



MARINE RESOURCES ADVISORY COUNCIL

Meeting Summary

April 25, 2016 10:00 a.m. to 3:00 p.m.

Pacific Tower, Seattle WA

Meeting Attendance and Objectives

The Washington Marine Resources Advisory Council (MRAC) held its eleventh meeting on April 25, 2016. The meeting was facilitated by Martha Kongsgaard, MRAC Chair and Angie Thomson of EnviroIssues.

Members in attendance: Martha Kongsgaard (Chair), Nan McKay, Linda Anderson-Carnahan (Environmental Protection Agency alternate for Dennis McLerran), Gus Gates, Rich Childers (Washington Department of Fish and Wildlife alternate for Michele Culver), Bill Dewey, Kristen Feifel (Washington Department of Natural Resources alternate for Peter Goldmark), Libby Jewett, Richard Feely, Lisa Graumlich, Senator Kevin Ranker, Greig Arnold (Makah Tribe alternate for T.J. Green), Doug Steeding, David Alnut

MRAC members not in attendance: Brian Allison, Mike Cassinelli, Representative Dave Hayes, Senator Steve Litzow, James Peters, Phil Rockefeller, Tom Davis, Tony Floor, Terry Williams, Kelly Wood, Kelly Susewind (Department of Ecology alternate for Maia Bellon), Erika McPhee-Shaw (Western Washington University alternate for Steve Hollenhorst)

Other participants: Meg Chadsey (Washington Sea Grant), Jan Newton (WOAC), Terrie Klinger (WOAC), Mindy Roberts (Ecology), Julie Horowitz (Governor's Office), Laura Nelson (Makah Tribe), Mariko Kobayashi (University of Washington), Danielle Flanagan (University of Washington), Julia Sanders (Global Ocean Health), Ansi Morales (Vulcan Philanthropy), Linda Steinmann (OFM), Gary Wilburn, Amanda Grondin

Meeting objectives:

- Hear about new recommendations recently released by the Ocean Acidification and Hypoxia (OAH) Panel
- Share updates on ocean acidification activities and events
- Discuss progress on developing and prioritizing funding and policy actions

Materials distributed:

- OAH Panel press release

Welcome and introductions

Chair Martha Kongsgaard opened the meeting and thanked council members for their participation.

West Coast Ocean Acidification and Hypoxia Science Panel

Terrie Klinger (WOAC), Jan Newton (WOAC), and Richard Feely (NOAA) presented the findings and outputs from the West Coast Ocean Acidification and Hypoxia Science Panel

(OAHP). Twenty leading scientific experts from the west coast were selected from California, Oregon, Washington, and British Columbia to participate on the panel. Scientists that participated in the OAHP were charged with continuing scientific studies that were management- and policy-relevant. As the work of the panel began, it became clear that although shellfish motivated much of the response to ocean acidification in Washington, in Oregon and California OA impacts on shellfish are less of an issue. In Oregon, the concern is the joint effects of ocean acidification and hypoxia on commercial fishing. In California, the primary concern is water quality. These different concerns suggested that ocean acidification and hypoxia together are a much broader concern than simply the ability to continue growing shellfish.

The OAHP had six major findings:

- Ocean acidification and hypoxia together will have serious economic, environmental, and ecological impacts for the west coast
- Global carbon emissions are the dominant cause of ocean acidification
- There are actions we can take to lessen exposure to ocean acidification
- We can enhance the ability of ecosystems and organisms to cope with ocean acidification
- Accelerating ocean acidification science will expand management options available
- Inaction now will reduce options and impose higher costs

The Panel separated recommendations into broad classes: reducing exposure, enhancing the ability of organisms to cope, and research and monitoring.

