Functions of the COHORT

Assumption:

The structure of the COHORT and the coast-wide resilience initiative should grow out of the COHORT’s function and should be designed in a way that it can grow and evolve to meet changing needs, functions, and funding. It will establish shared goals and measurable outcomes toward achieving coast-wide resilience.

Mission

The Mission of the COHORT is to help create and support an integrated coast-wide effort to strengthen the social, economic, and ecological resilience of communities on the outer coast of Washington. The effort would:

- Elevate and integrate the existing resilience efforts and leadership of coastal tribes, Conservation Districts, government agencies, existing organizations, communities, group, and individuals; mobilizing new efforts; and weaving together local initiatives;
- Mobilize new efforts;
- Bridge government, nonprofit, and academic analysis and research; and
- Use a systems approach to issues, risk analysis, project evaluation, and shared strategy development.

Functions

To support the Initiative in achieving this, the COHORT will provide the following functions:

- Provide backbone services, and work as a team to address resilience issues coast-wide. Backbone services include:
 - Orchestrate the activities of the various coastal entities engaged in resilience activities;
 - Convene these various entities as necessary;
 - Facilitate meetings;
 - Coordinate internal and external communications; and
 - Support the leveraging of funds for additional projects.
- Develop a shared concept of resilience and work collaboratively with existing entities to develop coast-wide strategies for resilience.
- Establish an annual work program.
- Align key resources and expertise, spearhead cross-fertilization of ideas, enhance collaboration, and coordinate strategic investment in projects and programs.

- Assist with a coast-wide risk assessment and risk reduction analysis in coordination with existing groups (e.g. Department of Natural Resources, The Nature Conservancy, WCMAC, WECAN, MRC) to identify priority actions and projects.
- Bring the best available science to communities by developing a joint research agenda to inform project and policy development, as well as developing a system for tracking findings that are accessible to and in formats that are useful and comprehensible to communities and local governments.
- Administer seed funding and help communities pursue resilience activities through planning, preliminary design, site assessment, final design, data collection, and permitting, as well as monitoring (monitoring is important for adaptive management, testing innovative approaches, and sharing lessons learned among communities).
- Help MRCs, coastal governments, and other coastal entities to develop and write new grant proposals. Proactively coordinate with government officials, nonprofits and foundations to identify funding opportunities and opportunities for collaboration that can enhance the likelihood of securing grants.
- Support grant and contract administration.
- Encourage cross-sector collaboration among government agencies, researchers, and communities.
- Support the capturing of success stories and communication to decision-makers about what is needed to increase the resilience of the coast and coastal communities.
- Identify and coordinate opportunities to enhance access to data and practical information for coastal communities on emergency preparedness, resilience planning, policymaking, outreach, and project development, building on resources such as the Washington Coastal Hazards Resilience Network.
- Increase outreach about community and coastal resilience and emergency preparedness efforts.

Organizational Structure

Core Members of the COHORT

- Composed of four Washington State agencies—Washington Sea Grant, Washington State University Extension, Washington State Department of Ecology, and Washington State Emergency Management Division.
- Each agency hires one staff person.
- Hire a half or full-time operations coordinator to handle logistics, basic communications, office finances, and essential administrative duties. This could also be achieved through a position share with an existing position or through fellowships.
- When additional expertise is needed, the COHORT staff and their supporting agencies will work collaboratively with other State agencies, such as the Department of Commerce, to support community objectives.

Location of the COHORT

- Co-locate the 5 positions, probably in Aberdeen and possibly at Grays Harbor College, which could enable learning opportunities for students and engagement of the next generation of coastal leaders on issues of resilience.
- Existing entities with offices on the coast could also potentially provide drop-in field offices. (WSU Extension has offices in every county. There are also other State offices throughout the coast.).
- In addition to having specific subject matter expertise, COHORT staff could each serve as a liaison with a specific region of the Coast, to develop deeper relationships.

COHORT Charter

- Develop a charter to guide the work of the COHORT and to establish its intent with the member agencies. The charter would lay out the COHORT's purpose, mission, and roles and responsibilities.
- The charter would incorporate the "Guiding Principles" stated in the Ruckelshaus Center Assessment.

Administration and Management

- Develop formal interagency agreements or MOUs/MOAs between all participating agencies. The agreement would bind all agencies to the partnership, would define the roles and responsibilities of the participating agencies and their staffs, would set out principles for coordination, collaboration, and communication, identify fiscal responsibilities, and set up internal management structures.
- Identify an administrative lead agency. The administrative lead agency would be responsible for managing the core administrative functions of the office. This would include, at a minimum, managing any pooled and shared administrative funds; paying rent or other shared bills; procuring any shared equipment or supplies; providing administrative support to the COHORT staff, if needed; and developing and administering the COHORT's internal budget. The lead agency would also house and maintain the website and provide IT support.
 - Funding for positions would include salaries, benefits, operational needs (computer, office furniture, office supplies, etc.). Indirect costs for the lead administrative agency would also need to be included.
 - Financial management could be established as part of the administrative lead agency's responsibilities. Through an interagency agreement the administrative lead agency could distribute operational funds and capital funds. Or each agency is designated in budget and receives funding directly.

Additional option: Establish an overall lead agency. An overall lead agency could be established to liaise with elected officials, be a final arbitrator, or other roles.

Project Implementation and Funds Management

- Funds managed by either one COHORT agency or by the Lead Administrative Agency, depending on the source of the funds

- If initial project funding was provided, funds could be distributed through the MRCs or through an application process, WCMAC or a newly established community advisory group could develop selection criteria and evaluate project proposals
- COHORT members would not be direct project managers for capital projects.
- COHORT can develop partnerships with other entities to assemble project funding and can monitor other opportunities for project funding.

Intra-agency Coordination

In order to support field staff and ensure that agency support is developed and maintained for the work of the COHORT, each agency would:

- Assign a designated unit manager or supervisor in each agency to each COHORT member to support the COHORT member operationally. The details of this responsibility will need to be clearly spelled out in the supervisor's job description. These supervisors should meet regularly to coordinate.
- Assign an intra-agency lead, who is a higher-level manager, to provide leadership, conflict resolution, integration, and communication within the agency to support the COHORT politically.

Inter-agency Coordination

- Develop an inter-agency leadership team, composed of the intra-agency leads to support the COHORT partnership objectives, resolve conflicts, and provide guidance. The leadership team should meet on a quarterly basis initially. COHORT supervisors should also be included in these meetings as appropriate, to ensure their buy-in to the broader vision and support of the COHORT's efforts, as well as to keep them in the loop on related policy and program discussions.

Partnerships

- In the future, it could be helpful to create a separate nonprofit and/or foundation structure that could solicit private donations and support ongoing costs.

Communications:

- Each COHORT agency will utilize the communications resources of their individual agencies to contribute to the overall communications needs of the COHORT.
- COHORT develops a communication strategy focused on key target audiences laying out:
 - How COHORT members will communicate with each other, including use of individual emails;
 - How consistent messaging will happen within participating agencies about the COHORT when the COHORT is created, as well as over time, to ensure that agency support and alignment continues;
 - Website design and implementation;
 - Communications with other agencies;
 - How to tap into university resources, including students focused on communications;
 - Communications to coastal communities and organizations; and

- How best to share community and COHORT successes and lessons learned.

Overall Community Advisory Structure/Oversight of COHORT

- The WCMAC will initially provide the primary community advisory structure for the COHORT.
- The COHORT will seek guidance from tribes in how best they would like to be engaged in advising the COHORT.
- The COHORT will seek guidance, as appropriate, from MRCs, elected officials, local jurisdictions, Councils of Government, regional planning bodies, relevant regional efforts, and a diversity of community interests.
- Oversight will be provided through the COHORT agencies, as well as the Governor's Office, through WCMAC. In addition, participating agencies will report on progress to the legislature.

Considerations for Responsibilities of COHORT Positions

- A core function of the positions is being an integrator and facilitator for community interests and community empowerment. Community engagement will be an essential skill.
- Each position would bring agency and subject matter expertise, for example:
WSU Extension: Community and Economic Development, Community Resilience, Agricultural Production, Natural Resources, and Family and Home.
Emergency Management: Emergency Preparedness, Planning, Mitigation, Recovery, Data Acquisition, and Risk Analysis.
Sea Grant: Community Outreach, Fisheries and Aquaculture, Marine and Coastal Planning, and Natural Hazards, Resilience, Community and Economic Development, and Climate Change.
Department of Ecology: Marine and Coastal Planning, Ecological Restoration, Policy, Data Acquisition, Risk Management, and Permitting and Regulations.

Political Advocacy

- Advocacy for coastal communities will be a critical element of a successful Coastal Resilience Initiative. Because COHORT staff will be State employees, however, any political advocacy efforts will need to come from other coastal entities. Key aspects of the COHORT's work can help to support these efforts, including data collection, research, communications, and convening of various coastal entities.

Considerations

Political Will

- The political will for creation and funding of the COHORT needs to come from coastal communities.

Governance

- *Does this COHORT establishment need to be incorporating into an Executive Action or law?*

Structure, including Administration, Management, and Funding

- The structure should grow out of the function and should be designed in a way that it can grow and evolve to meet change needs, functions, and funding.
- The administrative structure should be as simple as possible, but a clear structure will be needed in order to request funding and spend it.

Interagency Coordination

- Ensuring that there is a sustained and focused effort will require focus not just from the COHORT team and the governance structure for the effort, but also support from each of the agencies at both a programmatic level, helping COHORT members to deal with issues within their own agencies, and at an executive level, keeping the institutions bound together, holding the vision, and supporting the initiative and COHORT.

Draft

THE WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

STATEMENT OF WORK

Developing Options for the Coastal Hazards Organizational Resilience Team (COHORT)

Purpose: The William D. Ruckelshaus Center (Center) has developed this proposal to explore and develop options for the establishment of a Coastal Hazards Organizational Resilience Team (COHORT) in collaboration with the Washington Coastal Marine Advisory Council (WCMAC).

Background and Overview:

To more fully understand and appropriately approach a path forward to natural hazard resilience on Washington's Coast, the Department of Ecology's Coastal Program partnered with the office of U.S. Representative Derek Kilmer and Washington Sea Grant to commission a "Washington State Coast Resilience Assessment" completed by the William D. Ruckelshaus Center (Center) and published in May 2017.¹ The assessment included 104 interviews and examined interests, challenges, and provided recommendations and key leveraging actions for improving community resilience.

The Coastal Program has been working closely with the Governor's Office and other key agencies to find creative solutions to advance the wide range of actions identified for improving coastal and community resilience. In March 2018, Governor Jay Inslee added capacity to support these efforts by requesting the assistance of the Washington Coastal Marine Advisory Council (WCMAC) to prioritize needs and actions to carry out the recommendations in the Ruckelshaus Center Assessment.

