

COASTAL CONSERVANCY

Staff Recommendation  
December 1, 2022

**REGIONALLY ADVANCING LIVING SHORELINES IN SAN FRANCISCO BAY**

Project No. 22-082-01  
Project Manager: Marilyn Latta

**RECOMMENDED ACTION:** Authorization to disburse up to \$3,500,000 to the San Francisco Estuary Institute, Marin and Golden Gate Audubon Societies, Smithsonian Environmental Research Center, San Francisco State University, and additional contractors and grantees for monitoring of existing living shoreline projects, development of regional design and constructability guidance, preparation of permit applications, and preparation of preliminary site designs as part of the Regionally Advancing Living Shorelines in San Francisco Bay Project at ten locations in the Central Bay in San Francisco, Alameda, Contra Costa, and Marin counties.

**LOCATION:** Ten locations in the Central San Francisco Bay (Counties of San Francisco, Alameda, Contra Costa, and Marin)

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EXHIBITS

- Exhibit 1: [Project Location Map](#)
  - Exhibit 2: [Project Area Map](#)
  - Exhibit 3: [San Francisco Bay Restoration Authority June 22, 2022 Staff Recommendation](#)
  - Exhibit 4: [Project Letters](#)
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**RESOLUTION AND FINDINGS**

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

Resolution:

The State Coastal Conservancy (the "Conservancy") hereby authorizes the disbursement of up to three million five hundred thousand dollars (\$3,500,000) to the San Francisco Estuary Institute, Marin and Golden Gate Audubon Societies, Smithsonian Environmental Research Center, San Francisco State University, and additional contractors and grantees (the

“Grantees”) for part of the Regionally Advancing Living Shorelines Project in San Francisco Bay (the “project”), including monitoring of existing living shoreline projects, development of regional design and constructability guidance, preparation of permit applications, and preparation of preliminary site designs at ten locations in the Central Bay in San Francisco, Alameda, Contra Costa, and Marin counties.

Prior to commencement of any project component, the Grantee for that project component 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 component.
3. A plan for acknowledgement of Conservancy funding.

Findings:

Based on the accompanying staff report and attached exhibits, the Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, regarding the San Francisco Bay Area Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.

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**STAFF RECOMMENDATION**

**PROJECT SUMMARY:**

Staff recommends the State Coastal Conservancy (the “Conservancy”) authorize disbursement of up to \$3,500,000 to the San Francisco Estuary Institute (SFEI), Marin and Golden Gate Audubon Societies, Smithsonian Environmental Research Center, San Francisco State University, and additional contractors and grantees (the “Grantees”) for part of the Regionally Advancing Living Shorelines Project in San Francisco Bay (the “project”), including monitoring of existing living shoreline projects, development of regional design and constructability guidance, preparation of permit applications, and preparation of preliminary site designs at ten locations in the Central Bay in San Francisco, Alameda, Contra Costa and Marin counties. (Exhibit 1).

The goal of the project is to plan and permit ten new living shoreline climate adaptation projects (“living shoreline projects”) in a collaborative, programmatic manner to increase efficiency and serve as a model for other living shorelines projects. The recommended authorization is to fund four of the project’s components: (1) monitoring of existing living shorelines pilot projects to inform design of future living shoreline projects, (2) development of Regional Design and Constructability Guidance, (3) preparation of permit applications, and (4) preparation of preliminary site designs at ten sites. Portions of the project components are anticipated to be funded from other funding partners (\$500K grant from the San Francisco Bay

Restoration Authority secured by SFEI in June 2022; and applications pending to National Fish and Wildlife Foundation and to the US Environmental Protection Agency).

**Background and Need**

The locations of the ten living shoreline projects are in three heavily urbanized reaches of the Central Bay shoreline (San Francisco, Sausalito to San Rafael, and Hayward to Albany). The areas include a mix of both highly modified areas of anthropogenic fill and natural shoreline conditions including tidal marshes and mudflats, coarse grain sand and gravel beaches, and rocky intertidal areas that extend down into the submerged nearshore aquatic habitats, which include shellfish, eelgrass, seaweed, and sand beds and other important fish and wildlife habitats. These shorelines are adjacent to underserved frontline communities that are currently impacted by coastal erosion, flooding, and storm events, and at high future risk from more severe flooding, sea level rise (SLR), and other coastal hazards.

