



MEMORANDUM

TO: California Ocean Protection Council
FROM: Jenn Phillips, Policy Advisor, and Sara Briley, Sea Grant Fellow
DATE: April 26, 2017
RE: Update on OPC staff work on ocean acidification and hypoxia

1. Status update on OPC Ocean Acidification and Hypoxia Funding and Legislation

Leading up to, and following the release of, the West Coast Ocean Acidification and Hypoxia Science Panel (Panel; <http://westcoastoah.org/executivesummary/>) in April 2016, OPC staff, the Pacific Coast Collaborative¹ (PCC) and partners across the West Coast played a critical role in communicating, translating, and responding to the Panel’s work to inform policy and management decisions at the local, state and federal level. These discussions helped staff robustly and transparently strategize what our post-Panel work looks like for both the state of California and the region. Specifically, these discussions continue to illuminate the ocean community’s interests and abilities to address specific recommendations and actions of the Panel report, reveal gaps in capacity and knowledge, and have resulted in heightened interest from our political leaders and the legislature in the form of commitments and legislation (i.e., [S.B. 1363](#) and [A.B. 2139](#)).

As mentioned in the Executive Director’s report, OPC has funded (and work has begun on) six projects to implement the Panel and begin to address recent legislation. Specifically, and in addition to OPC funding, we have established a working group of the OPC-Science Advisory Team (OPC-SAT) to respond to S.B. 1363 by outlining next steps in identifying where seagrasses may ameliorate local ocean acidification (OA) and store carbon and will host a workshop in early May. This group is working alongside OPC grantees researching where, and to what extent, seagrasses ameliorate OA so we can target future restoration and conservation projects, and the group plans to deliver a progress report to the legislature and our partners at the one year mark of the signing of S.B. 1363. Meanwhile, OPC staff has been collaborating with the Natural and Working Lands sector of the Climate Change Scoping Plan to achieve California’s 2030 greenhouse gas reduction target and to incorporate seagrasses into the list of habitats that sequester carbon, and quantify how much seagrasses in California’s ocean waters offset greenhouse gas emissions. We look forward to continuing to elevate this work by both addressing the ways in which seagrasses can mitigate ocean acidification by modifying local water chemistry and store carbon in their sediments.

With support of the Ocean Science Trust (OST), the OPC-SAT, the PCC, and our countless partners and grantees, we are also making great headway on A.B. 2139 which, subject to the availability of funding, tasks OPC to address recommendations of the Panel including establishing a science task force to ensure decision-making is supported by the best available science, identifying gaps in OA monitoring, and facilitating agreements across many governmental scales and other entities (mentioned further below).

¹ The Pacific Coast Collaborative is a forum that brings together leaders of the West Coast jurisdictions to promote cooperative action and a common voice on issues facing Pacific North America. One of their priorities is ocean acidification and hypoxia.

In accordance with A.B. 2139, OPC staff will report out to the Council on an annual basis starting in 2018 on progress related to the recommendations of both A.B. 2139 and the Panel.

2. Pacific Coast Collaborative / Interagency Working Group on OA Monitoring Task Force

The Pacific Coast Collaborative (PCC) and the Interagency Working Group on Ocean Acidification (IWG-OA) partnered to convene an Integrated Ocean Acidification and Hypoxia Monitoring Task Force (Task Force). The Task Force builds off of recommendations from the West Coast Ocean Acidification and Hypoxia Science Panel to expand and integrate knowledge about ocean acidification and hypoxia, specifically by building out and sustaining a West Coast monitoring program that meets management needs. The Task Force is charged to develop and complete an inventory of West Coast monitoring of chemical, physical and biological parameters that inform our understanding of long-term oceanic change. Further, the Task Force is working jointly with PCC and IWG-OA to help identify key management questions that can inform current and future observing asset investments, and to facilitate an enhanced partnership between the PCC, IWG-OA, and the Integrated Ocean Observing System (IOOS) regional associations.