After a year of learning and investigation, the WCMAC decided that a priority should be placed on options for pursuing a "coast-wide resilience initiative to enhance and integrate efforts." According to the Ruckelshaus Center's Assessment Report:

A coast-wide approach would elevate existing resilience efforts, mobilize new efforts, and weave together local initiatives while providing a systems approach to issues, risk analysis, project evaluation, and shared strategy development. The initiative could be developed in a way that builds on the efforts and leadership of coastal tribes, Conservation Districts, government agencies, existing organizations, communities, groups, and individuals while also providing a vehicle to bridge government, non-governmental, and academic analysis and research.

To best address this need, the Ruckelshaus Center's report highlighted that there needs to be a core group of entities who would partner together as integrators, provide backbone services, and work as a team in addressing resilience issues coast-wide. The Center recommended the formation of a "Coastal Hazards Organizational Resilience Team" (COHORT). The COHORT would establish a formal partnership that would assist in aligning key resources and expertise, spearheading cross-fertilization of ideas, enhancing collaboration, and coordinating strategic investment in projects and programs. WCMAC and coastal communities would like to create a request for state resources and directive for establishing the COHORT, but acknowledge that work is needed to design and operationalize this concept.

¹ Washington State Coast Resilience Assessment Final Report, May 1, 2017:
https://s3.wp.wsu.edu/uploads/sites/2180/2013/06/Washington-Coast-Resilience-Assessment-Report_Final_5.1.17.pdf

Proposed Scope of Work

The Center offers this proposal for a scope of work as an initial recommendation based on conversations to date with staff at Department of Ecology. Included is an estimated scope of work and budget for the Center to conduct information gathering, including exploring potential models for organizational structure, engagement with WCMAC and potential COHORT partners, and organizational design and development of options and recommendations for the practical establishment of a COHORT. Overarching considerations to explore during the research process:

- Goals, purpose, and mission of the COHORT
- The definition of resilience and how it relates to the goals, mission, and purpose
- Opportunities for leveraging existing assets and resources
- Organizational structure, governance, and alignment with existing structures
- Cost, options, and tradeoffs

The tasks would be conducted from February 1, 2019 to June 30, 2019 by Amanda Murphy, Center faculty and Sr. Project Lead, Phyllis Shulman, Ruckelshaus Center Senior Facilitator, Tye Ferrell, Resilience Collaborative North West, and Shelby Thomas, Ruckelshaus Center Project Intern. WCMAC staff and facilitator will help support the coordination of meetings and will provide guidance throughout the project.

Task 1. Information Gathering

The Center would research potential organizational models that could be applied to the COHORT. Through information gathering the Center will develop a list of key issues and organizational elements that would need to be addressed in the development of the COHORT. In addition, the Center would solicit initial input from the WCMAC, the WCMAC Resilience Sub-Committee, and potential agency and university partners.

Task 1. Deliverables:

- List of key organizational elements that need to be addressed
- One meeting with the WCMAC to gather initial input that will inform information gathering
- One meeting with the WCMAC Resilience Subcommittee to gather initial input that will inform information gathering
- One meeting with agencies/Governor's staff/COHORT entities to gather initial input that will inform information gathering

Task 2. Organizational Design and Options

The Center would work with WCMAC and potential agency and university partners to address implementation issues and organizational design options for the establishment of the COHORT model. This could include identifying trade-offs, strengths, and weaknesses of options.

Task 2. Deliverables:

- Up to two meetings with WCMAC Resilience Subcommittee to discuss information gathered about key issues and organizational elements and to gather input on potential organizational design options for establishment of COHORT model.
- One meeting with agencies and COHORT entities to discuss information gathered about key issues and organizational elements and to gather input on potential organizational design options for establishment of COHORT model.

Task 3. Documentation and Facilitation of Exploration of Option

The Center would document options, implementation considerations, and could identify recommendations for implementation. The Center would facilitate discussion on next steps for implementation.

Task 3. Deliverables:

- One meeting with WCMAC to discuss options, implementation considerations, and recommendations for implementation.
- One meeting with WCMAC Resilience Subcommittee to discuss options, implementation considerations, and recommendations for implementation.
- One meeting with agencies and COHORT entities to discuss options, implementation considerations, and recommendations for implementation.
- Written Report that describes COHORT options, implementation considerations, and recommendations for implementation and actionable next steps.

This scope of work assumes the following:

- No more than 2 meetings with the WCMAC
- No more than 4 meetings with WCMAC Resilience Subcommittee
- No more than three meetings with COHORT entities
- One meeting with agencies and Governor’s staff
- Meetings would be held via phone and/or videoconferencing, except for meetings with the full WCMAC and with governor’s staff.

Budget

Salary and Benefits	\$25,297
Supplies/Materials	\$100
Travel	\$300
Overhead	\$6,681
Total	\$32,378

NOTE: These are preliminary estimates only and have not been reviewed by WSU or UW contracting or finance offices. As such, they are subject to modification as part of the formal contracting process. These estimates include a good faith assessment of the appropriate Facilities and Administration (F & A or Indirect Cost) recovery rates (26% for most activities herein), which may also be changed after formal review. These estimates are provided to facilitate discussion and negotiation, but do not constitute a formal offer or the basis of a formal contract – which may only be executed by the WSU Office of Grant and Research Development.

WCMAC Workplan

3/28/19

	Topic	Purpose	Source*	WCMAC Focus	Timeframe	Tasks	Information Needs	Working Group (Y/N)	Notes/Status Updates
A.	Coastal Resilience	Prioritize needs and actions to carry out the recommendations in the Ruckelshaus "Washington State Coast Resilience Assessment Final Report (2017)"	C	Information Sharing; Informal Advice; Formal Recommendations	Ongoing	1. Participate in and help develop options for the Ruckelshaus Center "Coastal Hazards Organizational Resilience Team (COHORT)" 2. Guide Ecology and Washington Sea Grant in completing the "Washington Coast Resilience Action Demonstration (RAD) Project" 3. Guide and participate in a science-policy workshop on coastal erosion 4. Help shape recommendations to the Governor, the Legislature, and state and local agencies to further support long-term pre-disaster risk reduction for Washington's Pacific coast-wide resilience initiative.		Yes	* Coastal Resilience Work Group is formed and is holding meetings * WCMAC funding contracted with the Ruckelshaus Center to develop options for the "Coastal Hazards Organizational Resilience Team (COHORT)" by June 30, 2019 * 18 month NOAA grant was awarded to Ecology's Coastal Program to partner with WCMAC on the "Washington Coast Resilience Action Demonstration (RAD) Project" * Erosion science-policy workshop has been postponed until Fall 2019 because of the Ruckelshaus COHORT project.
B.	Ecosystem Indicators	To provide feedback to the state on refining the list of ecosystem indicators.	C	Informal Advice	6/19-7/19	1. Compile existing lists of indicators, summary of methods, and proposed process for refining indicators (<i>WCMAC staff</i>) 2. WCMAC briefing and discussion (<i>WCMAC Meeting</i>) 3. Staff and other experts participate in OCNMS Ecological Indicator selection process	1. List of current potential indicators 2. Summary of methods used to identify current list 3. Informational briefing on developing scientifically robust indicators 4. Presentation from OCNMS on Conditions Report and Ecological Indicators	No, but included in work of Science & Research Agenda Work Group	*Need to consult with NOAA (NWFC)
C.	Economic Resiliency Workshop	To convene a 1-day workshop on economic resiliency in coastal communities	W	Information Sharing	3/19-6/20	1. Develop scope of work/approach for a 1-day workshop in May of 2010 to address economic resiliency in coastal communities	TBD	Yes	*Rod has agreed to chair this effort.
D.	Science and Research Agenda	To provide feedback to the state on the development of a science and research agenda, including data gaps and WCMAC's priorities.	C	Informal Advice	6/19-7/19	1. Compile Data Gaps (<i>WCMAC Staff</i>) 2. WCMAC Discussion on Initial List of Gaps and Priorities (<i>WCMAC Meeting</i>) 3. Coordinate with ecosystem indicators work	1. List of data gaps (initial list from MSP) 2. Summary of existing, current science needs documents for WA Coast (e.g. OCNMS, PFMC)	Yes	
E.	Monitor Implementation of MSP	To keep WCMAC informed of MSP implementation efforts	C	Information Sharing	Ongoing	1. Summarize status of MSP implementation tasks (<i>WCMAC staff</i>)	1. Informational Briefing on Status of MSP Implementation	No	*Include briefing on how the plan gets used, particularly regarding new applications *Review plans that are inconsistent with MSP
F.	Annual Work Plan	To develop an annual workplan to guide planning for WCMAC meetings and activities.	B	Operations/Admin	12/19	1. Compile topics and outcomes (<i>Steering Committee</i>) 2. Develop draft annual workplan (<i>Steering Committee</i>) 3. Discuss and adopt work plan (<i>WCMAC Meeting</i>)	1. Input from WCMAC members and Gov's office on topics and priorities	No	* Initial draft work plan discussed at September meeting with final work plan addressed at Dec. meeting.
G.	WCMAC Meeting Agendas and Operations	To fulfill Steering Committee responsibilities as listed in the by-laws	B	Operations/Admin	Ongoing	1. Set WCMAC Agendas for each meeting 2. Conduct officer elections every 2 years		No	

Source: C= Governor's Charge; B=Bylaws; W=WCMAC Generated

Other Topics of Interest/Future Consideration

Notes/Comments

1	Coastal Erosion	Coastal Resiliency Work Group is planning a Science-policy workshop on Coastal Erosion
2	Sea-level rise	An education presentation by Sea Grant and/or a presentation from Peter Ruggiero on Grays Harbor Coastal Futures Project.
3	Trends in changing ocean conditions	
4	Shipping overview	
5	Oil terminals	
6	Potash Terminal in Grays Harbor	
7	Commercial Net Pen Aquaculture	
8	Offshore Aquaculture	Will provide ongoing updates to WCMAC as appropriate
9	Shellfish Aquaculture Management issues (e.g. invasive species, burrowing shrimp, etc.)	Will provide ongoing updates to WCMAC as appropriate
10	Invasive Species and Pest Species Management (incl. Green Crab)	
11	Changing Fishing Fleets and Alternative Fishing Methods	
12	Coastal Energy	Other coastal groups are considering hosting a workshop
13	Economic Development: How <u>do</u> coastal communities adapt to changing economy?	
14	Building Local Capacity	
15	Watershed Protection	
16	Ecosystem Services Valuation	
17	Coastal Oil and Gas Leasing	

