CALIFORNIA OCEAN PROTECTION COUNCIL

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Item 2

California Ocean Protection Council (OPC)
Executive Director's Report
August 7, 2017

The Executive Director's Report provides an update on OPC outcomes and accomplishments since the previous OPC meeting. This report covers April 2017 – August 2017[1].

Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84): On October 17, 2016, the Council approved $6,024,956 in Proposition 84 funds for 16 projects supporting OPC's priority areas of climate change, marine protected areas, marine pollution and sustainable fisheries. Staff has finalized 14 grant agreements, with the remaining 2 grants close to being finalized. There is approximately $14.9 million remaining in Proposition 84 funds. At the August 7, 2017 meeting, staff is requesting approval to disburse up to $7 million to the California Sea Grant and University of Southern California Sea Grant programs to administer a competitive grant process for OPC priority programs; for more information, please see the staff recommendation for agenda item 4. The remaining $7.9 million will be awarded by June 2018 through a collaborative development process that ensures innovative and catalytic projects can continue to advance the Council's priorities.

Water Quality, Supply and Infrastructure Improvement Act of 2014 (Proposition 1): On June 29, 2016, the Council approved $7,414,534 in Proposition 1 funds for eight projects to improve water quality through pollution source reduction and habitat restoration/enhancement. Staff has finalized the grant agreements and all projects are underway.

Staff intends to bring updated Proposition 1 grant guidelines for Council approval in fall 2017, with project solicitation for Round 2 funding anticipated in 2018. The available funding for the second round of Proposition 1 funding is expected to be $11.2 million, with an additional allocation of $9.3 million anticipated for the 2019/2020 fiscal year.

[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.

Staffing: In June 2017, Joanna Stone left the OPC to work for the Department of Fish and Wildlife. We are grateful for Joanna's contributions to OPC and wish her the best in her new endeavors.

With Joanna's departure, OPC posted a job announcement for an Associate Governmental Program Analyst. The application deadline for this job closed on July 13, 2017 and staff anticipates filling this position by September 2017.

In mid-August, we will welcome Marina Cazorla to our staff as the program manager for OPC's Proposition 1 grant program. Marina will also serve as OPC's tribal liaison and help support other organizational priorities, including the development of OPC's once-through cooling interim mitigation funding program. Marina has over 15 years of coast and ocean policy and management experience and background administering grant programs. For the past ten years, Marina has been working for the Consultative Group on Biological Diversity on marine protected areas and other marine conservation strategies in Mexico. She has also worked for the California Coastal Commission and with OPC in its nascency within the State Coastal Conservancy. Marina has a Master's Degree in Public Policy from the Harvard Kennedy School of Government and Bachelor's Degree in International Relations from Claremont McKenna College.

In June, the OPC welcomed two interns for the summer, Courtney Thomas and Elizabeth Riggall. Courtney is a graduate student at the Bren School of Environmental Science and Management at University of California, Santa Barbara, and is focused on regional ocean acidification monitoring and developing outreach and communication materials for OPC-funded ocean acidification projects. Elizabeth is an environmental policy major at the University of California, Davis, and is working with the marine pollution program to synthesize the environmental and human health impacts of phthalates in the marine environment.

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

Science-based decision-making is integrated into all of our priority program areas; please see below for more details.

Strategic Plan Issue Area 2: Climate Change

PCC/IWG-OA Integrated Ocean Acidification and Hypoxia (OAH) Monitoring Task Force: The Pacific Coast Collaborative (PCC) and the federal Interagency Working Group on Ocean Acidification (IWG-OA) have partnered to foster a West Coast Ocean Acidification and Hypoxia (OAH) monitoring network that is scientifically grounded and responsive to management needs. To achieve this goal, a monitoring task force (consisting of representatives from West Coast states, British Columbia, IWG-OA, and West Coast IOOS Regional Associations) was established to build a comprehensive inventory of OAH-relevant monitoring efforts of chemical, physical and biological parameters to inform our understanding of long-term oceanic change. Such an inventory can be used to identify gaps in our understanding of temporal or spatial trends in ocean acidification and hypoxia and the biological response to those conditions, to help inform investment priorities in ocean acidification research.