Actions to reduce exposure:

- Reduce nutrient and carbon inputs
 - Locate hotspots
 - Advance science
 - Incentivize action
- Advance carbon removal strategies
 - Demonstration projects
 - Inventory locations for conservation

Actions to enhance ability of biota to cope:

- Reduce other stressors
 - Comprehensive management
- Promote adaptive capacity
 - Inventory co-location of areas vulnerable to ocean acidification and hypoxia
 - Evaluate benefits and risks of adaptive capacity

Actions for research and monitoring:

- Establish a coordinated research strategy
- Build out and sustain West Coast monitoring program that meets management needs
- Revise water quality criteria
- Expand scientific engagement to meet evolving management needs

Jan presented a crosswalk of the OAHP and Blue Ribbon Panel recommendations. There was strong consistency between the two panels. Differences between the two included geographic scope and consideration of multiple stressors. Also, the OAHP was made up of scientists only, while the Blue Ribbon Panel included multiple stakeholders. Overall, OAHP recommendations reinforce the work of the Blue Ribbon Panel, reflecting the growing scientific understanding of the importance of multiple stressors. Both groups focused on reducing carbon dioxide emissions and local pollutants, as well as thinking about adaptation strategies. Some Blue Ribbon Panel recommendations did not find parallels in the OAHP, especially those that focus on education and outreach. All OAHP products can be found online: <http://westcoastoah.org/>.

Richard Feely explained next steps based on collaboration with federal agencies. In 2007 leaders from California, Oregon, Washington, and British Columbia created the Pacific Coast Collaborative (PCC) and developed a plan for addressing ocean acidification. The PCC was charged with interacting with federal agencies directly to develop a coast-wide plan for ocean acidification, and in 2015 the PCC began meeting with federal agency leaders. This is an ongoing dialogue with federal groups such as the Inter-Agency Working Group (IWG). In 2016 the PCC outlined specific plans for collaboration to the IWG, including:

- Develop an inventory of OA-relevant, federal and non-federal chemical and biological observing assets on the West Coast, including British Columbia, and engage on key management questions that can be addressed with current and planned future observing assets.
- Have selected people from the IWG-OA and the West Coast states form a task force to reach out to state, university, tribal, and federal staff to further develop the inventory.
- Conduct a workshop attended and funded by US and Canadian federal agencies, IOOS, California, Oregon, Washington, and British Columbia to identify key management questions to inform current and future observing assets, and to facilitate an enhanced partnership with IOOS.
- Develop a national dialogue related to the potential application of Clean Water Act programs (regulatory and non-regulatory) to acidification in coastal waters. EPA hopes that the PCC will engage in this dialogue.

Questions and discussion

- What causes hypoxia?
 - This region is particularly susceptible to hypoxia because there are low oxygen waters offshore. Through the course of the summer, the oxygen is further depleted, creating a hypoxic event. Warming the surface water increases stratification and reinforces hypoxia, and may be exacerbated by climate change.
- Did the panel examine commercially important species?
 - No, it did not look at commercial species specifically, but did talk about how the Pacific Fishery Management Council can deal with fish that might be impacted.
- Did the OAHP talk about a west coast research coordinating body?
 - There is no consensus around that at this point.

- When you say further develop the inventory, could you imagine a scenario where you find potential for greater efficiency that could release resources to other needs, or getting more money for monitoring?
 - One issue right now is that many different agencies are developing observing systems independently of one another. Most of them only measure chemistry. The goals would be to see a more integrated system that also measures physical and biological factors. There are some duplicative efforts that can be refined to create a more optimized system, but it must be done with management strategies in mind. The management needs determine the monitoring strategy.
- Where does all of this live? Who is leading it, who is funding it, etc.?
 - That is still a part of the dialogue. The PCC and IWG have to work together to provide the leadership to develop that process. This will likely require a long-term collaborative body. In thinking about a west coast strategy, there is great value in having something that starts locally, like the Blue Ribbon Panel in Washington, since each area has different priorities. It has not yet been determined if other states will do so, or if they prefer a top-down, PCC-directed effort.
- Is Canada still an interested participant?
 - It seems like this effort will not be successful without engaging Canada, and potentially Alaska. What is lacking is the coordination among management to achieve full engagement.
- A workshop needs to identify key management questions and make sure that the inventory and monitoring efforts we have are responsive to that.
- We need to make sure we understand which questions are west-coast wide, regional, or local. Then we have to assign responsibility and understand how federal agencies might participate.
- Washington has to work harder and be more assertive to get appropriate funding for this type of work.
- It would be great if everyone could put in the newest generation of sensors, but we have to have reliable sensors and meet credible data act requirements. There are significant barriers to adoption of new sensors – please include that voice as you’re planning that workshop.
- Washington Sea Grant programs along the west coast should be included in the workshop; Sea Grant-funded research needs are already informed by management needs, and have outreach programs to get information out to managers.
- Are there plans going forward for the OAHP to engage other stakeholders, such as the fishing community?
 - They were not included in the panel process, but now is the time to integrate them.
- When is the right time to reconvene the management and science discussion to see what we can accomplish in the next few years?

