



Meeting summary

June 10, 2020

1 p.m. to 3:00 p.m.

Virtual meeting

Meeting attendance and objectives

The Washington Marine Resources Advisory Council (MRAC) held its 21st meeting on June 10, 2020 online and by conference call. The meeting was facilitated by Martha Kongsgaard, MRAC Chair, and Angie Thomson, EnviroIssues.

Members in attendance: Martha Kongsgaard (Chair), Annette Hoffman (Washington Department of Ecology), Bill Dewey (Taylor Shellfish Farms), Garrett Dalan (Washington Coast Marine Advisory Committee), Gus Gates (Surfrider Foundation), Senator Jesse Salomon (Washington State Senate), Keith Wagoner (Washington State Senate), Kirsten Feifel (Washington Department of Natural Resources), Libby Jewett (National Oceanic and Atmospheric Administration), Marilyn Sheldon (Northern Oyster Company), Mike Cassinelli (Recreational Fishing Tourism)

MRAC members not in attendance: Aaron Dufault (Washington Department of Fish and Wildlife), Alan Clark (Northwest Straits Commission), Brian Allison (Puget Sound Commercial Crab Association), Carol Smith (Washington State Conversation Commission), Douglas Steding (Association of Washington Business), Erica McPhee-Shaw (Western Washington University), Jay Manning (Puget Sound Partnership), Representative Joe Fitzgibbon (Washington State House of Representatives), Kelly Susewind (Washington Department of Fish and Wildlife), Lisa Graumlich (University of Washington), Mike Rechner (Washington Department of Natural Resources), Mindy Roberts (Washington Environmental Council), Norm Dicks (Van Ness Feldman LLP), Terry Williams (Tulalip Tribes of Washington), Tom Davis (Washington Farm Bureau), Tony Floor (Northwest Marine Trade Association)

Other participants: Angie Thomson (EnviroIssues), Anji Moraes (Vulcan), Betsy Peabody (Puget Sound Restoration Fund), Carol Reamer (Makah Tribe), Cory Baranski (EnviroIssues, MRAC facilitation team), Dana Oster (Northwest Straits Commission), Gary Wilburn (Washington State Senate), James Kaldy (Environmental Protection Agency), Jan Newton (Washington Ocean Acidification Center), Jennifer Hennessey (Office of the Governor), Jodie Toft (Puget Sound Restoration Fund), Julia Sanders (Global Ocean Health), Katie Keil (Washington Ocean Acidification Center), Katie Wrubel (National Oceanic and Atmospheric Administration), Kelly Ferron (Washington Department of Ecology), Linda Anderson-Carnahan (Environmental Protection Agency), Lynn Helbrecht (Washington Department of Fish and Wildlife), Meg Chadsey (Washington Sea Grant), Micah Horwith (Washington Department of Ecology), Natalie Coleman (Washington Department of Ecology), Olivia Smith (EnviroIssues, MRAC facilitation team), Paul Williams (Suquamish Tribe), Peter Murchie (Environmental Protection Agency), Richard Feeley (National Oceanic and Atmospheric Administration), Shallin Busch (National

Oceanic and Atmospheric Administration), Simone Allen (National Oceanic and Atmospheric Administration), Terrie Klinger (Washington Ocean Acidification Center)

Meeting objectives:

- Share updates on recent ocean acidification happenings
- Discuss impacts to budget opportunities and limitations following the COVID-19 health crisis
- Hear what to expect at the next MRAC meeting

Welcome and introductions

Martha Kongsgaard, MRAC Chair, opened the meeting and thanked council members for making time to participate on the call.

Recent OA happenings and research

Angie Thomson, EnviroIssues, invited participants to share updates on recent happenings related to ocean acidification work. Highlights include:

- Jan Newton, Washington Ocean Acidification Center (WOAC), shared the planned April cruise was canceled due to COVID-19 safety guidelines, though their June cruise off La Push, Washington in collaboration with PMEL and the University of Washington's Applied Physics Lab is still planned to move forward.
- Terrie Klinger, WOAC, added the University of Washington and National Oceanic and Atmospheric Administration (NOAA) labs have been temporarily closed due to COVID-19 safety guidelines causing them to pause the research on harmful algal blooms and salmon, but that work will resume when permitted. Terrie shared WOAC is analyzing water chemistry samples from past cruises to examine the presence of harmful algae in toxin production.
- Bill Dewey, Taylor Shellfish Company, shared on behalf of the Puget Sound Shellfish Growers that COVID-19 has severely impacted the shellfish industry. Governor Jay Inslee and the Washington Department of Agriculture have been working to provide aid to those in the shellfish growing industry.
- Senator Jesse Salomon noted the Washington Department of Fish and Wildlife helped to introduce bill No. 6147 which requires the installation of less invasive bulkhead replacement options if the bulkhead is not needed for erosion control. The goal of the bill is to substantially reduce bulkheads and increase forage fish habitat.
- Meg Chadsey, Washington Sea Grant, shared efforts are underway to develop commercial seaweed growing operations. Those with questions can contact herself, Betsy Peabody or Jodie Toft with Puget Sound Restoration Fund. Meg will soon co-teach a ten-day intensive "Green Water Blue Carbon" course with Dr. Eli Wheat at the University of Washington College of the Environment online through UW's term B; the course will focus on how carbon moves throughout our marine and upland environments.

