OCEAN PROTECTION COUNCIL

Item 4a

Staff Recommendation
June 14, 2022

Sea-Level Rise Technical Guidance Update

Justine Kimball, Senior Climate Change Program Manager

RECOMMENDED ACTION: Staff recommends that OPC approve the disbursement of up to $400,000 to the California Ocean Science Trust to convene a scientific task force to update California's sea-level rise technical guidance with the best available and most recent science on sea-level rise projections.

LOCATION: Statewide

STRATEGIC PLAN GOALS AND OBJECTIVES: Goal 1: Safeguard Coastal and Marine Ecosystems and Communities in the Face of Climate Change; Objective 1.1: Build Resiliency to Sea-Level Rise, Coastal Storms, Erosion, and Flooding

EXHIBITS:

Exhibit A: Letters of Support

FINDINGS AND RESOLUTION:

Staff recommends that the Ocean Protection Council (OPC) adopt the following findings:

> "Based on the accompanying staff report and attached exhibit(s), OPC hereby finds that:
> 1) The proposed projects are consistent with the purposes of Division 26.5 of the Public Resources Code, the California Ocean Protection Act;
> 2) The proposed projects are consistent with OPC's Environmental License Plate Funding Guidelines (Interim Standards and Protocols, August 2013);
> 3) The proposed projects are not 'legal projects' that trigger the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section, section 15378."

Staff further recommends that OPC adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"OPC hereby approves the disbursement of up to $400,000 to California Ocean Science Trust to convene a scientific task force to update California's sea-level rise technical guidance with the best available and most recent science on sea-level rise projections. This authorization is subject to the condition that prior to disbursement of funds, grantees shall submit for the review and approval of the Executive Director of the OPC detailed work plans, schedules, staff requirements, budgets, and the names of any contractors or grantees intended to be used to complete the projects, as well as discrete deliverables that can be produced in intervals to ensure the projects are on target for successful completion. All projects will be developed under a shared understanding of process, management and delivery."

EXECUTIVE SUMMARY:

Staff recommends that OPC approve disbursement of up to $400,000 to the California Ocean Science Trust to convene, in partnership with OPC, a scientific task force to update California's sea-level rise technical guidance with the best available and most recent science on sea-level rise projections. The last technical guidance update in 2018 has been utilized by federal, state, and local partners to inform sea-level rise decision-making, planning, and projects. Since 2018, however, the science and application of sea-level rise projections has advanced with significant implications for adaptation and planning, such as greater confidence in projections over the next 30 years. Because of the rapidly evolving science on sea-level rise, OPC has committed to updating the technical guidance every five years to support thoughtful, consistent, and coordinated planning statewide. The process for updating the technical guidance includes the synthesis of recent sea-level rise science for application to California; identification of existing tools and information that can be leveraged to support implementation and uptake of the guidance; development of practical and pragmatic approaches for end users to use and incorporate updated projections in local adaptation efforts; and engagement with federal, state, and local partners.

PROJECT SUMMARY:

Background:

In April 2017, catalyzed by direction from Governor Brown (EO B-30-15) and the need to ensure that best available science was informing sea-level rise planning decisions in California, a Working Group of the OPC Science Advisory Team was convened by the California Ocean Science Trust (OST) and released a report, entitled "Rising Seas in California: An Update on Sea-Level Rise." The Rising Seas report provided a synthesis of the state of the science on sea-level rise to reflect

recent advances in ice loss science and projections and was the foundation for the subsequent guidance document. Following the Rising Seas Report, OPC released the State of California Sea-Level Rise Guidance (2018 Update), which follows two previous versions in 2010 and 2013. With increased policy direction from SB 379 (Jackson, 2015) and SB 246 (Wieckowski, 2015) and improved understanding of possible impacts, the 2018 Update provides a science-based methodology for state and local governments to analyze and assess the risks associated with sea-level rise, and to incorporate sea-level rise into their planning, permitting, and investment decisions. Specifically, it includes projection tables for 12 tide gauges along the California coast for each decade from 2030 to 2150 and recommends three different projection scenarios based on the type of project, its ability to cope with or adapt to sea level rise, and the consequences to the environment and the project associated with sea-level rise.

Since its release, the 2018 Guidance has been utilized by federal, state, and local partners to inform sea-level rise decision-making, planning, and projects. For example, the California Coastal Commission references the 2018 Guidance in its recently adopted "Sea Level Rise Coastal Adaptation Planning Guidance for Critical Infrastructure" in addition to other previously adopted sea-level rise policy guidance documents. The 2018 Update has also informed interagency efforts, such as the development of the Principles for Aligned State Action and the State Agency Sea-level Rise Action Plan.

Project Summary:
The science on sea-level rise is constantly advancing as research provides more information on key earth system processes, such as glacier and ice sheet dynamics, and global climate models are refined. Providing the best available science on sea-level projections to federal, state, and local partners will allow the state of California to prepare for and adapt to sea-level rise in a coordinated, consistent, and thoughtful way. The sea-level rise technical guidance update will utilize at least two key sources of data. The first will be the "2022 Sea Level Rise Technical Report", a federal, multi-agency report that provides the most up-to-date sea-level rise projections, out to the year 2150, available for all U.S. states and territories. The report also includes coastal flooding projections based on tide and storm surge height. OPC anticipates the sea-level rise projections and coastal flooding data in this report will be downscaled and refined to apply to the California region.