- Doing a complete refresh of the Blue Ribbon Panel in the next year could be appropriate.

Recent ocean acidification happenings

Martha invited council members to share updates on recent happenings related to ocean acidification.

- Martha shared that the MRAC sunset provision was removed and the council is extended for an additional five years.
- Bill Dewey (Taylor Shellfish) shared that Governor Inslee launched phase 2 of the Shellfish Initiative. The launch will be kicked off by events as a part of Shellfish Week, the week of June 4. He also commented that following a trip to France organized by the Ocean Conservancy to open a dialogue with the French shellfish industry, the French group will be having a similar meeting with the UK shellfish industry, continuing international coordination efforts.
- Gus Gates (Surfrider Foundation) shared that the Surfrider Foundation is currently supporting the Olympic Coast National Marine sanctuaries to create an ocean acidification monitoring site off the Olympic coast that can pinpoint local pollution sources. The organization is also working to update Shoreline Master Plans for Gray's Harbor County to prioritize restoration, especially as it relates to blue carbon sequestration. It is also engaging in conversations about oil terminals, connecting the dots between carbon dioxide emissions and impacts to aquatic ecosystems.
- Julie Horowitz (Governor's Office) shared that the PCC is currently working on a letter to President Obama and Prime Minister Trudeau that will thank them for the engagement with the federal government, share the OAHF findings, and encourage continued federal support.
- Meg Chadsey (Sea Grant) shared that a NOAA cruise will be leaving in May. She will be blogging the trip and asked attendees to follow up with her if they have any suggestions on blog content.
- Jan commented that having the Olympic Coast sanctuary as an OA sentinel site through NOAA would be similar to looking at biological responses in WDFW refugia sites. Having a long-term data set in that area would be helpful in providing biological data. Funding long-term oceanographic moorings is difficult, but WOAC sees this as a very valuable opportunity.
- Kirsten Feifel (DNR) shared that DNR is working with Puget Sound Restoration Fund on Olympic oyster restoration. They are working on filling knowledge gaps and are also beginning work s with WDFW to move forward on long-term biological data sets.
- Mindy Roberts (Ecology) shared that Ecology is updating their climate pages and creating an ocean acidification-specific page that links people to other programs. She encouraged people to contact her with suggestions.

University of Washington student presentation

Meg Chadsey (Washington Sea Grant) introduced the UW capstone students and their work. Mariko Kobayashi and Danielle Flanagan (UW students) presented an update of their work initially presented at the February MRAC meeting. Their project was to identify organizations whose goals align with the MRAC, and to understand how those organizations communicate the cause and consequences of environmental problems. They developed a decision matrix to help

determine organizations that fit their requirements, and used it to evaluate a list of 30 organizations with goals similar to MRAC. The organizations they ultimately contacted are: Surfrider Foundation, Marine Conservation Institute, Puget SoundKeeper Alliance, Seattle Yacht Club, Alaska Airlines, and the Port of Seattle. They interviewed representatives from these organizations and heard that it is crucial to think creatively when framing issues, especially when talking to a broad audience. It is also important to have clear and explicit messages and goals. They also heard that many organizations have financial obstacles that prevent them from being able to expand their projects and achieve their goals.

After conducting interviews, Danielle and Mariko identified the organizations they felt had the greatest potential to be outreach partners for MRAC.

