COASTAL CONSERVANCY

Staff Recommendation
November 21, 2024

UNIVERSITY OF CALIFORNIA SANTA BARBARA SHORELINE ADAPTATION PLANNING PROJECT

Project No.24-052-01
Project Manager: Rachel Couch

RECOMMENDED ACTION: Authorization to disburse up to $1,000,000 to the Regents of the University of California, Santa Barbara to conduct community engagement and prepare technical studies, actionable sea level rise adaptation pathway plans, and preliminary designs for the Campus Lagoon and Lagoon Road shoreline areas of campus in Santa Barbara County.

LOCATION: Goleta, Santa Barbara County.

EXHIBITS

Exhibit 1: Project Location Map

Exhibit 2: Project Photos

Exhibit 3: Project Letters

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed one million dollars ($1,000,000) to the Regents of the University of California, Santa Barbara ("the grantee") to conduct community engagement and prepare technical studies, actionable sea level rise adaptation pathway plans, and preliminary designs for the Campus Lagoon and Lagoon Road shoreline areas of campus in Santa Barbara County ("the project").

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following:

1. A detailed work program, schedule, and budget.
2. Names and qualifications of any contractors to be retained in carrying out the project.

Findings:

Based on the accompanying staff recommendation and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 31113 of Division 21 of the Public Resources Code, regarding impacts and potential impacts of climate on resources within the Conservancy's jurisdiction.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends the Conservancy authorize a $1,000,000 grant to the Regents of the University of California, Santa Barbara ("UCSB") to implement the UCSB Shoreline Adaptation Planning Project ("the project"). The project consists of: (1) conducting community engagement; and (2) preparing technical studies, sea level rise adaptation pathway plans, and preliminary designs for the Campus Lagoon and Lagoon Road shoreline areas of campus in Santa Barbara County (Exhibit 1). The sea level rise adaptation pathway plans will identify specific projects as well as environmental changes or "triggers" that prompt future adaptation actions over several decades. Preliminary designs will be prepared for near-term projects identified in the pathway plans. The primary goal of the project is facilitation of future adaptation to protect university functions, infrastructure, beaches, coastal access, habitats, and cultural resources while allowing natural shoreline erosion to continue without seawalls or other hard shoreline protection interventions.

The project area spans approximately 1.5 miles of the south and east shoreline of the main UCSB campus (see Exhibit 2). The area is highly vulnerable to coastal erosion and flooding that will be accelerated with sea level rise. Already, bluff erosion rates exceed a half foot per year. The project area includes campus infrastructure as well as a well-used segment of the California Coastal Trail (CCT), the beach, and visitor-serving amenities. There are several "hotspot" locations within the project area where natural and built resources are currently vulnerable to collapse or damage at any time, depending on the severity of annual winter storms and El Niño climate cycles.

UCSB's Sea Level Rise Adaptation Strategy ("Strategy") was approved by the Coastal Commission on August 9, 2024, and subsequently incorporated into the UCSB Long Range Development Plan. The Strategy identifies various sea level rise vulnerabilities out to the year 2100 and recommends development of specific, incremental, and actionable adaptation pathways and projects to address these risks. This approach will help avoid unplanned emergency measures, proactively assure the continuance of the campus educational mission, and maximize protection of natural resources and public access amenities through systematic relocation of infrastructure and other development as well as restoration of the shoreline.

The project will develop two adaptation pathway plans. One will consider the evolution of Campus Lagoon and the other will look specifically at the resources along Lagoon Road. For

both plans, UCSB will conduct technical studies and engage tribes and the local community, including students, faculty, and the administration to develop preferred adaptation pathways for each project area. The technical studies prepared in tandem with the tribal and community engagement will inform the development of adaptation projects. The pathways will consider short- and long-term actions to address climate-driven beach and cliff erosion, flooding, wave run-up, and storm surge exacerbated by sea level rise. Projects identified through this process will be refined and preliminary designs will be developed to address areas that face imminent threat from bluff erosion and shoreline change.

The first interconnected adaptation pathway plan, considering the evolution Campus Lagoon, will identify the timing and sequencing of specific living shoreline adaptation actions to begin transitioning the Campus Lagoon from a closed, perched lagoon to a tidally-influenced system as sea level rises. This will include adapting, protecting, and restoring lagoon and surrounding habitats, the CCT and other public access trails, and cultural resources. Adaptations will include nature-based interventions, such as native bluff restoration, and may include bridges or elevated boardwalks to maintain public access. The technical studies will evaluate lagoon baseline conditions and model shoreline evolution, including changes in hydrologic processes that will control water levels and lagoon mouth opening and closing. A Lagoon Management Plan was incorporated into the UCSB Long Range Development Plan in 1999 and amended in 2010 to include habitat restoration opportunities. Once the pathway plan is complete, UCSB intends to amend the Campus Lagoon Management Plan to incorporate the new plan.

