



## **Meeting summary**

May 22, 2025

9:00 a.m. to 11:00 a.m.

Virtual Meeting

## **Meeting attendance and objectives**

The Washington Marine Resources Advisory Council (MRAC) held its 32nd meeting online on May 22, 2025. The meeting was facilitated by Angie Thomson, Thomson Strategic Consulting and Cory Archer, True Wind Collaborative.

Members in attendance: Martha Kongsgaard (Chair), Meg Chadsey (Washington Sea Grant), Bill Dewey (Taylor Shellfish Farms), Aaron Dufault (Washington Department of Fish and Wildlife, alternate), Lucas Hart (Northwest Straits Commission), Marilyn Sheldon (Coastal Shellfish Grower), Senator Keith Wagoner (Washington State Senate).

MRAC members not in attendance: Brian Allison (Puget Sound Commercial Crab Association), Mike Cassinelli (Recreational Fishing), Cynthia Catton (Department of Natural Resources), Tom Davis (Washington State Farm Bureau), Representative Joe Fitzgibbon (Washington State House of Representatives), Rod Fleck (Washington Coast Marine Advisory Committee), Tony Floor (Northwest Marine Trade Association), Jennifer Hennessey (Washington State Department of Ecology), Dennis McLerran (Puget Sound Partnership), Erika McPhee-Shaw (Western Washington University), Mindy Roberts (Washington Environmental Council), Senator Jesse Salomon (Washington State Senate), Douglas Steding (Association of Washington Business), Laura Watson (Washington State Department of Ecology).

Other participants: Simone Alin (National Oceanic and Atmospheric Association), Cory Archer (True Wind Collaborative, MRAC facilitation team), Lisa DeBruyckere (Oregon Ocean Science Trust), Brian Cochrane (Washington State Conservation Commission), Wiley Evans (Haiki), Richard Feely (National Oceanic and Atmospheric Association), Kirsten Feifel (Puget Sound Partnership), Micah Horwith (Washington Department of Ecology), William Kammin (True Wind Collaborative, MRAC facilitation team), Terrie Klinger (Washington Ocean Acidification Center), Jan Newton (Washington Ocean Acidification Center), Candace Penn (Squaxin Island Tribe), Betsy Peabody (Puget Sound Restoration Fund), Liz Perotti (National Oceanic and Atmospheric Association), Angie Thomson (Thomson Strategic Consulting, MRAC facilitation team), Jodie Toft (Puget Sound Restoration Fund), Liz Whiteman (California Ocean Science Trust), Heather Yu (Cascadia Law Group).

## Meeting objectives:

- Share updates on recent ocean acidification efforts.
- Recent updates with MRAC Chair
- Introduction to West Coast Ocean Science Action Agenda
- Discuss MRAC website homepage refresh

## Welcome and introductions

---

Angie Thomson, MRAC facilitation team, and Chair Martha Kongsgaard welcomed participants, prompted introductions, and reviewed the meeting agenda.

## Leadership Transition and MRAC Future

---

- Martha Kongsgaard announced her decision to step down as MRAC Chair after years of service.
  - Martha reflected on MRAC's accomplishments and her personal journey.
  - Betsy Peabody, former Executive Director and founder of the Puget Sound Restoration Fund (PSRF) has been recommended for the position of Chair. Her application to the Governor's Office is currently awaiting review. Members are invited to submit recommendations for her appointment through the [Governor's Boards and Commissions portal](#).
- Celebration and Continuity
  - The group expressed appreciation for Martha's leadership in elevating ocean acidification science and policy.
  - A celebration of Martha's leadership will take place at the October in-person MRAC meeting.
  - Betsy Peabody emphasized continued support for MRAC's mission, including species conservation, legislative advocacy, and science-driven policy engagement.