This project will increase local awareness of and build capacity to develop new, innovative living shoreline projects. Regionally, climate risk assessments by the county are in process or have generally been completed, but specific adaptation plans and guidance on effective and sustainable nature-based adaptation methods haven't been substantially developed. There is substantial and growing support for nature-based adaptation approaches by the California Natural Resources Agency, San Francisco (SF) Bay Regional Water Quality Control Board, SF Bay Conservation and Development Commission, SF Bay Restoration Authority (SFBRA), SF Bay Joint Venture, and others. While the nature-based adaptation planning efforts completed by these partners to-date are important for setting policy direction, funding priorities, and institutional support and engagement, they don't provide sufficient detailed guidance on how to initiate and construct high quality living shoreline projects. Many of these early adaptation planning initiatives also don't include strong recommendations for local community input and engagement in co-creating designs and making sure projects consider locally specific community priorities and needs. This project seeks to advance these gaps through technical-to-community regional engagement and workforce development, site-specific design planning, and new resources and design guidance to advance regional uptake, support, and involvement in living shoreline project development.

This project is a priority for the Conservancy as it will advance nature-based climate adaptation and resilience planning in SF Bay, a key priority identified in the San Francisco Bay Subtidal Habitat Goals Report (SCC 2010), Baylands Goals Climate Change Update Report (SCC 2015), and San Francisco Bay Adaptation Atlas (SFEI 2018). The pace and scale of implementing nature-based adaptation are slow in many municipalities due to data gaps, lack of on-the-ground experience, and the complexity of permitting. The total number of living shorelines projects is still small compared to the East and Gulf Coasts, and Pacific Northwest regions. With increasing urgency to adapt to climate changes and sea level rise, there is a need to rapidly expand capacity, scale up efforts, and engage a wider network of community partners, municipalities, public and private landowners, and scientists and engineers. This capacity-building is critically needed to scale up from a limited research stage and integrate and normalize these nature-based restoration approaches within traditional master planning, sea level rise adaptation planning, and ongoing shoreline management by city, county, state, and

private landowners (Bay Adapt Platform 2021, National Wildlife Federation Living Shorelines Regulatory Review 2021, Restore America’s Estuaries Living Shorelines: From Barriers to Opportunities Report 2016).

Below are the five project components proposed for funding under this recommendation:

**Monitoring of existing living shoreline pilot sites to inform future designs**

The first project component to be funded through this Conservancy authorization is monitoring of five existing living shoreline pilot sites to inform designs of future living shoreline projects (Exhibit 1). Many baywide partners and landowners have been engaged in implementing the recommendations of the SF Bay Subtidal Habitat Goals Recommendations and Baylands Goals Climate Change Update Report through pilot living shorelines projects to test experimental nature-based approaches in different conditions in the bay from 2012-2022. These living shoreline projects have resulted in new data on previously untried local techniques, including native oyster reef restoration and various multi-habitat and multi-objective designs for living shorelines and nearshore habitats. The ongoing regional and statewide transfer of knowledge and coordination is critical to programmatically integrate the lessons learned and best practices to date and keep momentum going by seeding this information into additional high-quality site designs and in-the-water projects. This project component includes monitoring of physical changes to topography and bathymetry, wave attenuation, water quality, and biological monitoring of plant, invertebrate, and other wildlife response at five existing living shoreline pilot sites.

**Development of Regional Design and Constructability Guidance**

The second project component to be funded through this Conservancy authorization is development of the first-ever design and constructability guidance for living shorelines in San Francisco Bay through use of the monitoring data along with other regional living shoreline project data and lessons-learned. The guidance will reduce regulatory burdens and link lessons-learned and monitoring outcomes from the demonstration of living shoreline projects conducted to-date. This needed technical guidance is critical to expanding regional capacity to design and implement living shoreline projects, as the field is still in a research stage and there are no local or national standard engineering, ecological design, and constructability guidance documents. The goal for the project is to have local partners work with regional design teams to co-develop a suite of ten coordinated living shoreline projects as a set, that link with best available science and identified priority sites, and recommended actions in the regional and state plans referenced in the Project Selection Criteria section. The guidance will include several habitat methods, alone and in combination:

- Olympia oyster restoration
- Eelgrass bed plantings
- Sand and gravel beach restoration
- Invasive species removal
- Shoreline vegetation plantings (such as Pacific cordgrass, Pacific rockweed, wetland and dune species)
- High tide refuge marsh island construction
- Vertical hybrid green-grey seawall enhancements (“living seawalls”)

- Enhanced rock slope levees with plantings and other biological treatments (“green riprap”)
- Derelict creosote piling removal and artificial structure enhancement

The guidance will build upon the construction and monitoring data and lessons learned from pilot living shoreline projects to date, California’s 4<sup>th</sup> Climate Assessment Guidance for Natural Shore Infrastructure, and the SFEI Shoreline Adaptation Atlas as well as other design guidance documents. The guidance will cover hydraulics, geomorphology, biology, engineering, and implementation to provide support for design and construction of living shoreline projects. Regional and site-level monitoring data and available hydraulic studies will be used to develop a regionally informed concise set of management level design and constructability guidance for several distinct nature-based adaptation approaches in SF Bay. The guidance will summarize best design and monitoring practices, methods, materials, and approach; tide, logistical, seasonal, and equipment considerations; site specific community, landowner, and permitting pathway considerations; sensitive and endangered species considerations; and shoreline type, depth, physical and biological information that will be helpful for shoreline municipalities planning future projects.

#### **Preparation of Programmatic Permit Applications**

The third project component to be funded through this Conservancy authorization is preparation of programmatic permit applications for ten living shoreline projects in the San Francisco Bay. One of the biggest constraints to development of innovative nature-based adaptation living shoreline projects in San Francisco Bay is a lack of understanding about the permits and process required; and the complexity of state and federal permit mechanisms. Programmatic permit pathways can result in clearer submittal criteria and standardized permit conditions. Match funding from SFBRA will support initial planning for programmatic permit pathways to efficiently permit these future ten living shoreline projects as a suite of living shoreline projects in order to address conflicts between agency regulations and achieve higher quality and more efficient environmental consultations and regulatory permitting that covers all activities. This approach will advance permit consultations with six regulatory agencies (US Army Corps of Engineers, National Marine Fisheries Service, US Fish and Wildlife Service, SF Bay Regional Water Quality Control Board, California Department of Fish and Wildlife, and the SF Bay Conservation and Development Commission) for a cohesive set of living shoreline projects all at once, with the goal of reducing costs and expediting the permit process compared with doing so on a project-by-project basis. Funding from this Conservancy request will support the preparation of all permit applications per the confirmed programmatic and efficiency mechanisms. The project will coordinate with the Bay Restoration Regional Integration Team and other agencies to develop programmatic permit consultations on 30-60% restoration designs for ten living shoreline projects.

#### **Preparation of Preliminary Site Designs for Ten Living Shoreline Projects**

The fourth project component to be funded through this Conservancy authorization is the preparation of preliminary site designs for ten living shoreline projects in the San Francisco Bay. The project’s comprehensive four-county approach with multiple regional landowners,

community groups, natural resource agencies, and public works departments will provide larger direct community resilience benefits from the future green infrastructure. The project will also achieve beneficial environmental outcomes to fish and wildlife including oyster and mussel beds, eelgrass and algal beds, endangered and protected salmon, steelhead, sturgeon, herring, surfperch, and additional estuarine species and essential fish habitats. Working together as a cohesive regional collaboration will benefit the landowners and communities included in this project. The project will also generate new technical resources and permit pathways that will provide transferable models to additional local partners in San Francisco Bay and other estuaries statewide.

**Implementation of Living Shorelines Collaborative to share information with partners**

The fifth project component is to implement a Living Shorelines Collaborative forum to share information with the ten landowners in this proposal, design teams, and additional site landowners developing living shorelines projects in SF Bay. Funds from SFBRA to SFEI will support initial planning to establish a framework for collaboration through a Living Shorelines Collaborative. This work includes collaboratively informing other landowners, project proponents, community groups, and residents from frontline communities in the Central Bay regarding climate resilience planning for living shorelines, subtidal and intertidal habitats and species, protection measures, best design practices, lessons learned, and permit guidance. This will be accomplished by hosting informational meetings and technical workshops and sharing design and permitting resources in order to transfer knowledge from this project to other baywide municipalities and practitioners. Funding through the proposed Conservancy grant will expand on initial planning for this forum and allow the sharing of technical information, discuss design and permitting issues, identify opportunities to leverage synergies, and foster a stronger community of living shoreline partners.