OPC staff and additional members of the task force are continuing to build a complete inventory of OAH monitoring assets across California and the West Coast region. Individual member states and provinces have refined their inventories and produced preliminary maps showing the extent of current monitoring networks in each state. Task force members are now in the planning stages to integrate each state's inventory into a single regional map of monitoring assets along the West Coast. This map and associated resources will be made available to the public through an interactive data portal, such as the West Coast Ocean Data Portal and/or the IOOS Pacific Region Ocean Acidification Data Portal, to allow interested parties to assess the strengths and weaknesses of current OAH monitoring taking place across the West Coast. Alongside this regional process, and in response to AB 2139, (Williams, 2016: Ocean Protection Council: ocean acidification and hypoxia) California task force members are also planning an in-person meeting with other researchers and practitioners in OAH monitoring to review California's monitoring network and identify opportunities for improvement through a California-specific analysis of gaps in monitoring. This in-person meeting is planned for August 29; more details will be posted to OPC's website soon.

The April 2016 West Coast Ocean Acidification and Hypoxia Science Panel strongly recommended establishing an OAH monitoring network, such as the one described above, to provide decision-support information to policy makers and managers. Completion of the monitoring inventory moves California further along in implementing the recommendations of the Panel. The inventory, and the network it fosters, also supports the intent and spirit of the Global Ocean Acidification Observing Network (GOA-ON) and the recently launched International OA Alliance, which calls on governments to advance scientific understanding of

ocean acidification and take actions to plan for, adapt to, and mitigate ocean acidification in preparation for our changing oceans.

OPC-SAT Working Group – Exploring Aquatic Vegetation as an Ocean Acidification Management Tool in California: On May 2, 2017, a working group of the Ocean Protection Council Science Advisory Team (OPC-SAT) met in person for a full day workshop in Oakland to build off of recommendations from the West Coast Ocean Acidification and Hypoxia Science Panel Executive Summary and SB 1363 (Monning, 2016: Ocean Acidification and Hypoxia Reduction Program) to better understand, monitor and advocate for the restoration and protection of eelgrass and other aquatic vegetation as a critical strategy in enhancing California's ability to withstand ocean acidification. The goals of the workshop were to: 1) develop a shared understanding of the state of the science regarding the ability of seagrass and kelp habitats to ameliorate ocean acidification in a California-specific context; 2) identify research and monitoring gaps; and 3) provide recommendations for future work, including criteria to consider when selecting locations for additional demonstration projects in California.

The working group also aims to provide an update to the California State Legislature on current progress and next steps for implementing SB 1363 in California. To this end, working group members and staff at Ocean Science Trust are currently drafting a high-level white paper for managers and decision-makers based off of the working group's discussion, which will be available in Fall 2017, as well as communication briefings with the California legislature on the progress towards implementing SB 1363. For more information on the working group, please visit: http://www.oceansciencetrust.org/projects/exploring-aquatic-vegetation-as-an-ocean-acidification-management-tool-in-california/

For more information on OPC's work on ocean acidification and hypoxia at the international scale, please see the staff memo for agenda item 7 and presentation at the August 7, 2017 meeting.

Sea-level rise: The OPC and the California Natural Resources Agency, in collaboration with the Governor's Office of Planning and Research, California Energy Commission, and the California Ocean Science Trust, are in the process of updating the State Sea-level Rise Guidance Document. In May and June, the OPC and Ocean Science Trust hosted a series of public workshops and tribal outreach throughout California (Los Angeles, San Francisco, Eureka, and San Diego) with 3 main objectives: 1) to share and discuss the scientific information in the recently released report - *Rising Seas in California: An update on sea-level rise science*; 2) to share the results of the input collected to date via interviews and online listening sessions, and give participants an opportunity to further enhance the utility and usability of the forthcoming

guidance; and 3) to seek input on the draft outline and core components for the updated sea-level rise guidance. OPC further engaged with sister agencies in the Coastal and Ocean Climate Action Team (CO-CAT) and Sea-Level Rise Coastal Leadership group to solicit feedback for consideration in updating the current policy guidance document. OPC staff is currently developing a draft updated policy guidance, which will be out for public comment in October 2017.

To comply with AB 2516 (Gordon, 2014: Sea-level rise planning: database), OPC completed the first of two yearly surveys with state agencies, ports, airports and utilities on the status of sea-level rise planning activities in March and April of this year, to update the current version of the Sea-level Rise Planning Database. The second survey is planned for later this year.