Topics Addressed in Previous Meetings

Notes/Comments

Vessel Traffic/Navigational Safety/Transport of hazardous substances	Briefing on Grays Harbor Vessel Traffic Risk Assessment occurred at 3/28/18 meeting.
Ocean Acidification	Presentation by MRAC members at 6/13/18 meeting
Tsunami/Disaster Preparedness	Presentation at 6/13/18 Meeting
Juvenile salmon survey results and ocean conditions	Webinar in 9/18
Briefing from WDFW on recreation and commercial fishing allocation	Presentation at 12/12/18 meeting

Olympic Coast National Marine Sanctuary



U.S. National Marine Sanctuary System

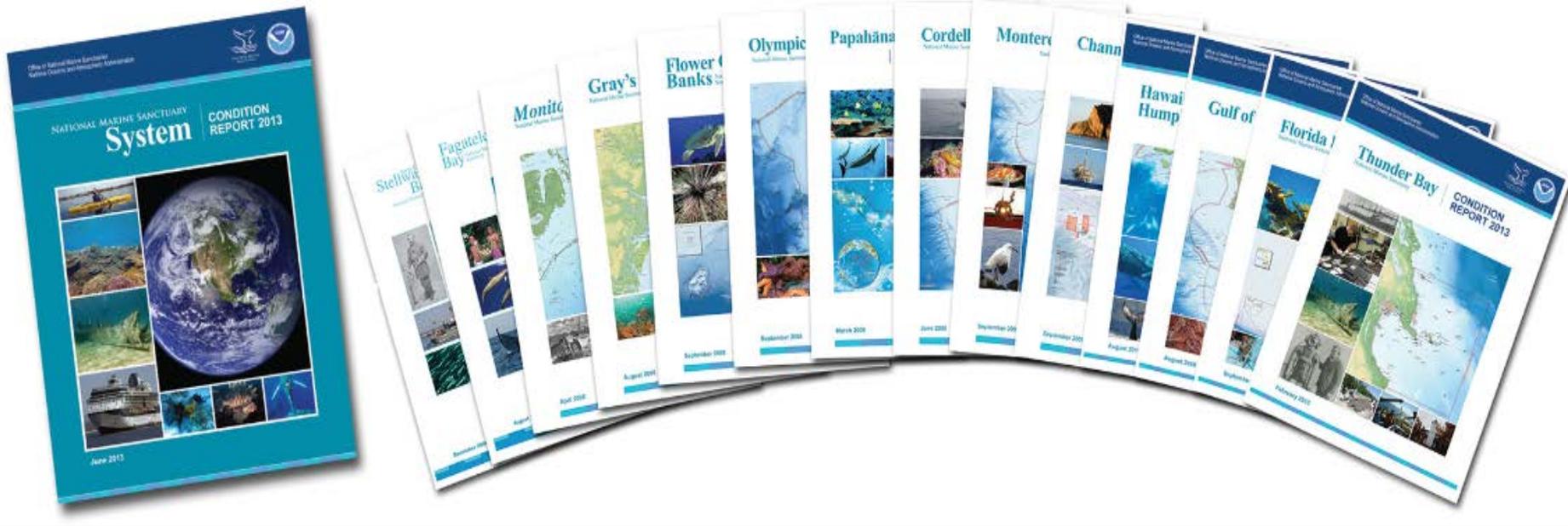


“Areas of the marine environment with special conservation, recreational, ecological, historical, cultural, archeological, or aesthetic qualities...”

National Marine Sanctuary Act (sec. 301)

Condition Reports

Assessing the status and trends of sanctuary resources

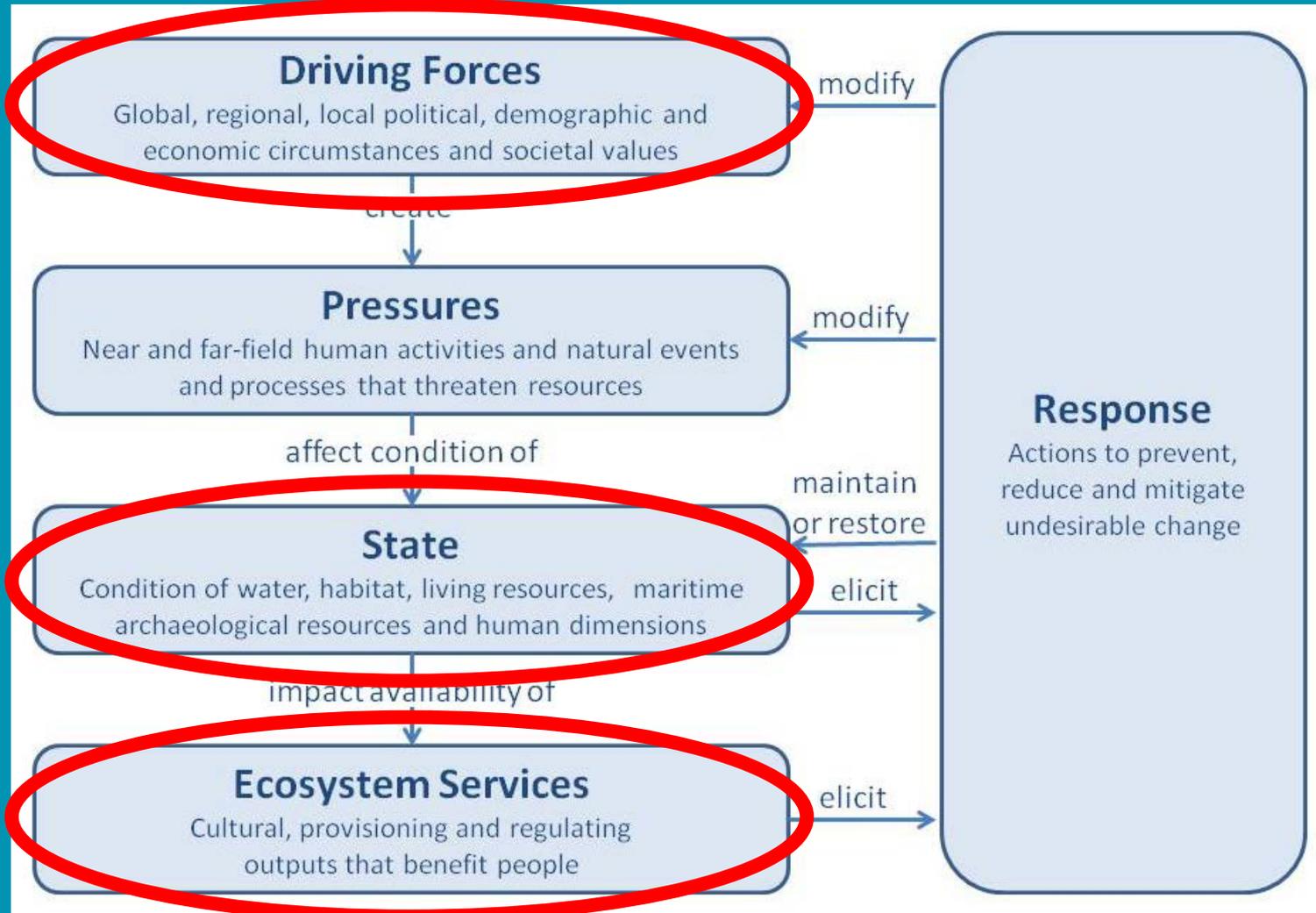


Purpose and Audience

- Assess current condition of OCNMS resources
- Updated understanding of status and trends since 2008 using NEW information
- Supporting tool in management plan review
- Identify knowledge gaps and future research priorities
- Inform and educate partners, stakeholders, and the public
- Reporting tool for ONMS, NOAA and Congress



DPSEER Structure



State of Resources

17 Questions:

- Human Dimensions
- Water Quality
- Habitat
- Living Resources
- Maritime
Archaeological
Resources



Questions have been reordered since 2008

Ecosystem Services

Cultural (*non-material benefits*)

- Sense of place
- Non-consumptive recreation
- Consumptive recreation
- Science
- Education
- Heritage

Regulating (*buffers to change*)

- Coastal Protection

Provisioning (*products and supplies*)

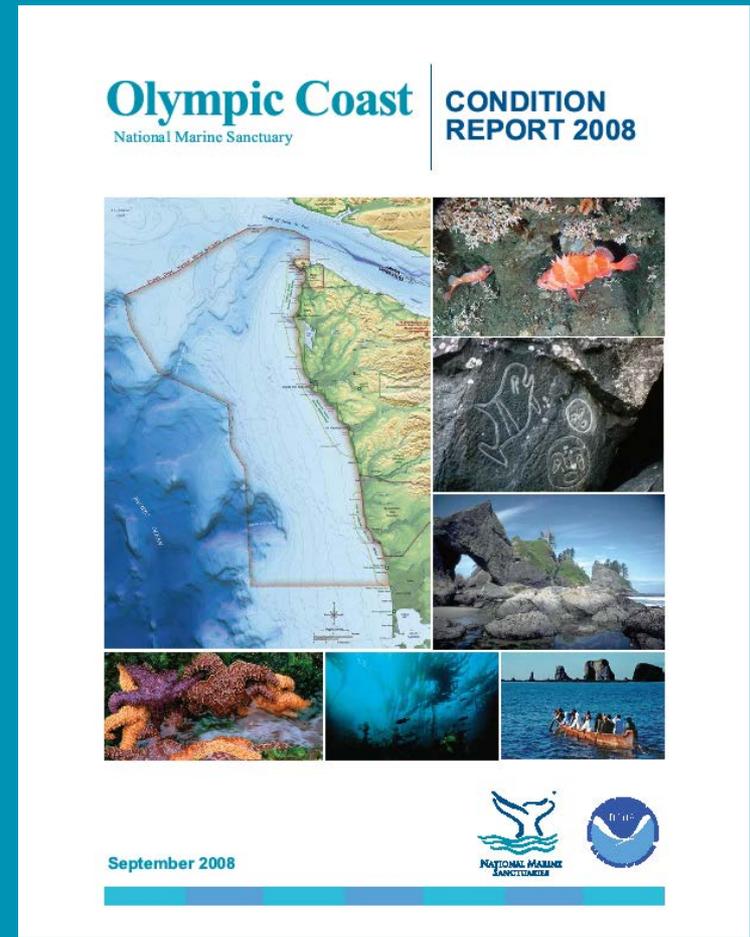
- Food
- Ornamentals
- Biotechnology
- Water
- Energy



OCNMS Condition Report



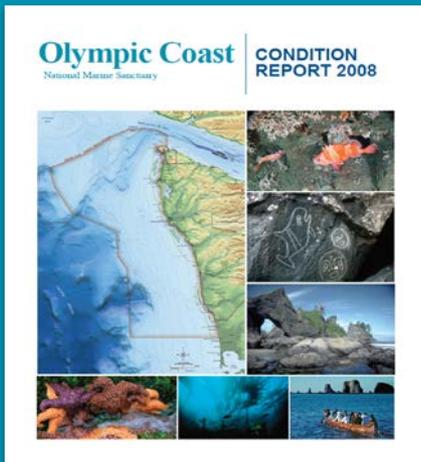
- 2-year timeline for report development: Oct 2018 to Sept 2020
- Ecosystem Indicator Selection workshop on May 2, 2019
- 3-day expert workshop planned for next winter; location TBD on the coast
- New “Ecosystem Services” section provides opportunity to highlight Olympic Coast tribal perspectives, traditional ecological knowledge
- Results inform subsequent Management Plan Review Process
- Financial support available for tribal participation and review.



