

WASHINGTON COASTAL MARINE ADVISORY COUNCIL MEETING

Wednesday, May 8, 2024
Part 1 from 10am – 12:10pm
Part 2 from 1:00pm – 3:30pm

[TVW's Broadcast Channel](#)

[Link to Materials](#)

[Public Comment Sign-up](#)

Zoom link: <https://us02web.zoom.us/j/88197790641?pwd=WUdQeXkzUW5YUIRITC9GSmU5eVpPUT09>

Meeting ID: 881 9779 0641

Passcode: 050824

Call in number: 1-253-215-8782

May 8th, 2024 Agenda

| Time | Agenda Item and Description | Objective | Presenter(s) |
|----------------------|--|--|--|
| 10:00am* (25 min) | Welcome and Introductions, Agenda Review <ul style="list-style-type: none">• Welcome from Chair• Review agenda• Welcome and roll call introductions• Meeting ground rules• Encourage public comments via chat• Adopt summary of February meeting minutes | Information, Action <i>Reference Materials:</i> <ul style="list-style-type: none">• May 2024 Agenda• Draft February 2024 Meeting Summary (Appendix A) | <ul style="list-style-type: none">• Rod Fleck, Chair• Nicole Gutierrez, Facilitator |
| 10:25am* (15 min) | WCMAC Updates <ul style="list-style-type: none">• Membership updates<ul style="list-style-type: none">◦ Welcome new WCMAC members◦ Confirm Steering Committee members at large• Announcements | Information, Action | <ul style="list-style-type: none">• Nicole Gutierrez, Facilitator |
| 10:40am* (25 min) | Updates <ul style="list-style-type: none">• Governor's Office Updates• MRC Updates• Agency Updates• General Coastal Updates• Technical Committee Updates<ul style="list-style-type: none">◦ Confirm OSW TC co-lead• MRAC Update | Information, Discussion, Action <ul style="list-style-type: none">• Technical Committee Meeting Summaries (Appendix B) | <ul style="list-style-type: none">• Nicole Gutierrez, Facilitator• Carrie Sessions, Governor's Office• State Agency Representatives• Technical Committee Co-leads• WCMAC Members |

| Time | Agenda Item and Description | Objective | Presenter(s) |
|----------------------|--|---|---|
| 11:05am* (20 min) | Maritime Washington National Heritage Area <ul style="list-style-type: none"> • Presentation and Q&A | Information, Discussion | <ul style="list-style-type: none"> • Alex Gradwohl, Program Director |
| 11:25am* (35 min) | Marine Carbon Dioxide Removal (mCDR) <ul style="list-style-type: none"> • Presentation on current mCDR removal technology and research • Q&A | Information, Discussion | <ul style="list-style-type: none"> • Jessica Cross, PNNL |
| 12:00pm* (10 min) | Public Comment <ul style="list-style-type: none"> • Link to sign up for online public comment. • Encourage commenters to limit their comments to roughly 2 minutes to allow for all public comments to be received. | Discussion | <ul style="list-style-type: none"> • Public/Observers • Nicole Gutierrez, Facilitator |
| 12:10pm* | 50-minute break Online participants: Reconvene at 1:00 pm using the same Zoom link | | |
| 1:00pm* (2 hours) | Gridworks Update & Discussion <ul style="list-style-type: none"> • Update and discussion about Gridworks' offshore wind engagement project to-date. | Discussion <ul style="list-style-type: none"> • <i>Meeting Presentations (Appendix C)</i> | <ul style="list-style-type: none"> • Kate Griffith, Gridworks |
| 3:00pm* (20 min) | European Green Crab Update <ul style="list-style-type: none"> • Presentation and Q&A | Information, Discussion | <ul style="list-style-type: none"> • Justin Bush, WDFW |
| 3:20pm* (10 min) | Public Comment <ul style="list-style-type: none"> • Link to sign up for online public comment. • Encourage commenters to limit their comments to roughly 2 minutes to allow for all public comments to be received. | Discussion | <ul style="list-style-type: none"> • Public/Observers • Nicole Gutierrez, Facilitator |
| 3:30pm* | Adjourn | | <ul style="list-style-type: none"> • Nicole Gutierrez, Facilitator |

* All times are estimates and subject to change.

Meeting Ground Rules

1. Be Respectful

- Listen when others are speaking. Do not interrupt and do not participate in side conversations. One person speaks at a time.
- Recognize the legitimacy of the concerns and interests of others, whether or not you agree with them.
- Cooperate with the facilitator to ensure that everyone is given equitable time to state their views. Present your views succinctly and try not to repeat or rephrase what others have already said.
- Silence cell phones and refrain from using laptops during the meeting, except to take notes.

2. Be Constructive

- Participate in the spirit of giving the same priority to solving the problems of others as you do to solving your own problems.
- Share comments that are solution focused. Avoid repeating past discussions.
- Do not engage in personal attacks or make slanderous statements. Do not give ultimatums.
- Ask for clarification if you are uncertain of what another person is saying. Ask questions rather than make assumptions.
- Work towards consensus. Identify areas of common ground and be willing to compromise.
- Minimize the use of jargon and acronyms. Attempt to use language observers and laypersons will understand.

3. Be Productive

- Arrive on time and stay until the meeting is adjourned.
- Adhere to the agenda. Respect time constraints and focus on the topic being discussed.
- Volunteer for tasks between meetings.

4. Bring a Sense of Humor and Have Fun.

Appendix A. Final February 2024 Meeting Summary

Please see meeting summary on next page.

Washington Coastal Marine Advisory Council Meeting

Final Summary

Wednesday, February 14, 2024

Part 1 from 9:30am – 11:45am

Part 2 from 12:45pm – 3:00pm

Meeting materials and presentations can be found on the WCMAC website:

<https://www.ezview.wa.gov/?alias=1962&pageid=37058>

Meeting recording can be viewed here: [Washington Coastal Marine Advisory Council - TVW](#)

Highlights

- Introduced four new members to WCMAC: Stephanie Bowman, Brian Blake, Molly Bold, and Phil Anderson.
- WA Sea Grant presented an update on the Willapa-Grays Harbor Estuary Collaborative.
- MRAC staff members provided a presentation on mCDR, and the role MRAC will play in mCDR development.
- A representative from the Olympic Coast National Marine Sanctuary provided an overview of the National Marine Sanctuary System and the Ocean Acidification Sentinel Site.
- BOEM presented an update on OSW development on the West Coast, highlighting work in California and Oregon.
- Gridworks provided an overview of their project, working with the Governor's office, that will determine how best to proceed through the development of a planning and evaluation engagement framework related to the BOEM OSW process.

Upcoming Meetings

- **Hybrid May WCMAC meeting:** May 8, 2024
- **Next OSW Technical Committee Meeting:** March 26, 2024

WCMAC Members Present

| | |
|---------------------------------------|--|
| Anderson, Phil - Recreational Fishing | Meinig, Christian – Coastal Energy |
| Arkema, Katie – Science Organization | Niles, Corey – Department of Fish & Wildlife |
| Blake, Brian – Commercial Fishing | Niles, Matt – State Parks |
| Bold, Molly – Coastal Port | Nordin, Michael – Pacific MRC |

| | |
|--|---|
| Bowman, Stephanie - Commerce | Polagye, Brian – Energy Organization |
| Conrad, Michele – Coastal Economic Development Group | Rechner, Michael – DNR |
| Culbertson, Paula – Wahkiakum MRC | Sessions, Carrie – Governor’s Office |
| Dalan, Garrett – Grays Harbor MRC | Steelquist, Peter – Coastal Recreation |
| Dolsak, Nives – Educational institution | Thevik, Larry – Commercial Fishing |
| Fleck, Rod – North Pacific MRC | Zimmerman, Mara - WA Coast Sustainable Salmon Partnership |

Council Members Absent

Doenges, Rich - Ecology

Others Present (as noted on the Zoom log-in)

| | |
|--|--|
| Aoki, Mai – Ecology | Krebs, Amy - Hecate Energy |
| Archer, Cory - MRAC | Krienitz, Jay – Ecology |
| Bain, David - Orca Conservancy | LeValley, Emma - WDFW |
| Bernthal, Carol – Consultant | MacLean, Casey |
| Blalock, Jackson - Pacific Conservation District | Magee, Taylor – Cascadia Consulting Group |
| Brown-Law, Alle – Cascadia Consulting Group | Mason, Ellie |
| Chambers, Susan | Moore, Tommy –NW Indian Fisheries Commission |
| Conroy, Mike | Naar, Nicole – WA Sea Grant |
| Decker, Kevin A - WA Sea Grant | Nevitt, Kristine – Certified Public Accountant |
| Dunham Jordahl, Maggie - Gridworks | Okoniewski, Mike – West Coast Pelagic Conservation Group |
| Felleman, Fred – Port of Seattle Commissioner | Oshie, Pat - Consultant |
| Gillett, Maya - BGA | Paine, Brent - United Catcher Boats |
| Gomez, Juan Carlos - BOEM | Pucylowski, Teresa - Ecology |
| Griffith, Kate - Gridworks | Rolf, Jenna - Makah Tribe |
| Gutierrez, Nicole – Cascadia Consulting Group | Schroer, Jenna - Ecology |

| | |
|------------------------------------|---|
| Hall, Heather - WDFW | Schwerin, Don - Ag and Rural Caucus (Walla Walla) |
| Johnson, Steven - Gridworks | Skelton, Ann – MRC |
| Jordahl, Maggie Dunham - Gridworks | Thompson, Angie - MRAC |
| Kawahara, Joel | Weinstein, Alla – Trident Winds |
| Koehlinger, Julie Ann | Wright, Teri – Forest/Salmon/Orca Advocate |
| | Wrubel, Katie - OCNMS |

Welcome and Introductions

- Rod Fleck, WCMAC Chair, opened the meeting and welcomed everyone. He reviewed the meeting agenda and noted that there was only one decision action item during meeting with several discussion-oriented agenda items.
- Nicole Gutierrez went through covered the ground rules and expectations for WCMAC members and public participants.
- Nicole Gutierrez reviewed the December meeting minutes and summary, noting that they have adjusted the meeting summary to reflect Larry Thevik's feedback.
 - Larry commented that it would be helpful to hyperlink past meeting summaries in WCMAC meeting agendas.
 - Nicole replied that they will be doing this for future meetings as well as linking the meeting recordings in the summaries when called out.
 - Mike Nordin made a motion to approve the December meeting minutes. Stephanie Bowman seconded, and all WCMAC members approved.
 - Mara Zimmerman abstained from the motion as she did not attend the December meeting.

WCMAC Updates

Doug Kess Remembrance

- Rod Feck shared that longtime WCMAC member Doug Kess passed away on February 11, 2024. Rod shared that Doug played an integral role in forming the WCMAC. He was an incredible combination of an open ear, heart, and mind, and a strong advocate for the coast and his community.
- Mike Nordin shared that losing Doug is a huge loss to the Pacific County community and he will be deeply missed. Doug volunteered and offered his time for everything. He was just short of his dissertation for a PhD in mathematics. He was a dedicated husband and a mentor to many. The WCMAC would not exist without Doug and his efforts.
- Garrett Dalan remembered Doug's longstanding watermelon joke, and shared a watermelon-rhyme poem he wrote for Doug.

- Larry Thevik commented that Doug was incredibly kind, openminded, appropriately skeptical, and loyal to coastal issues. Larry is thankful to have known him.

Membership Updates

- Carrie Session welcomed four new members to WCMAC: Stephanie Bowman, Brian Blake, Molly Bold, and Phil Anderson. The four new members then introduced themselves.
- Stephanie Bowman thanked everyone for having her and shared her excitement over joining WCMAC. She serves as the state's Maritime Industry Director with the Department of Commerce, and has been in the maritime industry for 20 years. Prior to working for Commerce, she was a Port of Seattle Commissioner and worked for the Port of Tacoma.
- Brian Blake shared that he's glad to be a member of WCMAC. He served 18 years in the WA Legislature and was involved with onshore marine issues. Since leaving the Legislature, he now works for Ocean Gold Seafood in Government Affairs, and is learning a lot about the CA Current Ecosystem and what it brings to our coastal communities.
- Molly Bold shared that she'll be serving as the Coastal Port seat. Molly serves as Manager for the Westport Marina, which is one of the largest hubs for recreational and commercial fishing on the West Coast. Molly's passion for marine and coastal issues is multi-faceted, as she also comes from a commercial fishing family.
- Phil Anderson shared that he is pleased to be appointed to WCMAC and is looking forward to being involved. He has lived in Westport, WA, for a little over 50 years, and had a long career with WDFW, including serving as the department's director for 6 years. Phil is currently a director of the Pacific Fisheries Management Council and commissioner on the Pacific Salmon Commission for the states of WA and OR.
- Nicole thanked everyone for the introductions and moved on to WCMAC updates:
 - WCMAC submitted letters of support for three Ecology projects based on the decisions from the December WCAMC meeting.
 - The facilitation team will be circulating an updated WCMAC member contact list alongside communication guidelines following OPMA guidelines.
 - The facilitation team is exploring in person meeting options and will be following up with more information for future meetings. **The May WCMAC meeting will be hybrid, on May 8th, 2024.**
 - Nicole reminded everyone of the [work plan and topic elevation](#) form. WCMAC members are encouraged to share ideas for agenda topics via this form!

WCMAC Discussion

- Mike Nordin asked if there was any progress on filling the vacant shellfish WCMAC seat.
 - Carrie Sessions replied that the Governor's Office is currently reviewing applications and completing interviews. She thanked those who sent over letters of support for applicants.

Updates

Governor's Office Update

- Carrie Sessions shared an update on the 2024 legislative session, and shared information regarding the following bills put forward by WDFW:
 - HB 1226, which aims at better protecting sensitive fishing information.
 - HB 2049, or the ReWRAP bill, which focused on plastic reduction and recycling unfortunately did not advance.
- Carrie also shared that we anticipate seeing the Senate Capital budget this week, with the rest coming the following week. She shared two items that were included in the Governor's Office budget:
 - They proposed \$750,000 for the Department of Commerce to advance their work in development of WA's participation in the OSW supply chain.
 - They proposed \$300,000 to Ecology to increase and continue their work in engaging on the science and data needs for upcoming OSW.
- Carrie provided an update on the consultant that the Governor's Office hired. The consultant, Gridworks, will conduct outreach to tribes, coastal communities, WCMAC, and other coastal stakeholders on how to best engage with BOEM, or if our own processes best fit the needs of WA. She noted that Gridworks will be presenting later at this meeting.

MRC Updates

- Mike Nordin shared that the Pacific County MRC is holding a Science Conference on May 18, 2024, and requested members to send over any topics or speakers they should include. He noted that lunch and dinner will be provided, and they will be covering a lot of science and education surrounding coastal issues. Pacific County MRC is also looking to update their bylaws.
- Garrett Dalan shared that the Grays Harbor MRC is funding projects as the year moves along, making connections with the other work that's currently happening. They are working out where their MRC fits in with these projects, as many are large projects.
- Paula Culbertson shared that Wahkiakum MRC is recruiting more members, specifically from fishing, and aiming for both environmental and business expertise. She shared that the MRC has funded all their projects and project work is already underway. The MRC has also reviewed their bylaws and procedures. They are contemplating applying for a grant for habitat conservation. She commented that it would be nice to have more support from the State, with increased funding to help address inflation.
- Rod Fleck shared that the North Pacific MRC is bringing back the coastal film festival and is looking to host sometime in the fall, possibly linking the film festival to the Maritime Heritage Festival and Coastal Marine Resources Summit. He noted that he's been working to give the MRC real-time updates and information, such as information from the WCMAC and the MRAC, and up to date maps from the state as it relates to the MRC.

- Nicole commented that she'd be happy to circulate any materials and information regarding MRC events. WCMAC members can send event information to the facilitation team for distribution via the WCMAC listserv.

Agency Updates

- Mai Aoki, Department of Ecology, shared that Rich Doenges will be leaving State service in March, and the new staff person hired for his role will take his WCMAC seat. Ecology is working with State District 19 representatives to help rebuild the Ilwaco dock that burned down. She commented that if anyone has any regulatory needs for qualification or questions to contact Rich Doenges (until March 15th) or the Office of Regulatory Assistance.
- Corey Niles, WDFW, shared no updates but thanked Carrie for her updates on the agency request legislation. He did point to HB 1010, noting WCMAC's previous support for that bill.
- Mike Rechner, WDNR, shared no updates but noted that he's happy to answer any questions.

General Coastal Updates

- Larry Thevik shared that the original crab evisceration bill, HB 1010, did not move forward this year. He commented that the need for the bill continues, and it's expected that next year it will be reintroduced with some modifications and will hopefully make it through the Senate.
- Larry Thevik shared that the Tribal Crab Fisheries for Quinalt opened on December 7th of 2023 and the non-tribal fishery opened on February 1, 2024. The opening cannery price is higher than last year by \$1, and while early catches look promising, they don't appear as strong as last year. He also noted the devastating fire in Ilwaco, where many fishermen lost pots. Larry relayed that Dale Beasley said that how other fishers and the community responded to help fishers harmed from the fire become whole before the start of the season just days away was "selfless, amazing, and inspiring"
- Mara Zimmerman shared that there are currently several grant programs for both habitat protection and restoration. She highlighted an opportunity through the Washington Coast Restoration and Resiliency Initiative, which seeks to fund ecological projects with a resiliency benefit. Proposals are welcome through March 13: [Link to application](#). Contact Mara directly with questions.
- Peter Steelquist shared that Surfrider recently released their [Annual State of the Beach Report](#), and WA has increased their grade from B to A. He shared that they also recently received funding through the Bipartisan Infrastructure Law and IRA for new projects, coastal armoring, development, and sea-level rise. He thanked everyone for their work on that front.
 - Mike Nordin asked if the report separated between the different types of armoring. Peter replied that the report does specify between the different types of armoring, and noted that there is a large difference between natural and hard armoring. A large part of the report dives into armoring along the WA coast and

offers a great comparison to what other coastal states are doing, such as Southern CA.

- Mike Nordin shared that the Pacific MRC funded the Washaway Beach armoring project and is looking to fund a similar project but receiving push back. He commented that this report should hopefully help move the project forward.
- Chris Meinig shared that May 20-23 PNNL will be holding a buoy workshop event in Sequim which will cover the best practices in buoys and moorings, and topics such as data buoys, tsunami warning systems, ocean temperatures, currents, and more. It's an incredible community that likes to share best practices, and student scholarships are offered as well. [Link to Event](#)

Technical Committee Updates

- Nicole shared that the TC last met on January 23, 2024. During this meeting we heard an update from Carrie on the on the consultant team that was hired to further investigate an OSW engagement process with BOEM in WA – the OSW TC is very interested in engaging in this process and we're looking forward to the discussion later today. Brandii O'Reagan, WA Sea Grant, shared key findings related to OSW from a Sea Grant seminar that took place in December 2023. There were many lessons learned from the NE and elsewhere that the OSW can continue to build from and track. The TC also debriefed the December WCMAC meeting's State Energy Strategy presentation & Trident Winds update and identified potential follow-up items from the December WCMAC presentations regarding the WA State Energy Strategy – which could be potential future agenda items, and we continued our review of the Objective 2 Action Plan.
- Larry Thevik, OSW TC Co-Lead, shared the following updates:
 - One of the key themes Brandii reported from stakeholders present at the Sea Grant conference was frustration with the BOEM process and the disconnect between stakeholder input and BOEM actions.
 - During the last few meetings, the TC discussed the ongoing BOEM process in OR regarding two draft WEAs, noting that there have been over 1,100 public comments, and continuous calls from tribal governments, the PFMC, many NGOs, hundreds of stakeholders and stakeholder organizations, and government representatives to slow down this process until there is adequate research on the impacts. It has been discussed that the process is moving forward despite the omission of a cumulative impacts analysis, lack of reference to potential upwelling impacts as NMFS has recommended be done before action, and there is no reference to potential impacts on the California large marine ecosystem (the California Current). He shared that once the WEAs are adopted, the next step is public notice of lease sales.
 - HB 5341 was discussed in the last TC meeting. This bill would've directed UW and others to do research on potential OSW impacts on upwelling and other hydrodynamic effects, but unfortunately it didn't pass out of committee.
 - The TC is working to ensure access to OSW TC meeting summaries and meeting materials are easily accessible via hot links.

MRAC Update

- Rod Fleck shared that there were no updates at this time.

Data Gap Prioritization Update

- Mai Aoki from Ecology provided an update on her data gap prioritization efforts for WA's Marine Spatial Plan (MSP). The MSP provides information and guidance for development of new ocean use proposals along the coast. Since the MSP's development, knowledge has shifted, prompting an assessment of the MSP's data gaps. With each data gap topic, there are three types/categories: general, OSW, and offshore aquaculture. Mai interviewed SMEs to identify, assess, and prioritize data gaps, aiming for at least three experts per topic. She is undergoing a separate process with the coastal tribes. For the next step, Mai shared that she would like to meet with WCMAC members 1:1 to review a list of refined data gaps and receive feedback.
 - Larry Thevik commented that the 2020 Ecology Assessment was done outside of the current context of OSW and data needs and data gaps have been altered by the latest context and influence the need to identify new data layers to be added as well as updates to existing data. Larry offered an example of the omission of the protected species Short Tailed Albatross as a missing data layer.
 - Mai replied that she will contact Larry afterwards to hear his concerns, but she is looking to see who is interested in an interview at this time.
 - Phil Anderson asked for clarification on the volunteering process.
 - Mai said that she will go through the five identified categories and ask members to volunteer for the topic areas they're interested in.
- Mai then went through the categories and asked members to volunteer for the categories they're interested in. For each category, members showed their interest in participating in an interview by raising their hand. For full list of volunteers, see Appendix A. Participants for Data Gap Prioritization Interviews. Mai will follow-up with WCMAC members to schedule interviews and determine specific topics of interest.

WCMAC Discussion

- Phil Anderson commented that sardine experts should be available from SW Science Center of National Marine Fishery Service managed under Pacific Fisheries Council arena. He commented that he would be able to get here a name or two that she could contact.

Willapa-Grays Harbor Estuary Collaborative Update

[Presentation recording](#) 1:36:30- 1:49:00. See slide deck in the February 2024 WCMAC Meeting Packet.

