



MEMORANDUM

TO: California Ocean Protection Council
FROM: Jennifer Phillips, Program Manager
DATE: June 29, 2016
RE: Updates on work related to the impacts of climate change including the West Coast Ocean Acidification and Hypoxia Science Panel

1. West Coast Ocean Acidification and Hypoxia Science Panel and Next Steps

Panel History and Panel Products

A recent nationwide vulnerability assessment shows that California is one of the most at risk states from ocean acidification. Ocean acidification endangers the health of marine organisms, coastal ecosystems, marine dependent industries, and our coastal communities. Because of this, in 2013, the Ocean Protection Council (OPC) asked Ocean Science Trust (OST) to convene a world-class panel of scientists from California, Oregon, Washington, and British Columbia to advise natural resource managers on the impacts of ocean acidification and hypoxia throughout the West Coast, and their interactions with other environmental stressors, such as nutrient loading and warming waters. More importantly, though, this panel – the West Coast Ocean Acidification and Hypoxia Science Panel (Panel) – was brought together to provide management options to address ocean acidification and hypoxia and shift the conversation from documenting science and impacts to addressing what can be done about ocean acidification and hypoxia (OAH). As a West Coast-wide, bi-national science coalition, the Panel is the first of its kind to outline management options to combat the global threat of OAH at a regional and local level.

The Panel publicly released their [Executive Summary](#) in early April of this year with a series of coordinated press releases across the West Coast region, widespread media coverage, and an event in Sacramento. The report outlines key recommendations and actions we can take at a local, statewide, and national scale to mitigate, adapt to, and reduce the ecological and economic impacts of OAH. While reducing carbon emissions immediately is crucial to addressing ocean acidification globally, more immediate and regionalized recommendations include: enhancing a West Coast-wide monitoring network that informs actions to build resilience to changing ocean conditions, revising water-quality criteria to more appropriately assess current ocean acidification conditions, reducing local pollutant inputs that exacerbate ocean acidification, understanding and quantifying the extent to which seagrasses ameliorate ocean acidification and remove carbon dioxide from seawater, and reducing co-occurring stressors on ecosystems. Therefore, the work of the Panel serves as a roadmap for managers to lessen exposure and enhance the ability of ecosystems and organisms to cope with ocean acidification.

OPC's Stakeholder Engagement and Next Steps

Leading up to the public release of the Panel, OPC staff and the Pacific Coast Collaborative¹ played a central role in communicating and translating the Panel's work to inform policy and management decisions at the state and federal level. OPC staff, with the support of OST staff and Panelists, initiated a series of discussions on how we can better partner and align priorities across state and federal government to respond to the Panel's findings, and act now on ocean acidification and hypoxia to build resilience and strengthen ocean health for the long-term. These discussions helped staff robustly and transparently strategize what the post-Panel phase looks like for both the state of California and the region. Specifically, these discussions highlighted the ocean community's interests and abilities to address specific recommendations and actions of the Panel report, gaps in capacity, and resulted in heightened interest from our political leaders and the legislature in the form of commitments and draft legislation (i.e., [S.B. 1363](#) and [A.B. 2139](#)). Moreover, such targeted discussions allowed the Pacific Coast Collaborative to identify how best to collaborate with the federal government in light of the scientific foundation and recommendations provided by the Panel. For example, together we are initiating a monitoring task force to align monitoring protocols, inventory existing data collection efforts, and plan smartly for the future. This will help us avoid critical information gaps and implement the most judicious adaptation measures to address ocean acidification hotspots.

As a response to these critical, numerous, and diverse activities informed and spurred by the Panel, OPC staff, alongside discussions with NGOs, OST, academic partners, and decision-makers, developed an internal action plan detailing how we are going to make the recommendations of the panel actionable and the timeline and mechanism with which we are going to employ various OAH mitigation, adaption, and research strategies. The plan outlines how we will work with our OPC's Science Advisory Team, the Governor's Office, NOAA's Interagency Working Group on Ocean Acidification (IWG-OA), and how we will allocate existing Proposition 84 funds, among other details. We look forward to bringing a final action plan for ocean acidification as well as funding proposals, which will employ local adaptation strategies and better understand drivers in areas vulnerable to ocean acidification, to the next Council meeting. We know that OAH will have significant environmental, ecological, and economic consequences for the West Coast, and that we must work together and take immediate action to manage the potentially devastating effects of OAH. OPC staff, under the guidance and leadership of our Council, are eager to continue coordinating with a range and diversity of partners to act swiftly and thoughtfully on this challenge and further solidify the Ocean Protection Council as a state and national leader on ocean acidification.

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.