The second interconnected adaptation pathway plan will evaluate options to realign, relocate, and redevelop, as necessary, road and pedestrian access, including the CCT, subsurface infrastructure, and educational, research, and residential buildings along Lagoon Road, between the main Campus gate and the Campus Lagoon. Technical studies will include: an assessment of development along Lagoon Road and the possibilities for redevelopment or incremental retreat; a beach adaptation assessment; and a transportation/circulation assessment to better understand and anticipate the needs of the campus circulation system as the corridor adapts to shoreline erosion. The plan will have a menu of adaptation “moves” identified for implementation based on relevant triggers tied to monitoring bluff conditions. The most important project components will be an assessment and identification of preferred action for the immediately vulnerable development at the Anacapa Hall “pinch point.”

Site Description: UC Santa Barbara is located on a coastal mesa in the southern portion of California’s central coast area in Santa Barbara County. The university supports more than 25,000 students and another 5,000 faculty and staff and associated infrastructure and includes more than 350 acres of restored native habitats. The campus is surrounded by the ocean and tidal and non-tidal wetlands. Although much of the campus is elevated and away from the shoreline, it is vulnerable to climate change-driven sea level rise and associated bluff erosion, sudden beach berm breaching, and flooding in multiple locations. Campus assets at risk include the CCT and access amenities along the ocean-edge, sandy beach areas, coastal wetlands, cultural and tribal resources, roads and utility infrastructure, and residential, research, and educational facilities. The project’s shoreline adaptation planning focuses on two shoreline areas of campus in southern Santa Barbara County: (1) Campus Lagoon; and (2) Lagoon Road.

Campus Lagoon: The Campus Lagoon is approximately 31 acres located on the southern tip of the UCSB campus. It includes approximately 0.8 miles of open ocean shoreline and 1.6 miles of interior lagoon shoreline. The lagoon's water level is maintained with two weirs. The western "overflow" weir is located on the beach separating the upland interior of the lagoon ("Lagoon Island") from the mesa that includes Manzanita Village. The eastern weir is located north of Campus Point near the pump house for the campus seawater system. The lagoon receives both run-off and pumped in sea water. The Campus Lagoon began to convert to a perched lagoon when a berm for the western weir was constructed.

The outer shoreline of Campus Lagoon includes Depressions Beach, an approximate half-mile section that includes both bluff-backed sandy beach and two smaller dune-backed sections, and ranges in width from 20 to 50 meters. The mesa along Depressions Beach has a nearly vertical ocean-fronting bluff face, and steep vegetated slopes descending into the lagoon. Manzanita Village, which houses 1,100 undergraduate students, is located on the mesa adjacent to Isla Vista. A series of public trails traverse and connect the mesa to the lagoon. Campus Point Beach is a short, north-south trending beach segment. Though it is also generally a bluff-backed beach, the toe of the bluff is armored with an approximate 540 foot-long boulder revetment wrapping around the point. At the lagoon mouth, there is an artificial berm with public access on top. The eastern weir drains through pipes that run under the berm.

Lagoon Road: Lagoon Road is on the eastern edge of Main Campus, running northerly about 0.8 miles from the downcoast edge at the Campus Lagoon mouth to the western edge of Goleta Beach Park). Educational buildings and infrastructure along the Lagoon Road shoreline include the Marine Biotechnology Buildings on the ocean side of Lagoon Road; East Bluffs and beach; Lagoon Road, Steck Circle, and the southern portion of Highway 217; Sewer Pump Station #529; and other residential and academic buildings, parking and other infrastructure along this corridor. Similar to the Lagoon shoreline, the blufftop along Lagoon Road is also a significant public access corridor, and includes a popular blufftop trail, scenic views, and a major public access parking area with a stairway down to the beach in the vicinity of Anacapa Hall.

The Marine Biotech buildings sit on a 20-35 foot high terrace, which is protected by approximately 550 linear feet of riprap. To the north of the Marine Biotech facilities and rip-rap, the East Bluffs marine terrace gently rises from around 30 feet above sea level to approximately 45 feet at Steck Circle. The beach along the East Bluffs is narrow, typically ranging in width from 0 to 30 meters. Historically, the beach width has changed rapidly as a result of a large storm or months of sand build-up. Utilities serving the entire campus are also located within and on both sides of Lagoon Road.