- Nicole Naar from WA Sea Grant presented an update on the Willapa-Grays Harbor Estuary Collaborative (WGHEC), a non-regulatory body serving to increase resilience, build trust and common understanding, and triple-bottom line sustainability. The Collaborative utilizes ecosystem-based management, a regional approach aimed at tackling past, present, and future management.
- Nicole shared that the Collaborative has funding through January 2027 through NOAA's Climate and Fisheries Adaptation program and will use the funding to create decision-

support tools for scenario planning. They are looking to recommend management strategies but need system models.

- Nicole shared information on their Climate and Fisheries Adaptation (CAFA) project which aims to promote adaptation and resilience of fishing communities to climate change. They will receive \$200,000 a year for three years to fund this work. This applied social science project will first develop conceptual map to create formal models, then apply those models before creating a web-based platform for data sharing. They will reach out to community partners to recruit for oral history interviews and focus group participants.
- WCMAC members did not have any follow-up questions at this time.

Marine Resources Advisory Council – mCDR Update & Work Planning

[Presentation recording](#) 1:51:28- 2:07:56.

- Angie Thomson and Cory Archer from Marine Resources Advisory Council (MRAC) introduced their presentation. Angie shared that they will discuss the process that MRAC has gone through to consider Marine Carbon Dioxide Removal (mCDR) and consider the role that MRAC can play related to mCDR.
- Angie shared that MRAC acts to maintain a sustainable and coordinated focus on ocean acidification (OA). MRAC was established by the legislature in the same legislation that created WCMAC. They work across organizational boundaries to ensure that OA efforts are coordinated across the state. She shared that mCDR is found to have positives benefits in targeting OA, however terms and conditions apply.
- Angie shared that MRAC has formed a subcommittee on Carbon Dioxide Removal and is evaluating suitable roles for MRAC in the mCDR landscape.

WCMAC Discussion

- Nives Dolsak asked if they could explain what role, if any, the Washington Ocean Acidification Center plays in mCDR.
 - Angie replied that the Washington Ocean Acidification Center is not currently doing work on mCDR.
- Mike Nordin commented that there are three coastal representatives for MRAC, and asked who was the current State Conservation Commission representative.
 - Angie replied that there is not a current representative.
- Mike Nordin asked if they update the Blue Ribbon Panel as new science comes out.
 - Cory replied that they do update the Blue Ribbon Panel, typically on a five-year basis, and in 2022 MRAC considered an update to the science and they determined it wasn't necessary.
 - Angie also shared that the Blue Ribbon Panels include models, and if they demonstrate a significant impact then here are actions they may take
- Mike Nordin asked if there was a coastal representative for the mCDR subcommittee.
 - Angie replied that they are actively reaching out to coastal members and asking them to join.
- Chris Meinig shared that at PNNL Sequim, they're developing one of the first mCDR machines and conducting the process at a research scale. He noted that the technology

is still in its early days, and one of the largest challenge they're currently facing is permitting- and getting people to understand what mCDR is and isn't. He also noted that sequestering carbon is essential now and moving forward, and utilizing marine resources is integral. He shared that their lab is happy to be a resource for their panel.

- Paula Culbertson commented that the oil industry is running out of space underground for carbon and is now talking about burying it under the sea floor. What are the sources of carbon mCDR is seeking and where will they put it/ how are they going to handle it?
 - Chris Meinig replied that the deep-sea sequestration of carbon is at its extreme early days. The quantity of carbon we need to pull out of the atmosphere and put underground is enormous and will require a lot of solutions to tackle the problem. Chris added that this sequestration process needs to be increased to attain climate goals.
- Paula asked what happens to both the land and ocean buried carbon after a series of years? What is the potential hazard?
 - Chris replied that the durability and sustainability of those options is being reviewed at all levels. Ideally, it would be tied with mineralization so that it's buried for a long time. Additionality and durability are important, and we want to consider the timeline of sequestration and danger of re-emission.
- Larry Thevik asked what the quantitative trends of PH levels were both ocean wide and local. He asked if there were evidence projects to date influencing these trends, and if there were fundamental differences between Puget Sound and coastal ocean waters.
 - Angie replied that there are opportunities to look at more data on these questions, and she could connect Larry to some of this information.
 - Cory added that in general, WA waters are increasing in OA at a more rapid rate than observed globally, and that there are differences between coastal ocean waters and the Puget Sound.
- Nicole Gutierrez relayed a message from the chat, asking if there were any specific projects in WA currently removing CO₂.
 - Chris Meinig shared that there is a pilot project in Sequim at the ecosystem scale, trying to understand regional effects.
- Brian Blake commented that he was on the original Blue Ribbon Panel, and his idea was to use the Prince of Wales marble to enhance the oceans ability to absorb carbon. At the time, scale was an issue. Has technology changed to now allow this?
 - Chris replied that he/s not familiar with the Prince of Wales marble, however this is now possible. Crushed minerals are being used on the East Coast by a project called Vestas, and they're examining the effects now. Crushed mineralization is one of the more promising mCDR techniques that can be used at scale.
- Nicole Gutierrez noted that it seemed the group had a lot of interest in this topic, and that there is an opportunity to hear more from Jessica Cross at PNNL at the May WCMAC meeting.

Public Comment #1

- Fred Felleman, Port of Seattle Commissioner, wanted to share the Port's stance on OSW, noting that the Port supports the position of being a supply chain provider but is not

weighing in on the siting decision. He noted that it is the coastal communities and sovereign nations that should weigh in on the siting decision.

- https://meetings.portseattle.org/portmeetings/attachments/2024/2024_01_23_RM_8c_Memo_Federal-Legislative-Agenda-for-2024.pdf

OASeS/Olympic Coast National Marine Sanctuary

[Presentation recording](#) 2:30:07- 2:41:54. See slide deck in the February 2024 WCMAC Meeting Packet

- Katie Wrubel from Olympic Coast National Marine Sanctuary (OCNMS) provided a presentation on the National Marine Sanctuary System, with a detailed look at the OCNMS. She presented an overview of Sentinel sites, which are geographic areas focused on specific topics, like OA or sea level rise. The Olympic Coast holds distinctive physical, biological, cultural, and governance attributes that deemed it an Ocean Acidification Sentinel Site (OASeS) in 2019. The OASeS site has three main goals, to make informed management decision, science collaboration, and education and outreach.
- Katie shared that OASeS Membership includes a wide audience, including coastal treaty tribes, state agencies, federal agencies, and non-governmental organizations.
- There will be an OASeS Symposium, hosted in Forks, WA, from May 14-16, 2024. The multi-day session is focused on management, policy, science education, and outreach activities. She also asked for any topic recommendations to be sent to her as they begin to build out the schedule.

WCMAC Discussion

- Stephanie Bowman asked if their organization intersected with OSW, and what feedback would the marine sanctuaries provide to BOEM, if any?
 - Katie replied that there has not been any action warranting a response, as nothing is proposed within the sanctuary itself. If there was a proposal within the sanctuary or in an area that required access through the sanctuary, they would consider those needs on a case-by-case basis, but BOEM cannot lease areas within a sanctuary. There's a lot of conversation happening in Southern California between the proposed National Marine Sanctuary and OSW lease areas.
- Kristine Nevitt asked Katie if they've ruled out additional sanctuary status on the WA Coast.
 - Katie replied that the sanctuary designation process is community-led, and they're currently in the process of reviewing their coastal management which presents an opportune time to reassess boundaries. They did not receive any public comments on boundary changes during their last public comment hearing. She then provided information for the sanctuary nomination process: <https://nominate.noaa.gov/>
- Larry Thevik shared a follow up to Stephanie's question, noting that it wasn't long ago that the sanctuary solicited public comments to re-evaluate the uses that are allowed within the marine sanctuary. He noted that he and the crab association commented on this. To his understanding, BOEM is prohibited from leasing marine sanctuary space, however it was one of the items to comment on. What has happened relative to the solicitation of comments and those comments themselves?

- Katie replied that the public comment period was on the scoping phase of their management plan review process. The response to those comments and the Draft Management Plan will likely come out the end of this year, but timing may change. They are using the comments from the public scoping process and working with the Sanctuary Advisory Council to modify the Draft Management Plan with an environmental assessment. She said that the OCNMS could come back to WCMAC with a presentation on the draft plan.
- Larry Thevik asked if she had any idea if there would be a departure from the OCNMS goals in allowing industrial scale OSW to be sited within those boundaries.
 - Katie replied that they were soliciting feedback for any changes regarding their management plan, looking at the compatible and emerging resource uses. They were looking to get a sense of what additional information or any changes that may be warranted. They did not receive any feedback that would lead them to modify their regulations at this time, however that may be possible in the future. They would still need to look at any permit application and assess it on a case-by-case basis to determine if it is compatible with the National Marine Sanctuary guidelines and regulations as well as agencies and tribes. The public scoping was to gather input, not the sanctuary proposing any changes.
- Larry Thevik commented on the Coast Guard PAC-PARS study, noting they did not extend their prohibition on fixed structures into the marine sanctuary because the sanctuary would prohibit the uses already. If the sanctuary changed their stance, it would affect the PAC-PARS.
 - Katie replied that they engaged with the Coast Guard, and to her understanding the area to be avoided is voluntary.
 - Larry replied yes, that the fairways are voluntary for navigation, but the prohibition on fixed structures temporary or permanent prohibited in the Fairways is a regulatory prohibition and enforceable policy within Coast Guard purview.
- Katie commented in the chat with a link to more information on their management plan review process: <https://olympiccoast.noaa.gov/management/mpr/>

BOEM Updates (Carlos Gomez)

[Presentation recording](#) 2:56:50-3:13:34. See slide deck in the February 2024 WCMAC Meeting Packet.

- Carlos Gomez, a renewable energy specialist from BOEM, provided an overview and update on BOEM's process and activities in the Pacific Region. He reminded the group of BOEM's mission to manage the development of US Outer Continental Shelf (OCS) energy and mineral resources in an environmentally and economically responsible way. Their jurisdiction on the West Coast includes the OCS and excludes National Marine Sanctuaries. He shared the timeline for BOEM's OSW Energy Authorization Process, noting that they try to work with the state and local governments to determine the details of OSW siting, and engage with communities to gauge opinions on OSW. The WEA process includes planning and analysis, leasing, site assessment, and construction & operation.

- Carlos provided an update on the California leases, sharing that they are currently between lease granting and site-assessment. They have received communication plans from all lessees, with some having submitted survey plans that BOEM is reviewing. All lessees provided their first progress report, posted to the BOEM website. He also shared that the Programmatic Environmental Impact Statement (PEIS) is available for public comment ending in February. The document is meant to analyze mitigation but will not approve anything.
- Carlos provided an update on OSW in Oregon, sharing that the final WEAs were announced on February 13, 2024, after receiving over a thousand comments on the draft WEAs. Oregon had two call areas, Coos Bay and Brookings, and the Brookings call area was reduced by 20,000 acres after reviewing public comments. They now have a 30-day public comment period on the final WEAs: www.boem.gov/Oregon

WCMAC Discussion

- Rod Fleck relayed a question from the chat, asking at what point will BOEM model the cumulative effects from the California Current Ecosystem from a full build out scenario?
 - Carlos replied that some of that modeling is done in tandem with the National Labs, but he would need to circle back on that question.
 - Katie Arkema replied that she's not familiar with the National Labs looking into cumulative impacts. She would be happy to follow-up offline.
 - Carlos replied that Katie could be right, and he will check with the BOEM team to answer the question.
 - Larry commented that there are no cumulative impacts analysis included in any of project discussions to date despite requests to do so.
- Mike Nordin asked about the probability that no siting is selected for Oregon or Washington.
 - Carlos replied that he is unsure, as he typically manages the CA leases. He said that he would check with his team.

Developing a Framework on a Planning and Evaluation Process for OSW Projects

[Presentation recording](#) 3:19:00–3:32:34. See slide deck in the February 2024 WCMAC Meeting Packet.

- Carrie Sessions introduced the next agenda item, to hear from the consultant team hired by the Governor's Office. The Consultants, Gridworks, will work with tribes and stakeholders to inform the governor what a more transparent planning and evaluation process may look like.
 - Project RFP: <https://www.commerce.wa.gov/contracting-with-commerce/recommending-a-planning-and-evaluation-process-for-offshore-wind-projects-request-for-proposals/>
- Kate Griffith, Director of Gridworks' Pacific Northwest Office, provided a brief background on Gridworks, a nonprofit convener and facilitator of challenging energy conservation on the West Coast. Kate introduced the project team, including subconsultants. The goal of Gridworks' work in OSW engagement for the Governor's

Office is to determine what an inclusive engagement process that fits Washington's specific needs looks like. Their final report will include recommendations for the engagement process, data gaps pertinent to OSW study, and a list of relevant scientific work. Their work will inform any potential OSW planning and processes, but it will not determine those processes.

- Kate shared their approach to the process, which will include a documentation of best practices, interviews and collaborative meetings, public comment & feedback, and socialization of findings and recommendations. The project will follow a six month timeline, with the final report due in June. They have already started research on best practices, including interviews.

WCMAC Discussion

- Nives Dolsak asked what the relationship between the work of the consultant team and the work of the OSW TC committee would be.
 - Kate replied that the work is stand-alone, but they understand that the TC is working on these issues as well.
 - Carrie commented that the TC work is valuable and hope they can lend expertise to this study. The TC chooses their work areas; however the consultant has directed topic areas.
- Mike Nordin asked what success for this project looks like.
 - Kate replied that success would be a clear framework with actionable steps that identify what an inclusive and transparent engagement process looks like. Want to ensure folks are heard, and their input is received.
- Kristine Nevitt asked if there will be a comprehensive effort to identify energy use reduction.
 - Kate replied that their process will focus on what OSW engagement should look like, rather than determine if OSW is feasible for WA.
- Mike Nordin asked what conservation groups Gridworks will reach out to, and if it was possible to use the term "relevant stakeholders" instead of just "stakeholders."
 - Carol replied that they are looking at organizations within WA that have focuses on OSW, such as Surfrider, Sierra Club, etc., but they welcome any recommendations.
 - Carol commented that the term "relevant stakeholders" is a reasonable term, and the focus of the project is to focus on the needs of WA state.
 - Kate commented that their goal is to use a concentric engagement process, looking at most impacted folks first and moving out from there.
 - Mike commented to be wary of conservation as opposed to preservation organizations.
- Brian Polagye commented in the chat: Assuming that, if OSW development occurs in WA, it will be once the cost of OSW falls below other generation and conservation measures, how can/should engagement balance diffuse benefits to a relatively large number of energy users against potentially acute impacts to a smaller (but significant) number of existing ocean users?

- Kate replied that these are the exact questions they are hoping to answer through this process.
- Molly Bold asked in the chat: What errors in process have you identified in other like projects that you intend to approach differently? Any examples of where you've seen great strategy?
 - Kate asked if she was referring to errors with the federal BOEM process? One example of a concern that has been brought up is the Taskforce.
 - Steve replied that there are a lot of questions about how to run a process so that people are heard and involved, but not fatigued by engagement.
- Mike Conroy asked in the chat: Please be sure to include fishery trade associations representing harvesters from across the west coast that spend a significant amount of time and effort harvesting offshore Washington state. For example, the albacore fleet(s) that include harvesters from California and Oregon that fish off Washington
 - Steve answered by sharing that they are prioritizing that all are heard, including stakeholders outside of WA. They are still reaching out to Oregon based fisheries folk for their feedback.
- Peter Steelquist asked if they could discuss plans for broad community engagement and opportunities for public education, especially in rural coastal communities.
 - Kate replied that the scope of their effort is to create that broader perspective. They will work with the concentric circle of stakeholders to ask what would be helpful or useful for a follow up process, either from federal government, BOEM, or WA state. They will share this information as they receive feedback.
- Larry Thevik shared concerns over the framing of this project, and would want to ensure it is framed as "how to shape this work IF work progresses towards these projects rather than "as" work progresses". Furthermore, he wants to know how Gridworks will incorporate the WCMAC Principles of Engagement, MSP, ORMA, and Enforceable Policies. The Intergovernmental BOEM Task force process we have seen elsewhere is sorely lacking and speaking on behalf of "relevant" stakeholders and on behalf of stakeholders who or that cannot speak for themselves such as the California Current System and other marine and avian species that all must be included and be part of the evaluation process.
 - Kate replied that yes, their efforts will be guiding a framework for WA to engage *if* a federal process kicks off in WA. On the WCMAC Principles of Engagement, they plan on going a step further on the concepts of transparency, inclusivity, and science-based.
- Corey Niles commented on something Carol shared earlier, that OSW is fairly new in WA, but that isn't the case. We have an intergovernmental taskforce led by Ecology, that developed the Marine Spatial Plan. The main question here is how do we align our management framework with BOEMs process?
 - Carol provided clarification to her earlier statement, noting that the BOEM process is fairly new in WA. There's a lot of foundational work that needs to be built on, which we intend to incorporate into our work.

- Tommy Moore commented that the proposed timeline for engagement will be challenging for tribes and state fisheries folks, as February through April is the salmon preseason planning process.
 - Kate replied that the Governor's Office is leading government to government engagement and consultation.
- Katie Arkema asked if the BOEM Interagency Taskforce was a requirement for the federal process, or if an alternative state led body fulfills that requirement.
 - Jay Krientiz in the chat: BOEM told the team that an interagency task force is not required, and there are options for alternatives. This is something that the Gridworks team is capturing as part of the interviews and this project.
 - Kate replied that there are many options for alternatives that they will explore.
 - Carlos Gomez replied that the Taskforce is not a direct requirement, and there can be an effort to adjust the that based off WA needs.
- Steve Johnson commented on a question in the chat which asked about Gridworks neutrality regarding OSW. He shared that he has a fair bit of experience in this field and when seeking renewable energy options, you need to assess the best technology for the lowest price. These are considerations in the Gridworks process, and they do this with integrity and intent.
 - Kate added that they have no preference towards OSW, and their organization is technologically neutral.
- Kate relayed a question in the chat that asked if Gridworks will engage the NWIFC and ATNI. Kate shared that yes, they will. They presented at ATNI already and are interested in reaching out to NWIFC and CRITC and asked if people had any contacts to please send them over.
- Nives Dolsak commented that she believes there's a benefit in keeping the Gridworks and OSW TC process separate. Back to Carrie's earlier point, the Gridworks process is following the Governor's set agenda, and the TC gets to set their own agenda- we should see if they both lead the same direction.
- Kate welcomed WCMAC members to email her and her team directly with any questions and comments.

WCMAC Work Plan and Accomplishments Review

- Nicole Gutierrez started by sharing that the facilitation team incorporated feedback received via email from WCMAC members on the Draft 2023 Accomplishments document as well as the 2024-25 WCMAC Workplan.
- Alle Brown-Law presented on the 2023 Accomplishments. The Accomplishments document aims to create a reference document that highlights the accomplishments and actions that WCMAC has taken each year. You can see the final [linked here](#).
- Nicole presented on the updated work plan and shared the [working version](#), which will continue to be adjusted and refined based on feedback. She noted that just because a topic is on the Smartsheet, it doesn't mean it will be addressed this biennium, but rather that it is a topic of interest. However, we want to ensure items on the work plan for the short term are realistic.

WCMAC Discussion

- Larry Thevik asked if the Smartsheet could be sent via email.
- Larry Thevik commented that we are concentrating on the OSW piece of ocean activities right now because it is an impending subject and it is a foundational subject to the formation of the WCMAC in the first place. He shared that we should be spending more time on it not less during this time period.
- Corey Niles commented that it might be helpful to have a standing agenda item on WCMAC meetings to discuss pending legislation or agency legislation requests, such as letters of support for future legislation.

Public Comment #2

- Brent Paine, Executive Director of United Catcher Boats a vessel trade association representing the owners of 72 catcher boats that fish whiting and pollacks in the Bering Sea. Of the last few WCMAC meetings he's attended, it seems that this is a forum for information sharing- is WCMAC a decision-making agency with action items? He also noted that he read the Principles of Engagement document and believes it has led to the continued work such as the Gridworks process. He also noted the importance of transparency and ensuring everyone has a seat at the table in discussing OSW and it's development.

Closing and Adjourn

- Rod Fleck thanked everyone for attending and reminded everyone of the hybrid May meeting, before wishing everyone a good rest of their day and happy Valentine's Day!

Appendix A. Participants for Data Gap Prioritization Interviews

| Topic Area | WCMAC Volunteers | Specific Topic Interests (if stated) |
|----------------------|------------------|---|
| Biology | Phil Anderson | All categories except benthic invertebrate, corals & sponges |
| | Michele Conrad | |
| | Larry Thevik | |
| | Mara Zimmerman | |
| | Chris Meinig | |
| Ecology | Larry Thevik | |
| | Matt Niles | |
| | Phil Anderson | |
| | Michele Conrad | |
| | Peter Steelquist | |
| Oceanography | Larry Thevik | |
| | Michele Conrad | |
| | Brian Polagye | |
| | Phil Anderson | |
| | Peter Steelquist | |
| Socioeconomic | Larry Thevik | |
| | Peter Steelquist | |
| | Rod Fleck | |
| | Phil Anderson | |
| | Michele Conrad | |
| | Nives Dolsak | |
| | Brian Polagye | |
| | Chris Meinig | |
| | Molly Bold | |
| | Stephanie Bowman | Shipping, Transportation, Commercial Fishing |

| | | |
|---|------------------|---------------------------|
| | Brian Blake | |
| Culture | Rod Fleck | |
| | Peter Steelquist | |
| | Michele Conrad | |
| | Larry Thevik | |
| TBD Topics (under Socioeconomic & Culture) | Larry Thevik | |
| | Peter Steelquist | |
| | Michele Conrad | |
| | Brian Polagye | |
| | Rod Fleck | Public Services, Cultural |
| | Matt Niles | |
| | Chris Meinig | |

Notes: Kristine Nevitt (member of the public) asked to participate in the historical/culturally significant topic areas. Larry Thevik noted that Mike Okoniewski (member of the public, OSW Technical Committee) would also be an expert on sardines.



Appendix B. Technical Committee Meeting Summaries

Please see final meeting summaries on the next page.