California 4th Climate Change Assessment: Currently underway, the California Fourth Climate Change Assessment (4th Assessment) is the first inter-agency effort to implement a substantial portion of California's Climate Change Research Plan. The 4th Assessment is being supported through two funding sources, one managed by the California Energy Commission (CEC) and another by the California Natural Resources Agency. OPC staff serve as technical managers on the Resources Agency project related to ocean acidification, ocean temperature, and hypoxia. With the support of the Ocean Science Trust and the OPC-SAT, OPC is leading the regional assessment focused on ocean and coasts that will be paired with the other regional assessments of the Fourth Assessment. The ocean regional assessment will support, bolster, and synthesize funded research projects most relevant to climate change impacts to the ocean and coast. It was discussed and advanced at the most recent workshop of the Ocean Protection Council's Science Advisory Team: http://www.oceansciencetrust.org/wp-content/uploads/2017/05/OPC-SAT-Workshop-Agenda-public-5.23.17.pdf

Closed grants within Climate Change:

Local Coastal Program grant program: City of Half Moon Bay (CNRA Agreement #C0300300, $70,000):

This grant funded an assessment to identify potential sea-level rise scenarios and conduct a vulnerability assessment of impacts from those scenarios on coastal resources. The resulting analysis assisted the development of land use policies and regulations that will expand Half Moon Bay's capacity to adapt to those impacts while protecting coastal resources and public access to the sea.

Local Coastal Program grant program: City of Morro Bay (CNRA Agreement #C0300400, $250,000):

This grant resulted in the development of a Sea-Level Rise Vulnerability Assessment and Policy Framework for the City of Morro Bay. For the vulnerability assessment, the City identified existing coastal conditions, prepared an inventory of infrastructure and systems potentially affected by sea-level rise (SLR), identified sea-level rise scenarios and model cumulative effects, analyzed sea-level rise vulnerability, and identified an adaptation policy framework, all within a consistent effort of collaboration and outreach with the public and key stakeholders. Deliverables included a baseline assessment of coastal conditions along the shoreline reaches, including specific evaluation of beaches, hardened shoreline, structures, and other environmentally sensitive areas; maps and tables for each of the planning areas to illustrate these conditions; inventory of structures, functions, and populations that may be affected by SLR; GIS-based maps, coastal erosion and coastal flooding extents, and spatial representation of the uncertainties associated with the modeling. The products are designed for use by the City for analyzing coastal development permits (CDPs) and in the development of the update to the City's Local Coastal Program.

Local Coastal Program grant program: County of Sonoma (CNRA Agreement #C0300500, $150,000):

This grant resulted in digital maps showing the location and extent of habitats, land uses, and development in priority communities inundated as a result of sea-level rise; a report identifying potential adaptation measures and strategies to reduce sea-level rise impacts on habitats, land use, and development in priority communities; and policies regarding sea-level rise impacts and adaptation planning for these priority communities to be incorporated into the Sonoma County Local Coastal Plan. In addition, this project produced sea-level rise maps generated using two different models and approaches (NOAA Sea-Level Rise Viewer and CoSMoS) and a report comparing them that will be useful for sea-level rise impact analyses conducted by other coastal jurisdictions. A report on the lessons learned throughout the grant process was also submitted to inform local, regional, and state sea-level rise adaptation planning efforts.

Strategic Plan Issue Area 3: Sustainable Fisheries and Marine Ecosystems

MLMA Amendment Information Gathering Projects: The California Department of Fish and Wildlife (CDFW) and partners are in the process of amending the Marine Life Management Act (MLMA) Master Plan for Fisheries, which is a planning document that guides management efforts on highest priority species as well as describes the specific tools and approaches to be applied in achieving the goals of the MLMA. The OPC is supporting various projects in the Information Gathering Phase to develop tools and recommendations to be considered during

the Master Plan Amendment Phase including: developing an ecological risk assessment tool; developing guidance and recommendations for CDFW peer review processes related to fisheries management; and the development of socioeconomic guidance for fisheries management.

