California Ocean Protection Council (OPC)
Executive Director's Report
February 3, 2016

The Executive Director's Report provides an update on OPC outcomes and accomplishments since the previous OPC meeting. This report covers October 2015 to February 2016[1].

Water Quality, Supply and Infrastructure Improvement Act of 2014 (Proposition 1): For more information on Proposition 1, please see the staff memorandum for the February 3, 2016 Council meeting.

Staffing: In early January we welcomed our new cohort of California state Sea Grant fellows: Sara Worden and Paige Berube. Sara graduated from Moss Landing Marine Labs with a Masters in marine ecology and will be working primarily on marine protected areas. Paige received her Masters from the Bren School of Environmental Science & Management at UCSB and will be working on climate change, including sea-level rise and ocean acidification and hypoxia.

We are also recruiting for two new positions funded by Proposition 1: a Coastal Program Analyst I or II and an Associate Governmental Program Analyst.

Strategic Plan Issue Area 1: Science-Based Decision-making

California Seafloor and Coastal Mapping Program:
The California Seafloor and Coastal Mapping Program has nearly completed its funded mandate of providing map products for 30% of the mainland coast. The map products include eleven different sheets of information (e.g. benthic habitat, geology, sediment distribution) that are intended to be more useful to decision-makers and managers than the raw bathymetric data alone. The map products are available from the US Geological Survey's website at http://walrus.wr.usgs.gov/mapping/csmp/index.html. The raw bathymetric and backscatter data are available from CSU Monterey Bay's website: http://seafloor.otterlabs.org/csmp/csmp.html

[1]The present ED report contains descriptions of OPC grants or contracts that have closed since the last OPC meeting. Each grant or contract is described under the header of the OPC strategic plan issue the work is intended to address.

Additionally, the state-federal California Seafloor and Coastal Mapping Program Steering Committee continues their work to develop a vision document for the future of the program, including the highest priority locations for work should additional funds become available. The Steering Committee met for the third time on November 10, 2015 at which point they provided staff with direction to develop 4-5 packages of options for the program. The Steering Committee will hold its final meeting in spring 2016.

Building Institutional Capacity

Using the first general fund allocation to support the Statewide MPA Monitoring Program, OPC staff under the guidance of Secretary Laird is developing an innovative partnership with the UC Davis Coastal and Marine Science Institute and the California Department of Fish Wildlife (CDFW). This partnership will place three post-doctoral scientists with CDFW including housing them at CDFW offices for an 18 month appointment. The post-docs will be mentored by expert UC Davis faculty and CDFW staff to work on the cutting edge development of the long-term Statewide MPA Monitoring Program, including a dedicated position to work on developing approaches and processes CDFW can use to integrate the Marine Life Management Act and Marine Life Protection Act mandates. Our intention is that this novel approach will help to build the capacity in CDFW to actively and directly engage with leading experts in MPA performance evaluation to build an effective and efficient long term MPA Monitoring Program moving forward.

Strategic Plan Issue Area 2: Climate Change

Update on Safeguarding California: Implementation Action Plans

OPC acted as sector lead for the Oceans and Coastal Resources and Ecosystem Sector Plan for the Safeguarding California: Implementation Plans. Public comment was received in December and the OPC worked on incorporating the constructive feedback provided by the ocean and coastal stakeholder community. The final report is anticipated for release in late January or February 2016. OPC will continue to function as the sector lead with the upcoming report on actions taken due by June 2016 as well as the update to Safeguarding California Plan anticipated in 2017. For more information, see http://resources.ca.gov/climate/safeguarding/.

Planning for Sea-Level Rise Database

OPC and CNRA have fulfilled the mandate required by AB2516, which required the development of a public online database cataloguing sea-level rise planning information by January 1, 2016. The database and other resources can be accessed at http://www.opc.ca.gov/climate-change/planning-for-sea-level-rise-database/. In keeping

with the law, OPC and CNRA plan to re-survey entities in early 2016 and update the database biannually.