WASHINGTON COASTAL MARINE ADVISORY COUNCIL

Offshore Wind (OSW) Technical Committee

November 21, 2023

1pm – 3pm

Meeting Highlights

- **Oregon Wind Energy Areas (WEAs) Update:** Members discussed recent activities in Oregon concerning BOEM's Draft WEAs, the process to date, and the opposition from various stakeholders regarding OSW development along the coast.
- **Objective 2 Action Plan Review:** The TC began to review and provide feedback on the Objective 2 Action Plan.

Participants

WCMAC Members

- Larry Thevik, Commercial fishing (TC Co-Chair)
- Corey Niles, WDFW
- Rich Doenges, Department of Ecology
- Nives Dolsak, Educational institution
- Michele Conrad, Coastal economic development group

TC Members & Facilitators

- Heather Hall, WDFW
- Ann Skelton, Pacific County MRC
- Dale Beasley, Commercial Fishing
- Arthur "R.D." Grunbaum, Coastal Conservation group
- Mike Okoniewski, Pacific Seafood Consultants
- Brandii O'Reagan, WA Sea Grant
- Mai Aoki, Ecology
- Nicole Gutierrez and Alle Brown-Law, Cascadia Consulting

Meeting Summary

Nicole welcomed everyone to the OSW TC meeting and reviewed the agenda and ground rules.

Updates and Announcements

- Nicole shared that she would continue to send OSW meeting summaries via email, as well as linked in the Shared Folder. She also noted that the Shared Folder is for WCMAC and OSW TC members only, as it's linked to people's individual emails.

- The next OSW TC meeting will be in January 2024, and Nicole shared the potential TC meeting dates for 2024.
- Larry raised concern about the purpose of the Shared Folder, noting that he thought it was intended to serve as documents library to help inform all stakeholders, including the public. The information currently in the Shared Folder is not private and is already shared publicly, so he asked why this resource can't be shared more broadly.
 - Nicole replied that folder is shared with all WCMAC members and TC members, and is not intended to be a public resource. If the Shared Folder were to be shared more broadly, there would be more oversight required, and at this time that is not the intention of the Shared Folder. This is an important topic, so we can continue to discuss the use of the folder.
- Dale echoed Larry's feelings, noting that what we're doing isn't secret.
 - Nicole replied to Dale that the Shared Folder is not meant as a public resource and is supposed to be internal to WCMAC members.
- Ann asked what the protocol is for the Shared Folder.
 - Members should send resources to Nicole via email.

Update on Oregon Wind Energy Areas (WEAs)

- Mike O. updated the technical committee about Oregon's most recent OSW letter to the Governor (which was organized by Heather Mann). ODFW is beginning to look at the 1,156 comments that came in from BOEM's two Draft WEAs. Those comments are predominantly opposing OSW development on the coast, and there were three public meetings for the Draft WEAs, with many comments opposing OSW. The meetings were contentious, with many comments in Brookings coming from longtime residents. OR agencies also wrote a letter to the Pacific Fisheries Management Council (PMFC) and BOEM.
- Larry highlighted that in OR, BOEM put out a request for information on two draft WEAs, and there have been considerable comments asking that BOEM look at broader areas outside the WEAs including water depths beyond 1,300 meters and have expressed concern over BOEM's process. Various agencies and stakeholders have asked BOEM for more information and impact analysis to be completed to determine the viability and effects of OSW development - including OR Tribal Sovereigns, WA Treaty Tribes, NOAA, ODFW, and PFMC. Larry added that supply chain and cost issues have prompted developers to back out of agreements, and there have been requests for more subsidies. The fundamental message from all OR entities is that there should be no further action on the final WEAs until these issues have been resolved. There was also the use of an NCCOS suitability report in the determination of the Draft WEAs done by the National Centers for Coastal Ocean Sciences (NCCOS). Part of the study was initially represented in several previous meetings to include looking into ecosystem impacts, upwelling impacts, cumulative impacts and multiple data layers that the NCCOS suitability model would present. The resulting suitability report in the WEA demonstrated that none of these impacts were looked at or addressed, and there were obvious data layer exceptions and exclusions. There is continued skepticism on lack of research which hasn't been much diminished by BOEM, the Draft WEAs and/or the NCCOS modeling. The PFMC has been integral in promoting the need for greater

understanding of the impacts OSW developments may have on our oceans before proceeding with the process. As Mike O. mentioned, there is a new letter to the Oregon Governor, and there is an ad-hoc working group recently formed to advise the Oregon Governor.

Questions & Discussion

- Rich asked if there was a WCMAC equivalent in Oregon, and if so, how they were engaged.
 - Larry replied that there is the OR Territorial Sea Plan, but there isn't an entity specifically charged with presenting policy recommendations like WCMAC. The OR Territorial Sea Plan has presented an organized gathering of information and concerns through ad hoc processes. Larry said it was a bit outside his knowledge to answer.
 - Rich replied that he might follow up with Heather Mann to see who is leading this effort.
 - Larry commented that ODFW and PFMC have both played major roles in this process, including communicating with BOEM.
 - Ann shared that the non-profit Oregon Shores Conservation Coalition has also been active and has submitted testimony and letters about OSW.
- Dale added that the Oregon legislators held six coastal meetings in Oregon about a year ago, and they received similar feedback. Dale attended meetings in Newport and Coos Bay, Oregon, and noted that the sentiment was nearly 100% opposition to OSW development off the OR coast. He also noted the diversity of attendance in those meetings, saying it wasn't just the fishing community but other OR coast community members as well.
- Corey shared that he's part of the PFMC's Marine Planning committee, and he doesn't believe that OR has a direct analogy to WCMAC. The BOEM Taskforce in Oregon has frustrated all stakeholders and community members. The Washington Governor's Office is hiring a consultant to determine a new route for interacting with BOEM. Corey recommended looking at the PFMC's materials, including reports and meeting summaries. He noted that BOEM's suitability analysis came late, and the PFMC had to work quickly to try and understand it. However, their analysis did move the WEAs out of the major fishing grounds. We still don't know what the indirect impacts on habitats or fisheries are. We would want better sequencing in WA if it were to move forward.
 - Nicole will put the PFMC reports in the Shared Folder.
 - Corey replied that you can see all the MPC materials from November under Agenda Item C.3, and "MPC Report 1" and "Supplemental Report 2" would be the main products of the MPC. <https://www.pcouncil.org/briefing-book/november-2023-briefing-book/#c.-administrative-matters-toc-9532a15a-3b54-43e5-b63b-ea9add311552>.
- Mike O. shared that many species go through life cycles that take them hundreds of miles up and down the coast, and the currents are very important to that movement. BOEM has not addressed any of the full cycle effects. As frustrating as BOEM has been, this isn't necessarily reflective of their staff with whom he's had productive conversation.
- Nicole asked the TC if they wanted to keep this as a standing agenda item.

- Larry answered that it is essential to continue monitoring the Oregon process and that we need regular updates. There exists this idea that impacts and need for mitigation actions is confined to discussions about displacement and areas that cannot be used by fisheries/ fishers. That conceptual framework is too confining and that OSW development will carry hydrodynamic and ecosystem changes, which effects resources that fishermen and marine ecosystems rely on, and must be included in NCCOS suitability modeling.. There are more areas that need further study, and while BOEM said they needed more research, and admitted this takes time, they are moving ahead with the process without completing the research.
- Corey shared that it's important to think about this. He also agreed with what Larry said, but pointed out that BOEM has a mandate from the President and Congress. BOEM is trying to go about this the best way they can, but there isn't a NEPA document answering every uncertainty. There's a lot of criticism about the displacement of fishing grounds, but now BOEM has responded to that by moving the WEAs.
- Larry replied to Corey saying he never said they needed to answer every question, but there were many general questions that were not addressed. And pointed out Washington was not singled out as part of the President's plan.
- Corey responded that the question will be: which questions can we ask BOEM to address? NEPA and federal laws allow agencies to act within their discretion, so how do we take up all those questions and fit it into BOEM's process, and do better than other states? We've been listing all these questions without acknowledging what BOEM is doing better, which can come off as unresponsive.
- Nicole asked if there is an output WCMAC can work towards?
 - Corey replied that the output is the same as the Governor's Office's RFP for the consultant to help us with.
- Larry shared that we need to look back at the Principles of Engagement and our letter to the Governor. One of the statements in the Principles of Engagement is "utilizing current research, data, and information, as well as filling gaps is paramount to answering impacts from OSW development. WCMAC strongly recommends that a cumulative analysis be initiated and completed before leasing." As we move forward with the next steps, we shouldn't overlook the data needs. There is an output that we recommend in the Principles of Engagement, and we're trying to get to that through this process.
- Mike O. shared that he understands Corey's argument, and what we don't yet understand is the cumulative impacts of OSW. He compared OSW development to what happened to the Columbia River salmon when they built dams. That was legal, and up to the agency's discretion, but was it the right thing to do? Are we in a similar place now?
- Corey shared that he, Mike, and Larry are all in agreement and on board regarding cumulative impacts. The Marine Planning Committee report laid out what is plausible /doable in terms of understanding the CA Current Marine Ecosystem. What are the big questions we have, and how do we get scientific experts to answer them? What can we do to fit it within the BOEM process?

- Dale reminded the group that WA is unique in its characteristics. There was also a discussion of the Rafeedie decision and the implications of this decision, in addition to potential displacement and impacts from floating OSW on coastal communities.
- Larry commented that everyone but BOEM agrees that a cumulative impacts analysis is needed. Regarding the Rafeedie Shellfish decision, one of the effects of the Decision on the management of the crab fishery caused a shift and concentration of fishing effort by non-tribal fishers south of the adjudicated Usual and Accustomed Areas (U&As) of the Coastal tribes. The majority of the state fleet now concentrates effort in the remaining 38 miles of the Washington coast, to the south of the U&As, causing intense fishing in that area and increased competition and decreased profitability. The Rafeedie decision requires co-management, which has affected the area by concentrating non-tribal fishing spatially. Increased spatial demand and effects in that southern coastal area is now coupled with the possibility of further confinement of space by OSW being sited within that area.
- There was discussion about the need to understand tribal perspectives, although tribal representatives have been invited to the WCMAC, they may be more interested in government-to-government interaction and relationships. Larry noted that we have a number of public statements and comments from coastal Tribes regarding Oregon and California OSW, so even if they aren't able to have in-person representation on WCMAC, we do have tribal public statements about the BOEM process and OSW development process on West Coast.
 - Nicole shared that there is a tribal comment letter folder in the Shared Folder.

Objective 2 Action Plan Review

- Larry asked a question about the statement “Objective 2 does not explicitly state that WCMAC seeks to identify data gaps.” He stated that it *implicitly* says so if not explicitly. In the Principles of Engagement, the OSW TC recommend filling data gaps. When Objective 2 states “community research needs,” Larry believes it meant both existing data and new data, to fill in those gaps. Larry requested that this language shouldn't limit our discussion to only the existing unsolicited lease requests. He thinks the unsolicited lease requests have prompted and caused a temporal need to understand the potential impacts of OSW off the coast of WA, but our discussion should not be limited to the unsolicited lease requests alone.
 - Nicole commented that we've been taking the broader and general approach and was interested to hear if TC members felt that should be changed.
 - Larry replied that we don't need to change the Objective, but we should understand that the language may be limiting. He argued we shouldn't change the objective, as long as it's recognized that there are other options that might be generated, such as a WEA (Wind Energy Area) proposed by BOEM might be different than the areas the unsolicited lease requests have previously described.
 - Larry also disagreed that Ecology should identify data gaps. He believes WCMAC should also be doing this. Larry requested the TC do a strawman

poll about what people believe data gaps to be, and then cross reference that with Ecology's process. Larry believes the WCMAC's charge includes—under community research needs—the consideration of what some of the data gaps are, by this body and not just Ecology.

- Nicole commented that there are potentially no edits to Objective 2.
- Corey recommended changing the section “review cumulative impacts and needs.” He’s unsure what community research needs are, and regarding the unsolicited lease requests, BOEM said they won’t move forward until they hear from WA’s Governor. Carrie has said that they will work on a planning process for what OSW off the coast of WA may look like, and that’s the priority for this group to advise on. This is not a technical committee that can tell us what the most important data gaps are, as we’re not experts. We need to build an understanding of potential cumulative impacts in OR, CA, and WA; this is what our group should spend its time on. The Governor is hiring a consultant to design what an engagement process would look like, and to determine what scientific needs would go with that process.
- Larry replied that he never said we should prioritize these data gaps, rather, he wants to use the TC’s skill and expertise to identify potential data gaps. He agreed with Corey that there is no need to revise, as long as we understand that this is a broader conversation.
- RD shared his support for a general and overarching objective that allows for new things to develop, which can help with future thinking and capturing new potentials as things develop.
- Corey proposed the TC look at BOEM’s planning process rather than just the unsolicited lease requests and appropriateness of OSW off the coast. He agreed with Larry that it might broaden and include other areas, rather than just the unsolicited lease request.
 - Larry responded that he does not like that language, as it suggests we have a planning process established by BOEM and the State of WA. BOEM has stated that there are no planning processes in WA; they’re waiting to see if the Governor starts a planning process.
 - Larry suggested the following revision: “Review existing data and community research needs, **prompted by** the unsolicited lease requests.” However, he also noted that if the language is already vague enough, we might not need to change it.
- Corey commented that this is a Governor’s advisory council. The Governor’s representative said they want to think about a planning process for OSW. If WCMAC wants to advise on OSW, that is the most direct question to WCMAC. Carrie said that they wanted to think about the appropriateness of OSW and what a potential planning process could look like.
- Larry commented that if we want to reword this Objective, then we’ll need to spend more time on it.
- Nicole followed up by asking, if the TC doesn’t feel strongly about editing the language of the Objective, does the group feel okay with our current Objective?
- Mike O asked if the intent was for the TC to add some language that may satisfy Corey and Larry’s conversation.

- Nicole replied that if members want to revise the language and present that to the full WCMAC, it would be great to discuss what those edits would look like.

Next Steps

- OSW TC will continue the Objective 2 Action Plan revision process in January.
 - May require an additional meeting be held if we want to ensure we can move forward with the Action Plan. The goal is to present the plan to the full WCMAC and have it approved.
- The Facilitation Team will revise the Action Plan based on the discussion.
- Nicole will send new meeting invites for the 4th Tuesday of the Month.
- Next OSW TC meeting is January 23, 2024.

WASHINGTON COASTAL MARINE ADVISORY COUNCIL

Offshore Wind (OSW) Technical Committee

January 23, 2024

1pm – 3pm

Meeting Highlights

- Carrie Sessions, Governor's Office, provided updates on the consultant team that was hired to further investigate an OSW engagement process with BOEM in WA.
- Brandii O'Reagan, WA Sea Grant, shared key findings related to OSW from a Sea Grant seminar that took place in December.
- The TC debriefed the December WCMAC meeting's State Energy Strategy presentation & Trident Winds update.
- The TC continued review on the Objective 2 Action Plan

Participants

WCMAC Members

- Brian Polagye, Energy industries or organizations
- Carrie Sessions, Governor's Office
- Corey Niles, WDFW
- Katie Arkema, Science organization
- Larry Thevik, Commercial fishing (TC Co-Chair)
- Matt Niles, State Parks
- Michele Conrad, Economic development
- Mike Nordin, Pacific MRC
- Nives Dolsak, Educational institution
- Rich Doenges, Department of Ecology
- Rod Fleck, North Pacific MRC

TC Members & Facilitators

- Ann Skelton, Pacific County MRC
- Brandii O'Reagan, WA Sea Grant
- Casey Dennehy, Ecology
- Heather Hall, WDFW
- Mai Aoki, Ecology
- Mike Okoniewski, Pacific Seafood Consultants
- Nicole Gutierrez, Cascadia Consulting Group
- Taylor Magee, Cascadia Consulting Group

Meeting Summary

Welcome and Agenda Overview

Nicole welcomed everyone to the OSW TC meeting and reviewed the agenda, noting the ground rules are included in the meeting packet. Carrie shared that she had to leave at 1:20 due to a legislative session, and the Governor's Office Update was moved up on the agenda.

Updates and Announcements

Governor's Office Update

- Carrie shared that the Governor's Office has hired a consultant, Gridworks, to begin discussions with tribes, WCMAC, and other OSW stakeholders to develop a planning and evaluation process for OSW. The work will begin in the next week or two, and the consultant will be under contract for six months. The bulk of their work will be in discerning what a transparent engagement process with BOEM may potentially look like, and getting an *idea* of the data and science gaps and how sequencing those may look. Carrie noted that she's hoping they will attend the February WCMAC meeting, and they're currently checking the consultants' schedules.
- Carrie then asked for any questions the group may have:
 - Larry thanked Carrie for the information and noted that he appreciated acknowledgement that the BOEM process is flawed. He raised concerns that looking into the BOEM process may speed up the process of engagement with BOEM, and asked if the Governor's Office was planning on engaging with BOEM after this process.
 - Carrie replied that their approach will depend on what the consultants find.
 - Brandii informed Carrie that Sea Grant held a conference in Rhode Island where they brought together Sea Grant Representatives from across the country to discuss OSW and impacts to marine species, fishermen, and the communities affected by OSW. There is a summary document detailing the outcomes of these conversations, which Brandii will forward to Carrie.
- Katie commented that there was legislation Senator Whitehouse put forward to improve the BOEM process, and that it would be good to look at that. She then asked Carrie if there were plans to engage the scientific community.
 - Carrie replied that it may be insightful to engage the scientific community regarding the science and data gaps.
 - Katie also commented that many in the social science community and PNNL have been following various sustainable development processes and noted that the BOEM process is missing key pieces of engagement that is present in other plans. She said she'd be happy to be in contact with the consultant to provide this insight.
 - Carrie thanked Katie for that insight and noted she would follow up.
- Michele asked if WCMAC members should expect to be contacted by the consultants.
 - Carrie replied that will be determined.
- Mike N. commented that he'd like to know more about the science community being a stakeholder, as he views them as more of an asset or information source. He also commented that the social science community is broad and was curious who Katie had in mind from these groups.
 - Carrie commented that it's important to the Governor's Office to engage with as many people as possible who have an insight into OSW.
 - Mike N. commented that Marine Resource Committees are very important, and there aren't many on the WA coast. When gathering input from

stakeholders, those who are from direct coastal communities should have a weighted opinion on the matter.

Announcements

- Nicole noted that the Final October Meeting Summary was sent to the OSW TC members and can be found in the Shared Folder.
 - Larry said he'd like hot links to meeting summaries accessible to the full WCMAC and the public.
 - Nicole replied that she can talk with Ecology and see if standalone summaries can be added to the EZ View page.

OSW TC Updates

Sea Grant Update

- Brandii provided a Sea Grant update, sharing an overview of a recent three-day conference that was held in Rhode Island. The conference brought together Sea Grant representatives from across the county to discuss OSW development and focused on various topics.
 - The representatives were organized into four regions, and each provided an overview of OSW development. All regions shared similar challenges and concerns, especially regarding commercial fishing and tribal relations (where they existed).
 - A session focused on marine mammals and fish demonstrated that too much is unknown regarding the impacts of OSW on marine habitats. While some data shows no negative impacts from OSW to certain species, such as whales, this data is too new to provide solid answers.
 - From communities who build OSW or communities that have OSW developments sited, impacts to the job market were positive in some cases. Key takeaways included needing early planning for local job trainings to ensure local communities were accessing these jobs.
 - In some cases, fishermen were left out of conversations entirely, resulting in the loss of entire key fishing areas. The identified need for increased transparency throughout the process, and local knowledge and input before maps are drawn and decisions made.
 - Fishmen spoke at the conference and shared that halfway through certain OSW processes, the Rhode Island Forum for Fishermen was established to highlight this important stakeholder group. The establishment of the group created an avenue for fishermen to be heard and demonstrated a need for inclusion at the beginning of OSW processes.
 - In areas where OSW is occurring, communities are supportive of the potential economic benefits but concerned over the unknown environmental impacts, and the BOEM engagement process.
- Brandii also shared that OSU recently received funding for a four-year grant which will explore the community benefits of OSW development on the West Coast. She noted that the study will focus on CA, but the Grays Harbor, WA area was also highlighted.
- Questions / Comments:

- Mike N. commented that there are no economic benefits to coastal communities with OSW development. He then asked Brandii if Sea Grant was looking at any alternative energy processes.
 - Brandii replied that Sea Grant serves as a conduit of information and not actively researching other opportunities. Formal requests for additional research must be made by UW and they would need to find a fellow for that work.
- Rod commented that a few members had discussed small onshore wind and solar installations with Carrie, and the importance of accessing sustainable power for small coastal communities. These discussions are often overshadowed by large scale array discussions.
 - Brandii noted that this was great to hear, as Sea Grant is often unaware of land-based initiatives.
- Larry thanked Brandii for her updates. He asked if Sea Grant could go through the public comments received on the OR OSW projects. He also asked about any research into the long-term effects of OSW and upwelling.
 - Brandii replied that there is a Sea Grant fellow tasked with collecting all the comments and entering them into a searchable database, but she has no timeline update. She noted that projects on the East Coast were initially slated for long term research on OSW, but the requirement diminished into 1-year of funded research. She noted that this can't happen on the West Coast, and long-term research should be required.
 - Larry commented that BOEM is not looking at any cumulative effects. They are just now beginning to look at upwelling effects into 2025, however many projects are slated for development and lease sales before then.
- Michele thanked Brandii and asked her to elaborate on the 4-year Grays Harbor study by OSU.
 - Brandii replied that she knows very little about the project, but the study is focusing on community benefits of OSW. Community benefits reference the “perks” or benefits that an OSW company will offer to communities, such as community infrastructure or payments to fishermen over lost fishing areas. She noted that the research is mostly looking at community benefits in CA but will also survey the residents of Grays Harbor and see what they might like community benefits to look like.
- Larry commented that community benefit agreements are more for mitigation of impacts.
 - Brandii also noted that if you negotiate community benefits before you know the effects, you can't properly mitigate.
- Mike N. commented that he had to leave the meeting early but wanted everyone to keep the Ilwaco community in their thoughts after the recent fire.
 - Heather Hall provided a resource in the chat [Fundraiser by Ilwaco Tuna club : Support those who lost pots in the Ilwaco fire \(gofundme.com\)](#)
- Brandii also noted that UW recently received funding for a study, unrelated to Sea Grant.