California Dungeness Crab Fishing Gear Working Group: In response to the recent spike in whale entanglements, the CDFW, in partnership with the OPC and the National Marine Fisheries Service (NMFS), convened the California Dungeness Crab Fishing Gear Working Group (Working Group) to develop recommendations for reducing the risk of whale entanglements in California Dungeness crab fishing gear. In early 2017, the OPC provided funding to The Nature Conservancy to support the Working Group's shared priorities and goals. To date, the Working Group has made progress in designing, informing, and implementing a series of collaborative research projects and communications products. A number of voluntary pilot projects are on track to be underway during the upcoming 2017-18 Dungeness crab fishing season.

For more detailed information on OPC's work in the sustainable fisheries program, please see the staff memo for agenda item 6 at the August 7, 2017 meeting.

Marine Protected Areas: California's Marine Protected Area (MPA) Management Program continues to mature and is providing a global model on how to manage MPAs effectively. In March 2017, a paper was published in the journal *Nature* by Gill et al. that reviewed hundreds of MPAs worldwide. The authors found a strong link between the lack of human and financial resources and failure of MPAs to meet their ecological goals. Through the support and leadership of Secretary Laird, this Council, the Legislature and Governor Brown, California has developed a robust MPA Management Program that includes active partnerships at the local level - led by MPA Collaboratives - coupled with our national, regional and state partners. The collaborative nature of this partnership leverages both social and financial resources to steward our MPA Network to success.

Outreach and Education

In partnership with CDFW and our grantee the California Marine Sanctuary Foundation, we are well into our second round of installing interpretive and regulatory signs statewide. This effort builds on the initial signage effort, which was completed in 2015 and resulted in 190 signs being installed from Del Norte to San Diego County. These signs play a critical role in helping improve compliance with MPA regulations and connecting Californians and visitors to the MPA network.

Research and Monitoring

With the recent completion of baseline monitoring in the north coast region, the MPA Monitoring Program has completed Phase 1 baseline monitoring statewide. In partnership with CDFW and Ocean Science Trust, OPC will be holding a series of community meetings along the north coast in late October to share what we have learned so far about the north coast MPAs and next steps for evaluating the performance of the MPA Network as a whole. OPC is currently supporting Phase 2 long-term monitoring statewide in high priority habitats including intertidal, kelp, shallow rock and mid-depth rock. This monitoring includes a combination of academic and citizen science to produce high quality data that will be used to inform CDFW's 2022 MPA management review.

OPC has multiple projects underway to solidify the approach for Phase 2 long-term MPA monitoring. These projects are developing quantitative tools to prioritize sampling sites and metrics to ensure that the data collected are a robust set of information to support CDFW's 2022 MPA Management Review. This information will be compiled in the MPA Monitoring Action Plan, which will guide long-term monitoring of the MPA Network. The Action Plan will be peer-reviewed and will be available for public comment in mid-2018.

At the August 7, 2017 OPC meeting, Dr. Jenn Caselle from the University of California, Santa Barbara will present monitoring results that highlight how the Anacapa State Marine Reserve - a long-standing MPA at the Channel Islands - is affecting the invasion success of a non-native alga, *Sargassum horneri*.

Closed grants within Sustainable Fisheries and Marine Ecosystems:

Dungeness Crab Task Force – (CNRA Agreement # 0-11-085, $200,000): The OPC has supported the establishment and administration of the Dungeness Crab Task Force (DCTF), in accordance with SB 1690 (Wiggins, 2008) and SB 369 (Evans, 2011). OPC has partnered with Strategic Earth Consulting since early 2012 through 2017, on the administration of the DCTF. Per SB 369, a final report of the DCTF, which provides recommendations directed to the Joint Committee on Fisheries and Aquaculture, the CDFW, and the Fish and Game Commission to inform future Dungeness crab fishery management actions, was released on January 13, 2017. Short-term funding has been provided by The Nature Conservancy for administration of the DCTF and the CDFW is exploring their ability to utilize the Dungeness crab trap tag account to allocate funding for future administration of the DCTF. For more information and meeting summaries, visit the DCTF webpage: http://www.opc.ca.gov/2009/04/dungeness-crab-task-force/

Readying California Fisheries for a Changing Climate – (CNRA Agreement # C0301000, $100,000): This grant with the California Ocean Science Trust resulted in the development of an Ocean Protection Council Science Advisory Team (OPC-SAT) report, *Readying California Fisheries for a Changing Climate*. This full report, and summarized "in-brief" report considered the issue of climate change in the sustainable management of California fisheries by providing an evaluation of four potential ecological scenarios and seven management strategies to consider when preparing for managing fisheries in a changing climate. This project was specifically developed for consideration by CDFW to help inform the state's process to amend the Marine Life Management Act (MLMA) Master Plan. Products from this project have been submitted to CDFW for review and may be integrated, in full or in part, into a draft Master Plan Amendment. Additional information about the Master Plan amendment process is available at https://www.wildlife.ca.gov/Conservation/Marine/Master-Plan.