Grant Applicant Qualifications: The proposed project will be managed by UCSB Campus Planning and Design with supporting co-direction from Charles Lester, Director of the Ocean and Coastal Policy Center (OCPC) at UCSB, and Lisa Stratton, Director of Ecosystem Management at the UCSB Cheadle Center for Biodiversity and Ecological Restoration (Cheadle Center). The project will be supported by campus planning staff, as well as technical consulting teams specializing in coastal engineering, hydrology, environmental restoration, and transportation and circulation planning. The project also will be supported by UCSB faculty and research staff and a science advising group. UCSB has a long track record for leading complex

planning projects to address complex natural resource and land use issues. Campus Planning and Design has managed and implemented multiple campus planning and development projects totaling many tens of millions of dollars over the past 10 years. OCPC is currently managing two California Ocean Protection Council sea level rise planning grants and The Cheadle Center recently managed the $18 million North Campus Open Space (Upper Devereux Slough) Wetland Restoration Project, which included significant Conservancy funding.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on September 23, 2021, in the following respects:

Selection Criteria

1. **Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.**

See the "Consistency with Conservancy's Strategic Plan" section below.

2. **Project is a good investment of state resources.**

The project is a valuable investment of state resources because it will advance adaptation planning for the UCSB coastline, building resilience of campus functions, infrastructure, beaches, coastal access, habitats, and cultural resources while allowing natural shoreline erosion to continue without seawalls or other hard shoreline protection interventions. The project builds off the UCSB Sea Level Rise Adaptation Strategy to create projects and triggers for future adaptation actions to help UCSB strategically relocate facilities and infrastructure and avoid catastrophic losses as the shoreline evolves in response to climate change. Under the leadership of OCPC and the Cheadle Center, UCSB will engage the faculty and technical consultants to incorporate best available scientific analyses and practices. In addition, the project will benefit the Isla Vista community that borders the project site and is identified as a severely disadvantaged community.

3. **Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.**

The project includes tribal engagement and consultation, including asking tribes to provide advice on recognition and protection of cultural heritage and resources. Tribes will be invited to participate in all project phases to ensure tribal and cultural resource perspectives and solutions are integrated into adaptation actions considered in the planning effort. This may include identification of specific locations and protocols for addressing potential cultural resources encountered through ground disturbance and redevelopment, opportunities to use campus shoreline and bluff areas to promote and enhance cultural awareness and practices, and consideration of additional engagement processes and methods for future adaptation plan implementation.

4. Project benefits will be sustainable or resilient over the project lifespan.

The primary goal of the project is facilitation of future adaptation of the UCSB coastline to promote resiliency as coastal habitats evolve in response to sea level rise while ensuring the university continues to function and the public can access the coast. The project will result in preliminary design plans for specific adaptation interventions, which will be designed to be sustainable and provide on-going coastal resiliency to the effects of sea level rise to 2050. For example, the campus lagoon resiliency adaptation strategy will provide for phased transition of the lagoon from a closed to open-ocean system while providing for habitat transitions and enhancements that work with the anticipated gradual decadal changes in hydrology driven by sea level rise and precipitation patterns. Similarly, CCT and Lagoon Road realignment strategies will provide for cost-effective "moves" of key resources and infrastructure over time in response to on-going and accelerating bluff erosion. This approach seeks to avoid the need for development of shoreline armoring and facilitate more natural evolution and persistence of campus beaches.

5. Project delivers multiple benefits and significant positive impact.

The project will achieve multiple benefits through the main goal of increasing UCSB's resilience to future climate change stressors like sea level rise. Preparation of the actionable pathway plans will facilitate UCSB's ability to continue to fulfill its education and research functions, provide housing for students, maintain public access through the campus and to the shoreline, while also supporting the transition of Campus Lagoon to a tidal system and maintaining sandy beaches along the campus for several more decades. Isla Vista, just to the west of campus, is a low-income community that will benefit from these efforts in addition to the UCSB students and faculty.

6. Project planned with meaningful community engagement and broad community support.

The proposed project will involve UCSB's student, faculty, and staff as well as the surrounding communities in the development of the pathway plans. This will include multiple and iterative public engagement meetings through which specific adaptation intervention alternatives will be considered and refined. There will also be opportunities for regular participation in sessions about the vision for UCSB's shoreline, anticipated sea level rise effects, and vulnerabilities of campus resources, and alternatives for adaptation interventions over time. These sessions will be designed to build on each other, completing an arc of adaptation pathway development over the two-year project timeline. In addition to engagement meetings, opportunities for leveraging environmental studies class sessions and social media may be developed to deepen the engagement of the student population in the shoreline adaptation challenge. Engagement will also leverage on-going academic and administrative committee work on campus, including facilities planning and management in shoreline areas.