- Casey commented that current legislation is proposed for funding that looks into the upwelling effects of OSW.
- Katie (in the chat): This program may be of interest to this group because it funds research on diverse renewable energy technologies (land-based solar, small-scale wind etc.) and is designed for coastal community energy resilience. This is funding the work that Rod mentioned with the Makah Tribe. [About the Energy Transitions Initiative Partnership Project | Department of Energy](#)

WCMAC December Meeting Debrief

- Nicole reoriented the group to the December WCMAC meeting, and asked the group to provide any reflections on the OSW discussion items from that meeting-the Trident Winds presentation and the WA State Energy Plan.
- Larry noted that it was a lot of information to take in, and it was interesting to see the contrast between Alla and Jeremy's presentation on OSW development on the West Coast. On the administrative goal of 30 GW by 2030, WA is not included as a region/state to support that goal. Jeremy shared that CA is mandated to generate 25 GW of power by 2045- a huge production of power which diminishes the need for OSW power in both OR and WA. He also shared that the WA wind energy resource is less appealing than the resource in CA, however, Alla claimed that the wind resource produced by WA by southerly winds in the winter made up for that gap. He noted that wind energy advocates continue to discuss wind energy in terms of plate capacity, but what turbines actually produce will likely be significantly less. He commented that the idea of the potential production capacity of 20 GW of OSW off the WA coast was not realistic and it didn't account for constrained areas. 6-7GW was much more feasible, however would likely still have to be sited in high intensity fishing areas.
- Rod commented that he appreciated Larry's feedback and noted that the different perspectives shared were helpful. Rod also shared that he wanted more information on how OSW could mitigate energy needs and energy growth- as some dots are not connecting. He also noted that most OSW is sited in rural communities, so ensuring that state benefits are reflected at the local level is crucial.
 - Nicole commented that there is an opportunity to better understand how OSW will mitigate GHG emissions to meet the state goals.
- Larry shared that the presenters gave confusing information about the current transmission potential on WA coast. The argument was made that existing transmission lines could conduct OSW energy; however, the substations are not suitable for these loads, and there is no current local infrastructure that could transfer these larger energy loads to the grid.
- Katie commented that there is a West Coast wide transmission study, and she'd be happy to connect with them to provide more information.
 - Nicole replied that she will follow up on this topic.

Objective 2 Action Plan

- Nicole introduced the agenda item. She noted that they will continue to review the Objective 2 Action Plan, and pick up where they left off at the November meeting which was determining if a new objective is needed. The group went through the document and provided feedback and edits, reaching "Table 1. OSW Data and

Community Research Needs.” Nicole added edits made by the OSW TC to the Objective 2 Action Plan document, [here](#).

- Comments / Edits:
 - Heather asked how they would prepare themselves to respond to the governor / consultant, and if that aligns with their objectives. Wants to ensure meaningful engagement with the short consultant contract.
 - Larry said he felt concerned that the role of WCMAC and consultant was not identified, and they need to ensure the consultant adheres to the WCMAC Principles of Engagement.
 - Larry asked to replace the word “prioritize” with “identify” throughout the document.
 - Larry asked if the red text in the objective would need authorization from the full WCMAC.
 - Nicole replied that it would not require authorization, however adding the phrase “prompted by” would require their approval.
 - Larry and Rod shared that they felt the “prompted by” text was important in providing context to the document.
 - Nicole replied that they can provide more context and state the intention of the plan, outside of the Objective 2 box.
 - Rod replied that this offers flexibility in our wording and intent.
 - Corey commented that he doesn’t see a need to nit-pick this item, and the OSW TC should focus on crafting questions for the consultant. He also added that #1 and #3 of Objective 2 are similar and could be combined.
 - Nicole shared with the group that she wants to ensure TC alignment on Objective 2 and that it fits the TC’s goals.
 - Katie echoed what Larry shared and doesn’t want to narrow this document to the very specific unsolicited lease requests. She wants it made clear in the elaboration that this objective isn’t solely about responding to those requests, and more broadly about OSW on the West Coast.
 - Nicole noted that this document was intended to be broad and encompass all OSW projects.
 - Michele commented that, to Corey’s Point, you could combine #1 and #3, as the MSP is the implementation of ORMA policies.
 - Heather echoed this.
 - Nicole noted that we will clarify the intent of the Action Plan, that it’s a broad document that seeks to provide a roadmap for the TC.
 - Larry would like to add hot links to meeting summaries in the Action Plan Development Background.
 - Nicole replied that the April and May meeting summaries could be linked as a public resource.
 - The group reached Table 1. OSW Data and Community Research Needs (identified to date) where many comments were received. Nicole noted that this is not meant to be comprehensive but to provide an overview.
 - The following comments we collected for the MSP Data Viewer row of the Table.
 - Larry commented to emphasize “new” in “identify new layers to include”.

- Larry commented in the “other considerations” piece that while sightings of short-tailed albatross may be limited, the impacts of their potential interference and blade collisions with OSW turbines would be severe.
- Larry commented the “constraints” piece identified by BOEM in the NCOSS modeling is narrow, and we need to understand what constraint means in the BOEM context and when compared to our idea of constraints and potential barriers to developments in WA.
- Michele commented (in the chat): RE: the BOEM "constraints" referenced in Table 1, BOEM is using the NOAA National Centers for Coastal Ocean Science (NCCOS) spatial suitability model to determine suitable locations for OSW development. The NCCOS model assigns scores and Dept of Defense and Pac PARS (USCG) areas receive a score of zero and are identified as "constraints," which means "no go."
<https://coastalscience.noaa.gov/science-areas/offshore-wind-energy/>

Next Steps and Closing

Next Steps

- The next full WCMAC meeting is February 14th.
- The next OSW TC is March 26th 1-3pm.

Closing Comments

- Mike O. commented that Larry’s comments about the BOEM constraints are very important, and we need to clarify what is meant by constraint.
 - Nicole replied that we will discuss how we want to define constraints in relation to the MSP data viewer in the next meeting.
- Nicole thanked everyone before ending the meeting at 3:00pm.



Appendix C. Meeting Presentations

Please see the meeting presentations on the next page.



**MARITIME
WASHINGTON**
NATIONAL HERITAGE AREA

Washington Coastal Marine Advisory Council

Wednesday, May 8, 2024

We're here to help Washingtonians preserve, interpret, and celebrate their vibrant maritime heritage.

We'll do that by:

- **Advocating** for maritime heritage resources and cultural practices.
- **Connecting** residents and visitors with maritime stories and places.
- **Supporting** those who steward and share water-based heritage.

National Heritage Areas

- Designated by Congress
- Landscapes of national importance
- Each focuses on different stories
- Financial and technical support from National Park Service but not traditional park units
- Non-regulatory!
- Build public-private partnerships to better tell the stories of these places and support communities in maintaining and sharing their unique resources
- Facilitated by a local coordinating entity



Maritime Washington National Heritage Area

- Designated by Congress in 2019
- 3,000 miles of coastline from Grays Harbor to the Canadian border
- ¼ mile from mean high tide line
- 13 counties, 21 federally recognized Tribes, 32 incorporated cities, and 33 port districts
- First and only NHA in the country focused entirely on maritime heritage
- Facilitated by Washington Trust for Historic Preservation





Where we are today

- Designated by Congress in 2019
- Completed 3-year regionwide, collaborative planning process in May 2022
- Management Plan approved in October 2022
- First year of operations as a fully-funded National Heritage Area in 2023



Mission

The Maritime Washington National Heritage Area supports a network that strengthens the maritime community and connects people with the stories, experiences, resources, and cultures of our state's saltwater shores and waterways.

Key Functions

1. Advocacy
2. External messaging
3. Partner support

Advocacy

Promote the protection of maritime resources, practices, and ways of life

- Advance local, regional, and national policies and funding in support of maritime heritage
- Projects that preserve, interpret, and share historic and cultural sites
- Raise awareness of modern maritime careers and trades





External messaging

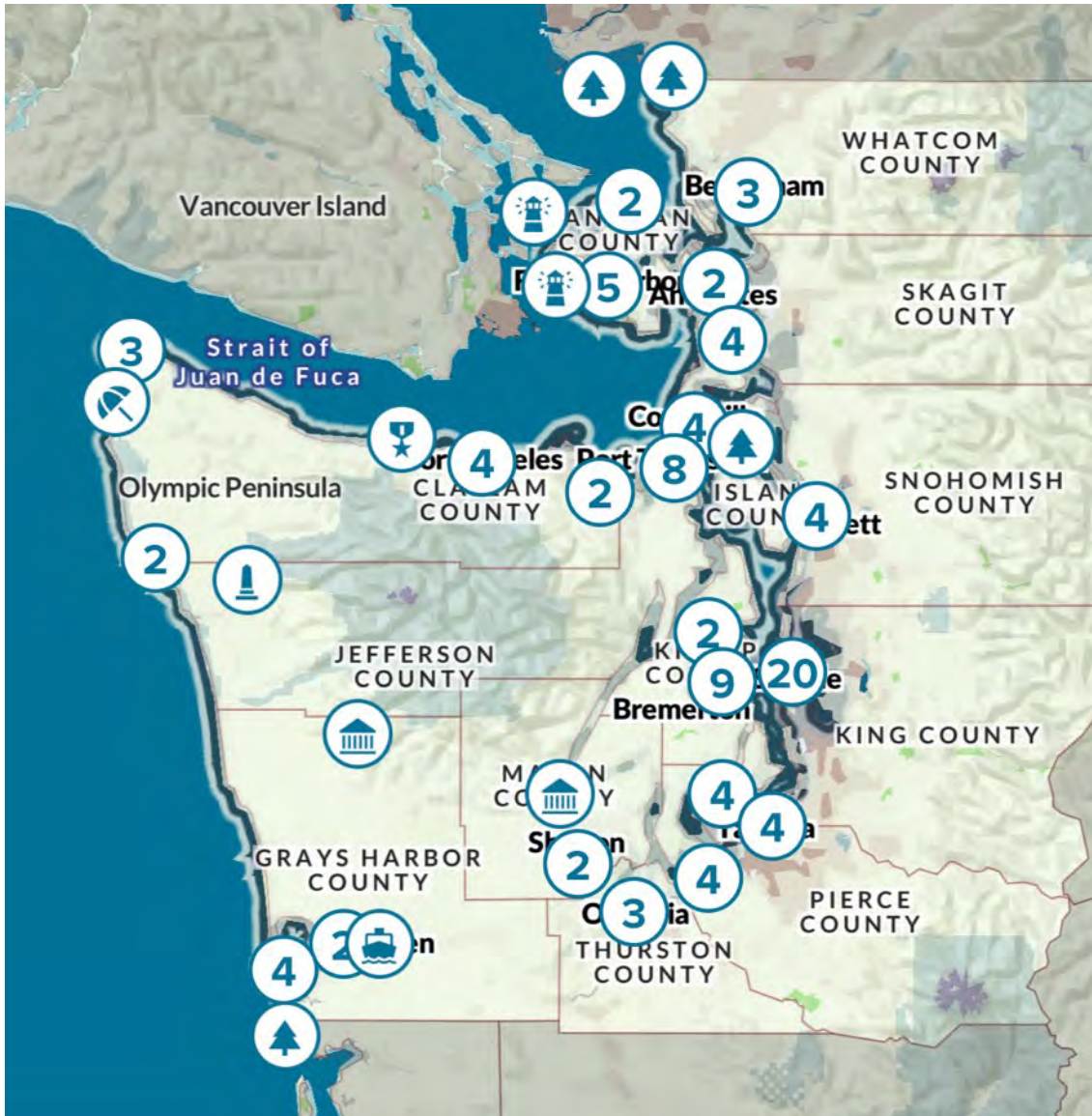
Share diverse stories and increase visibility of Washington's maritime heritage – past and present

- Focus on pride of place
- Weave together diverse stories to strengthen region-wide identity
- Centralize and amplify existing storytellers and sources
- Collaborate on new projects

External messaging

Storytelling





External messaging

Encourage sustainable experiences of maritime heritage for residents and visitors alike

- Highlighting maritime tourism experiences through new website maritimewa.org
- Maritime Mapper
- Travel itineraries
- Amplify through social media, newsletters, paid marketing, partner promotion
- Support for events like history-focused boat tours and maritime festivals

Partner support

Provide support and resources

- Grant program
 - Supporting work that strengthens, maintains, and shares maritime heritage in Washington
 - Annual funding rounds in the spring
- Help connect with additional funding and technical resources



Partner support

Build a network

Maritime Washington Partner Network

- 45+ cross-sector partners working together to connect, strengthen, and increase appreciation for Washington's maritime heritage
- Any organization (private or public, for-profit or nonprofit), local government entity, or Tribe whose work is aligned with Maritime Washington mission is eligible

Benefits

- Networking, such as annual Partner Meeting and listserv
- Education and professional development opportunities including workshops and field trips
- Promotion on Maritime Washington channels
- Resources such as partner newsletter and online library



Looking forward

- Networking events, workshops, and learning circle for partners
- Postdoctoral fellow working on Tribal interpretation
- Traveling exhibits on Croatian boatbuilding and Filipinos on the Waterfront
- Photo contest!
- Collaboration with Washington State Ferries and America250 celebrations
- Continued storytelling efforts

Questions?



**MARITIME
WASHINGTON**
NATIONAL HERITAGE AREA



**MARITIME
WASHINGTON**
NATIONAL HERITAGE AREA

The Maritime Washington NHA is facilitated by the Washington Trust for Historic Preservation with support from the National Park Service.



Pacific Northwest
NATIONAL LABORATORY

Cleaning up Climate Change: Practical Climate Recovery and Carbon Removal

Jessica N. Cross, PhD

PNNL Coastal Sciences Division
Seattle, WA

U.S. DEPARTMENT OF

ENERGY **BATTELLE**

PNNL is operated by Battelle for the U.S. Department of Energy



mCDR
@PNNL

YOU ASKED:

What is the reasonable range of use of the marine environment for marine Carbon Dioxide Removal (mCDR)?

Would mCDR be subject to the WA Marine Spatial Plan?



mCDR
@PNNL

mCDR is not mentioned in the 2018 WA MSP.

In general, mCDR is a
unique use case that
doesn't have strong
existing analogues.



Photo by Katrina Lassiter

Marine Spatial Plan for Washington's Pacific Coast

October 2017

Publication no. 17-06-027 Revised June 2018



Chapter 2: Current Conditions and Future Trends.....2-1

| | | |
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| 2.1 | Ecology of Washington's Pacific Coast..... | 2-2 |
| 2.2 | Cultural and Historical Resources..... | 2-60 |
| 2.3 | Socio-Economic Setting..... | 2-64 |
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| 2.5 | Aquaculture..... | 2-116 |
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| | | |
|--------|---|-------|
| 2.10 | Potential New/Expanded Uses | |
| 2.10.1 | Renewable Energy..... | 2-169 |
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| | Gas Hydrate Mining..... | 2-258 |
| 2.11 | Climate Change..... | 2-271 |

**We can use the
structure of the MSP
as a conversation
guide today...**

...but establishing
broad consensus
around these ideas will
be essential.

Outline:

1. Summary of History and Current Use
 - Why CDR
 - Why mCDR
 - What's happening in WA
2. Potential benefits and use compatibilities
3. Potential environmental impacts
4. Potential conflicts with future uses
5. Permitting
6. Future trends and other Factors

1. Summary of mCDR History and Current Use

IPCC AR6 WGIII: CDR Factsheet



Working Group III-Mitigation of Climate Change

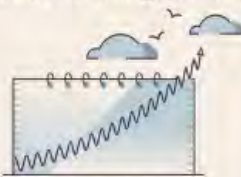
Carbon Dioxide Removal

CARBON DIOXIDE REMOVAL (CDR) refers to technologies, practices, and approaches that remove and durably store carbon dioxide (CO₂) from the atmosphere. CDR is required to achieve global and national targets of net zero CO₂ and greenhouse gas (GHG) emissions. CDR cannot substitute for immediate and deep emissions reductions, but it is part of all modelled scenarios that limit global warming to 2° or lower by 2100. Implementation will require decisions regarding CDR methods, scale and timing of deployment, and how sustainability and feasibility constraints are managed.

CDR is required to limit global warming to 1.5°C



CDR is required to limit warming to 1.5°C. Particularly, CDR is needed to counter-balance emissions from difficult-to-decarbonise sectors, such as industry, long-distance transportation, and agriculture.



Mitigation scenarios assume large volumes of future global CDR deployment compared to current volumes of deployment.



Future deployment of CDR will require rapid and sustained upscaling.

Role of CDR in mitigation



CDR is not a substitute for deep emissions reductions, but it is an important tool that should be deployed in tandem with other mitigation methods.



CDR can complement other mitigation strategies by further reducing net greenhouse gas emissions, especially in the near-term.



CDR can help achieve and sustain net negative greenhouse gas emissions (where more greenhouse gases are removed from the atmosphere than added to the atmosphere), especially in the long-term.

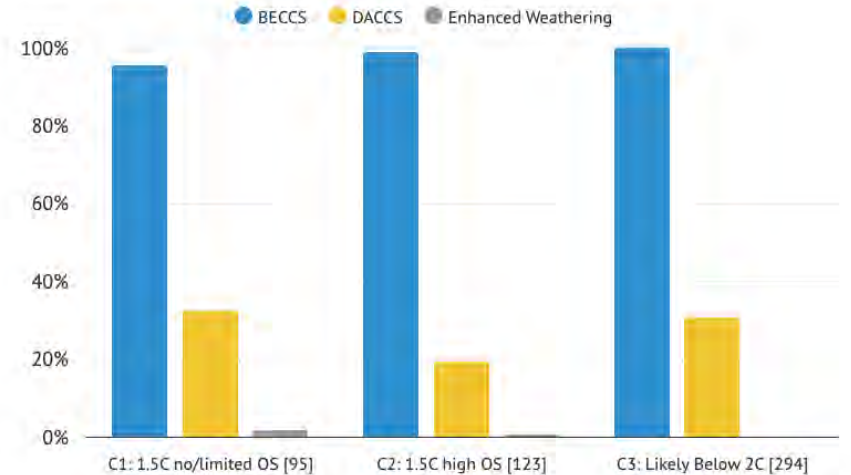


[Source](#)

1. Summary of mCDR History and Current Use

Almost all IPCC scenarios that hold warming below 2 °C, even those designed to emphasize emissions reductions, include CDR strategies.

Portion of scenarios deploying different CDR technologies



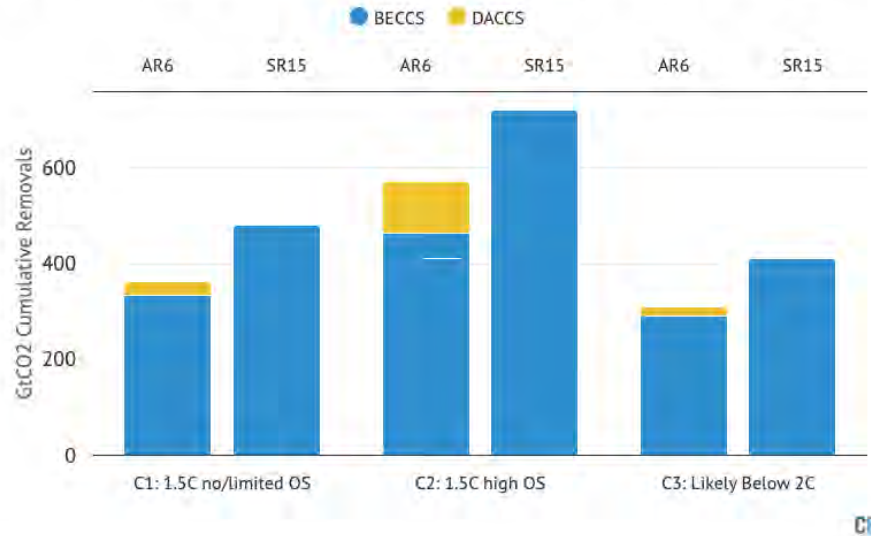
Percentage of scenarios deploying different types of CDR technology in C1-C3 climate categories. Scenarios which may be able to simulate a CDR technology but do not deploy it are not counted toward the portion deploying. Brackets show the number of scenarios in each climate category. Chart by Carbon Brief using [Highcharts](#).



[Source](#)

1. Summary of mCDR History and Current Use

CDR from BECCS and DACCS in the AR6 WG3 and 2018 SR15 reports



Cumulative deployment of BECCS and DACCS between 2020 and 2100 in the median scenario in the WG3 and SR15 reports for C1-C3 scenarios (and their SR15 equivalents). Chart by Carbon Brief using Highcharts.

How much CDR is necessary to meet our climate goals varies in different scenarios. Most estimates suggest we may need to remove ~5-10 Gt CO₂ from the atmosphere each year from 2020 through 2100.