## Ocean Acidification Science and Research Updates

---

Participants shared recent ocean acidification activities. Highlights include:

- WOAC Science Symposium (Jan Newton, Washington Ocean Acidification Center): The 2025 Washington Ocean Acidification Center (WOAC) Science Symposium is scheduled for May 28, featuring sessions on observations, modeling, and biology. A member of the Makah Tribe is expected to speak, underscoring the integration of Indigenous perspectives.
- Biennium Research Review (Terrie Klinger, Washington Ocean Acidification Center): The biennial ocean acidification research program is concluding, with findings to be shared at the symposium. This marks an important milestone in the two-year research cycle.
- Ocean Acidification Indicators and Data Request (Micah Horwith, WA Ecology):
  - A call for marine pH data (spanning the past 10 years) for the 2026 [Water Quality Assessment is open](#) until July 7, 2025.

- The 2019–2023 Ocean Acidification indicator dataset is live; the 2024 season data are forthcoming. This indicator helps characterize seasonal variability in water chemistry across Washington's inland marine waters.
- OARS and Monitoring (Liz Perotti, National Oceanic and Atmospheric Association (NOAA)):
 

The Ocean Acidification Research for Sustainability ([OARS](#)) initiative is progressing, though platforms such as Integrated Ocean Observing System (IOOS) and Northwest Association of Networked Ocean Observing Systems (NANOOS) are facing operational risks and potential funding cuts.
- Ocean Acidification Sentinel Site (OASeS) Media and Outreach (Meg Chadsey, Washington Sea Grant):
 

The OASeS team is producing a 5-minute documentary featuring ocean acidification impacts along the Washington coast, collaborating with Tribes and Washington Department of Fish and Wildlife (WDFW) on larval sampling efforts. Videographer John Gussman is gathering stories and visual content to enhance public understanding of ocean acidification science.
- Blue Carbon/Green Fields (Jodie Toft, PSRF and Richard Feely, NOAA):
 

While the five-year, \$5M project integrating shellfish and agriculture was canceled, work continues on abalone and oyster restoration with Tribal partners. Over 12,000 abalone have been delivered to partner organizations. NOAA's biological indicator mapping is ongoing and will soon include data dating back to 1998.
- Eelgrass Protection (Lucas Hart, Northwest Straits Commission): The "[Anchor Out of Eelgrass](#)" campaign has been launched, aiming to protect vital habitat and promote sustainable anchoring practices across state and Canadian waters.
- Climate Video (Jan Newton, WOAC): Jessie Turner has been leading a new video interpretation of climate change "warming stripes" which will debut on World Ocean Day (June 8).
- New Publications:
  - *Global Change Biology* will publish a seminal paper this June detailing four decades of global ocean acidification trends, showing that ocean acidification has already exceeded planetary boundaries.
  - NOAA Marine Carbon Dioxide Removal (MCDR)-funded research (2023–2025) is yielding insights into species responses to acidification, including those expected to thrive under new conditions.

- West Coast-wide ocean acidification indicators are expected within three months via the West Coast Governors Alliance. These will be shared with MRAC when released.
- Martha highlighted the interdependence of Pacific Marine Environmental Laboratory (PMEL) and all the other organizations represented by this group. It is extremely important that MRAC highlights this interdependence because of the salience that ocean acidification has that, sometimes, carbon and climate does not.

### **Budget Update and Legislative Engagement**

Angie Thomson gave the group an overview of the funding levels for ocean acidification work in the 2025-2027 budget, which remain steady.

- Core state programs — DNR and Ecology allocations — remain funded, enabling state agencies to sustain long-term monitoring.
- Biological response studies for WOAC are now an ongoing budget item.
- The General Fund allocation at the department of Ecology was also renewed.
- Senator Wagoner emphasized the importance of proactive legislative engagement and recommended MRAC request a presentation to the Senate Agriculture and Natural Resources Committee. Senator Chapman is the new Committee Chair.
- Bull kelp forests are now designated as Washington’s Marine Forest.

### **West Coast Ocean Science Action Agenda**

#### **Lisa DeBruyckere (Oregon Ocean Science Trust) and Liz Whiteman (California Ocean Science Trust):**

Representatives of the nation’s two Ocean Science Trusts introduced the West Coast Ocean Science Action Agenda as a new collaborative initiative. This science-driven framework aims to identify and elevate shared ocean science priorities across California, Oregon, and Washington over the next 2–3 years.