- **Citizen group: Seattle Yacht Club**
The representative they spoke with did not know much about ocean acidification, but was very interested. The students thought having an oyster cocktail hour in partnership with Taylor Shellfish would be a good opportunity for the MRAC to share messages about ocean acidification. Working with low-income public schools to conduct field trips that help community and increase education in the younger generation could be an opportunity for the Yacht Club. Danielle and Mariko recommend using visual aids such as the video produced by the Seattle Aquarium for their Visualizing Change event when communicating with these organizations.
- **Nonprofit: Surfrider Foundation**
Danielle and Mariko found that Surfrider has been able to increase ocean and ocean acidification awareness through programs such as the ocean friendly garden program. Surfrider is able to bridge the connection between their work and how it relates to ocean acidification using social media and blogs. Danielle and Mariko see Surfrider as a role model for other organizations to engage people on ocean acidification
- **Industry: Alaska Airlines**
The students hoped to procure a space in the airline's inflight magazine, Alaska Beyond. This publication has a large audience, but with a base in Seattle it creates a local connection. Alaska Airlines is already implementing sustainability initiatives and making the connection between sustainability and mitigation. An article could highlight Alaska as a frontrunner in the airline industry and connect their sustainability initiatives to ocean acidification. The article will be written by a Sea Grant staff writer, Eric Scigliano and would require a pitch to Paradigm, the editors of Alaska Beyond Magazine

The group thanked the students for their work and suggested that getting a list of who they contacted would help to limit duplicative work.

MRAC funding and policy priorities

Angie explained that since the last MRAC meeting, the Adaptation and Remediation committee met to discuss funding priorities. She also spoke with Betsy Peabody about the Education and

Outreach group to get the group started again. Angie noted that the Local Land-Based Contributions group is having trouble getting started up again because it does not currently have a chair. The Monitoring and Investigations group is working on many models and will be wrapping up some of them soon.

Bill explained that the recent Adaptation and Remediation call went well. The group reviewed a list of priorities from 2014 and talked about the top five priorities and on how to come up with a prioritized list moving forward. The goal for this year is to get the priorities folded into agency budgets wherever possible.

Angie added that she and Martha are working to set up meetings with budget leads at each of the agencies. In this round of funding requests, MRAC will determine the priorities of three ad hoc committees (Adaptation and Remediation, Science and Monitoring, and Local Land-Based Contributions) then identify outreach and education opportunities within those priorities.

Bill asked if there has been any dialogue with OFM to understand the timeline for funding requests. Angie explained that Linda Steinmann has recommended that the MRAC meet with agencies now. In the next month, the committees will convene to develop priorities and Angie and Martha will meet with agencies to understand how priorities might fit in agency budgets. In the last round of funding requests, some of the requests received ongoing funding. This does not mean the funding is automatically renewed, but that OFM is expecting a request for this work.

Kirsten commented that having those conversations with the agencies early is very important, since the agencies have to be strategic about how they can spend money. Mindy commented that explaining why something is important right now and why the funding is needed in this cycle is critical. Nan commented that including policy leads with budget leads in discussions would be helpful. Gus asked if, recognizing that the Ecology model will be ready for use soon, there would be an opportunity to explore some of the ocean acidification hotspots further, or create an incentive-based program and if there is a need to insert a placeholder for funding now in the future. Mindy responded that the MRAC does not need to wait for the model to be fully completed to get funding. Now is the time to understand which programs are promising. There is information available now to support this discussion.

Next steps and action items

The council agreed that the next MRAC meeting might be a phone call in June, followed by an in-person meeting in late summer.

Final action items were noted:

- Angie and the EnviroIssues team is developing a handout for Shellfish Week
- Martha will contact Resource Media and others to get coverage on Shellfish Week
- Martha will contact Paradigm Publishing to get an article published in the Alaska Airlines in-flight magazine
- Angie and the EnviroIssues team will seek a representative from the Legislature to join the MRAC and will contact Paul Dye to discuss his participation on the MRAC
- Angie and Martha will begin meeting with agencies to discuss agency budgets
- Angie and the EnviroIssues team will facilitate meetings of the ad hoc committees

Martha thanked everyone for their participation and adjourned the meeting.