PROJECT FINANCING

Coastal Conservancy	**$1,000,000**
Project Total	**$1,000,000**

Conservancy funding for the proposed project is anticipated to come from a Fiscal Year 2023-24 appropriation from the General Fund to the Conservancy for "urgent sea level rise adaptation and coastal resilience" (Budget Act of 2023, Chapter 12, Statutes of 2023 (SB 101) as amended by Chapter 38, Statutes of 2023 (AB 102)). The coastal resilience funds are available as described in Section 52 of Chapter 258 of the Statutes of 2021, which sets forth a detailed description of the purposes of the coastal resilience funds, including for coastal resilience projects that build resilience for coastal communities, public access, and critical infrastructure. The project will advance adaptation planning for the UCSB coastline with the specific aim of building resilience of the campus facilities and functions, public access, cultural resources, critical infrastructure, and coastal habitat.

UCSB will provide approximately $105,000 of in-kind work by staff at the Cheadle Center, UCSB Budget and Planning, and UCSB Facilities Management.

Unless specifically identified as "Required Match," the other sources of funding and in-kind contributions described above are estimates. The Conservancy does not typically require matching funds or in-kind services, nor does it require documentation of expenditures from other funders or of in-kind services. Typical grant conditions require grantees to provide any funds needed to complete a project.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The project is consistent with Section 31113 of Chapter 3 of Division 21 of the Public Resources Code, which establishes the Climate Ready Program and authorizes the Conservancy to address the impacts and potential impacts of climate change on resources within the Conservancy's jurisdiction.

Pursuant to Section 31113(b)-(c), the Conservancy is authorized to award grants to public agencies to undertake projects within the Conservancy's jurisdiction, "including, but not limited to, those that reduce greenhouse gas emissions, address extreme weather events, sea level rise, storm surge, beach and bluff erosion, salt water intrusion, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources."

Pursuant to Section 31113(c)(1)-(2), the Conservancy must, to the extent allowed, prioritize projects that maximize public benefits and accomplish certain purposes, including reducing emissions of greenhouse gases, preserving and enhancing coastal wetlands and natural lands, providing recreational opportunities, reducing flood risk, and/or enhancing fish and wildlife habitat.

Section 31113(d)(1) requires the Conservancy to prioritize projects that use natural infrastructure to help coastal communities adapt to climate change and projects that provide multiple public benefits, including, but not limited to, protection of communities, natural resources, and recreational opportunities.

Consistent with these sections, the project will prepare adaptation pathway plans for two areas of the UCSB shoreline that will prioritize nature-based shoreline change strategies, including native bluff restoration and strategic relocation of campus facilities and infrastructure. The

plans will help reduce future impacts of sea level rise on coastal habitats, recreational features, and infrastructure and enhance coastal habitats and natural lands, where feasible.

CONSISTENCY WITH CONSERVANCY'S 2023-2027 STRATEGIC PLAN:

Consistent with **Goal 1.1 Commit Funding to Benefit Systemically Excluded Communities,** the project will improve climate resilience and recreational conditions for Isla Vista, which is identified as a severely disadvantaged community.

Consistent with **Goal 4.1 Sea Level Rise Adaptation Projects,** the project will prepare sea level rise adaptation plans for two areas along the UCSB coastline.

CEQA COMPLIANCE:

The proposed project is statutorily exempt from review under the California Environmental Quality Act (CEQA), pursuant to Section 15262 of Title 14 of the California Code of Regulations (CCR), which exempts planning and feasibility studies for possible future actions that have not yet been approved, adopted, or funded; and categorically exempt from review under CEQA, pursuant to Section 15306 of Title 14 of the CCR, which exempts basic data collection, research, experimental management, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. The project consists of preparing technical studies, actionable sea level rise adaptation pathway plans, and preliminary designs; and engaging the community to inform future projects. Thus, the project involves planning and feasibility studies for possible future actions that have not yet been approved or funded and basic data collection, research, and/or resource evaluation activities. Consistent with Sections 15262 and 15306, the project will consider environmental factors and not include activities that will result in a serious or major disturbance to an environmental resource.

Upon approval of the project, Conservancy staff will file a Notice of Exemption.