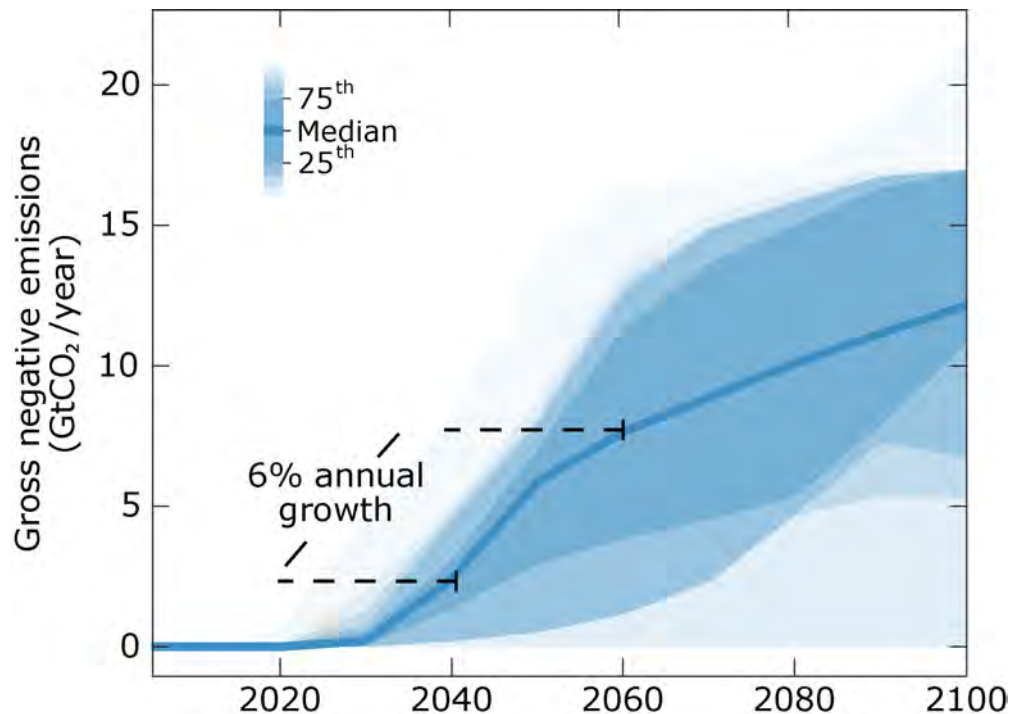
[Source](#)

1. Summary of mCDR History and Current Use

Timing is also important:
The longer we wait to
implement emissions
reductions and develop
reliable CDR, the more
CDR we will need each
year, and the faster it will
need to develop.

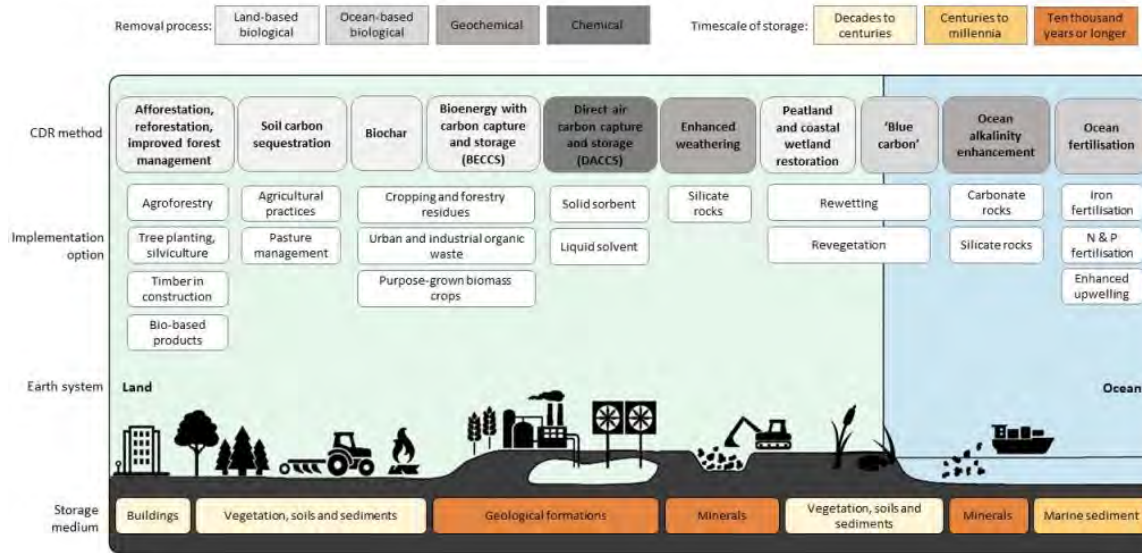


[Source](#)
[Fig 9](#)



1. Summary of mCDR History and Current Use

Scientists are developing many ways to remove carbon from the atmosphere.



[Source](#)

IPCC, 2022: AR6 WG3 C12, Cross-Chapter Box 8, Figure 1 (page 1262)

As adapted from [Minx et al., 2018](#) Figure 2

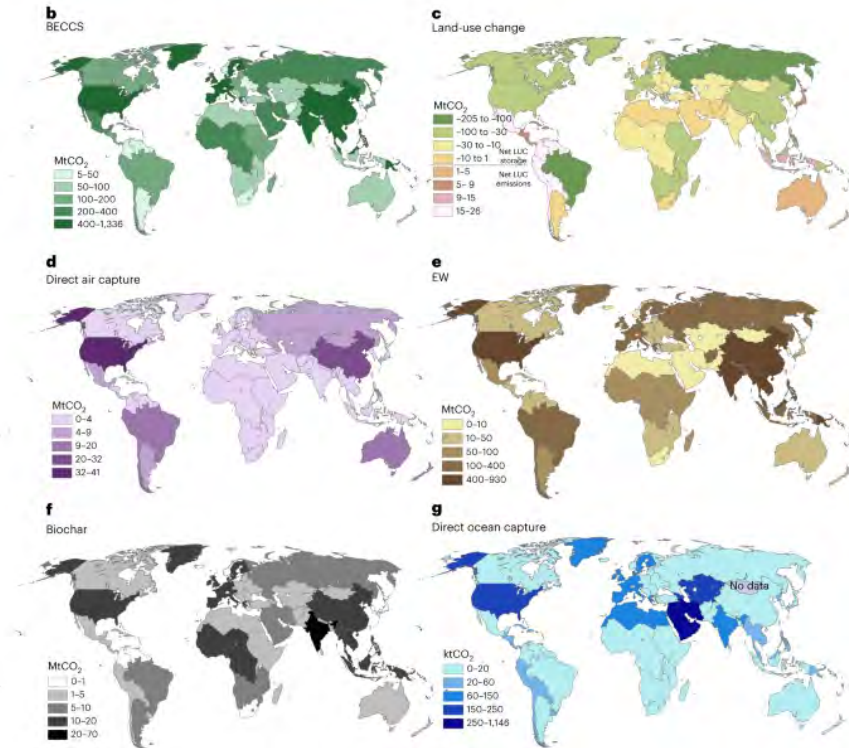
Common ways to evaluate CDR methods:

- Scalability (How much?)
- Efficiency (How fast?)
- Durability (How long?)
- Env. Sustainability (How safe?)
- Uncertainty (How sure?)
- Additionality (How leaky?)
- Cost (How cheap?)

See also:

[Source](#), Part II / Page 18

1. Summary of mCDR History and Current Use



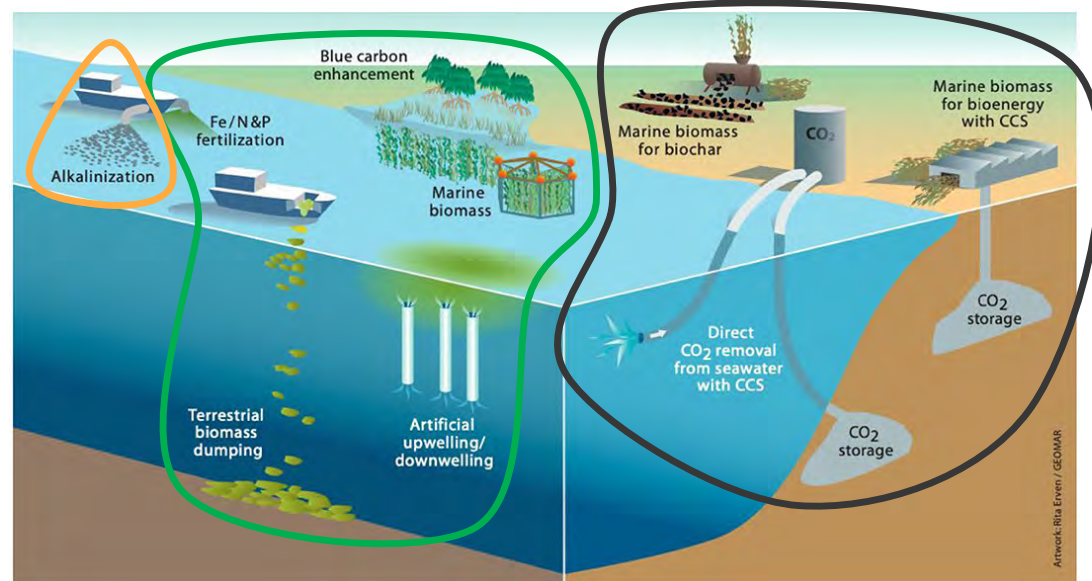
[Source](#)

Fig 1

A diverse portfolio of CDR techniques can help limit and distribute these costs and impacts, especially for the global south.

1. Summary of mCDR History and Current Use

Ocean CDR methods can help diversify CDR portfolios. Several could offer promising scale, but most are in early- to mid-stages of development.



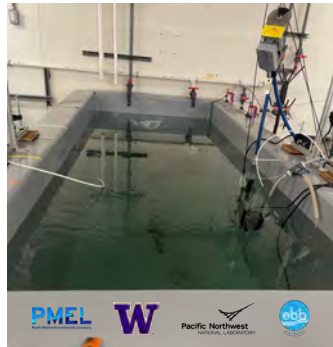
1. Summary of mCDR History and Current Use *In Washington State... research is beginning.*

Closed System Tests (no release)

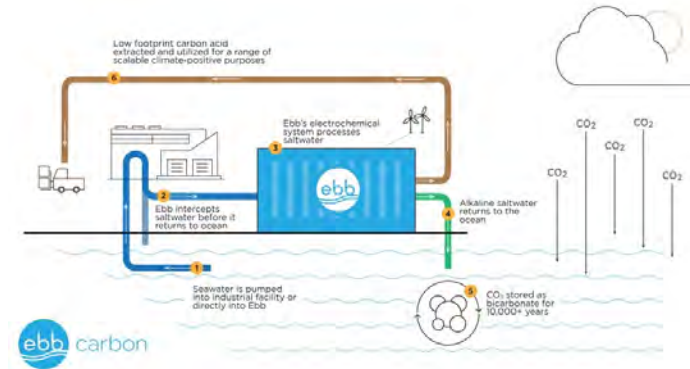


mCDR
@PNNL

<https://www.pnnl.gov/projects/marine-carbon-dioxide-removal>



Temporary Open System Pilot Proposed in Port Angeles *(local, state, federal permitting in progress)*



1. Summary of mCDR History and Current Use

In Washington State... capacity building is beginning.



Sea Grant
WASHINGTON



mCDR
@PNNL

**Register for Virtual mCDR
Listening Workshop (June):**



<https://shorturl.at/yCFNO>

Take the Viewpoint Survey:



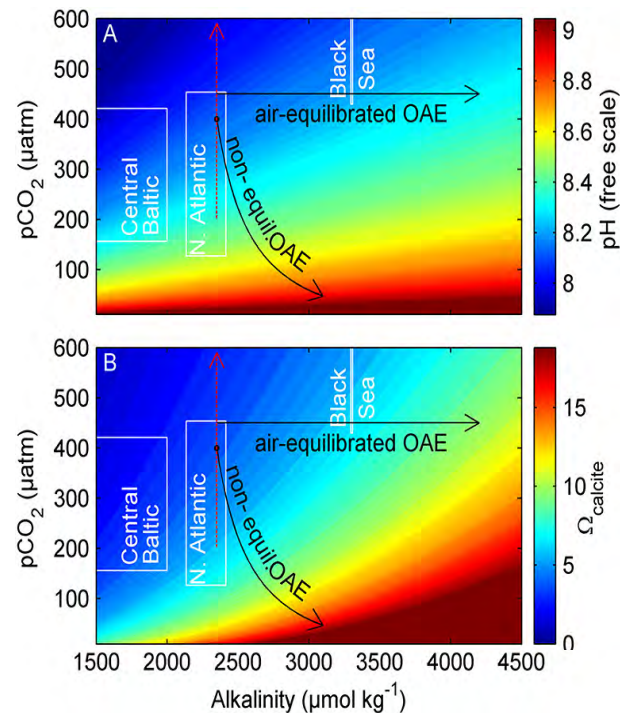
<https://shorturl.at/MQSV8>

2. Potential Benefits and Use Compatibilities

Can carbon removal mitigate ocean acidification?
Yes, but terms and conditions apply.

CDR is a very slow time machine. [Source](#)

- Steep, parallel emissions reductions will ***always*** be required for CDR to have a real effect on the atmosphere or OA. [Source](#)
- At scale, mCDR could ***pause*** additional acidification of surface waters, but it will be very difficult to reverse surface OA. [Source](#)
- Some mCDR methods can also be used to mitigate subsurface OA impacts instead of removing atmospheric carbon. [Source](#)



[Source](#)

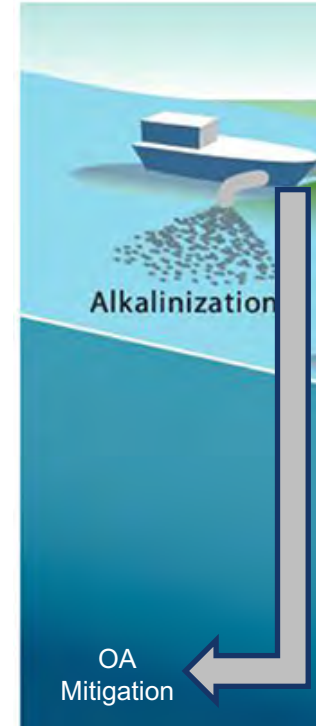
Fig 3

2. Potential Benefits and Use Compatibilities

Can carbon removal mitigate ocean acidification?
Yes, but terms and conditions apply.

CDR is a very slow time machine. [Source](#)

- Steep, parallel emissions reductions will ***always*** be required for CDR to have a real effect on the atmosphere or OA. [Source](#)
- At scale, mCDR could ***pause*** additional acidification of surface waters, but it will be very difficult to reverse surface OA. [Source](#)
- Some mCDR methods can also be used to mitigate subsurface OA impacts instead of removing atmospheric carbon. [Source](#)



2. Potential Benefits and Use Compatibilities (An incomplete list)



PNW Co-Accelerants for mCDR:

- Renewable Energy
- Favorable Geology & Ocean
- Ocean Expertise
- **Marine-Motivated Culture**
- **Aquaculture**
- **Coastal Infrastructure**

3. Potential Environmental Impacts



| | Fertilization | Nutrient Robbing | Toxic Materials Exposure | Modified pH/Alkalinity | Increased Ship Traffic | Fishing and Ship Obstacle | Habitat Alteration | Introduced Species |
|--|---------------|------------------|--------------------------|------------------------|------------------------|---------------------------|--------------------|--------------------|
| Ocean Alkalinity Enhancement: Enhanced Weathering | ✓ | | ✓ | ✓ | ✓ | | ✓ | |
| Ocean Alkalinity Enhancement: Electrochemical Approaches | | | | ✓ | ✓ | | ✓ | |
| Direct Ocean Removal | | | | ✓ | | ✓ | ✓ | |
| Ocean Fertilization | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Artificial Upwelling | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| Artificial Downwelling | | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| Macro-algae Cultivation | | ✓ | | ✓ | | ✓ | ✓ | ✓ |
| Blue Carbon | | | | ✓ | | | ✓ | |
| Ecosystem Recovery | | | | ✓ | | | ✓ | |

Source - Table 3

Scaled mCDR has the *potential* to impact the marine environment, but more research is necessary.

Early tests are likely to be very small / undetectable.

4. Potential Conflicts with Future Uses

What might potential mCDR use conflicts look like?

Future research could explore...

- Spatial Conflicts
- Viewshed and Tourism Conflicts
- Use conflicts from physical effects



5. Permitting

The EPA is the primary federal mCDR permitting authority for mCDR, but BOEM and USACE also have relevant regulatory authority.



Marine Carbon Dioxide Removal and Solar Radiation Management Permitting

Proposed marine carbon dioxide removal (mCDR) or marine solar radiation management (mSRM) activities—including field research trials—that involve the disposition of material into a body of water likely need a permit from the EPA or a state with delegated permitting authority. Below, learn more about mCDR, mSRM and permits for these activities.

The EPA may issue special permits, research permits, emergency permits and general permits for ocean dumping. For additional information about MPRSA permits, please visit our [Ocean Dumping Permits](#) webpage.

About mCDR and mSRM



Learn more about the background and techniques of mCDR and mSRM.

Learn About
mCDR and
mSRM

Permitting for mCDR and mSRM



Learn which activities require an MPRSA Permit and how to apply.

See mCDR and
mSRM
Permitting
information



6. Future Trends and Other Factors

mCDR research needs
pilot programs to
investigate and
optimize efficacy and
safety.



OCEAN CLIMATE
ACTION PLAN



ENERGY
earthshots
U.S. DEPARTMENT OF ENERGY

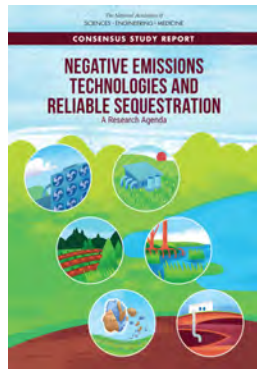
Carbon
Negative™



Strategy for NOAA
Carbon Dioxide
Removal
Research



The National
Academies of
SCIENCES
ENGINEERING
MEDICINE



What else would WCMAC like to know about mCDR?



mCDR
@PNNL

***Register for Virtual mCDR
Listening Workshop (June):***



<https://shorturl.at/yCFNO>

Take the Viewpoint Survey:



<https://shorturl.at/MQSV8>



Gridworks convenes, educates, and empowers stakeholders working to decarbonize our economy. We facilitate complex discussion and collaboration to meet decarbonization goals.

Our team offers:

- deep subject matter expertise
- extensive facilitation experience
- motivation to work for Washington equitably, transparently, and with integrity



TEAM & CONSULTANT EXPERIENCE



Matthew Tisdale
Executive Director



Kate Griffith
Director



Steve Johnson
Senior Fellow



Maggie Dunham Jordahl
Senior Project Manager



Pat Oshie
Consultant

- Washington Utilities and Transportation Commission
- Western Electricity Coordinating Council
- Northwest Power and Conservation Council
- Consulting practice focused on tribal relations and energy
- Lives in the Yakima Valley and is a member of Kah-Bay-Kah-Nong Band of the Chippewa Nation



Carol Bernthal
Consultant

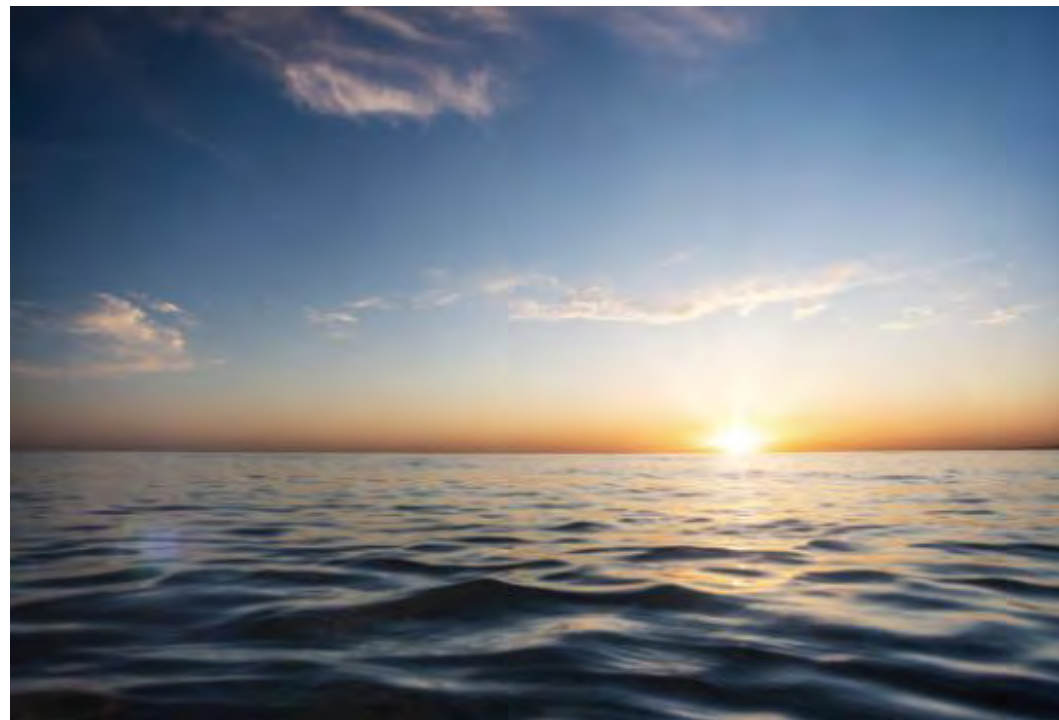
- 35 years of experience working in natural resource management
- Served as Sanctuary Superintendent for Olympic Coast National Marine Sanctuary within the National Oceanic and Atmospheric Administration
- Senior Habitat Biologist/Program Coordinator for Point No Point Treaty Council
- Lives in Port Townsend

Offshore Wind

The U.S. federal government (BOEM), California, and Oregon are exploring offshore wind development on the West Coast.

Formal federal process has not begun in Washington, however, Washington State is considering how best to proceed through the development of a planning and evaluation engagement framework.

This is a pre-decisional effort to scope the type of engagement Washington Tribes, fisheries, industry, conservation groups, local governments, communities, etc., would like to see from and around formal federal offshore wind processes, including how Washington might supplement a federal process.