OCNMS Condition Report



- Opportunity to leverage and build on previous work by Washington State, CCIEA, NMFS, ONMS, others.
- Integration with WA MSP efforts to highlight the region's shared science and monitoring needs moving forward

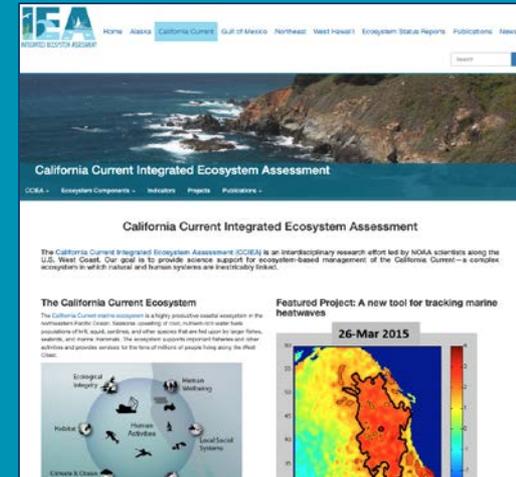


OCNMS 2008 CR

Ecological indicators for Washington State's outer coastal waters.



WA Marine Spatial Plan Ecological Indicator Project

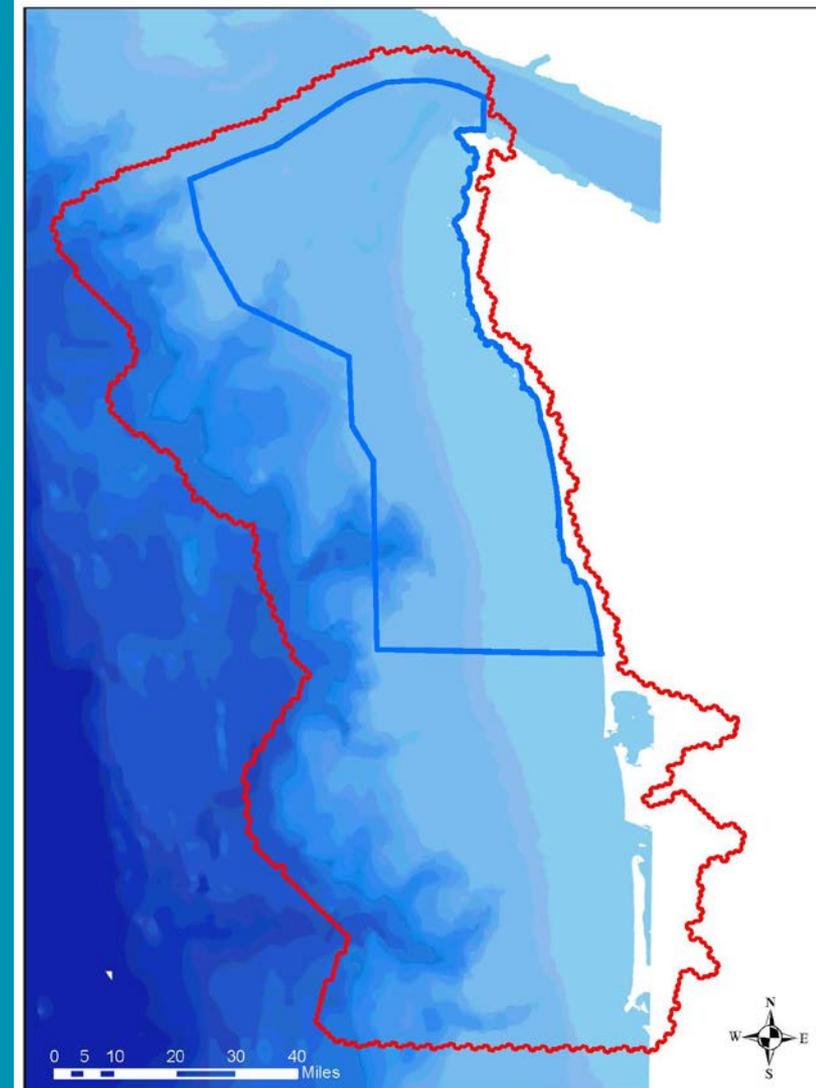


California Current Integrated Ecosystem Assessment (CCIEA)

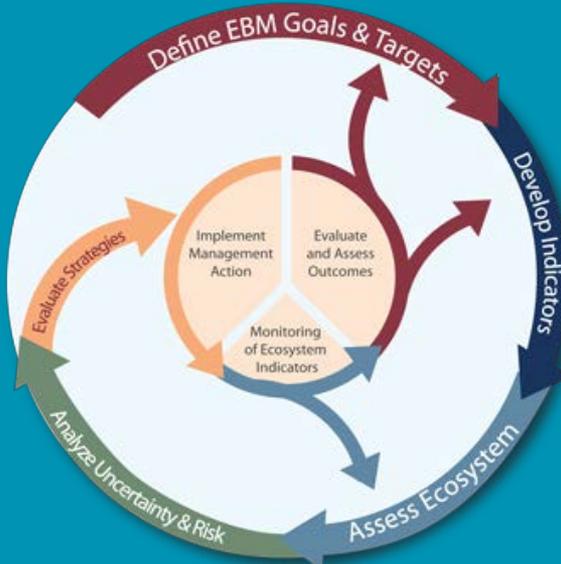
OCNMS and the WA MSP



- OCNMS accounts for ~42% of WA MSP planning area
- Overlap of primary habitats, exception is estuaries
- Both build on NWFSC's 2015 Ecosystem Indicator work (sponsored by WA MSP)
- Integrated Ecosystem Assessment (IEA) collaboration, converging frameworks
- CZM Project of Special Merit linkages
- High priority data gaps
- Builds on existing productive collaborations



Condition Report Process Overview



Sanctuary Condition Reports



Framed around 17 standard questions:

- Drivers/pressures (Q1-5)
- **Ecological Indicators: Water quality, habitats, living marine resources (Q6-15)**
- Maritime Archaeology (Q16-17)
- Ecosystem Services

Drivers and Pressures

- Q1. Influential human drivers
- Q2. Human activities and water quality
- Q3. Human activities and habitats
- Q4. Human activities and living resources
- Q5. Human activities and MAR

Water Quality:

- Q6. Eutrophic condition
- Q7. Human health risks
- Q8. Changes in climate
- Q9. Other stressors

Habitat:

- Q10. Integrity of major habitats
- Q11. Contaminants in habitats

Living Resources:

- Q12. Keystone & foundation species
- Q13. Other focal species
- Q14. Non-indigenous species
- Q15. Biodiversity

MAR:

- Q16. Integrity of MAR
- Q17. MAR environmental hazards

Each question answered with Status & Trends Reporting System

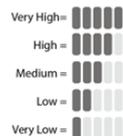
Key:



▲ = Improving — = Not Changing ▼ = Worsening

? = Undetermined N/A = Not Applicable

Confidence Scale:



EXAMPLE:

This symbol indicates the condition was rated "fair" with "medium confidence" and a "worsening" trend with "very high confidence."



OCNMS Ecosystem Indicator Workshop Preparations



1. Subdivide into major habitats

2. Survey potential indicators

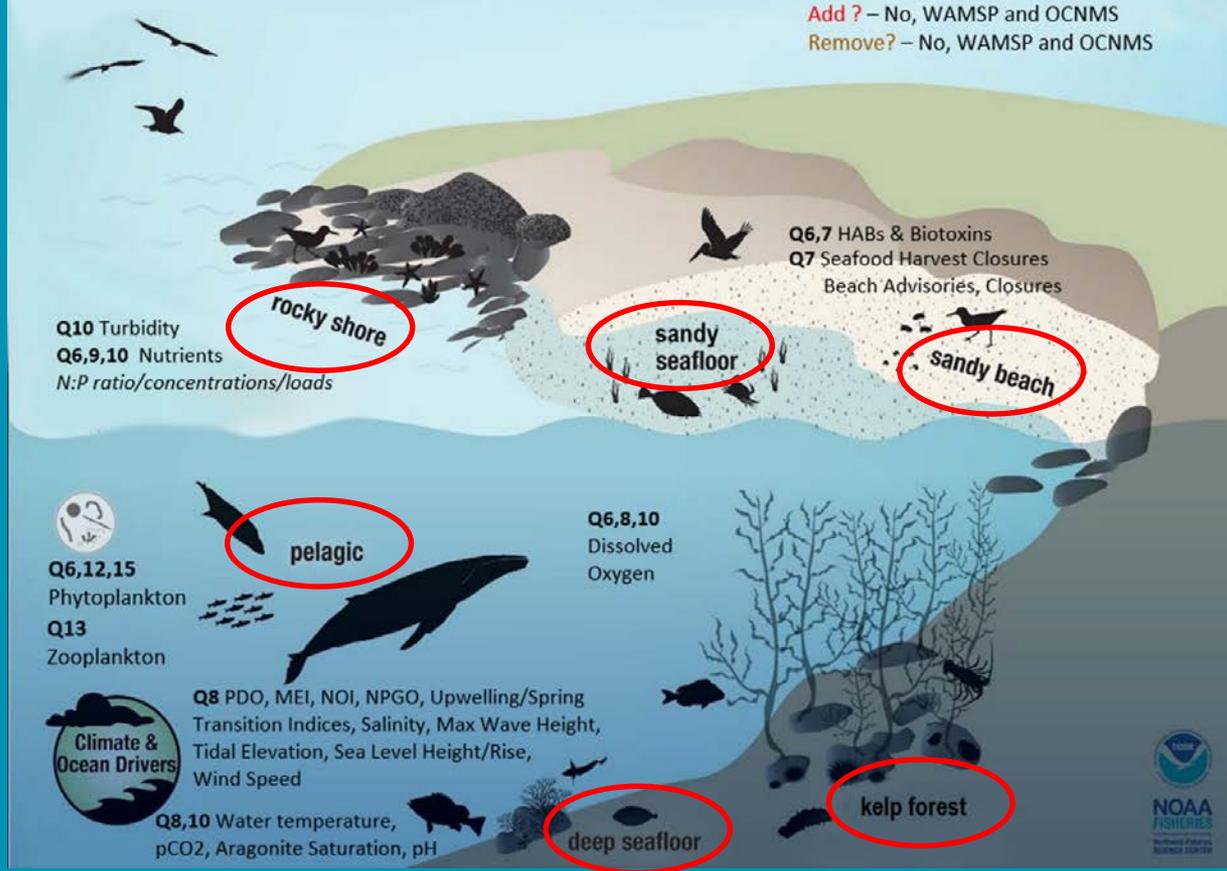
3. Evaluate potential indicators

4. Vet draft indicator portfolio

Indicators represent key components of an ecosystem and allow change to be measured. They provide the basis to assess the status and trends in the condition of the ecosystem or of an element within the system.