**Site Description and Background:** This project uses a multi-site approach to collaboratively plan and permit a suite of living shoreline projects at once in order to support landowners and municipalities in developing experience and increasing engagement in designing and permitting living shoreline projects. Please see a short description below of the sites included in this project that spans four counties in three reaches of the Central Bay.

**San Francisco Shoreline (three living shoreline project sites)**

The Port of San Francisco (Port) has a varied shoreline, with natural and human-made features, including **Mission Creek to Islais Creek, Pier 94 wetlands, and Heron’s Head Park**. The Port has established a goal of improving habitat and designing future coastal flood defenses through Engineering with Nature, a US Army Corps of Engineers initiative to align engineering and natural processes to deliver multi-benefit solutions using nature-based approaches as a critical path toward climate adaptation. This Conservancy-funded living shoreline project will be a step forward for the Port to work with the project team and advance pilot nature-based living shoreline projects including living seawall demonstrations that will help to inform the full seawall replacement to be conducted in the 2030’s. The Conservancy has previously funded work at Heron’s Head through a US Fish and Wildlife Service National Coastal Wetlands Conservation grant, and this living shoreline project would expand into designs for additional complementary eelgrass restoration in the nearshore areas adjacent to the first living shoreline project. The Conservancy has funded beach and marsh restoration work at Pier 94, and this

living shoreline project would expand into additional complementary designs for oyster treatments in the adjacent nearshore areas.

**Marin County Shoreline (three project sites)**

The existing **San Rafael Living Shorelines pilot site**, led by the Conservancy, San Francisco State University, Smithsonian Environmental Research Center, and other partners including landowner The Nature Conservancy, is the first larger-scale demonstration site for oyster reefs and eelgrass restoration in a living shorelines approach, and has provided a model for living shoreline projects in Humboldt Bay, Newport Bay, San Diego Bay, and other areas of California and San Francisco Bay. The City of Sausalito manages **Dunphy Park** on the Sausalito shoreline, where recent terrestrial park and public access improvements link well with a vision for a connected extension into the bay with additional nearshore oyster and eelgrass restoration included in this proposal. California Department of Fish and Wildlife manages the **Corte Madera Marsh Ecological Reserve**, and the Estuary and Ocean Science Center and Marin County Public Works Department have developed promising early ideas for placement of coarse sediment to create marsh fringing beaches to protect the marsh from ongoing and significant marsh edge erosion and loss of tidal marsh habitat.

**Alameda and Contra Costa Counties, East Bay Shoreline (four project sites)**

The project includes landowners in the East Bay shoreline from Hayward to Albany, including East Bay Regional Park District, City of Berkeley, and City of Albany. Unique opportunities exist to develop broader transition zones due to several locations, including **Berkeley North Basin**, where development is some distance back from the existing shoreline margin. Other site opportunities along this shoreline include nearshore designs adjacent to a future new interchange at **Ashby Spit** on Highway 80, improvement of failing riprap north and south of **Point Isabel**, and subtidal and intertidal components to complement **Hayward Shoreline** climate adaptation planning. The site design planning in this proposal will be developed for these specific locations (Exhibit 1).

There are no known barriers to implementation and there is broad support for the project in these locations. While the exact habitat methods and locations at the ten sites are to be determined, the plan is to apply the design and constructability guidance to development of ten designs to 30-60% level under a collaborative and programmatic approach. A key goal is regional information sharing and transferability so that others can benefit from this work, through design guidance and permit pathways that will be helpful to current and future living shoreline projects and partners beyond the ten direct sites.