GRIDWORKS' APPROACH TO THIS PROJECT

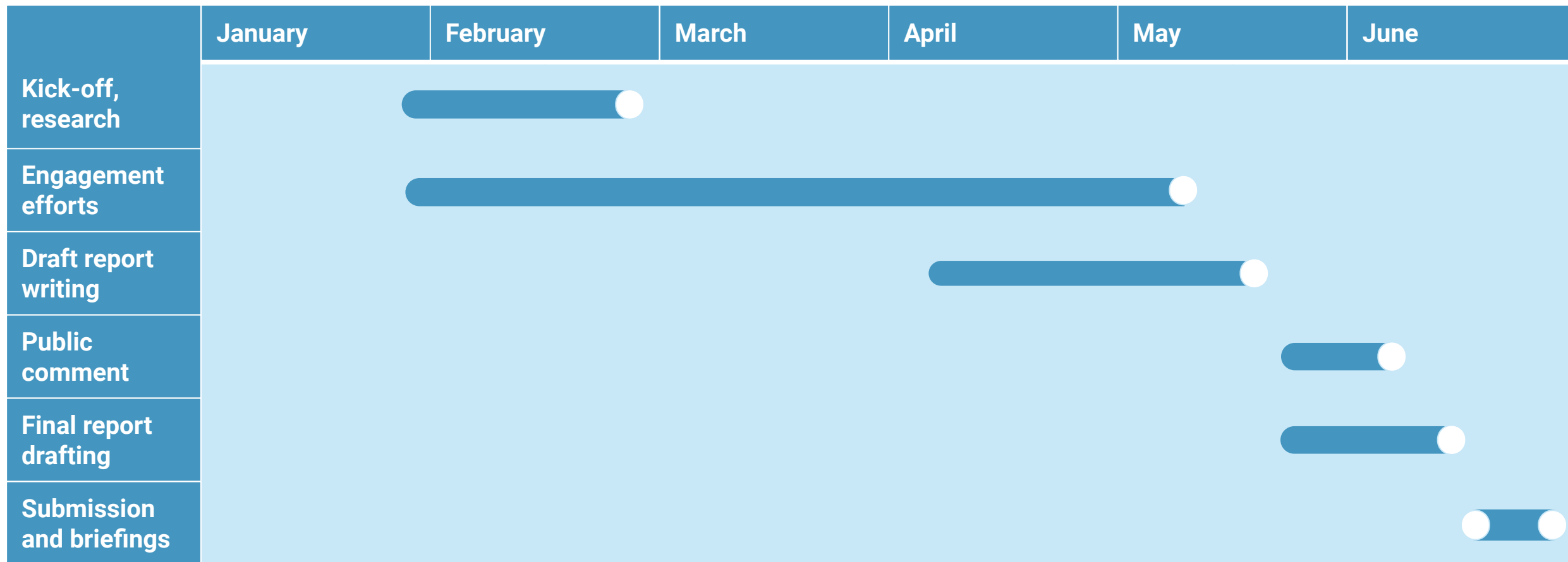
Outcomes

- Framework for a **comprehensive, transparent process to evaluate offshore wind development** in Washington state.
- **Catalog of funding needs** to implement the framework
- **Review of key data gaps** pertinent to planning and evaluation of offshore wind
- **Recommendations for scientific studies** needed to evaluate potential offshore wind impacts.

Process

- Expert **research and documentation of offshore wind engagement best practices** in other jurisdictions
- Targeted **interviews and collaborative meetings with stakeholder groups and Tribes**
- **Public comment and feedback**
- **Socialization of findings and recommendations**

PROPOSED PROJECT TIMELINE



Engagement Meetings To-Date

| | | | | | |
|-----|---|---------|-----|--|---------|
| 1. | WCMAC | 2/14/24 | 15. | Maritime shipping | 4/8/24 |
| 2. | Coastal Tribes - initial briefing | 2/20/24 | 16. | Conservation | 4/10/24 |
| 3. | All State Tribes - initial briefing | 2/23/24 | 17. | Research interests | 4/10/24 |
| 4. | Commercial fishing introduction call | 3/19/24 | 18. | Local Government: Clallam County | 4/10/24 |
| 5. | Recreational fishing introduction call | 3/20/24 | 19. | ATNI | 4/11/24 |
| 6. | Commercial & recreational fishing deep-dive | 3/25/24 | 20. | Research 1-1: University of Washington | 4/12/24 |
| 7. | Local government: Ilwaco and Forks | 3/25/24 | 21. | Port of Grays Harbor | 4/16/24 |
| 8. | WCMAC offshore wind TC | 3/26/24 | 22. | Local Government: Grays Harbor County | 4/22/24 |
| 9. | Labor | 3/27/24 | 23. | Pacific MRC representative | 5/6/24 |
| 10. | State Ocean Caucus | 3/27/24 | 24. | Grays Harbor MRC representative | 5/6/24 |
| 11. | Ports and econ development: Pacific County | 3/28/24 | 25. | WCMAC | 5/8/24 |
| 12. | WA Department of Ecology | 3/28/24 | 26. | Hoh Tribe | 5/14/24 |
| 13. | PNNL | 4/3/24 | 27. | Additional Tribes | TBD |
| 14. | Clean energy | 4/8/24 | 27. | Additional meetings | TBD |

Washington Engagement Process

- Gridworks invited and convened discussions with Washington stakeholders and communities who would be most impacted by the development of offshore wind off the Washington Coast
- Most meetings ranged from 1-3 hours in length, and typically included a presentation from Gridworks followed by facilitated discussion.
- Comments and questions largely fell into 7 categories:
 - Federal process improvements/expectations
 - State process improvements/expectations
 - Public trust, respect, and transparent engagement
 - Environmental, marine co-use, and community impact issues
 - Data gathering & research
 - Gridworks' OSW Engagement Project process
 - Tribal impacts

Overarching Takeaways

- The state could position itself in a leadership role in a BOEM process, requiring more rigorous stakeholder engagement, pre-decisional Tribal consultation, and off-ramps to the leasing process.
- The state could catalog its authorities and the authorities of impacted Tribal governments, and how they apply to engaging in a BOEM federal leasing process, prior to engaging in a BOEM process.
- The state could continue pre-decisional engagement with Coastal Treaty Tribes.
- The state and BOEM could define the scope and intent of their processes up front, including clear definitions of decision points, criteria for decision-making, opportunities for Tribal consultation, opportunities for public and stakeholder engagement, and methods for responding to feedback/input.
 - The state and BOEM could design an engagement process that allows decision-makers to get to know and respect the communities their decisions impact.

What is an off-ramp, or exit ramp?

A point in a process where it becomes necessary to pause or reconsider decision-making for planning, leasing, siting, design, construction, or maintenance and evaluation of offshore wind projects, including associated infrastructure.

Identification of off-ramps and the process elements that might trigger them could be helpful for guiding Washington and Washington stakeholder engagement, but may not be reflected in federal processes where the federal government is a decision-maker, such as processes determining siting in federal waters (led by BOEM).



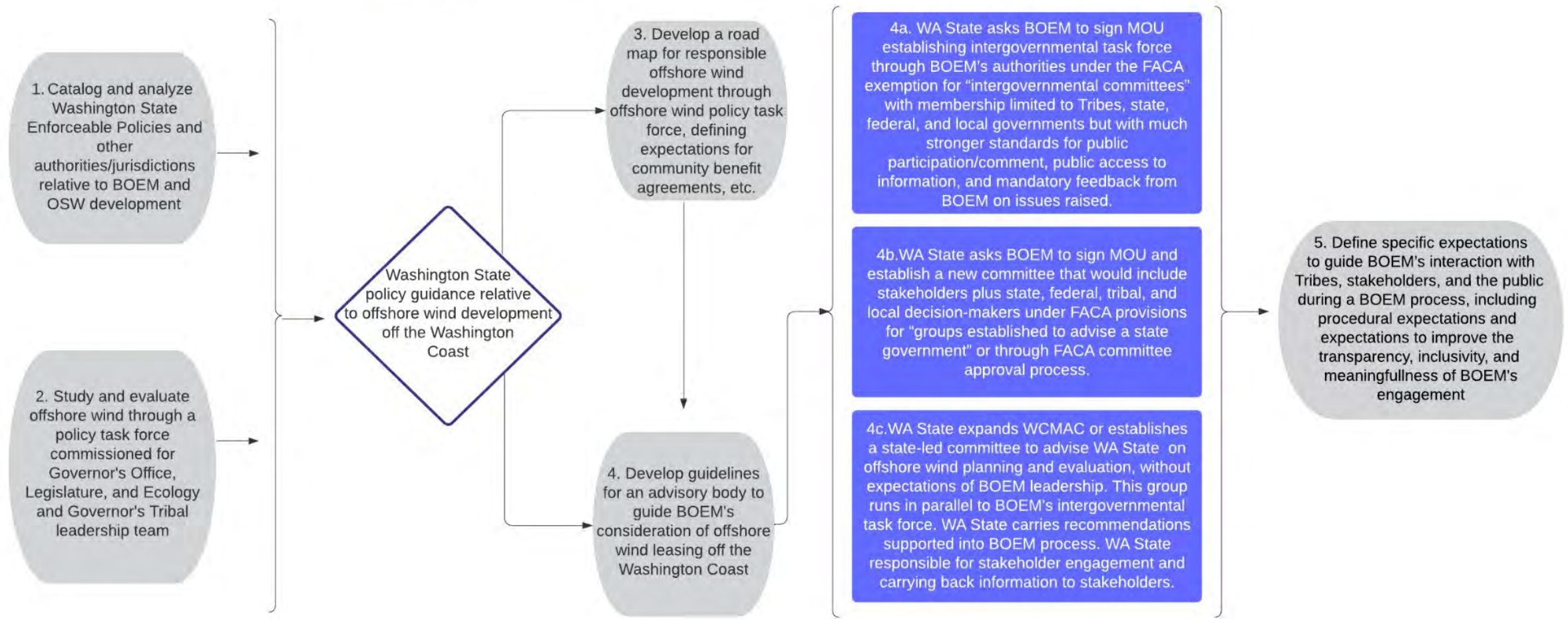
Initial Thinking

1. Washington state could **perform a thorough investigation and catalog of Washington's authorities** under CZMA enforceable policies and other jurisdictional authorities, such as transmission siting, that would be **relevant to offshore wind planning and analysis**.
2. Washington state could **further study and evaluate offshore wind** off the state coast prior to a BOEM process through:
 - an **offshore wind policy task force** made up of state agencies, Tribal governments and organizations, local governments, and stakeholders including the fishing and maritime industries, labor, conservation, and other impacted viewpoints.
 - **targeted government-to-government consultations** with the Washington Coastal Treaty Tribes.
 - **development of a Washington road map for responsible offshore wind development**, including provisions for: understanding and avoiding or mitigating impacts of offshore wind development on the marine environment, local communities, and existing industries and economies; additional data and research collection; community benefit agreements; project labor agreements; and the nature and impact thresholds of process off-ramps

Initial Thinking continued

3. Through an MOU with BOEM, Washington could **develop advisory body guidelines for BOEM** to meet in BOEM's consideration of offshore wind planning and analysis off the Washington Coast:
 - **Option A:** Washington asks BOEM to develop an intergovernmental task force but requires stronger standards for public and stakeholder engagement, including public and stakeholder access to information and two-way dialogue from BOEM to stakeholders explaining decision-making and providing answers to questions stakeholders raise around and outside of task force meetings.
 - **Option B:** Washington asks BOEM to create a new committee that includes stakeholders and governmental and Tribal members through FACA provisions for “groups established to advise a state government” or through the FACA committee approval process.
 - **Option C:** Washington tasks WCMAC or a newly established committee (such as the policy task force outlined in item #2) to meet in parallel to a BOEM intergovernmental task force. State agency leads are tasked with bringing committee input into BOEM's task force. Washington State would be responsible for stakeholder engagement and carrying back information to stakeholders.

Framework for a comprehensive, transparent process to evaluate offshore wind development in Washington



Initial procedural guidelines

1. BOEM could **develop a charter for its advisory body**, and Washington and BOEM should agree upfront on the terms of the charter, participant representation, scopes of work, decision-making powers, public engagement functions, and how public comment will be taken and responded to during or around the advisory body meetings
2. BOEM could **increase its government-to-government consultation efforts with Washington Tribes** and share decision-making rationale with Tribes prior to public announcements
3. BOEM could **share a detailed process plan for any BOEM leasing effort off the Washington coast** with the state and stakeholders, ideally developed with representatives of impacted groups and provided to the state and stakeholders for feedback before finalization
4. BOEM could **conduct an analysis of potential impacts of offshore wind development** to coastal communities, the marine ecosystem, Tribes, and economic interests like fishing and shipping during the planning and analysis phase of the BOEM process. Analysis should include Tribal and stakeholder input and be provided as a draft for public comment
5. BOEM and the state could **develop or support development for a West Coast regional research consortium** providing independent expert analysis and peer review of research and analysis informing responsible offshore wind development off the Pacific Coast

Initial guidelines supporting transparency, inclusivity, trust, and meaningful engagement

1. Before any BOEM process kickoff, the state and BOEM could **meet directly with Tribes, communities, and impacted stakeholders** to share information and build relationships
2. BOEM could **provide time and funding for key BOEM staff to spend time in the community** to learn community priorities and develop relationships
3. BOEM could **share the criteria for decision-making and the reasoning supporting BOEM's decisions** with stakeholders, the state, and Tribes
4. BOEM could **share iterative thinking between draft call areas and draft wind energy areas** between the releases of drafts
5. BOEM could **identify task force or advisory body members or BOEM staff to act as points of contact** for Tribes and affected communities to help channel their concerns into the decision-making process
6. BOEM's could **provide clear and scoped meeting agendas with sufficient time to cover the complexity of the planned discussion** to prevent public and stakeholder process fatigue

Initial guidelines supporting transparency, inclusivity, trust, and meaningful engagement, cont.

7. BOEM could **commit to active listening and two-way dialogue** at meetings and make enough space on a meeting agenda to have that dialogue
8. In advisory body meetings, BOEM's oral **public comment opportunities should be long enough to address the complex issue of offshore wind** (longer than 3 minutes) and **be placed at times convenient for the public** to participate in
9. BOEM could **commit to one-on-one or small group meetings with stakeholder and community experts**
10. BOEM meetings could **include facilitators** and **be physically located in affected communities**
11. BOEM task forces or advisory bodies could **make staff available before, during, and after the task force or advisory body meetings** to engage with the public

Questions for WCMAC

- What stands out to you about these ideas?
- How do these ideas reflect the 2023 WCMAC offshore wind principles of engagement?
- How do these ideas reflect your understanding of improvements needed to federal offshore wind planning and evaluation processes?
- How would you improve these ideas to be more actionable and useful to Washington?



HOW CAN WE HELP?

KATE GRIFFITH

kgriffith@gridworks.org

www.gridworks.org



GRIDWORKS

Appendix: Other States Research Takeaways

Oregon

Maine



Taskforce structure

- Stakeholders commented that the public process structure of the task force had multiple negative unintended effects.

Data gathering and education

- Stakeholders felt early public education is essential, but education must be provided by a trusted third-party and not focus too heavily on industry perspective.
- Stakeholders had strong confidence in the work of the science-based organizations that produce studies used in the BOEM process and that provided direct input to the BOEM process.
- Stakeholders say they need more science to understand the impacts of offshore wind on communities and the marine environment, particularly beyond the call areas; suggested tapping UW.
- To utilize the available science and to develop more, one stakeholder suggested BOEM should coordinate better with its sister federal agencies, such as NOAA and National Marine Fisheries Service.
- Multiple stakeholders criticized the lack of a comprehensive look at the entire leasing program on the West Coast. Those who understand the threshold for BOEM's leasing decisions still believe a PEIS for the entire coast is essential.



Public engagement

- BOEM meetings not accessing all groups, including sports fishermen.
- Stakeholders liked BOEM's practice of hosting information tables organized by subject matter that gave the public an opportunity to talk with BOEM staff and provided the public a dialogue with decision-makers.
- Stakeholders appreciated documentation of the public comments and generally praised the third-party facilitators work to run meetings.

Transparency

- For stakeholders who oppose offshore wind leasing, even knowing/understanding what BOEM's development/leasing goals are would make engagement processes feel more honest and more productive.
- BOEM tended not to share its draft ideas on how to change Wind Energy Areas prior to releasing new drafts, though stakeholders feel that doing so would have allowed better discussion of the reasoning behind how BOEM is using data and information.
- Stakeholders felt it was difficult to understand what was influencing BOEM's decision making.

Tribal engagement

- Many, including Tribal governments, believe BOEM's Tribal engagement to be inadequate, amounting to "listening to the Tribe's concerns and ignoring them and providing promises that they may be dealt with at some later stage of the process."



State leadership

- Stakeholders expressed a desire for more leadership from state government, especially for addressing questions about offshore wind that BOEM was not addressing, including the state's energy needs, onshore transmission needs and impacts, and many marine impact issues.
- Some stakeholders questioned Oregon's need for offshore wind power, while others expressed a need for the state to demonstrate how Oregon offshore wind fits into Oregon's energy needs and decarbonization goals.
- Some stakeholders pointed to the lack of a state energy plan or strategy to gauge the importance of offshore wind for Oregon.



Taskforce structure

- Despite a clumsy launch, stakeholders share that BOEM turned its process around and provided a very engaged dialogue with stakeholders and Tribes, including through use of one-on-one meetings.
- Stakeholders agreed that the task force functioned reasonably well but was of limited value for meeting the public engagement needs of Maine.
- Fishing interests indicated that it was inaccessible to them as it was down the coast from their homes and fishing grounds.
- Stakeholders appreciated the quality of facilitation BOEM secured for its task force meetings and public meetings.
- Stakeholders commented that the three-minute public comment opportunities and centralized location of the task force meetings limited the effectiveness of the task force public comment opportunity.

State leadership

- Processes, such as Maine's road map process, needed to start with trust building.
- Many on the Maine road map advisory committee wanted the committee to operate by consensus. The fishing industry wanted room to participate while still having room to express opposition to offshore wind development.

Maine Takeaways



Tribal engagement

- BOEM met and engaged in a continuous dialogue with Tribes.
- Observers believed that the Tribes felt BOEM's engagement was respectful and met their standards, in contrast to stakeholder observations that the state made little or no effort to meet the Tribes as sovereign nations and to welcome them in the state process.

Other state public engagement efforts

- Most of the fishing industry agreed that road map forums fostered a constructive dialogue between the diverse interests of the state and facilitated personal relationships between individuals
- The road map process achieved good working relationships between participants even as some tension remained over the road map's balance between examining jobs, economic development opportunities, clean energy, and offshore wind technology versus community, environmental and fishing industry concerns.
- Almost all stakeholders contacted agreed that public meetings based in impacted communities and facilitation services were essential.
- Relationship building between state agency staff and participants through learning how the lives of the people in the affected communities related to the land and sea, including site visits, helped committee members understand other perspectives.



Transparency

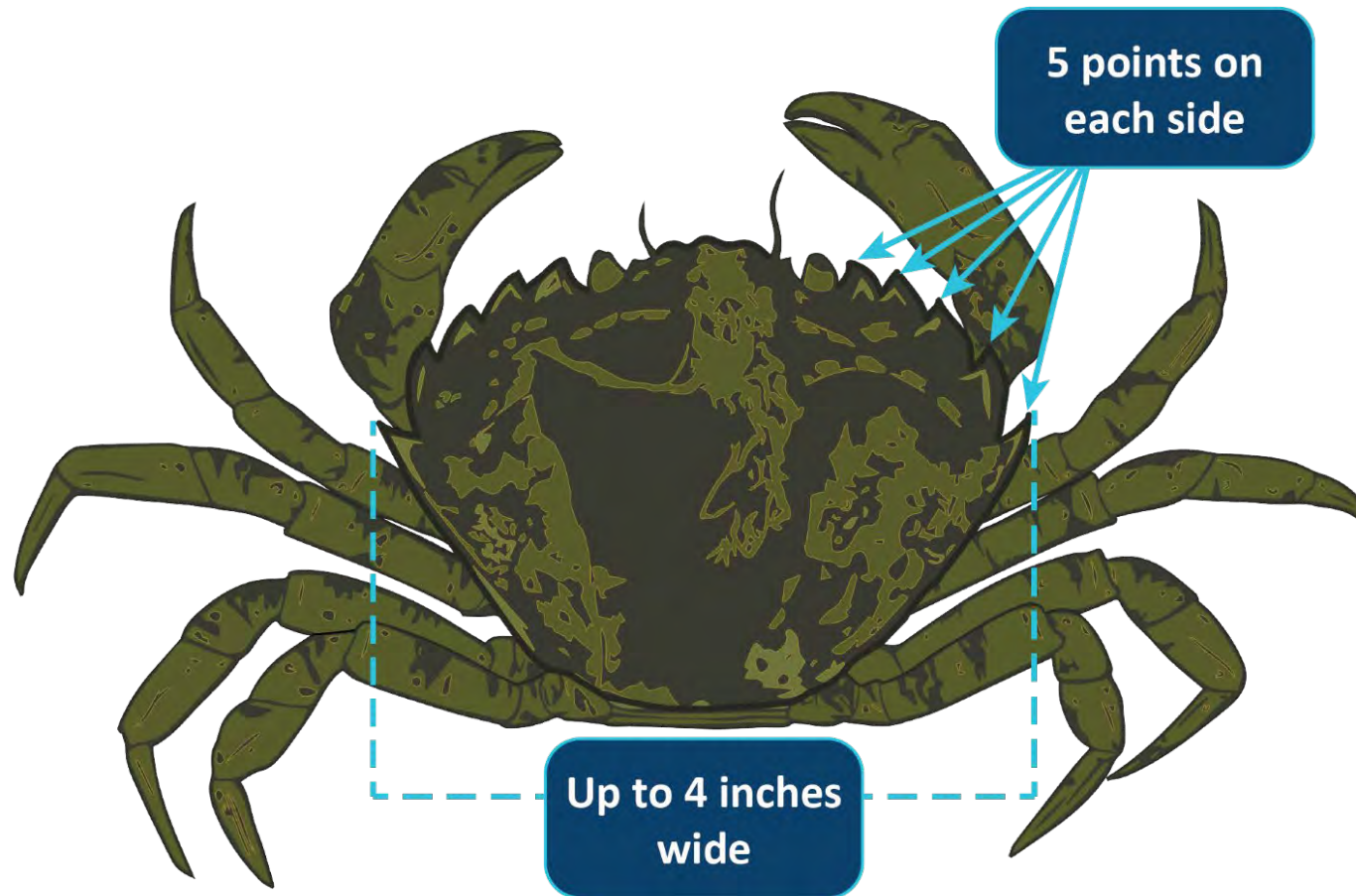
- Establishing the scope and intent of the state and the BOEM processes were essential.
- Fishing industry believed its contributions to the BOEM process were worthwhile and their priorities, standards of avoidance, mitigation, and compensation were respected.
- Stakeholders, especially the fishing industry, appreciated BOEM conducting one-on-one working meetings with stakeholders that remained fully opposed to offshore wind. For example, BOEM held working meetings with the fishing industry to examine maps and worked with marine and fisheries data to draw potential wind energy areas. Other meetings worked to identify gaps in baseline data.
- Stakeholders greatly appreciated the BOEM staff's efforts to engage in dialogue directly with the public. Stakeholders generally praised BOEM staff for their sincerity, knowledge, effort, and responsiveness.