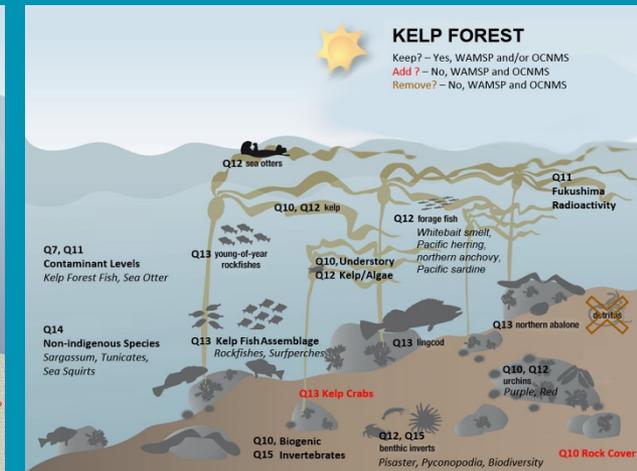
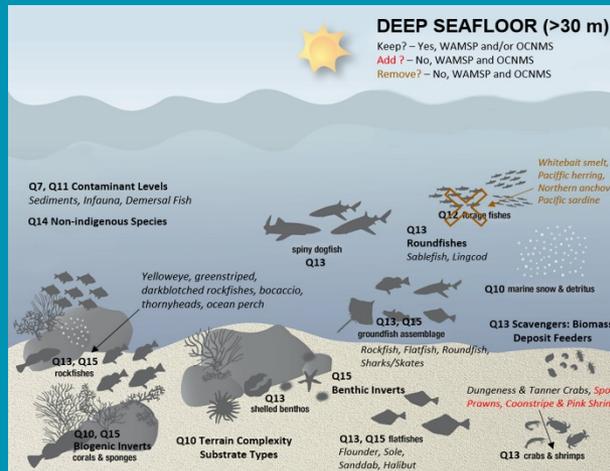
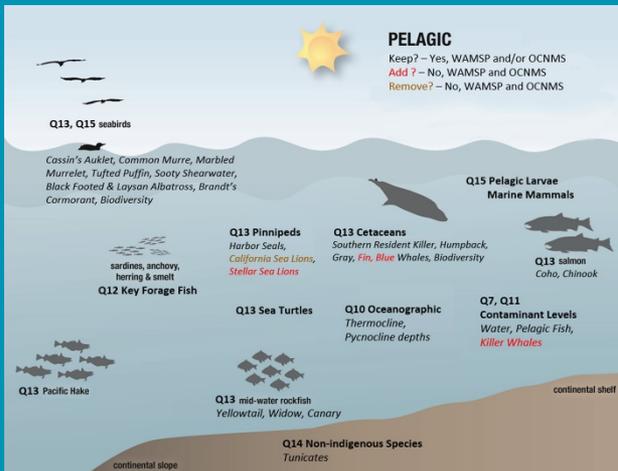
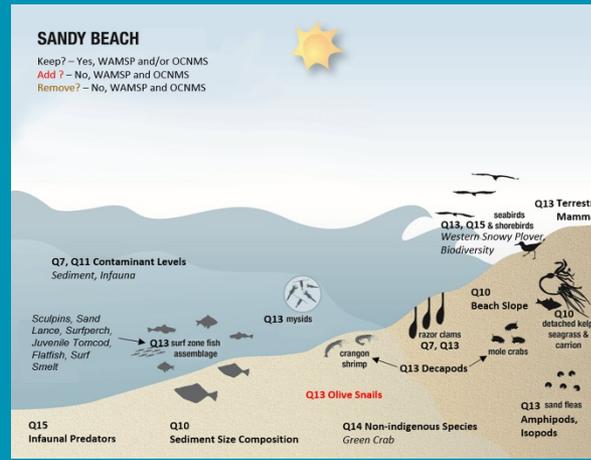
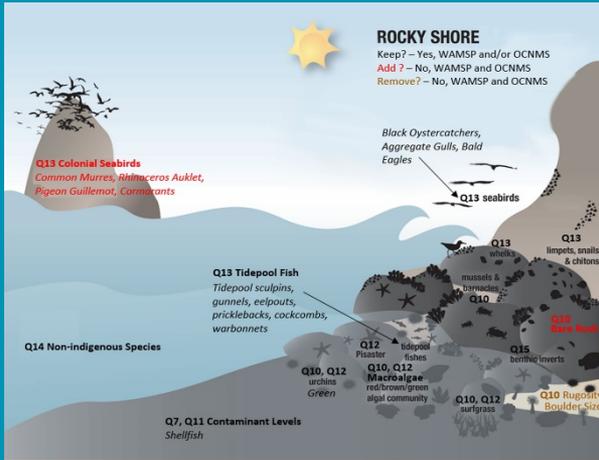
6 HABITATS

Keep? – Yes, WAMSP and/or OCNMS
Add ? – No, WAMSP and OCNMS
Remove? – No, WAMSP and OCNMS



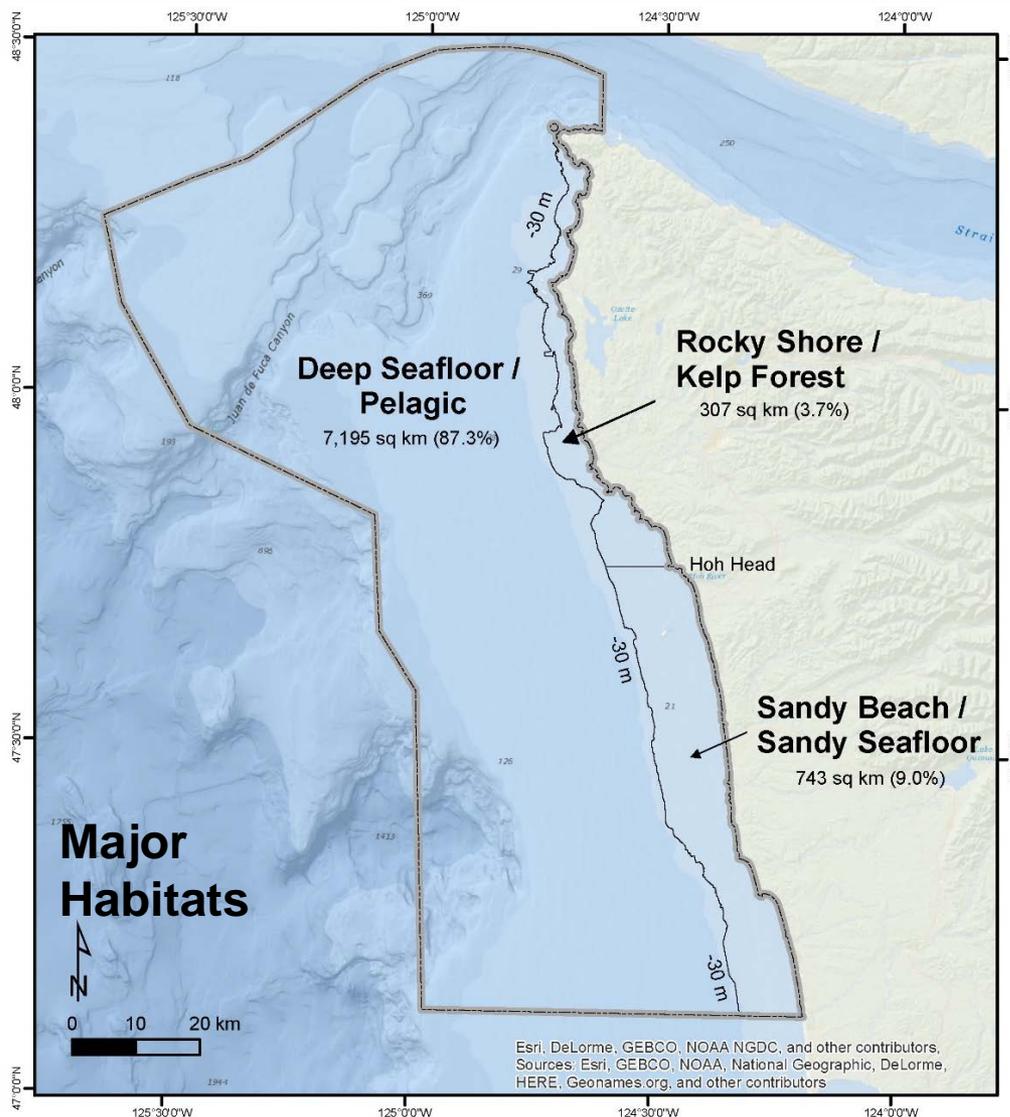
OCNMS Ecosystem Indicator Workshop

Major Habitats



OCNMS Ecosystem Indicator Workshop

Major Habitats



Depths < 30 m

- Rocky Shore/ Kelp Forest dominant in north (~ 4%)
- Sandy Beach/Sandy Seafloor dominant in south (~ 9%)

Depths > 30 m

- Deep Seafloor/Pelagic
- Most common habitats (~ 87%)