**Grant Applicant Qualifications:**

The project is a regional effort, estimated to cost \$6,000,000, led by the Conservancy and a network of diverse stakeholders including SFEI, Smithsonian Environmental Research Center, San Francisco State University's Estuary and Ocean Science Center, Port of San Francisco, Marin County Department of Public Works, Cities of Sausalito, Berkeley, Albany, and Emeryville, California Department of Fish and Wildlife, East Bay Regional Park District, Marin and Golden Gate Audubon Societies, Merkel & Associates, and additional landowners, agencies, and partners. The community and scientific partners, municipal and private landowners, and

resource agencies participating in this regional project have been engaged in pilot living shorelines projects to test experimental nature-based approaches in different conditions in the bay since 2012. There is a regional network of partners to raise awareness about sea level rise and co-design sustainable approaches to shoreline and aquatic habitat enhancement with multiple goals. These goals include shorelines protection, sea level rise adaptation, community education and involvement, and workforce development. The partners in this overall work and in this new proposed project have strong support and have demonstrated past success through pilot living shoreline projects, regional information sharing and reports, and published research. The partners engage multiple stakeholders in planning meetings, direct engagement through field work and technical skills training, and in-person and virtual forums to welcome input and share information. This includes substantial outreach efforts with presentations and media articles to engage more practitioners, planning and public works departments, and local municipalities as well as the broader Bay Area public in advancing nature-based adaptation principles.

**CONSISTENCY WITH CONSERVANCY’S PROJECT SELECTION CRITERIA & GUIDELINES:**

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

**Required 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.**

This project is a good investment of state resources because it builds on and leverages prior state-funded work with living shorelines pilot project development in Marin, San Francisco, Alameda, and Contra Costa counties. The project is meeting a major need in extending the lessons learned and best practices from pilot living shoreline designs into additional future site designs with new regional municipal and community partners. It will also further develop and assess nature-based shoreline adaptation designs to address SLR that increase resilience and have strong community input and engagement.

The project is feasible, and the budget is reasonable, considering the strong focus on technical guidance and site design planning and the necessary resources and paid involvement with local community partners. The project leverages non-state resources from the SFBRA grant, potential future grants from National Fish and Wildlife Foundation and US EPA, and the in-kind contributions of non-profit and public agency staff.

In addition, this project helps to advance the planning and protection of natural resources and shorelines in San Francisco Bay, will provide a model for sea level rise adaptation, living shoreline designs, and community engagement.



**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 public agency and community partners will include efforts to communicate, consult, or engage with tribes who are traditionally and culturally affiliated to the project areas as early as possible in project development. Conservancy staff have sent initial introductory letters about this project to several tribes, and the core project team led by SFEI will invite each of these tribes to meet individually and join in the Living Shorelines Collaborative and feedback meetings as part of the general information sharing on living shorelines and in the site-specific design development process.

The Conservancy and partners will respect tribal knowledge and concerns in the project. Any materials about the project will include tribal land acknowledgement and accurate historical information in signage, communications, and other project information.

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

Living shorelines, by definition, aim to address and adapt to increasing sea level rise rates by restoring natural shoreline habitats and processes. This planning project will use best available sea level rise projections from NOAA's SLR Guidance (2021), Ocean Protection Council SLR Guidance (2018, updated 2020), SF Bay Conservation and Development Commission's Joint Platform (2021), the 4<sup>th</sup> CA Climate Assessment (2017), County Sea Level Rise Vulnerability Assessments, and other sea level rise and climate change guidance documents. The adaptation methods, specific design considerations, and expected benefits will be described within the framing of these sea level rise scenarios and recommended best practices for nature-based climate adaptation designs.

**5. Project delivers multiple benefits and significant positive impact.**

Living shorelines have resulted in documented physical and biological benefits in San Francisco Bay. They can provide habitat for a variety of native species including invertebrates, fish, algae, plants, birds, and other wildlife. In terms of physical benefits, they can address erosion issues by dampening wave energy and allowing for natural sediment accretion. The four project components to be funded by this authorization (pilot site monitoring, preparation of technical guidance, programmatic permit applications, and preliminary site designs) are necessary elements of the project, which will be completed with anticipated match funding to result in ten site-specific designs. This work will leverage with additional match funded work to result in ten new site-based living shoreline projects that demonstrate best techniques through the use of established best available scientific knowledge; implement recommendations in adopted regional and local plans and relevant studies; and will provide the greatest potential benefits to the Bay ecosystem. More specifically, the ten living shoreline projects will be designed to provide co-benefits, including, but not limited to, improved flood protection, public access, local workforce development, local job training in green infrastructure, potential beneficial reuse of dredged material, and carbon sequestration.