European Green Crab Update



Justin Bush
Aquatic Invasive Species Policy Coordinator
& European Green Crab Emergency Incident Commander





The European green crab (EGC) is a globally damaging invasive species that poses a threat to native shellfish, eelgrass, and estuary habitat critical for salmon and many other species. wdfw.wa.gov/greencrab



Where are they from?

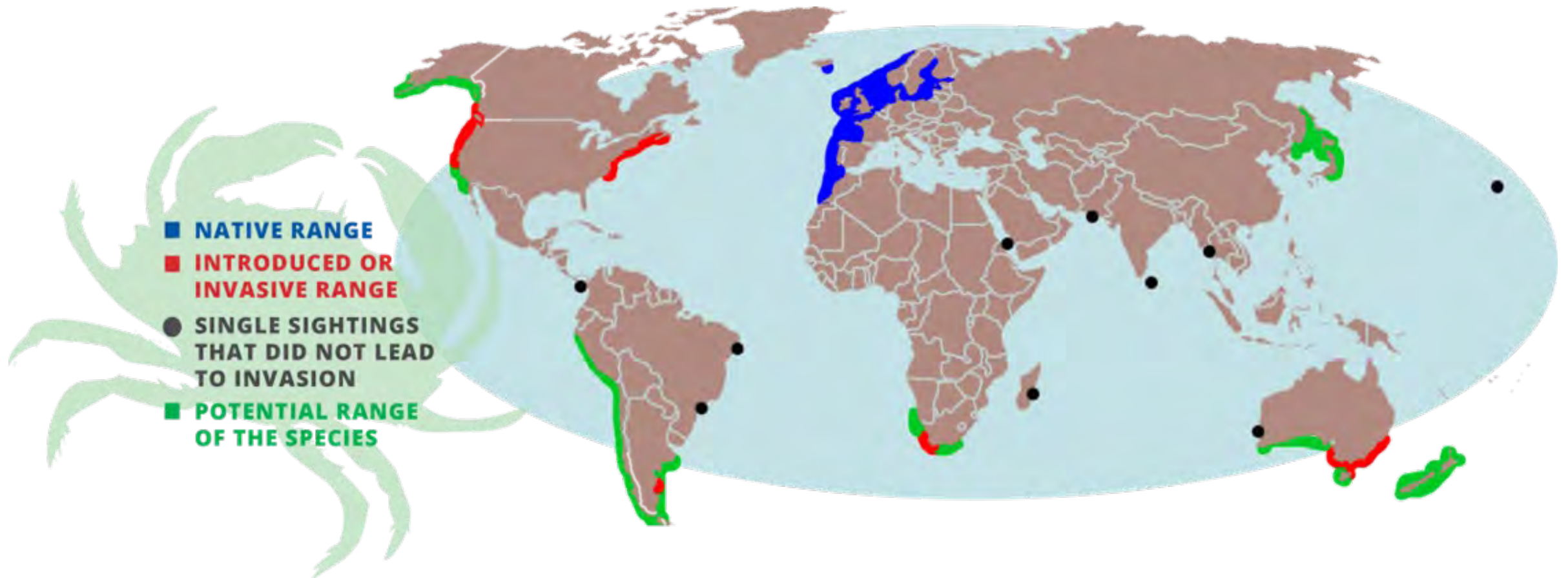


Image by NOAA Alaska Region Fisheries



Background

WHEREAS, due to their invasive nature and potential for harm, European green crabs are classified as a prohibited level 1 (highest risk) species that seriously threatens the environment, economy, and well-being of the state of Washington under RCW 77.135.030 and is a high priority for expedited prevention and rapid response management actions; and



STATE OF WASHINGTON
OFFICE OF GOVERNOR JAY INSLEE

EMERGENCY PROCLAMATION BY THE GOVERNOR

22-02

Green Crab Infestation

WHEREAS, the Washington Department of Fish and Wildlife, tribal co-managers, shellfish growers, and other partners have identified an exponential increase in European green crab (*Carcinus maenas*) populations within the Lummi Nation's Sea Pond and outer coast areas, including Makah Bay, Grays Harbor, and Willapa Bay; and

WHEREAS, initially native to the northeastern Atlantic Ocean, the European green crab is a globally-damaging invasive species that is able to survive in a wide range of water temperatures and salinities and has become established in many temperate coastal zones in areas around the world; and

WHEREAS, where they have become established, European green crabs have disturbed native habitat, displaced and outcompeted resident native species, altered natural food webs, and decimated shellfish and other aquatic industries; and

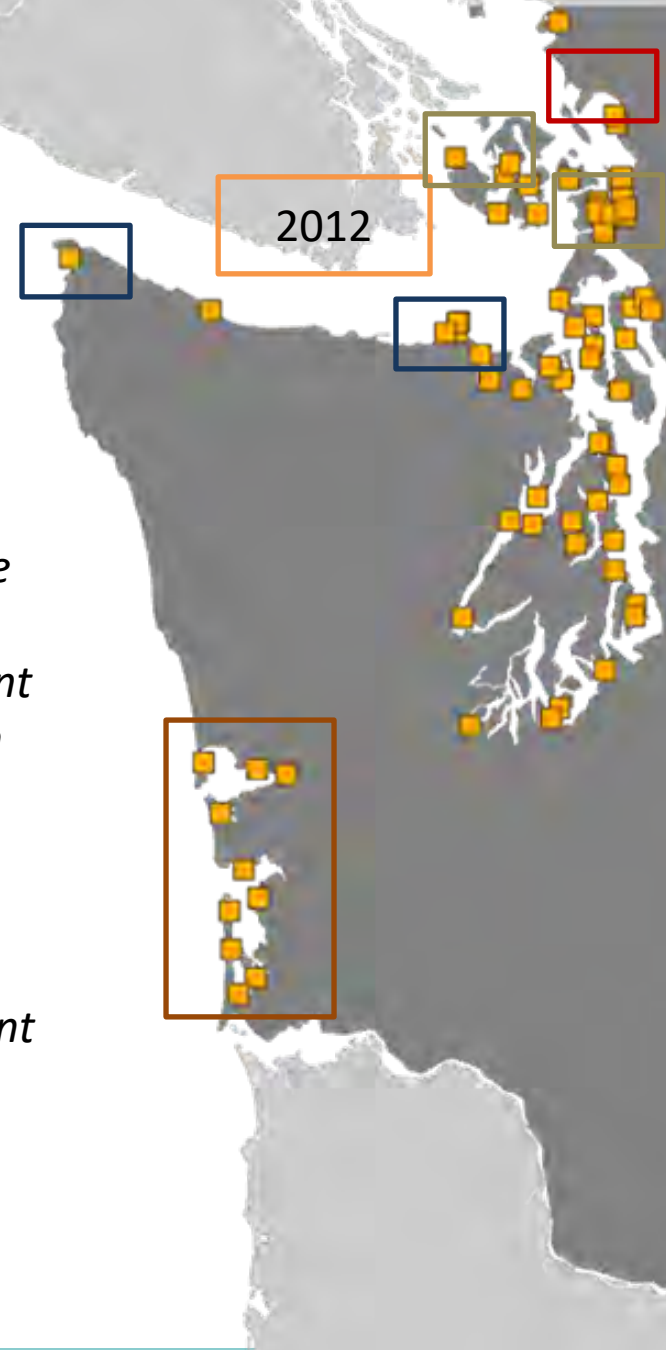
WHEREAS, if they become permanently established in the coastal waters of Washington State, it is likely that European green crabs will become predators to shellfish and juvenile Dungeness crab, destroy critical habitat such as eelgrass beds and estuarine marshes, disrupt natural food webs, harm overall crab populations, hinder salmon and Southern Resident killer whale recovery efforts, reduce shorebird food supplies, and ultimately affect the overall health and resiliency of the Salish Sea; and

WHEREAS, the damage caused by European green crabs, if they become permanently established, will particularly harm endangered species, impact resources that are part of the cultural identity of the tribes and native peoples, and affect small businesses and low-income communities; and

WHEREAS, in recognition of the threats posed by the European green crab, the Washington Department of Fish and Wildlife (WDFW) co-signed the Salish Sea Transboundary Action Plan (Plan) in early 2019 with the Department of Fisheries and Oceans Canada, the Puget Sound Partnership, and Washington Sea Grant which provides the initial framework for a management response; and

I, Jay Inslee, Governor of the state of Washington..., do hereby order the Department of Fish and Wildlife to begin implementation of emergency measures as necessary to effect the eradication of or to prevent the permanent establishment and expansion of European green crab.

- January 19, 2022



| Year | Total |
|---------|---------|
| 1998 | 364 |
| 1999 | 507 |
| 2000 | 235 |
| 2001 | 142 |
| 2002 | 167 |
| 2003 | 24 |
| 2004 | 4 |
| 2005 | 115 |
| 2006-14 | 68 |
| 2015 | 8 |
| 2016 | 24 |
| 2017 | 165 |
| 2018 | 1,192 |
| 2019 | 1,943 |
| 2020 | 6,829 |
| 2021 | 103,165 |
| 2022 | 285,280 |



Whole Community Approach

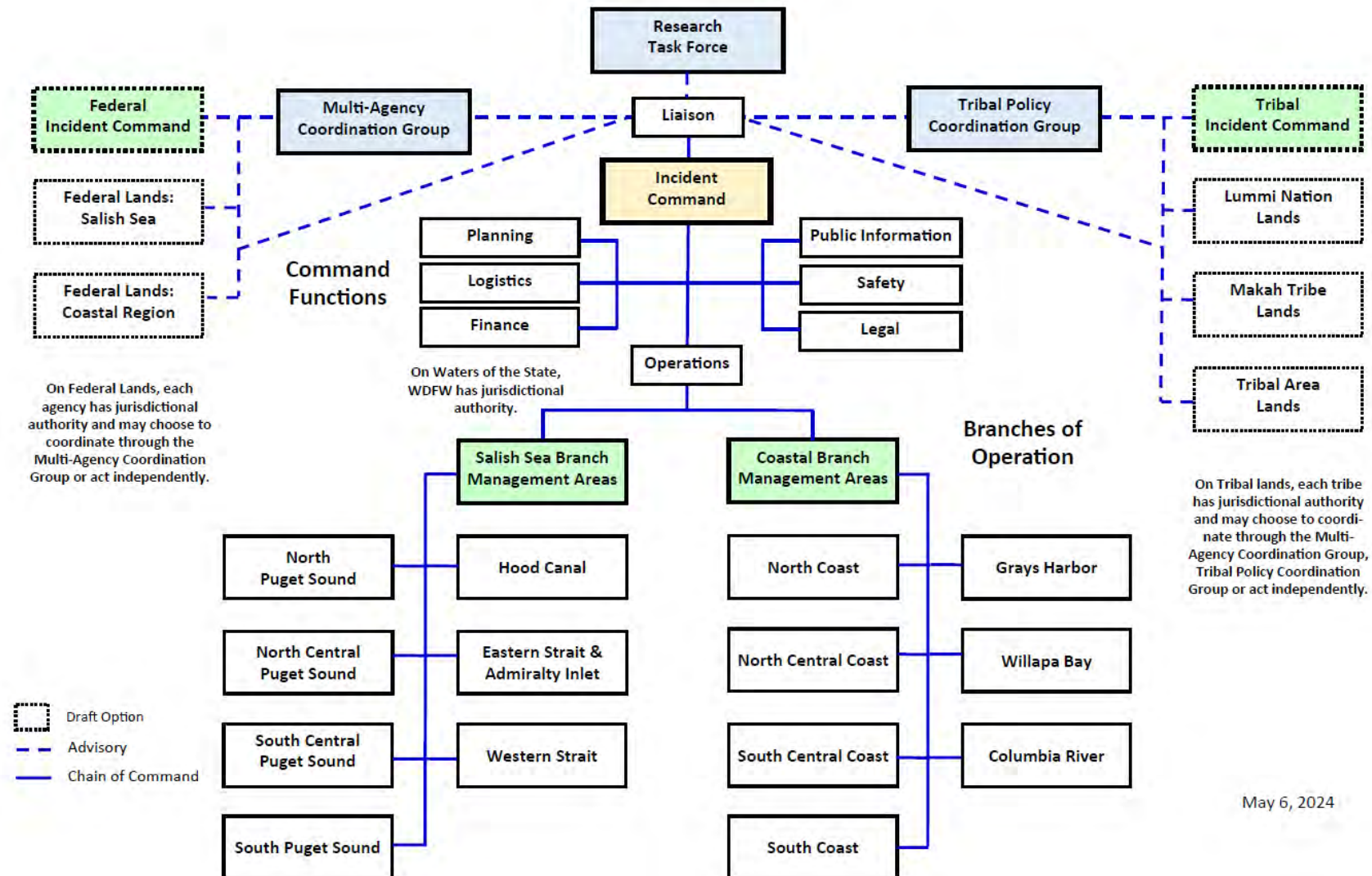
Management can be very complex as European green crab extend beyond jurisdictional boundaries and exist in varying densities throughout Washington.

WDFW is leading emergency measures through the Incident Command System (ICS) with coordination internally and externally.

WDFW, co-managers, tribes, and partners are building local and long-term management foundations, transitioning to a long-term (6-Year) management plan in 2025-2027 biennium.



Incident Command System Structure



May 6, 2024



Multi-Agency Coordination (MAC)Group

The (MAC) represent various co-managers, tribes, and partners participating in European green crab control or management. The MAC Group advises the Incident Command in policy decision-making, including allocation of emergency funding. Additionally, the MAC Group provides a forum for members to share information, establish a common operating picture, and recommend common long-term priorities for management.

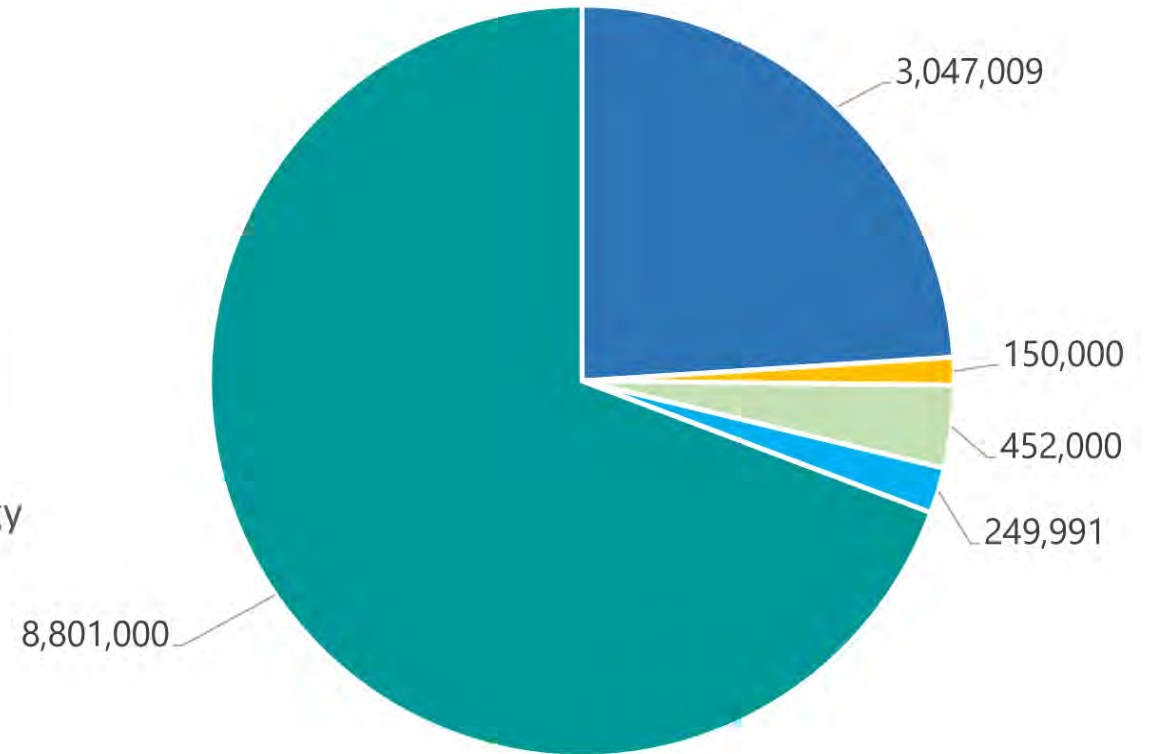
1. Coastal Aquaculture: Willapa-Grays Harbor Oyster Growers Association
2. Department of Fisheries and Oceans Canada
3. Lummi Nation
4. Makah Indian Tribe
5. Puget Sound Partnership
6. Salish Sea Aquaculture: Jorstad Creek Oyster Company
7. Shoalwater Bay Indian Tribe
8. U.S. Bureau of Indian Affairs
9. U.S. Environmental Protection Agency
10. U.S. Fish and Wildlife Service
11. U.S. Geological Survey
12. Washington Association of Conservation Districts
13. Washington Department of Ecology
14. Washington Department of Natural Resources
15. Washington Emergency Management Division
16. Washington Recreation and Conservation Office
17. Washington State Association of Conservation Districts
18. Washington Sea Grant
19. Washington State Department of Agriculture
20. Washington State Parks and Recreation Commission
21. Washington State University



2023-2025 Funding Overview

WDFW
European Green Crab
Emergency Measures
Funding
Fiscal Year 23-25
(July 1, 2023-June 30, 2025)
\$12,700,000 total

- Fish Program
- Habitat Program
- Communications and Public Engagement
- Information Technology
- Passthrough Funds to Tribes and Partners



2024 Incident Objectives

1. Facilitate Washington Department of Fish and Wildlife (WDFW) implementing Governor's Emergency Proclamation for statewide emergency measures with respect for tribal sovereignty and federal jurisdictions.
2. Health and safety of all participants.
3. Reduce or contain European green crab populations below levels that result in environmental, economic, and cultural resource harm.
4. Collaborative and transparent emergency management.
5. Post-emergency transition to long-term management by co-managers, tribes, and partners with WDFW oversight.