OPC will complement the findings in the aforementioned nationwide Technical Report with anticipated results from an active California Energy Commission funded project. This project downscales global climate models (CMIP6) to generate regionally refined sea-level rise projections for the coast of California, critical for local adaptation planning and application. The findings are expected

to contribute to California's 5th Climate Assessment as well as OPC's Technical Guidance update.

Building off successful efforts in the past, OST will work in partnership with OPC to guide the update to California's sea-level rise technical guidance with the best available and most recent science on sea-level rise projections. The process will include the following activities:

- Convene a scientific task force to bring specific expertise and guidance to the Guidance Update process. OST, with guidance from OPC, will convene a group of scientists who specialize in climate variability and modeling, oceanography, geology, shoreline processes, equity, and coastal resilience and adaptation planning.
- Synthesize the best available and most recent sea-level rise science to update California's current statewide sea-level rise and flood projections, as appropriate. Identify, and as appropriate, engage subcontractors to conduct technical analyses to fill identified gaps and needs.
- Develop practical and pragmatic guidance and approaches for end users to use and incorporate updated projections in local adaptation efforts (e.g. vulnerability and risk assessments, assessing impacts to communities and habitats, implementing resilience projects, etc.).
- Conduct a snapshot landscape and needs assessment to identify tools, frameworks, and data sources that can be leveraged to support implementation and uptake of the statewide guidance.
- Coordinate with OPC to engage with the Sea-Level Rise Statewide Leadership Team, and other state entities as appropriate to align the technical guidance with state level needs and interests.
- Identify, and as appropriate, pursue opportunities to engage locally and regionally, including opportunities to leverage current coastal resilience planning initiatives to inform development of the guidance.

This project leverages the active grant approved at the September 14, 2021 OPC meeting which funded OST to continue supporting OPC Science Advisory Team (SAT) Secretariat Activities and deliver timely, pragmatic, and actionable scientific information and advice to inform Council decisions. The members of the scientific task force for this effort will consist of SAT and non-SAT members and will be chosen based on their expertise and background in the field. Outreach to identified task force members is already underway with confirmed participation from the following technical experts and their areas of expertise:

- Dr. Gary Griggs (SAT member, UC Santa Cruz; coastal processes and hazards, and coastal resilience and adaptation planning)
- Laura Engeman (UC San Diego; coastal resilience and adaptation planning, environmental policy)
- Dr. Benjamin Hamlington (NASA JPL; sea-level rise and climate variability, and global ocean dynamics)
- Dr. Kristina Hill (UC Berkeley; urban ecology and hydrology, equity, and adaptation planning)
- Dr. Patrick Barnard (USGS; coastal geology and processes, including storms and flooding)
- Dr. Daniel Cayan (SAT member, UC San Diego; climate variability and modeling)
- Dr. Mark Merrifield (UC San Diego; sea level rise and climate variability, and coastal processes)

The first task force meeting is expected to take place in July 2022.

About the Grantee:
California Ocean Science Trust is a nonprofit public-benefit corporation under section 501(c)(3) of the Internal Revenue Code and was established pursuant to the California Ocean Resources Stewardship Act of 2000 to encourage coordinated, multi-agency, multi-institution approaches to translating ocean science to management and policy applications. OST bridges the gap between cutting edge scientific research and sound ocean management, accelerating progress towards a healthy and productive ocean future for California. As a nonprofit partner to OPC, OST's strength lies in nimble response to state priorities: leveraging resources and creating partnerships to foster innovative yet pragmatic approaches to difficult problems.

Project Timeline:
This project will be completed from June 2022 to June 2023. The draft Technical Guidance will be brought to the September 2023 OPC meeting for Council approval.

Project Financing:
Staff recommends that OPC approve disbursement of up to $400,000 to the California Ocean Science Trust to convene a scientific task force to update California's sea-level rise technical guidance with the best available and most recent science on sea-level rise projections. This funding will be used to amend the active grant approved at the September 14, 2021 OPC meeting which is administered by OPC staff. Final funding amount will be dependent on the scope

and scale of tasks and subject to refinement with OPC staff. The funding amount of $400,000 represents the maximum anticipated amount of funding required.

PROJECT FINANCING:

Ocean Protection Council	$400,000
TOTAL	**$400,000**

The anticipated source of funds will be from the Ocean Protection Council's Fiscal Year 2018/2019 appropriation of California Environmental License Plate Funds (ELPF). Using these funds to support this project is consistent with the California Ocean Protection Act, Section 35650(b), as well as OPC's Strategic Plan and Grant Program Funding Guidelines as discussed in more detail in the following section.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

The various projects are consistent with the Ocean Protection Act, Division 26.5 of the Public Resources Code, because they are consistent with trust-fund allowable projects, defined in Public Resources Code Section 35650(b)(2) as projects which:

- Improve the management of fisheries and/or foster sustainable fisheries.
- Improve coastal water quality.
- Improve management, conservation, and protection of coastal waters and ocean ecosystems.
- Provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources.
- Address coastal water contamination from biological pathogens.
- Provide funding for adaptive management, planning coordination, monitoring, research, and other necessary activities to minimize the adverse impacts of climate change on California's ocean ecosystem.

COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The various proposed projects are not 'legal projects' that triggers the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section 21068 and Title 14 of the California Code of Regulations, section 15378. If any were determined to be a 'legal project' under CEQA, the proposed project(s) are categorically exempt from review under CEQA pursuant to 14 Cal. Code of Regulations Section 15306 because the projects involve information collection, consisting of data collection, research, and resource evaluation activities that will

not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by OPC.