OCNMS Ecosystem Indicator Workshop Preparations



1. Subdivide into major habitats

2. Survey potential indicators

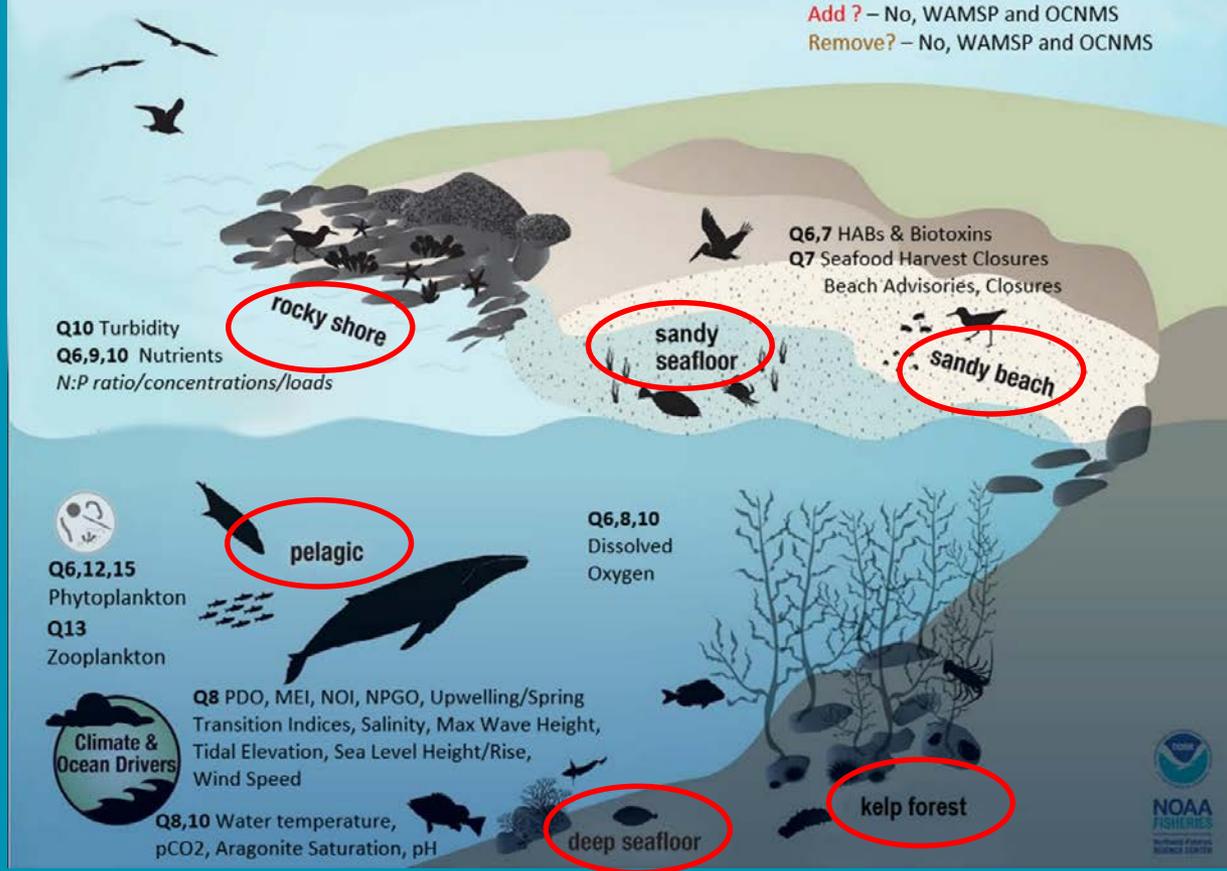
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Indicators represent key components of an ecosystem and allow change to be measured. They provide the basis to assess the status and trends in the condition of the ecosystem or of an element within the system.

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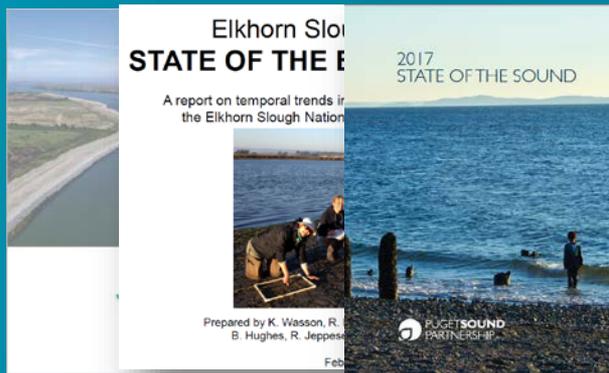


OCNMS Ecosystem Indicator Workshop

Survey Potential Indicators



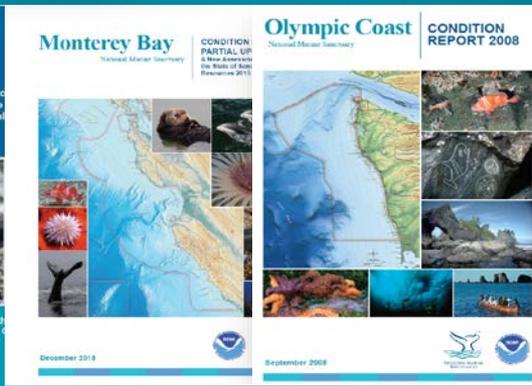
- Reviewed 19 Reports with Ecological Indicators
- Developed initial list of ~500 indicators



Local



State



ONMS



Regional

OCNMS Ecosystem Indicator Workshop Evaluation Criteria



3. Evaluate potential indicators



4. Vet draft indicator portfolio

Olympic Coast National Marine Sanctuary

CONDITION REPORT 2008



OCNMS Ecosystem Indicator Workshop

2 May, 2019: Agenda



4. Vet draft indicator portfolio

- Welcome and introductions
- Sanctuary Condition Report Overview
- Orientation to major habitats, workshop process
- Sandy Beach Habitat (plenary)
- Pelagic Habitat (lunch planary)
- Breakout: Kelp Forest and Rocky Shore
- Breakout: Sandy Seafloor and Deep Seafloor
- Breakout: Environmental Drivers, Oceanography
- Break and browse
- Summarize and share
- Next steps and closing thoughts

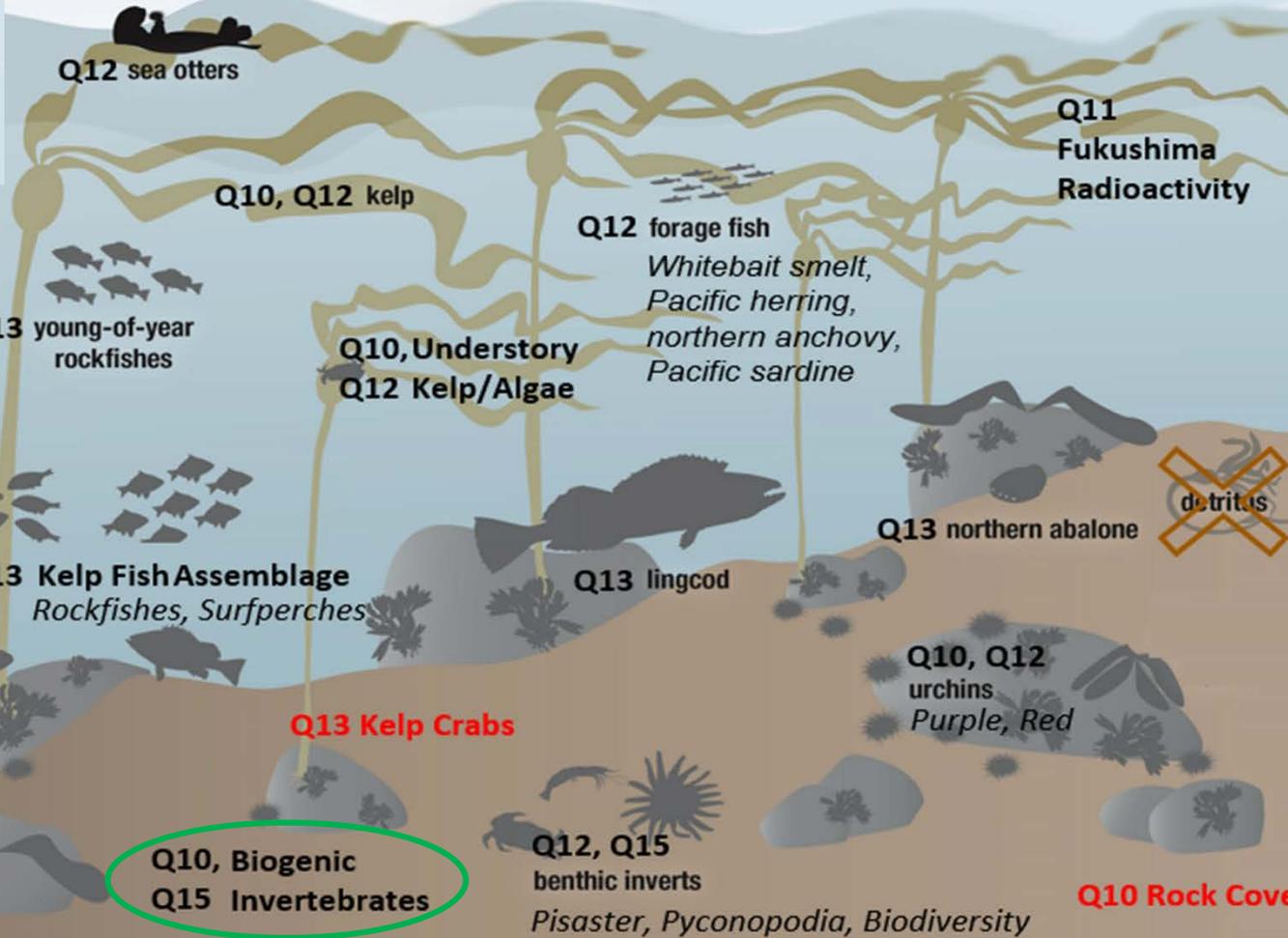
KELP FOREST

Keep? – Yes, WAMSP and/or OCNMS
 Add ? – No, WAMSP and OCNMS
 Remove? – No, WAMSP and OCNMS

1/21

Q7, Q11
Contaminant Levels
Kelp Forest Fish, Sea Otter

Q14
Non-indigenous Species
Sargassum, Tunicates, Sea Squirts



Proposed Ecological Indicator	Relevant CR Question(s)	Ecological, Cultural, Management Importance	Temporal & Spatial Data Availability	Other Considerations
<i>Habitat</i>				
Biogenic Invertebrates - Areal extent, Diversity, Density	Q10 - Hab/Integrity, Q15 - LR Biodiversity	Provide habitat for algae, invertebrates, fish, and marine mammals.	No temporal data; West coast wide spatial maps; (Deep sea coral database, NOAA predictive taxa distribution models)	Most information is presence-only

