Staff Recommendation
December 12, 2023

Item 4

Action Item:
Consideration and Approval of Disbursement of Funds Develop the California Beach Resiliency Plan

Ella McDougall, Climate Change Program Manager

Recommended Action: Authorization to disburse up to $2,100,000 to the University of California Santa Barbara (UCSB) to develop the California Beach Resiliency Plan, including the identification of vulnerable beaches, guidance for prioritizing adaptation, and inform statewide strategy for addressing beach resilience.

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; Objective 1.3: Improve Understanding of Climate Impacts on California's Coast and Ocean; Goal 3: Enhance Coastal and Marine Biodiversity, Objective 3.1: Protect and Restore Coastal and Marine Ecosystems

Equity and Environmental Justice Considerations: Increased understanding of Environmental Justice community beach access and use, locally driven adaptation priorities, and improved equitable beach access.

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 the Budget Act of 2022 which included a $50 million General Fund appropriation for coastal resiliency; and

3. The proposed project is not a 'legal project' 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 $2,100,000 to University of California Santa Barbara (UCSB) to develop the California Beach Resiliency Plan, including the identification of vulnerable beaches, guidance for prioritizing adaptation, and statewide strategy for addressing beach resilience.

This authorization is subject to the condition that prior to disbursement of funds, UCSB 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 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 OPC approve the disbursement of up to $2,100,000 to UCSB to develop the California Beach Resiliency Plan. California's beaches are known worldwide for their unique geology, diverse wildlife, and public access and recreational value. However, studies have found that the impacts of climate change, including sea-level rise (SLR), increased coastal storms, and erosion may cause beaches to drown and bluffs to collapse. Exactly how these effects will impact habitat and human use and recreation is still undetermined. This proposed project would provide funding to UCSB to lead a team of researchers to: identify the state's most vulnerable beaches to SLR and erosion; assess how the geological features behind a beach, such as cliffs or bluffs, may respond to the impacts of sea-level rise; provide a suite of strategies, based on best available science, for local governments to select and prioritize beach adaptation strategies; and highlight statewide trends in addressing and achieving beach resiliency.

Project Summary:

Background:

California is facing significant challenges due to sea level rise (SLR). SLR is already impacting California communities, infrastructure, and coastal habitats due to increased coastal flooding, storm surge, and erosion. The record-breaking coastal storms in January 2023 showcased future impacts of SLR rise and caused catastrophic damage to public and private property with damage

costing more than $34 billion, interrupting the state's coastal economy and community livelihoods.

SLR and associated impacts threaten both natural habitats and human activities along the coast. Recent research by the United State Geological Survey (USGS) has found that with three feet of sea-level rise, California's coastline may see significant erosion resulting in a loss of a quarter California beaches. California beaches offer habitat and refuge to a wide variety of species, some of which are threatened or endangered. In 2018, The Nature Conservancy and the State Coastal Conservancy produced a statewide assessment to better understand the impacts of SLR on coastal habitats and biodiversity, finding that two-thirds of beaches and rocky intertidal habitats are highly vulnerable and projected to disappear by 2100 with five feet of sea level rise.

Just as SLR threatens natural ecosystems, it will also have impacts on access, recreation, and tourism. California beaches serve as places of relaxation and recreation for residents and visitors worldwide. They also provide free or low-cost access the coast, which is particularly important for underserved communities burdened by environmental and social injustice. Understanding how and where these communities use California beaches can ensure future equitable access to California's coast. SLR and adaptation strategies will also affect the coastal economy in California, which is valued at $45 billion. Ensuring that beaches remain safe, resilient, and accessible, is critical for local economies statewide.

While previous studies elucidate the impacts of SLR on California's beaches, no comprehensive assessment has been performed to analyze the full scope of impacts, especially from a local or regional perspective. This information is increasingly critical for local governments to make informed decisions about what adaptation and investment strategies are available, especially as the impacts of climate change become increasingly intense. Failure to identify and invest in planning and adaptation strategies can result in significant economic impacts to the state and its communities, given that delayed action can increase the severity of impacts experienced on the California coast, increase construction and maintenance costs over time, and reduce the portfolio of available adaptation solutions.

Project Summary:

The proposed project will develop the California Beach Resiliency Plan, which will characterize the vulnerability of California's beaches, identify pathways to achieve resiliency, and inform timely adaptation investments based on the best available science. The California Beach Resiliency Plan will apply new and existing scientific tools to identify vulnerable outer coast and San Francisco Bay beaches, develop a framework for local jurisdictions to prioritize beach adaptation strategies and investments, and provide recommendations that can inform statewide policy to increase resilience of California beaches in the face of climate change.