**PROJECT FINANCING**

<b>Coastal Conservancy</b>	<b>\$3,500,000</b>
SF Bay Restoration Authority Grant	\$500,000
National Fish and Wildlife Foundation (proposed)	\$1,000,000
US Environmental Protection Agency (proposed)	\$1,500,000
<b>Project Total</b>	<b>\$6,500,000</b>

The above table shows the estimated total cost of the project. The five project components to be funded with the recommended authorization are estimated to cost \$6,000,000, with the Conservancy contributing \$3,500,000 and the San Francisco Bay Restoration Authority contributing \$500,000; and the balance to be supported if the National Fish and Wildlife Foundation and US EPA pending grant proposals are awarded.

Conservancy funds are anticipated to come from Fiscal Year 2022/23 appropriation from the General Fund to the Conservancy for the purpose of climate resilience. (The Budget Act of 2022, SB 154.) The proposed project is consistent with this funding source because it is a Climate Ready project that will help design and permit ten living shoreline projects in SF Bay to protect people and the natural and built environments from rising sea levels.

At its June 24, 2022 meeting, the SFBRA authorized a grant of \$500,000 for the project (Exhibit 3). The Conservancy has also submitted two pending grant proposals including \$1,000,000 request to the National Fish and Wildlife Foundation’s National Coastal Resilience Fund, and \$1,500,000 request to the US EPA’s SF Bay Water Quality Improvement Fund. In addition, the City and County staff on the core project team will provide \$150,000 in in-kind match. 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, nor does it require documentation of expenditures from other funders. Typical grant conditions require grantees to provide any funds needed to complete the project.

**CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:**

Section 31113 of Chapter 3 of Division 21 of the Public Resources Code authorizes the Conservancy to address the impacts and potential impacts of climate change on resources within the Conservancy’s jurisdiction (Section 31113(a)). The recommended project will address resources within the Conservancy’s jurisdiction because it will address living shoreline projects to be undertaken within four of the nine counties of the San Francisco Bay Area (Chapter 4.5 of Division 21 of the Public Resources Code).

Section 31113 authorizes the Conservancy to undertake, and award grants to nonprofit organizations and public agencies for, projects that reduce greenhouse gas emissions and

address extreme weather events, sea level rise, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.

Section 31113(c) states that the Conservancy must prioritize grants for projects that maximize public benefits and have one of several purposes, including reducing emissions of greenhouse gases and preserving and enhancing natural lands. Section 31113(d) directs the Conservancy to prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change.

Consistent with this section, the project advances planning for ten living shorelines projects that will address sea level rise, flooding, and other impacts of climate change through natural infrastructure. The project maximizes public benefits (see the discussions of investment of State resources, and multiple public benefits in the “Project Selection Criteria” section above) and will help preserve and enhance natural resources of San Francisco Bay using natural infrastructure to help bay front communities adapt to climate change.

**CONSISTENCY WITH CONSERVANCY’S [2018-2022 STRATEGIC PLAN](#) GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 8, Objective B**, the project will plan for projects to increase resilience to sea level rise or other climate change impacts using nature-based solutions.

Consistent with **Goal 12, Objective C**, the project will plan for enhancement of shoreline and subtidal habitats.

**CEQA COMPLIANCE:**

The proposed authorization is statutorily and categorically exempt from review under CEQA pursuant to CEQA Guidelines (14 California Code of Regulations) Sections 15262 and 15306, which exempt projects that involve feasibility and planning studies for possible future actions that have not yet been approved; and basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. The project qualifies for this exemption because it is a planning project consisting of basic data collection (monitoring of existing pilot living shoreline projects), planning for programmatic permitting and collaboration, and preparation of designs and permit applications. Not only is this project exempt, the living shoreline projects to be designed through this project will have a net positive effect on subtidal and intertidal areas of the bay through the monitoring and design of habitats that support multiple species of invertebrates, fish, and wildlife; act as a nursery for spawning and rearing of aquatic species; and help to stabilize sediments, reduce wave action, and protect critical wetland sites that have already been identified as regionally important.

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