The Task Force assembled in August 2016 to develop an integrated OAH monitoring inventory. Task force members represent diverse regions and disciplines, with representatives from all West Coast states, British Columbia, the IWG-OA, and West Coast IOOS Regional Associations. During the fall of 2016, the Task Force developed an inventory template and invited a wide audience of scientists and resource managers conducting chemical, physical and biological monitoring in the West Coast states and British Columbia to update the inventory. Information collected in the inventory includes locations of monitoring assets, types of data collected, how frequently and with which instruments. The first phase of inventory collections closed in February 2017 and Task Force members are currently compiling and fine-tuning the updated inventory within each state. With the working inventory complete, states and the region as a whole will then begin to assess current monitoring capacity and identify gaps. The longer term goals of the inventory assessment are to convene a workshop between the PCC and the IWG-OA to continue the conversation on monitoring and observing capacity and gaps with federal partners. The Task Force will also deliver information to policymakers and the public about the current status of ocean acidification monitoring and future needs through the production of asset maps and a synthesis report later in 2017.

3. International Alliance to Combat Ocean Acidification

California, with OPC as its representative, is one of the founding members of the International Alliance to Combat Ocean Acidification (Alliance; oaalliance.org). The Alliance brings together nations, subnationals, tribes and first nations to jointly address ocean acidification through developing jurisdictional action plans, and increasing funding commitments and awareness of this climate change impact on our oceans. Initiated within the PCC subcommittee on ocean acidification, the Alliance realizes the PCC's vision on ocean acidification. Specifically, the Pacific Coast Climate Leadership Action Plan that was signed in June of 2016 commits the PCC to: "Initiate the development of an international network of countries, states, provinces and cities that will work together to address the threat of changing ocean conditions with a particular focus on ocean acidification."

Initially announced in September 2016 at Secretary Kerry's Our Ocean Conference, the Alliance committed to working with, and supporting, existing global networks of scientists and ocean partners, and to sharing information and best practices that will benefit the global community. The Alliance had

its official launch event in December 2016 at the Western Governors' Association meeting. Governor Jerry Brown stood alongside representatives from Chile, France, Quebec, the Quilute Indian Nation and several other Alliance members to announce the launch of the Alliance and formally endorse the Alliance's Call to Action. The Alliance is currently comprised of 37 government and affiliate members. The Alliance will continue to focus heavily on recruitment to ensure robust participation and impact at the United Nations Ocean Conference, the 2017 Our Ocean conference and COP 23 later this year.

The Alliance will work to advance scientific understanding of ocean acidification, reduce the causes of acidification, protect the environment and coastal communities from impacts of a changing ocean, expand public awareness and understanding of acidification, and build sustained support for tackling this global problem. A key tool to accomplish these goals is the development of OA Action Plans. To help members, core Alliance members and coordinators (California, Oregon, Washington and Cascadia Law Group) built an OA Action Plan Toolkit that includes adaptation strategies to protect vulnerable resources and species from the impacts of ocean acidification. The Alliance team will host three webinars before July 2017 (the first of three occurred in February) that help members better understand the content and format that is encouraged within an individual plan, as well as assist members by sharing example legislation or policies that have created OA task forces, commissioned reports, or established monitoring networks.

Ongoing work that California has funded, facilitated, and is leading will be added to California's Action Plan as well as longer-term goals and activities – and will serve as a model for other countries, states, cities, and tribes looking for similar solutions to protecting their vulnerable resources. We aim to release California's Action Plan in late 2017, and at the April 26, 2017 OPC meeting, we will discuss our process to bring the California Action Plan to a future 2017 OPC meeting for approval. In advance of Action Plans, OA Alliance members have been asked to submit a Letter of Commitment to the OA Alliance by August 25th, 2017. Letter of Commitments will:

- Outline the priorities, current actions, and aspirational actions that members will work towards;
- Be signed by a representative of the jurisdiction;
- Include a statement committing to the OA Alliance's purpose and overall goals; and
- Commit to developing an OA Action Plan within a stated timeline that is right for the given jurisdiction or member.

It is critical with an evolving challenge like ocean acidification to rely on our collective knowledge and power to turn scientific progress into rapid management decisions and raise awareness to increase funding to a commensurate level. Just as 195 countries committed to the historic Paris Climate Agreement and over 180 countries, states, provinces and cities signed the California sponsored Under2MOU, the collective actions of Alliance members are already making a difference. Throughout 2017 and beyond, the Alliance will serve a unique role by inspiring political momentum and action through the high-level leadership of its members and further the issue of ocean health and acidification within the international agreements and dialogues.