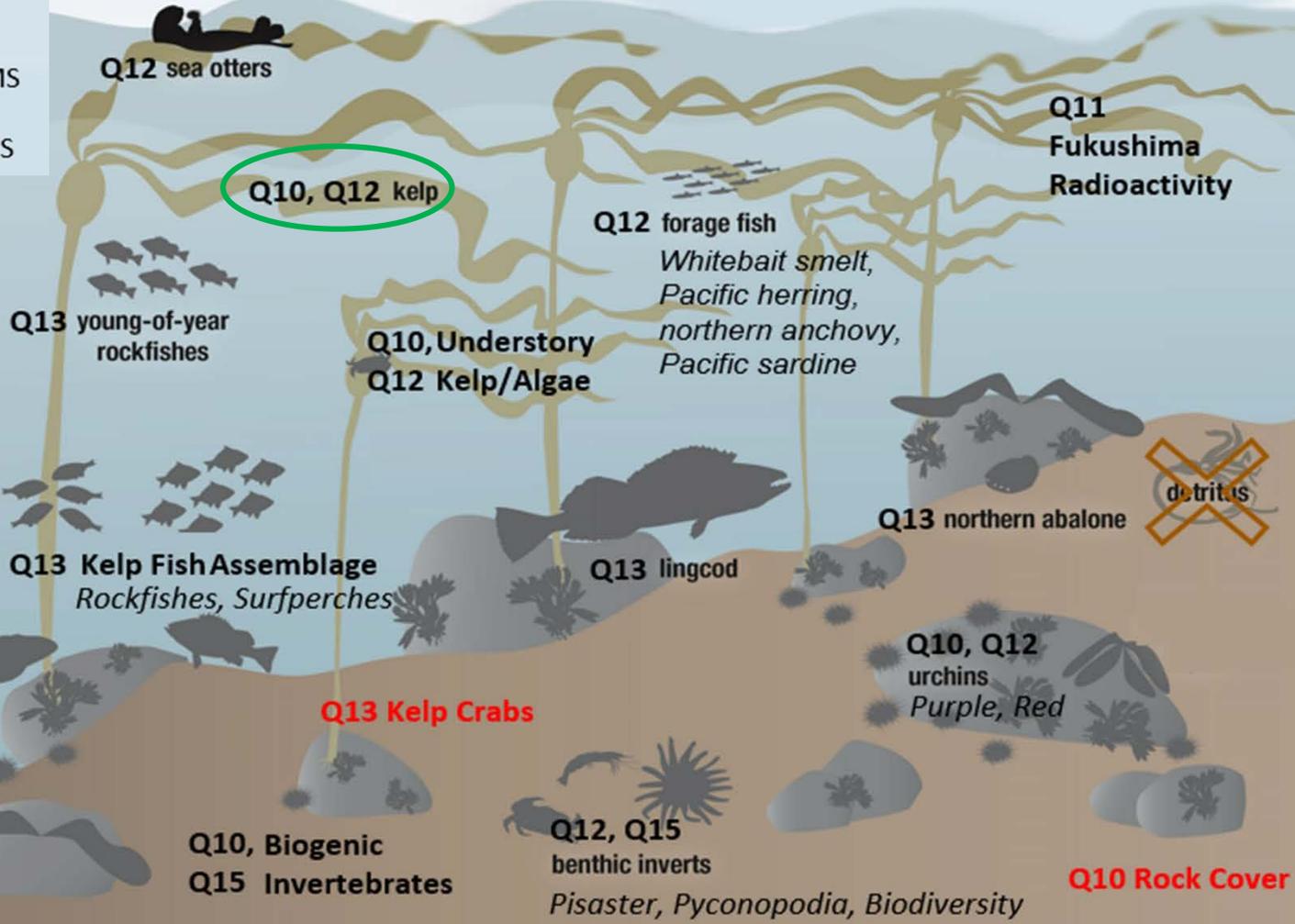
KELP FOREST

Keep? – Yes, WAMSP and/or OCNMS
 Add ? – No, WAMSP and OCNMS
 Remove? – No, WAMSP and OCNMS

2/21

Q7, Q11
Contaminant Levels
Kelp Forest Fish, Sea Otter

Q14
Non-indigenous Species
Sargassum, Tunicates, Sea Squirts



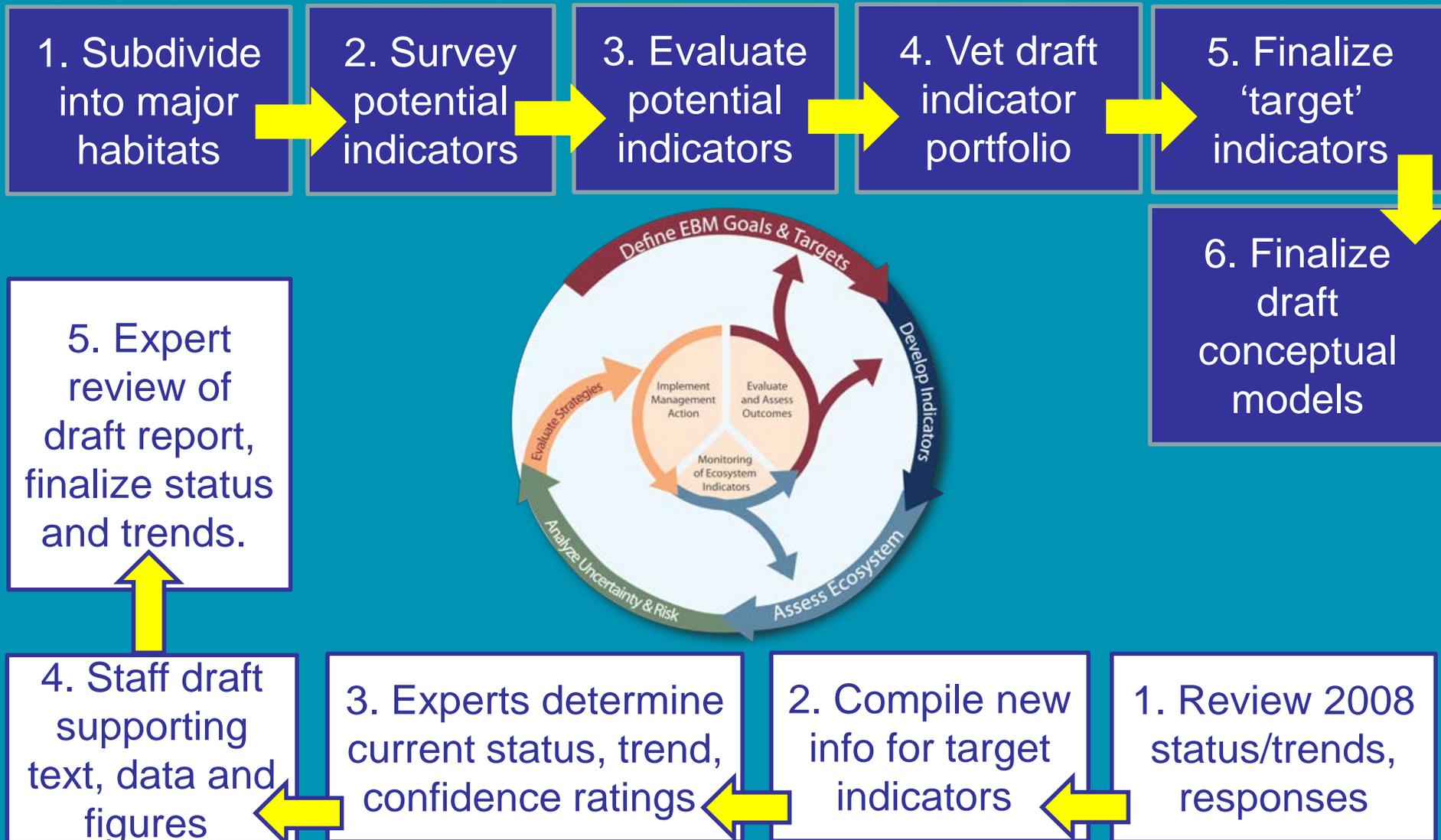
Proposed Ecological Indicator	Relevant CR Question(s)	Ecological, Cultural, Management Importance	Temporal & Spatial Data Availability	Other Considerations
<i>Habitat</i>				
Kelp - Canopy areal extent	Q10 - Hab/Integrity, Q12 - LR Keystone & Foundation	Ecologically and economically important; provide essential fish habitat, and affect recruitment of inverts and other species (Pfister et al. 2018).	1989-present; exhaustive nearshore West Coast coverage; (WA Department of Natural Resources)	Broadly used in other portfolios, including OCNMS 2008 CR.