- Dana Oster, Northwest Straits Commission, announced the Northwest Straits Commission recently released the [Puget Sound Kelp Conservation and Recovery Plan](#) in collaboration with the Washington Department of Natural Resources and NOAA.
- Dick Feeley, NOAA, shared a new study by Dr. Wei-Jun Cai, lead author and professor at the University of Delaware, that was featured in *Nature Communications* as the first in-depth comparison of ocean acidification processes in all North American coastal waters. Dr. Cai also recently submitted a paper on [protecting bays from ocean acidification](#) from Chesapeake Bay to Puget Sound. Dick gave a preview of another study underway; initial results indicate the area of Puget Sound experiencing the most dramatic changes in carbonate chemistry is directly in front of Seattle in Elliott Bay.
- Paul Williams, Suquamish Tribe, asked if the group could share ocean acidification materials to give to teachers and other groups across Washington state for virtual learning.
 - Marilyn Sheldon, Northern Oyster Company, responded the Pacific Education Institute is a helpful resource for online learning about ocean acidification.
- Kirsten Feifel, Washington Department of Natural Resources, announced DNR recently received some National Estuary Program funding to develop ocean acidification specific curricula with existing data from the Acidification Nearshore Monitoring Network, ANEMONE. Kirsten welcomed any existing curricula around ocean acidification to build from. DNR was recently able to get staff back in the field to service ANEMONE and are continuing work to support the Kelp Recovery Plan. Two years ago, DNR started surveying south Puget Sound to better understand current vs. projected kelp populations. Recently they have started looking at central Puget Sound. The report is not yet final, but early results suggest dramatic decreases up to 80% in some areas of kelp coverage in central and south Puget Sound with healthy kelp populations near areas with heavy water mixing. Kirsten concluded by sharing the Puget Sound Partnership added kelp as a top priority indicator for vital signs.
- Gus Gates, Surfrider Foundation, shared in February 2020 the Foundation gathered in Washington D.C. for Coastal Recreation Hill Day. Around 150 people from across the country met with representatives and senators to express their concerns for shorelines, water quality, plastic pollution, and other topics related to ocean health. Surfrider Foundation created a short [video](#) to capture the event including shots of the Seattle Chapter Chair highlighting how Washington state is a leader in this work on an international scale.
- Annette Hoffman, Washington Department of Ecology, announced Micah Horwith and Natalie Coleman have joined the Department of Ecology as ocean acidification scientists. Natalie will be working on sample collection, facility management, data analysis, and product generation to understand responses to ocean acidification. Ecology is also working on a report to document the first 18 months of data from the Marine Monitoring Network which will be shared publicly upon completion.

- Katie Wrubel, NOAA, recently joined the West Coast Sanctuary and is focusing on management strategies and priorities with tribal resource managers with the goal of setting up a steering committee.
- Micah Horwith, Washington Department of Ecology, shared how sampling for the Marine Monitoring Network is temporarily paused due to COVID-19. It is difficult to maintain social distancing on a vessel, and Ecology hopes to resume research soon to avoid a growing data gap. Ecology is analyzing data previously collected, and results show ocean acidification conditions in river deltas and areas with significant freshwater input are more extreme than in central Puget Sound.
 - A study by Ecology was published earlier in 2020 showing how the offspring of native Olympia oysters can have increased survivorship when exposed to ocean acidification conditions.
- Peter Murchie, Environmental Protection Agency (EPA), shared the EPA received an additional \$5 million for the Puget Sound Program, totaling \$33 million. The EPA has been working to distribute money to state agencies and is continuing to support the science that aligns with MRAC priorities, fund the Salish Sea Model, and support Washington state tribes.
- Shallin Busch, NOAA, shared NOAA is preparing to release a 10-year guidance program and Ocean Acidification Research Plan in the coming weeks. Shallin shared the Ocean Acidification Information Exchange (oainfoexchange.org) has been a great source for information and encouraged the group to continue to use this platform to build community and share resources between tribes, non-government organizations (NGO), government employees and anyone seeking the latest information on ocean acidification.
- Jennifer Hennessy, Office of the Governor, noted a recent workshop was held during Climate Week in September 2019 to convene states that are working on ocean acidification to share lessons learned and common challenges. A group of University of Washington students participated and are summarizing the highlights. Jennifer also shared a communications piece about ocean acidification work happening in Washington state was distributed to the Energy & Environment Committee in February 2020.
 - The Ocean Acidification Alliance released a video and updated an ocean acidification toolkit for members highlighting examples of actions Governor Inslee is taking.