This project directly supports OPC's Strategic Plan Target 3.1.1, which addresses beach habitat in the face of climate change and includes a specific action to create a Beach Resiliency Plan. The project also advances OPC's SLR Action Plan via Key Actions 1.7, 1.12, and 1.13, which call for the development of a Beach Resiliency Plan and further research into the implication of SLR on our beaches and coastal habitats. The proposed project will complete a large-scale study to achieve the following stepwise outcomes:

- An update to the USGS's Coastal Storm Modeling System to better predict beach response to sea level rise and storms over the 21st century by coupling beach response to a cliff retreat model.
- An assessment of the ecological and biological dimensions and vulnerability of sandy beach and rocky intertidal areas. Rocky intertidal areas will focus specifically on the habitat/biodiversity value of tidepools, and their vulnerability to the impacts of SLR.
- An assessment of the human dimensions of sandy beach environments, including public visitation, access, and recreation data, social and climate equity, cultural and tribal significance, and economic values.
- County-by-county snapshots of vulnerable beaches, regional beach characteristics such as sand source, development, and recreation, geophysical and ecological trends, and trends in beach use and access.
- The development of a decision framework and evaluation support tool to help guide local governments and communities through their beach vulnerability assessment and adaptation strategy.
- Based on findings from the above components, develop recommendations to inform a statewide strategy with next steps that may include policy tools, best practices for implementation, and funding and legal mechanisms to address beach resiliency and adaptation.

The California Beach Resiliency Plan will provide technical support to local and regional governments to prepare for SLR by identifying their community's vulnerable beaches and prioritizing which adaptation actions to implement. For example, a community will start by identifying their local beaches' response to the impacts of SLR, then layer local considerations for habitat, biodiversity, beach use, and access to evaluate available SLR adaptation strategies. Finally, a community will use the Plan's decision framework to determine adaptation strategies, whether they are nature-based adaptation interventions, realignment and access improvements, or allowing the beach to erode naturally. This will directly support OPC's goal to fund the development and implementation of coastwide SLR adaptation plans, consistent with Senate Bill 1 (Chapter 236, Statutes of 2021).

Equity and Environmental Justice Considerations:

Beaches are a unique habitat and valued community resource that should offer equal access for environmental justice communities and underserved populations. These ecosystems serve as a climate refuge and a low-cost access to nature and offer a sense of identity for a diverse and broad range of Californians.

The proposed project would include a robust assessment of how beaches are used and accessed by environmental justice communities statewide. This assessment will analyze various data sources including State Parks visitation logs, community vulnerability assessments, and existing beach use and visitation surveys. The findings will be used to ensure beach access and equity are included in local and community-led beach prioritizations and adaptation investment strategies.

About the Grantee:

UCSB is an R1 research university and houses the Ocean and Coastal Policy Center (OCPC). The OCPC works at the intersection of coastal stewardship, governance, and justice, with research experience in adaptation planning, governance, and resilience for all of California's coast. The principal investigator of this project, Dr. Charles Lester, serves as the Director of the OCPC, as well as the former director of the California Coastal Commission (2011-2016). He holds a Ph.D. and J.D. from UC Berkeley, and a B.A. in Geochemistry from Columbia University.

Project Timeline:

The project will begin in April 2024 and complete in March 2027.

Project Financing:

Staff recommends that the Ocean Protection Council (OPC) authorize encumbrance of up to $2,100,000 to University of California Santa Barbara to develop the California Beach Resiliency Plan.

California Ocean Protection Council	$2,100,000
TOTAL	**$2,100,000**

The anticipated source of funds will be from the Budget Act of 2022, which included a $50 million General Fund appropriation to OPC for grants or expenditures for the purpose of preserving and

conserving California's coasts and oceans for human and natural communities. This project addresses the resiliency of coastal communities by addressing the vulnerability of beaches and identifying science-based methods to inform and address beach resilience.

Consistency with California Ocean Protection Act:

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

- Eliminate or reduce threats to coastal and ocean ecosystems, habitats, and species.
- Allow for increased public access to, and enjoyment of, ocean and coastal resources, consistent with sustainable, long-term protection and conservation of those resources.
- 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.
- Protect, conserve, and restore coastal waters and ocean ecosystems.
- 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 proposed project is not a 'legal project' 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 it were determined to be a 'legal project' under CEQA, the proposed project is 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. If this were to occur, OPC staff would file a Notice of Exemption.