Indicator Matrix

Ecological indicators by major habitat and by condition report question Q6-15

		Sandy Beach	Rocky Shore	Kelp Forest	Sandy Sublittoral	Deep Sublittoral	Pelagic
6 What is the eutrophic condition of sanctuary waters and how is it changing?	1	Nutrients Nitrogen phosphorus	Nutrients Nitrogen phosphorus	Nutrients Nitrogen phosphorus	Nutrients Nitrogen phosphorus	Nutrients Nitrogen phosphorus	Nutrients Nitrogen phosphorus
	2	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen
	3	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins
	4	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton
7 Do sanctuary waters pose risks to human health and how are they changing?	1	Contaminant Levels (Sediment, Infauna)	Contaminant Levels (Shellfish)	Contaminant Levels (Kelp Forest Fish Sea Otters)	Contaminant Levels (Infauna, Dungeness Crabs)	Contaminant Levels (Sediments, Infauna, Demersal Fish)	Contaminant Levels (Water, Pelagic Fish, Killer Whales)
	2	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins	HABs & Biotoxins
	3	Seafood Harvest Closures	Seafood Harvest Closures	Seafood Harvest Closures	Seafood Harvest Closures	Seafood Harvest Closures	Seafood Harvest Closures
	4	Beach Advisories & Closures	Beach Advisories & Closures	Beach Advisories & Closures	Beach Advisories & Closures	Beach Advisories & Closures	Beach Advisories & Closures
8 Have recent, accelerated changes in climate altered water conditions and how are they changing?	1	Climatic Indices	Climatic Indices	Climatic Indices	Climatic Indices	Climatic Indices	Climatic Indices
	2	Upwelling	Upwelling	Upwelling	Upwelling	Upwelling	Upwelling
	3	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen
	4	Water Temperature	Water Temperature	Water Temperature	Water Temperature	Water Temperature	Water Temperature
	5	Water Salinity	Water Salinity	Water Salinity	Water Salinity	Water Salinity	Water Salinity
	6	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry
	7	Wind, Waves, Tides	Wind, Waves, Tides	Wind, Waves, Tides	Wind, Waves, Tides	Wind, Waves, Tides	Wind, Waves, Tides
	8						Thermocline Depth
	9						Pycnocline Depth
9 Are other stressors, individually or in combination, affecting water quality, and how are they changing?	1	Nutrients Nitrogen phosphorus loads	Nutrients Nitrogen phosphorus loads	Nutrients Nitrogen phosphorus loads	Nutrients Nitrogen phosphorus loads	Nutrients Nitrogen phosphorus loads	Nutrients Nitrogen phosphorus loads
	2	Turbidity	Turbidity	Turbidity	Turbidity	Turbidity	Turbidity
	3	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen
	4	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry	Water Chemistry
	5	Water Temperature	Water Temperature	Water Temperature	Water Temperature	Water Temperature	Water Temperature
	6	Beach Slope	Macroalgae (Red, Green, Brown Algae)	Biogenic Inverts	Biogenic Inverts	Thermocline Depth	Thermocline Depth
	7	Sediment Composition	Surfgrass	Kelp	Substrate Types	Substrate Types	Pycnocline Depth
	8	Detached Kelp, Seagrass & Carrion	Barnacles	Understory Kelp/Algae		Terrain Complexity	
	9		Mussels	Rock Cover		Marine Snow & Debris	
	10		Urchins (Green)	Debris			
	11		Bare Rock	Urchins (Purple)			
	12		Boulder Size	Urchins (Red)			
	13		Rugosity				
11 What are contaminant concentrations in sanctuary habitats and how are they changing?	1	Contaminant Levels (Sediment, Infauna)	Contaminant Levels (Shellfish)	Contaminant Levels (Kelp Forest Fish Sea Otters)	Contaminant Levels (Infauna, Dungeness Crabs)	Contaminant Levels (Sediments, Infauna, Demersal Fish)	Contaminant Levels (Water, Pelagic Fish, Killer Whales)
	2			Fukushima Radioactivity			
12 What is the status of keystone and foundation species and how is it changing?	1	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton
	2		Macroalgae (Red, Green, Brown Algae)	Kelp		Key Forage Fish (Whitebait smelt, Pacific herring, Northern anchovy, Pacific sardine)	Key Forage Fish (Pacific Sardines, Northern Anchovy, Pacific Herring, Whitebait smelt)
	3		Surfgrass	Understory Kelp/Algae			Pacific Hake
	4		Pisaster (Cohre Sea Star)	Ochre Sea Star, Pisaster			
	5		Urchins (Green)	Sunflower Sea Star, Pycnospida			
	6			Urchins (Purple)			
	7			Urchins (Red)			
	8			Forage Fish (Whitebait smelt, Pacific herring, northern anchovy, Pacific sardine)			
13 What is the status of other key species and how is it changing?	1	Zooplankton	Zooplankton	Zooplankton	Zooplankton	Zooplankton	Zooplankton
	2	Razor Clams	Limpets, Snails, Chitons	Northern or Pinto Abalone	Dungeness Crabs	Crabs & Shrimps (Dungeness, Tanner Crabs, Spot prawns, Coonstripe Shrimp, Pink Shrimp)	Mid-water Rockfish (Yellowtail, Widow, Canary)
	3	Olive Snails	Whecks	Kelp Crab	Flatfishes (Flounder, Sole, Sanddab)	Ratio Scavengers:Total Biomass	Salmon (Coho, Chinook)
	4	Decapods (Crangon Shrimp, Mole Crabs)	Yidepool Fish (Yidepool sculpins, gunnels, eelpouts, pricklebacks, cockcombs, warbonnets)	Lingcod		Deposit Feeders	Sea Turtles (Green, Leatherback, Loggerhead)
	5	Myxids	Zoneal Seabirds (Common Murres, Rhinoceros Auklet, Pigeon Guillemot, Cormorants)	Kelp Fish Assemblage (Rockfishes, Surfperches)		Shelled Benthos	Pinnipeds (Harbor Seal, CA Sea Lion, Steller Sea Lion)
	6	Amphipods, Isopods (Sand Fleas)	Seabirds (Oystercatchers, Gulls, Bald Eagles)	YOY Rockfish		Groundfishes (Rockfish, Flatfish, Roundfish, Sharks/Skates)	Cetaceans (Southern Resident Killer, Humpback, Gray, Fin, Blue Whales)
	7	Surf Zone Fish Assemblage (Sculpins, Sand Lance, Surfperches, Juvenile Tomcod, Flatfish, Surf Smelt)				Rockfishes (Yelloweye, greenstriped, darkblotched rockfishes, bocaccio, thornyheads, ocean perch)	Seabirds (Cassin's Auklet, Common Murre, Marbled Murrelet, Tufted Puffin, Sooty Shearwater, Black Footed & Laysan Albatross, Brandt's Cormorant)
	8	Shorebirds, Seabirds (All Species, Western Snowy Plover)				Flatfishes (Flounder, Sole, Sanddab, Pacific Halibut)	
	9	Terrestrial Mammals				Roundfishes (Sablefish, Lingcod)	
	10					Spiny Dogfish	
14 What is the status of non-indigenous species and how is it changing?	1	Green Crab		Sargassum honeri			Tunicates
	2			Sargassum muticum			
	3			Sea Squirts			
	4			Tunicates			
15 What is the status of biodiversity and how is it changing?	1	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton	Phytoplankton
	2	Infaunal Predators	Benthic Inverts	Benthic Inverts	Biogenic Inverts	Biogenic Inverts	Pelagic Larvae
	3	Shorebirds, Seabirds		Benthic Inverts	Flatfishes	Benthic Inverts	Cetaceans
	4					Groundfishes	Marine Mammals
	5					Rockfishes	Seabirds
	6					Flatfishes	

Condition Report Process Overview



Rating System



▲ = Improving — = Not Changing ▼ = Worsening

? = Undetermined

N/A = Not Applicable

Description of Findings

Description of findings statement for a given status rating (e.g., Good) is specific to the question being asked

Question 7 (Water/Human Health): Do sanctuary waters pose risks to human health and how are they changing?

Good	Water quality does not appear to have the potential to negatively affect human health.
Good/Fair	One or more water quality indicators suggest the potential for human health impacts, but human health impacts have not been reported.
Fair	Water quality problems have caused measurable human impacts, but effects are localized and not widespread or persistent.
Fair/Poor	Water quality problems have caused severe impacts that are either widespread or persistent.
Poor	Water quality problems have caused severe, persistent, and widespread human impacts.

Question 10 (Habitat/Integrity): What is the integrity of major habitat types and how are they changing?

Good	Habitats are in near-pristine condition.
Good/Fair	Selected habitat loss or alteration is suspected and may degrade some attributes of ecological integrity, but has not yet caused measurable degradation.
Fair	Selected habitat loss or alteration has caused measurable, but not severe degradation in some attributes of ecological integrity.
Fair/Poor	Selected habitat loss or alteration has caused severe degradation in some, but not all attributes of ecological integrity.
Poor	Selected habitat loss or alteration has caused severe degradation in most, if not all attributes of ecological integrity.

Question 14 (Living Resources/Non-Indigenous Species): What is the status of non-indigenous species and how is it changing?

Good	Non-indigenous species are not suspected to be present or do not appear to affect ecological integrity (i.e., full community development and function).
Good/Fair	Non-indigenous species are present and may preclude full community development and function, but have not yet caused measurable degradation.
Fair	Non-indigenous species have caused measurable, but not severe degradation in some attributes of ecological integrity.
Fair/Poor	Non-indigenous species have caused severe degradation in some, but not all attributes of ecological integrity.
Poor	Non-indigenous species have caused severe degradation in most, if not all attributes of ecological integrity.

Available in Appendix A of online guidance

OCNMS: 2008 Ratings

WATER	
Are specific or multiple stressors, including changing oceanographic and atmospheric conditions, affecting water quality?	?
What is the eutrophic condition of sanctuary waters and how is it changing?	—
Do sanctuary waters pose risks to human health and how are they changing?	—
What are the levels of human activities that may influence water quality and how are they changing?	—
HABITAT	
What is the abundance and distribution of major habitat types and how is it changing?	—
What is the condition of biologically structured habitats and how is it changing?	?
What are the contaminant concentrations in sanctuary habitats and how are they changing?	—
What are the levels of human activities that may influence habitat quality and how are they changing?	▲

LIVING RESOURCES	
What is the status of biodiversity and how is it changing?	?
What is the status of environmentally sustainable fishing and how is it changing?	▲
What is the status of non-indigenous species and how is it changing?	▼
What is the status of key species and how is it changing?	?
What is the condition or health of key species and how is it changing?	?
What are the levels of human activities that may influence living resource quality and how are they changing?	▲

MARITIME ARCHAEOLOGICAL RESOURCES	
What is the integrity of known maritime archaeological resources and how is it changing?	??
Do known maritime archaeological resources pose an environmental hazard and how is this threat changing?	—
What are the levels of human activities that may influence maritime archaeological resource quality and how are they changing?	?

Good	Good/Fair	Fair	Fair/Poor	Poor	Undetermined
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▲ = Improving — = Not Changing ▼ = Worsening

? = Undetermined

N/A = Not Applicable

Condition Report Process: Next Steps



- Expert workshop planning and logistics
- Expert list by specialty
- Ecosystem services discussions
- Finalized list of target ecological indicators
- Data discovery, access and evaluation
- Tribal engagement

National Marine Sanctuaries
National Oceanic and Atmospheric Administration



NATIONAL MARINE
SANCTUARIES

OLYMPIC COAST

<http://olympiccoast.noaa.gov>



Options for creation of the COHORT

Phyllis Shulman and Tye Ferrell, William D. Ruckelshaus Center

Making the case

- Coastal communities are deeply vulnerable and already impacted (by erosion, acidification, flooding, rising sea levels, etc.)
 - Coastal coordination will increase opportunities prioritizing projects, obtaining funds, improving efficiency of investments, and projects that benefit the entire coast
 - These efforts will be an example for others, including the new WA Natural Disaster and Resiliency Activities Work Group
 - Investing now in community resilience is much cheaper than investing after a disaster
- 



- Investing now will save lives by reducing risk and mitigating the damage from future disasters

What will the COHORT do?

- Provide backbone services and work as a team to address resilience coast-wide
- Align key resources and expertise, cross-fertilization, collaboration, and strategic investment
- Assist with a coast-wide risk assessment and risk reduction analysis
- Bring the best available science to communities
- Administer seed funding and help communities pursue resilience activities
- Help coastal entities develop and write new grant proposals
- Support grant and contract administration
- Help to capture success stories and communicate to decision-makers
- Identify and coordinate opportunities to enhance access to data and practical information for coastal communities on emergency preparedness, resilience planning, policymaking, outreach, and project development

What will the COHORT look like?

- Four agency staff, plus one operations coordinator
- Based on the coast, in one office, with satellite locations
- Work guided by a Charter and interagency agreement(s)
- Each agency will develop an internal structure to support the overall effort and their COHORT member in the field
- Communications will be a key responsibility
- WCMAC will initially be the primary community advisor
- COHORT will also seek guidance from tribes, electeds, MRCs, and other entities on the coast
- Advocacy will need to come from coastal entities