West Coast Ocean Acidification and Hypoxia Science and Policy Efforts

The West Coast Ocean Acidification & Hypoxia Science Panel (Panel) will conclude their work at the end of February 2016. Throughout its tenure, the Panel has produced a range of products to address decision-makers' science needs from scientific publications, to technical white papers and high-level translational products. Looking forward, the Panel still has a few key products to wrap up, including a final Executive Summary for Decision-makers which will include a number of recommendations for action. With OST and the Panel scientists, OPC staff anticipates holding a series of briefings and webinars on Panel recommendations to help formulate next steps. For more information, please visit: www.westcoastoah.org

As the Panel finalizes the remainder of its work, OPC staff and the Pacific Coast Collaborative (PCC) are already planning for next steps. Led by OPC staff, the PCC subcommittee on ocean acidification is in the midst of writing a detailed work plan for 2016-2017 and coordinating with California Ocean Science Trust, the Panel convener, about a roll-out strategy and communication plan around the work of the Panel over the last three years. It is important to give this West Coast-wide effort the attention and recognition it deserves and also continue our great momentum in addressing very real and tangible impacts of this burgeoning field. This next year should be a seminal one in on-boarding the recommendations of the panel, making increased and smarter funding investments, and strengthening our great partnerships across the West Coast governments and ocean leaders and with the federal government, such as the Interagency Working Group on Ocean Acidification.

Closed grants within Climate Change

Ocean Acidification Exacerbated by Coastal Upwelling: Monitoring of CO_2 and O_2 on the California Shelf and Effects on Red Sea Urchins, Abalone, and Oysters (CNRA Agreement #0-09-021): The overarching goal of this project was to examine the impact of ocean acidification, elevated levels of CO_2 in the ocean due to increased atmospheric CO_2, and low levels of dissolved oxygen (O_2) on ecologically and economically important marine invertebrates of the California coastal ocean. Laboratory results showed that body size was reduced in red urchin larvae under high CO_2 scenarios and that there was abnormal development of pink abalone under high CO_2 scenarios compared to the control experiments. Along the way, researchers also learned more about the natural variability of local seawater all along the California coast and the importance of exposing species to these variable levels of CO_2 and O_2 in order to best assess the vulnerability of key California species in the natural environment (and not only a

laboratory setting). Staff is eager to initiate conversations with natural resource managers with CDFW and the Fish and Game Commission about how this research could help guide future decisions.

Strategic Plan Issue Area 3: Sustainable Fisheries and Marine Ecosystems

Update on closure of Dungeness and Rock Crab Fisheries

High domoic acid levels have been detected in many marine species along the California coast, ultimately resulting in the closures of the Rock crab and Dungeness crab fisheries in late 2015. The commercial fishery for Dungeness crab, remains closed statewide due to unhealthy levels of domoic acid in the crab. The advisory will be lifted in those areas once ongoing monitoring by the California Department of Public Health determines crabs from those areas are safe to consume. As of December 31, 2015, the commercial rock crab fishery along the mainland coast south of Piedras Blancas Light Station was opened. Between Piedras Blancas Light Station and the California-Oregon border, and in state waters around Santa Cruz, Santa Rosa and San Miguel islands, the commercial season is currently closed for all rock crab species in ocean, bay, and estuarine waters due to unhealthy levels of domoic acid in the crab.

Dungeness Crab Working Group on Whale Entanglements

Following the Whale Entanglement Workshop hosted on August 20, 2015, the OPC and CDFW convened an informal Working Group to further explore short and long-term strategies to reduce the risk of whale entanglements in Dungeness crab fishing gear. Composed of commercial and recreational fishing community members, environmental NGOs, and CDFW and NOAA Fisheries staff, this Working Group met twice in the early fall of 2015. Their final list of recommendations includes strategies to enhance data collection, reduce entanglement risk, and improve outcomes for entangled whales (see http://www.opc.ca.gov/webmaster/_media_library/2015/08/CAWhaleEntanglement_Dcrab_Oct8_KeyThemesSummary_FINAL.pdf). The Working Group also charged several Implementation Teams with carrying out these recommendations and presenting their preliminary findings during a mid-season meeting in spring of 2016. OPC, CDFW and NOAA Fisheries staff are working to assess the best way to move forward with this collaborative process given the delay in opening the 2015-16 Dungeness crab season.