- Representatives emphasized that this is *not a policy initiative*, but a coordinated science effort designed to prepare the region for future federal funding opportunities—similar to efforts in the Great Lakes, Gulf of Mexico, and North Atlantic.
- The agenda will focus on strategic investment in institutions, infrastructure, research and development, and workforce capacity.

- Speakers noted that while not every issue will be highlighted, the intent is to amplify widely supported regional priorities.
- The initiative seeks to leverage private foundations and other non-federal sources to diversify funding.
- Advocacy is currently focused at the grassroots level along the West Coast, with plans to expand outreach in preparation for future administrative transitions.
- The West Coast Ocean Science Action Agenda is a major step toward unified scientific collaboration and sustainable ocean funding across state lines.

### **Science Update: Wiley Evans Haiki Institute**

---

Wiley Evans (Hakai Institute) highlighted research on the unique “carbonate chemistry weather” in the Salish Sea.

- New findings from coastal British Columbia demonstrate how ocean acidification is shaped not only by surface processes but by complex subsurface and seasonal dynamics.
- Wiley’s team’s high-resolution sampling show that storm-driven mixing and intermediate water masses play a critical role in driving carbonate chemistry variability—what NOAA PMEL researchers have termed “carbon dioxide storms.”
- Wiley and his team are seeing changes at shorter time scales, too. These changes are occurring in British Columbia and they have coined the term “carbonate chemistry weather” to help describe these shorter timescale corrosive events.
- Conditions have moderated slightly since 2018–2021, but episodic extremes persist, underscoring the need to integrate biogeochemical modeling with long-term, in situ monitoring.
- Mixing and biogeochemistry composition are driving corrosivity.
- The parallels and differences between British Columbia and Puget Sound reinforce the value of sustained cross-border collaboration and foundational oceanographic research.

#### Q and A:

*Q: Dick inquired whether storm activity influences residence times of studied water masses?*

A: Wiley noted that the current understanding of residence times in the study area remains limited and largely based on earlier studies, indicating a need for updated research to assess storm-driven variability.

*Q: Simone remarked on the pronounced acidification observed in intermediate water layers, noting it is somewhat surprising that deeper waters appear less impacted—an observation consistent with patterns seen in Hood Canal and near the mouth of the Strait of Juan de Fuca.*

A: Wiley confirmed that intermediate waters are indeed more significantly affected, explaining that approximately 60% of these waters are comprised of surface water mixtures. In contrast, deeper waters—delivered episodically via tidal exchange during spring and summer—experience comparatively lower exposure to surface-derived acidification signals.

A comment from Jan emphasized the inherent complexity of the coastal system, noting similarities to some, but not all, regions of Puget Sound. She highlighted the challenge of conveying both the natural variability and long-term trends in ocean conditions, and acknowledged the critical role of robust data collection in enabling such nuanced analysis.

### **MRAC Website Update**

---

Cory Archer (facilitation team) presented a draft website concept for the upcoming OAinWA.org website refresh.

- The MRAC website ([www.OAinWA.org](http://www.OAinWA.org)) is undergoing a refresh to better serve as a centralized hub for key reports, partner resources, and one-pagers, without becoming an archive of all scientific literature or news stories.
- While the foundational report pages and MRAC meeting documents will remain accessible, the updated site will emphasize high-value links and user-friendly navigation.
- Members are encouraged to share new websites and resources for inclusion to integrate them into the refreshed layout. Feedback and high-resolution images are welcome as the update rolls out—help us keep the site beautiful, informative, and easy to use.
- Cory asked for feedback from the group after the website goes live and requested high quality images to highlight MRAC’s work.

### **Next steps**

---

- MRAC will next meet in person in October.
- The group is asked to contribute resources for inclusion in website update such as website links, images, and videos that members would like to highlight.
- Increase visibility in legislative forums, including potential invitations to policymakers to ocean acidification focused events.