Budget Update

Jennifer Hennessey gave an overview of upcoming budget constraints and what to anticipate in the 2021-2023 biennium:

- In May 2020, the Office of Financial Management initiated a hiring and contract freeze in place and asked state agencies to identify a 15% budget reduction for planning purposes in the current and future biennia. A special session is under consideration to address budget cuts where necessary.

- Senator Salomon shared the caucus is working to exhaust all options before resorting to budget cuts and that a special session is in progress to understand budget needs.
 - Senator Wagoner added how state agencies are examining where a 15% budget reduction could apply as a precautionary exercise, not as a final decision, and hopes the special session can happen before July 2020 when legislation goes into effect.
 - Senator Salomon added increasing awareness on the severity of this work and the topic of climate change and ocean acidification is important.
- Martha Kongsgaard added how typically this time of year MRAC works with state agencies to see what groups like the Department of Ecology, Department of Natural Resources and Department of Fish and Wildlife are working on and how MRAC objectives can be integrated. Martha also commented on the importance of the Washington Ocean Acidification Center to the success of MRAC.
- Simone Allen, PMEL, shared she has been working with Jan Newton on summarizing findings from WOAC-funded cruises and moored observations that have been collected over the last decade. Simone shared in reviewing the work, there are many visible extreme events happening in the Puget Sound area making it a laboratory-like environment. Simone shared a desire to not miss out on future opportunities given the collected observations and work this community has invested.
- Dick Feeley, NOAA, noted how state and local groups have been working collaboratively with federal agencies to leverage each other's efforts to try to answer the appropriate science questions for policy makers and it feels they are finally getting to the point of answering critical questions. NOAA staff have built a model, gathered the observational data, and are working with biologists to understand the responses to ocean acidification and future projections through 2050. Dick emphasized the importance of continuing to answer those important scientific questions with the momentum they have gained to finish the story around the economic and ecological impacts from ocean acidification in our region. Dick hopes we can think creatively and continue to work hard collaboratively, and he predicts we will learn a lot in the next ten years.
 - Martha added Dick's statement can be used to develop the next budget ask and clearly describes the importance of the story and the work.
- Shallin Busch shared how monitoring data is the foundation on which natural resource management change can happen, and to create more resilient management systems in the future we need to understand what is going on and not leave gaps in the data.
- Mike Cassinelli, Recreational Fishing Tourism, asked for clarification on how MRAC is currently funded.
 - Jennifer Hennessey responded the funding for MRAC comes from the Department of Natural Resources budget out of an Aquatic Lands and Enhancement Account (ALEA).
 - Jan Newton, WOAC, added the state dollars are combined with money with federal dollars like NOAA, WOAC, and other education programs to leverage a

broad network. Jan added how gratifying it was to hear support for the monitoring, and to keep supporting the research on biological responses to understand how ocean acidification will impact Washington state.

- Martha Kongsgaard shared when MRAC was created there was an anticipated date to sunset the group, and then asked the group to contemplate what success would look like for MRAC.
 - Jennifer Hennessey added the current expiration for MRAC is June 2022 and the next legislative session would be the time to discuss what the end goal for MRAC looks like.
 - Betsy Peabody, Puget Sound Restoration Fund, suggested the group help prepare for the January legislative session by providing bullets on why MRAC work is important and why it should continue.
- Peter Murchie, Environmental Protection Agency, asked what the annual budget for MRAC is and what the group is seeking.
 - Martha Kongsgaard responded \$150,000 goes to staffing EnviroIssues for facilitation support and additional money helps fund the science and modeling for two years. Martha asked the group to help define what topics need to be funded and why the work needs to continue.

Next steps

Jennifer Hennessey and Angie Thomson shared the next meeting will focus on science and how to communicate scientific findings to resource managers with groups like the Washington Tribes, the Department of Natural Resources, and Department of Fish and Wildlife. The conversation will focus on what information resource managers are currently using, where the gaps are, and how to facilitate that discussion to resource managers.

The next MRAC meeting will be another virtual meeting later this summer.