Strategic Plan Issue Area 4: Coastal and Ocean Impacts from Land-Based Sources

Marine Pollution Program: In April 2017, the OPC approved funding for a project under the marine pollution program: Research and Development of Scientific and Standardized Trash Monitoring Methods to Effectively Implement the Trash Amendments. The grant agreement has been signed, and work has begun.

On May 2-3, 2017 the OPC and NOAA co-hosted a workshop to update the California Ocean Litter Strategy. The workshop provided State and Federal agencies, conservation organizations and industry with an opportunity to develop solution ideas to address ocean litter. OPC staff and our planning team partners are now refining and prioritizing the solution ideas. The draft California Ocean Litter Strategy, including the refined and prioritized solution ideas, is expected to be released for comment on August 15, 2017. A second workshop is planned for November 15 and 16.

OPC staff and Southern California Coastal Water Research (SCCWRP) Project staff have been accepted to co-chair a technical session on trash monitoring at the Sixth International Marine Debris Conference in March 2018.

Strategic Plan Issue Area 5: Existing and Emerging Ocean Uses

Marine Renewable Energy: OPC staff is assisting with an offshore wind energy planning effort being led by the California Energy Commission (CEC) and the federal Bureau of Ocean Energy Management (BOEM). State and federal agencies committed to this planning effort met at the

first Marine Renewable Energy Task Force Meeting, which was held on Oct. 13, 2016 in Sacramento. The next Task Force meeting, which was originally scheduled for July 13, 2017 has been postponed until this fall. OPC staff, in partnership with staff from BOEM and CEC, has been conducting targeted outreach to environmental groups, local government, fishermen, tribes, and the maritime industry over the last several months, . On July 6, 2017 OPC and BOEM staff presented before the Morro Bay Harbor Advisory Board and also used that opportunity to hold separate meetings with Morro Bay and Port San Luis fishermen.

Outer Continental Shelf Oil and Gas: The OPC Executive Director and staff have been assisting the Governor's office in responding to the President's Executive Order 13795 "Implementing an America-First Offshore Energy Strategy" which calls for, among other things, a review of the expansions of National Marine Sanctuaries and Marine National Monuments since April 28, 2007. All of California's four National Marine Sanctuaries (i.e., Channel Islands, Monterey Bay, Cordell Bank, Greater Farallones, and Channel Islands) are affected by the review.

In addition, the OPC is assisting with a response to the Department of Interior's announcement on July 3, 2017 that it is initiating a new National Outer Continental Shelf Oil and Gas Leasing Program development process to replace the existing 2017-2022 program. The new program will cover the years 2019-2024. Consideration of renewed oil and gas leasing on the California Outer Continental Shelf will be part of the process.

Coastal Sediment Management: The state-federal Coastal Sediment Management Workgroup, co-chaired by California Natural Resources Agency/OPC and the U.S. Army Corps of Engineers has entered into agreements with the City of Pacifica, Humboldt County, and the Gulf of the Farallones Association to complete coastal regional sediment management plans for the majority of the North Coast. Funding is being provided in the form of grants from State Parks, Division of Boating Waterways.

Closed grants within Existing and Emerging Ocean Uses:

Tijuana Estuary Sediment Fate and Transport Study: Southwest Wetlands Interpretive Association (CNRA Agreement #C0300500, $957,000)

The purpose of the study was to analyze and disseminate monitoring data gathered during the nourishment of the beach between the Tijuana River mouth and the U.S. – Mexico border. Historically, regulatory agencies had not permitted beach nourishment/restoration projects that used sand that was greater than 20 percent fine material by mass; the results of this study indicated that sand with a higher percentage of fine material could be placed on beaches in the vicinity of the Tijuana River mouth without smothering benthic organisms or otherwise adversely affecting the nearshore environment. These results can support potential opportunities for beach nourishment in other locations where the only available sand source has a high percentage of fine material.