Spiny Lobster Fishery Management Plan (FMP)

The Draft Spiny Lobster FMP was brought to the Fish and Game Commission at the December 9-10, 2015 meeting. The draft FMP has undergone independent scientific peer review, tribal review and is now being submitted by CDFW for public review and adoption by the FGC. The Marine Life Management Act requires that FGC hold at least two public hearings prior to the adoption, and that the draft by available to the public for review at least 30 days prior to the first hearing and discussion. The draft FMP is expected to have public discussion at the February

FGC meeting and possible adoption by the FGC at their April 2016 meeting. The draft Spiny Lobster FMP can be found here: http://www.fgc.ca.gov/meetings/2015/Dec/exhibits/12_Lobster_FMP.pdf. The Spiny Lobster FMP is a direct result of funding from the Ocean Protection Council provided in 2011 (see OPC staff at: http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20110512/Spiny%20Lobster/20110512_spinylobFMP_.pdf)

MPA Management Program Costs

OPC submitted a report to the Budget subcommittees of the Senate and Assembly of the total costs of the MPA Management Program. The report was developed by the MPA Statewide Leadership Team and is the first comprehensive accounting of current and future costs on the long-term management costs for California's network of MPAs across the state member agencies. Through extensive leveraging, partnership building and learning gathered from the statewide Baseline Monitoring Program, costs for the MPA Management Program were significantly reduced from estimates complied during the MLPA initiative process.

Sharing North-Central Coast MPA Monitoring Results

California Ocean Science Trust, together with CDFW and OPC, recently released the State of the California North Central Coast Report (http://oceanspaces.org/nccsotr). The report reflects the first five years of MPA monitoring in the region and represents the most comprehensive snapshot to date of the coastal ocean between Alder Creek and Pigeon Point. The report and corresponding online resources provide data and information collected by more than twenty partner groups, ranging from university scientists to fishermen, elementary school students to volunteer divers. It includes monitoring results from the kelp forests of Bodega Bay to the beaches of Half Moon Bay, and the rocky reefs and sea stacks around the Farallon Islands. Download the report at bit.ly/northcentralcoastmonitoring. These results were shared with stakeholders the first week of December 2015 in community meetings held in Gualala, Bodega Bay and Half Moon Bay. The meetings were well attended and provided an important forum to share results and hear from communities about their priorities as the statedevelops a long-term MPA Monitoring Program to inform adaptive management and evaluate the performance of the MPA network at meeting the goals of the MLPA.

North Coast Collaborative Forum

On November 17, 2015, the MPA Collaborative Network successfully convened 75 delegates at the North Coast Collaborative Forum in Fortuna, California. Co-chairs and members from all

North Coast collaboratives (Sonoma, Mendocino, Humboldt and Del Norte) as well as state agencies, tribal representatives, local fishermen, scientists, and representatives from Oregon, spent the day comparing experiences and strategizing on the best ways to connect their communities to local MPAs.

Tribal members met in a closed session, and proposed putting together a North Coast tribal collaborative to deal specifically with tribal MPA issues across the region. Ocean Science Trust organized concise yet thorough presentations from investigators on all twelve scientific monitoring projects currently underway. Video of these presentations will soon be available on http://oceanspaces.org/.
In 2016 each North Coast collaborative will focus on completing MPA video outreach projects. Additionally, collaboratives will be working to develop mission statements - top line strategic priorities that will focus their future work.

Closed grants within Sustainable Fisheries and Marine Ecosystems

MPA Signage Project (CNRA agreement #C1000100): This grant to the California Marine Sanctuary Foundation resulted in design, manufacture and installation of 195 interpretive and regulatory signs along the entire California coast. This is the most extensive effort to date to provide signage for the MPAs designated through the Marine Life Protection Act. Project details and a downloadable Google Earth file with sign locations and photos can be found http://www.opc.ca.gov/programs-summary/marine-protected-areas/outreach-and-education/c1000100-mpa-signage-grant/