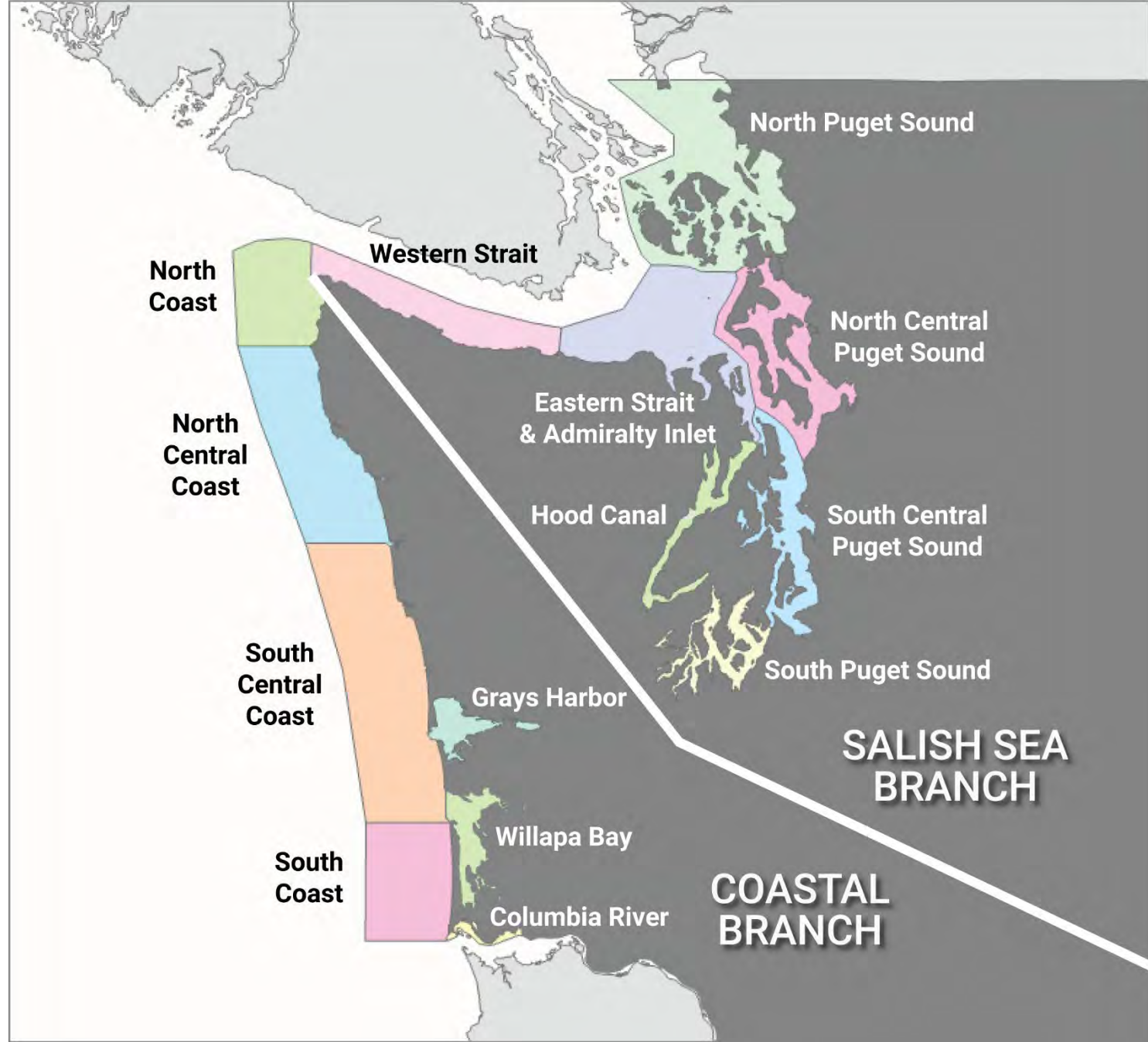
Areas of Operation

Management Branches

1. Coastal Branch
2. Salish Sea Branch

14 Management Areas

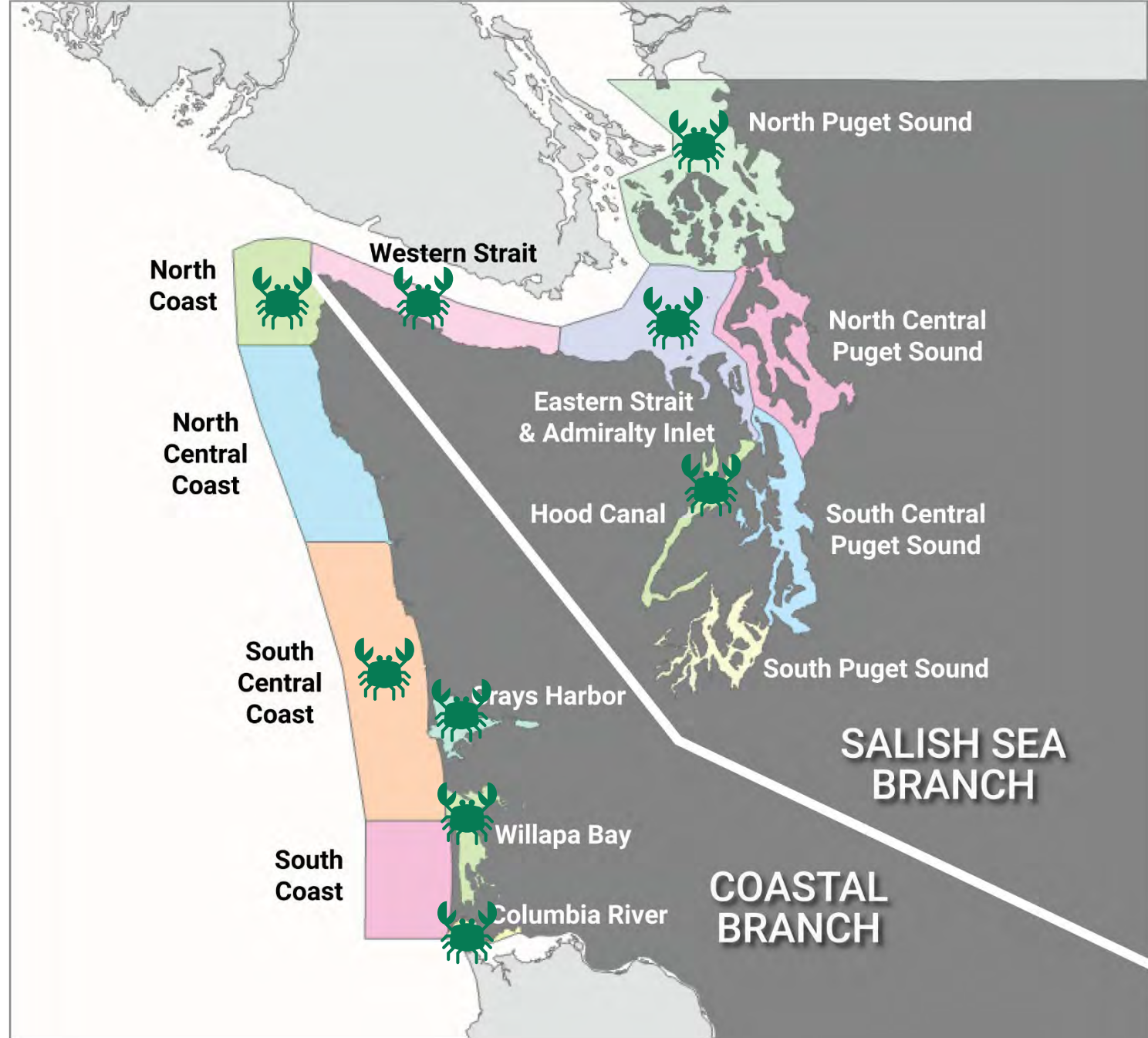
Further subdivided into
Coordination Areas, Sites
and Sub-Sites.



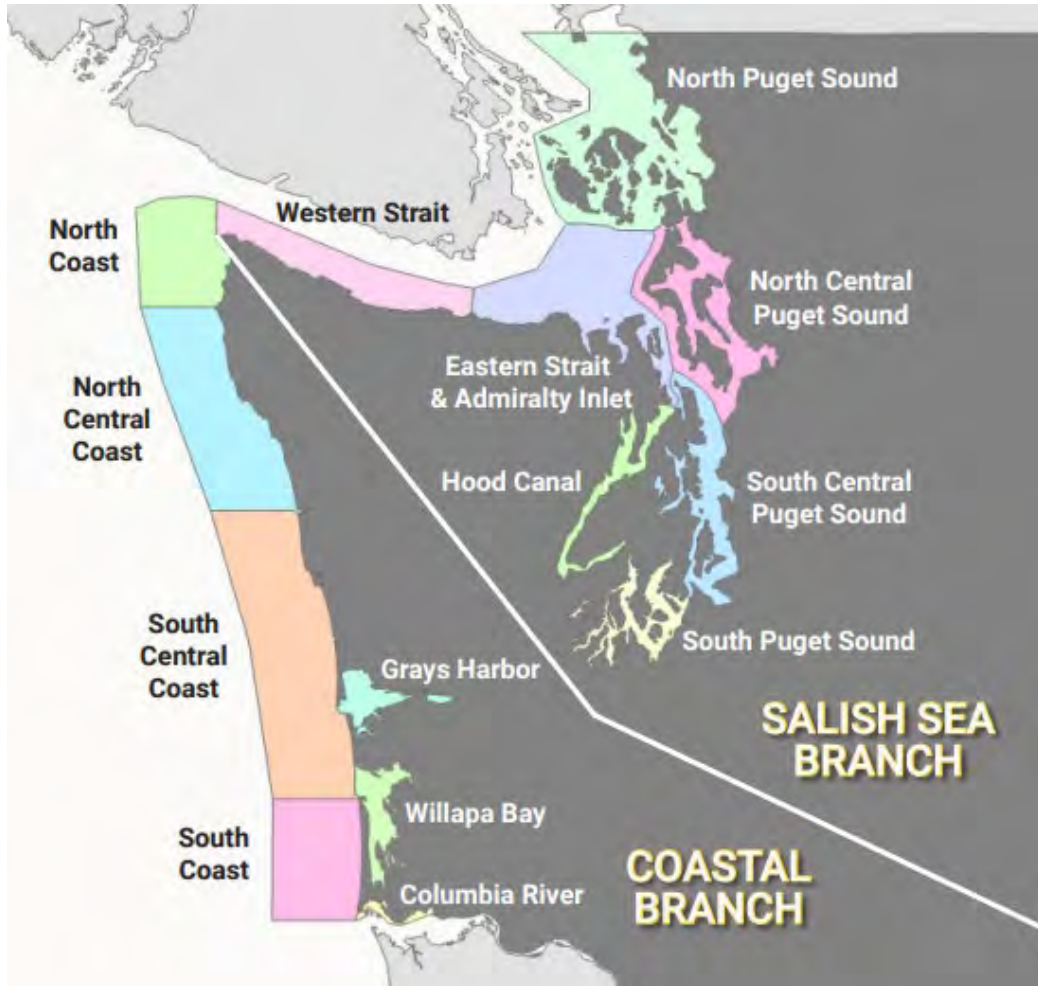
EGC Detections

EGC have been detected in 9 of 14 Management Areas.

| Year | Salish Sea | Pacific Coast | Total |
|-------------|------------|---------------|---------|
| 1998 | 0 | 364 | 364 |
| 1999 | 0 | 507 | 507 |
| 2000 | 0 | 235 | 235 |
| 2001 | 0 | 142 | 142 |
| 2002 | 0 | 167 | 167 |
| 2003 | 0 | 24 | 24 |
| 2004 | 0 | 4 | 4 |
| 2005 | 0 | 115 | 115 |
| 2006 - 2014 | 0 | 68 | 68 |
| 2015 | 0 | 8 | 8 |
| 2016 | 5 | 19 | 24 |
| 2017 | 101 | 64 | 165 |
| 2018 | 77 | 1,115 | 1,192 |
| 2019 | 177 | 1,766 | 1,943 |
| 2020 | 2,858 | 3,971 | 6,829 |
| 2021 | 86,340 | 16,825 | 103,165 |
| 2022 | 81,006 | 204,274 | 285,280 |



Calendar Year 2023 Accomplishments



2023 Total Removals and Trap Days

| Branch | 2023 Removals | 2023 Trap Set Days (TSD) |
|-------------------|----------------|--------------------------|
| Salish Sea Branch | 6,452 | 169,620 |
| Coastal Branch | 354,997 | 118,044 |
| Total | 361,449 | 287,644 |

2023 No Catch and Things to Celebrate

| Management Areas | 2023 Removals (TSD) |
|---------------------------|---------------------|
| North Central Puget Sound | 0 (1,316) |
| South Central Puget Sound | 0 (525) |
| South Puget Sound | 0 (228) |
| North Central Coast | 0 (0) |
| South Coast | 0 (0) |

| Year | Total |
|-------------|----------------|
| 1998 | 364 |
| 1999 | 507 |
| 2000 | 235 |
| 2001 | 142 |
| 2002 | 167 |
| 2003 | 24 |
| 2004 | 4 |
| 2005 | 115 |
| 2006-14 | 68 |
| 2015 | 8 |
| 2016 | 24 |
| 2017 | 165 |
| 2018 | 1,192 |
| 2019 | 1,943 |
| 2020 | 6,829 |
| 2021 | 103,165 |
| 2022 | 285,28 |
| 2023 | 361,449 |



Long-Term Management Plan

- Long-Term (6 Years) (2025-2031)
Management Plan Development
 - Purpose
 - Timeline
 - Funding Recommendations

| Milestone | Release by | Review By |
|-------------------------|------------------|--------------------|
| Updated Review Document | February 9, 2024 | March 1, 2024 |
| First Draft | March 29, 2024 | April 26, 2024 |
| Second Draft | May 24, 2024 | June 21, 2024 |
| Third Draft | July 19, 2024 | August 9, 2024 |
| Final Draft | August 30, 2024 | September 20, 2024 |
| Final Document | October 1, 2024 | |

European Green Crab 2025-2031 Management Plan for Washington



National Management Plan and National Coordination

Management Plan for the European Green Crab
Submitted to the Aquatic Nuisance Species Task Force
June 21, 2023
ANSTF European Green Crab Working Group

DRAFT

1

“The recommendations we present in this management plan illustrate the need for informed decision making by integrating members of multiple jurisdictions into a cohesive regional information network. This network will help to mitigate the spread and impact of EGC in priority areas where particular management strategies are feasible and effective.”

“To accomplish the goals of this plan, we recommend that the [Aquatic Nuisance Species Task Force] establishes an EGC Advisory Committee (EGC AC) consisting of members of local, state and federal agencies, Tribal communities, universities, NGOs, and other relevant stakeholders. The EGC Advisory Committee would meet to evaluate progress towards achieving the goals of the EGC Management Plan using the best available science and the best use of resources. “



Federal Appropriations Requests



Invasive European green crab

European green crabs threaten West Coast economies, environments, and tribal, cultural, and commercial resources. Federal funding and reinstatement of NOAA's Office of Aquatic Invasive Species are requested to combat European green crabs.

The European green crab is considered one of the world's worst invasive species. These shore crabs feed on clams, mussels, and other native shellfish. They compete with Dungeness crabs and impact resources that are as affected.

While they destroy, this crab's efforts, health.

An in Europe since 1900, the crab has spread to the Pacific Northwest. In 2014, crabs were found in Washington's Willapa Bay. Washir Europe in our I and see the this and pa the Wa. With fi green WDFW and pa. Yet fed emerg federal to con.

Contact information:
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Federal Policy Coordinator
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Request this information in an alternative format or language at: meagan.west@dfw.wa.gov

European green crab federal funding request

Request for federal funding and support for West Coast green crab response

We respectfully request that Congress recognize the emergency nature and destructive potential of European green crab, support Washington and other states' initiatives to combat this species, and act to minimize this destruction by implementing the following requests:

- Fund the reestablishment of the Office of Aquatic Invasive Species at NOAA headquarters to support state, tribal, and federal European green crab management programs.
- **Appropriate \$5 million in fiscal year 2024 and future years to the Coastal Aquatic Invasive Species Mitigation Grant Program** as authorized under the Frank LoBiondo Vessel Incidental Discharge Act of 2018.
- Provide funding for European green crab prevention, management, and data stewardship to:
 - \$300,000 to U.S. Fish and Wildlife Service's Willapa National Wildlife Refuge and Dungeness National Wildlife Refuge.
 - \$800,000 to U.S. Geological Survey's Biological Threats and Invasive Species Research Program for its Western Fisheries Research Center and Alaska Science Center.
 - \$8 million to Bureau of Indian Affairs' Invasive Species Program for its Northwest Region.
 - Funding to U.S. Department of Agriculture's Animal and Plant Health Inspection Service for Washington's coastal shellfish growers who have been impacted by European green crabs.

European green crab detections in Washington state in 2023

Learn more and report suspected European green crabs: <https://www.dfw.wa.gov/greencrab>



Graphic showing how to identify invasive European green crabs, emphasizing the five spines. Photo: WDFW

More information is available online at www.dfw.wa.gov/greencrab

April 2024

Request this information in an alternative format or language at: meagan.west@dfw.wa.gov or [206-462-3012](tel:206-462-3012), TTY (711) or <https://www.dfw.wa.gov>

1. Fund the reestablishment of the Office of Aquatic Invasive Species at NOAA headquarters to support state, tribal, and federal European green crab management programs.
2. Appropriate \$5 million in fiscal year 2024 and future years to the Coastal Aquatic Invasive Species Mitigation Grant Program as authorized under the Frank LoBiondo Vessel Incidental Discharge Act of 2018.
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 - A. \$300,000 to U.S. Fish and Wildlife Service's Willapa National Wildlife Refuge and Dungeness National Wildlife Refuge.
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 - C. \$8 million to Bureau of Indian Affairs' Invasive Species Program for its Northwest Region.
 - D. Funding to U.S. Department of Agriculture's Animal and Plant Health Inspection Service for Washington's coastal shellfish growers who have been impacted by European green crabs.

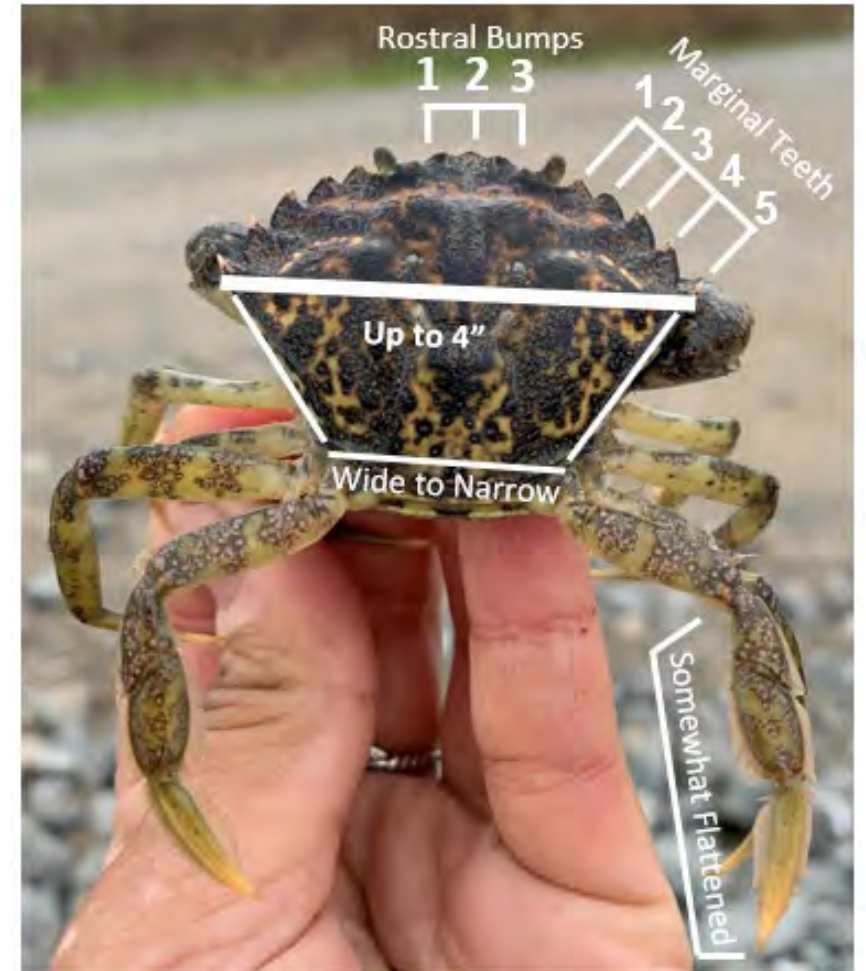


Report suspected EGC to WDFW

Members of the public can report suspected EGC to WDFW.

To do so, please:

- Take detailed photos of the suspected EGC.
- Note the location of the crab.
- Report your sighting to WDFW:
- Online at wdfw.wa.gov/greencrab
- Via email at ais@dfw.wa.gov
- Via phone at 1-888-WDFW-AIS
- Washington Invasive Species App



Spread the word!



Stickers



Reporting Signs



Rack Cards
Informational Posters

Available in
multiple languages
on our webpage!



Wallet Sized ID Cards
Informational Fliers

European Green Crabs

7th grade mini unit



This open educational resource is brought to you by the Washington Department of Fish and Wildlife's Wild Washington Education Program.

Individuals who need to receive this information in an alternative format, language, or who need reasonable accommodations to participate in WDFW-sponsored public meetings or other activities may contact the Title VI/ADA Compliance Coordinator by phone at 360-903-2346 TTY (711) or email (Title6@dfo.wa.gov). For more information, see <https://wdfw.wa.gov/accessibility/requests-accommodation>.



Resources



WDFW EGC Webpage

<https://wdfw.wa.gov/species-habitats/invasive/Carcinus-maenas>

Includes detailed information about EGC, public updates, outreach materials and other resources, and the emergency response coordination.



EGC Hub

<https://wdfw-egc-hub-wdfw.hub.arcgis.com/>

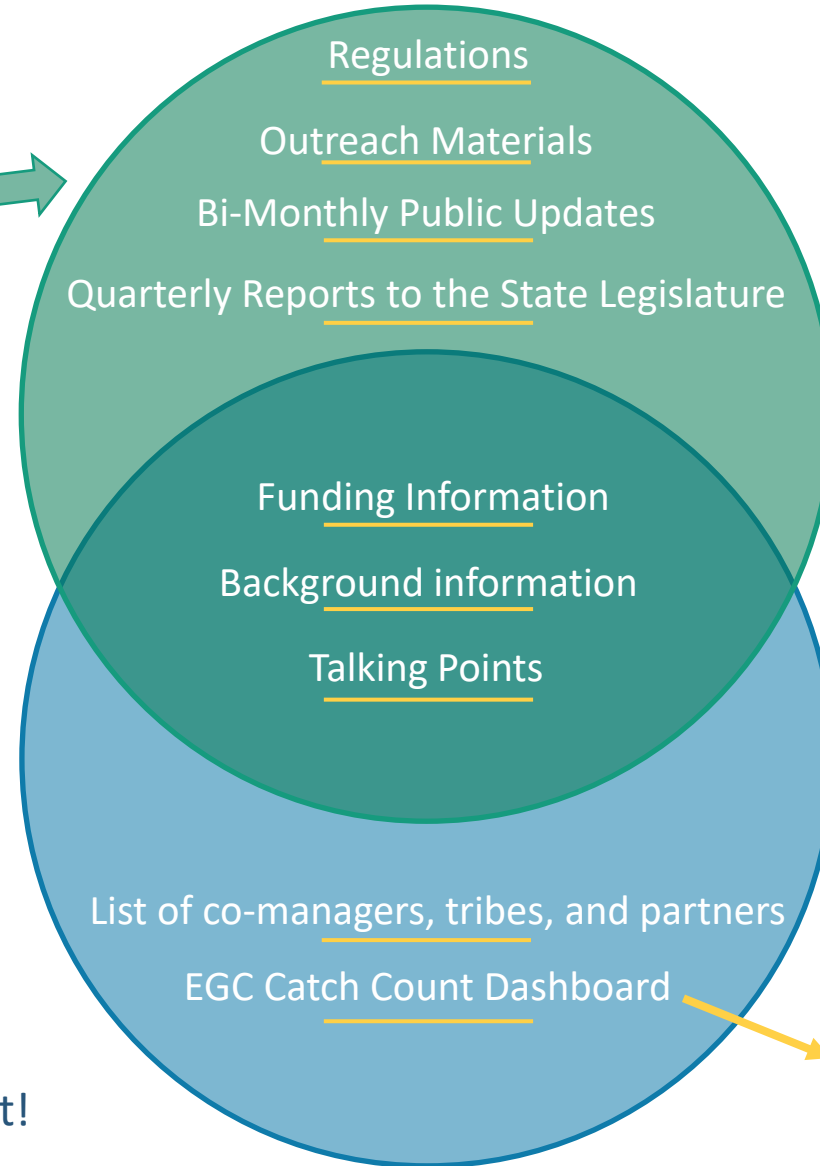
Includes the most recent information about catch numbers around the state and participating co-managers, tribes, and partners



EGC Reporting Form

<https://wdfw.wa.gov/greencrab>

Webpage intended for the public including EGC reporting and identification



Contact

Chase Gunnell

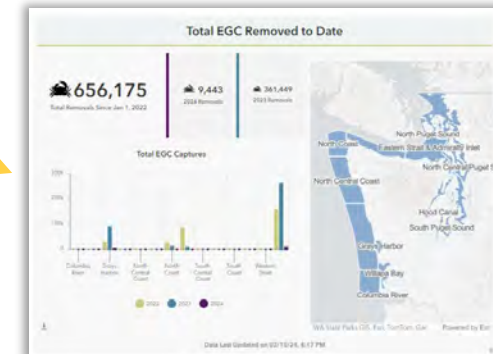
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Sign up for the WDFW EGC Management Updates email list!

<https://wdfw.wa.gov/about/lists>





 NASA Earth Observatory

Questions?

Contact me at Justin.Bush@dfw.wa.gov or 564-669-9486.

