

COASTAL CONSERVANCY

Staff Recommendation
May 5, 2022

Heron's Head Park Shoreline Resilience Project

Project No. 22-011-01
Project Manager: Erica Johnson

RECOMMENDED ACTION: Authorization to disburse up to \$987,000 to the Port of San Francisco, to be reimbursed by the U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program, for wetland enhancement and nature-based shoreline stabilization of Heron's Head Park in the City and County of San Francisco.

LOCATION: Heron's Head Park, City and County of San Francisco

EXHIBITS

- Exhibit 1: [Project Location Map](#)
Exhibit 2: [Project Elements Map](#)
Exhibit 3: [Letters of Financial Commitment](#)
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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 hereby authorizes a grant of an amount not to exceed nine hundred and eighty-seven thousand dollars (\$987,000) to the Port of San Francisco ("the grantee"), to be reimbursed by the U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program, to enhance wetland habitat and stabilize the existing shoreline through nature-based solutions at Heron's Head Park.

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.
3. A plan for acknowledgement of Conservancy funding.

4. Evidence that all permits and approvals required to implement the project have been obtained.

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 4.5 of Division 21 of the Public Resources Code, regarding the resource goals of the San Francisco Bay Area Conservancy 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 Conservancy authorize a grant of up to \$987,000, to be reimbursed by the U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program, to the Port of San Francisco (Port) to enhance wetland habitat and stabilize the existing shoreline through nature-based solutions at Heron's Head Park. The park has one of few wetlands on the San Francisco shoreline and it contains a mosaic of shoreline habitats, including tidal marsh, mudflats, tidal ponds, rocky intertidal habitat, and various subtidal habitats (Exhibit 1). Together these shoreline habitats support over 200 resident and migratory birds, several state listed special status species (such as the North American green sturgeon, steelhead, Chinook salmon, and longfin smelt), and federally listed endangered species (Ridgway's rail and California seablite). The combination of wave energy and low supply of suspended sediment from the San Francisco Bay is causing the shoreline and tidal pool edges to erode. The shoreline is estimated to have retreated 50 feet since 1998 and one tidal pond is consistently flooded instead of tidally flushed. The project will restore and enhance the ecological function of existing shoreline habitats and reinforce the shoreline of the park (Exhibit 2) using nature-based solutions to prevent loss of habitat to erosion and sea level rise through 2050.

The proposed project consists of the following:

- 1) Coarse material beach: 2 acres of dynamic coarse material beach will be constructed along the existing tidal salt marsh using coarse sand and gravel stabilized by rock and cobble groynes to conserve wetland area and reduce erosion.
- 2) Living shoreline: 1,600 linear feet of living shoreline will be constructed by placing large woody debris within the intertidal beach to provide high tide refuge for Ridgway's rail and other shoreline birds.
- 3) Vegetation management: Invasive plants will be removed from 7 acres of wetland habitat, and 1.2 acres of wetland habitat will be enhanced with 47,000 native plants

(including the endangered California seablite) to improve habitat quality and adaptation to sea level rise.

- 4) Subtidal reef balls: reef balls are an artificial structure that provides hard substrate in various subtidal habitats to support settlement of oyster and fish larvae. 60 reef balls will be placed in the subtidal area near the rock groynes. Once established, the reef balls and oysters will protect the shoreline by reducing the wave energy reaching it.
- 5) Community engagement:
 - a. The grantee and project partners will engage the surrounding communities in wetland habitat restoration to develop awareness of and support for coastal wetland conservation by planning workshops for regularly scheduled community meetings, hosting stewardship days in the park, and providing internships for residents of the communities (see "Selection Criteria" #4 for more information).
 - b. The grantee will communicate with local agencies, academic institutions, and other interested stakeholders about the project to contribute to the developing science and practice of using nature-based solutions for wetland habitat conservation and shoreline protection.

Site Description:

Heron's Head Park is owned and managed by the grantee. It is a 21.5-acre open space located on a peninsula extending out into the San Francisco Bay from the eastern shoreline of San Francisco. The project area includes about 13.5 acres of shoreline habitat (approximately 9 acres of various wetland habitat and 4.5 acres of various subtidal habitat).

The project area is located along a highly urbanized waterfront, adjacent to the Bayview and Hunters Point neighborhoods. From the early 1900's to early 2000's, the shoreline experienced heavy industrial development, such as the establishment and operation of slaughterhouses, shipyards, and powerplants. The residents of the Bayview and Hunters Point communities have suffered from the impacts of industrial pollution and racial and class discrimination. The community remains one of the most economically disadvantaged in San Francisco but has a long history of community advocacy for environmental justice and access to green space. This park provides access to the San Francisco Bay Trail, an environmental education facility, wildlife, and one of the few wetlands in the city.

The park was a result of the partial construction of Pier 98 in the 1970's that was never completed. In 1998 the Port restored the area back to a wetland and expanded and enhanced the wetland area to include the variety of habitats listed in the "Project Summary" section above. The Port also enhanced the adjacent upland habitat by planting of upland transition zone vegetation, constructing a portion of San Francisco Bay Trail, and constructing an environmental education center. Since the park and wetland habitat were created, erosion and lack of suspended sediment have caused a loss of habitat and ecological function of the area, also outlined in the "Project Summary" section above.

Grant Applicant Qualifications:

The Port manages 7.5 miles of waterfront in San Francisco and is charged with managing its property consistent with the public trust, including protecting natural resources. The Port will hold title to the project site in perpetuity and be responsible for managing the restored habitat through the anticipated 30-year life of the project improvements. They have overseen the previous work described above (1998) to expand and enhance the wetland habitat as well as the upland open space areas at the park. In July of 2020, the Port received a grant from the San Francisco Bay Restoration Authority to begin the vegetation management portion of the project with a well-established community group called Literacy for Environmental Justice. The vegetation management of their project included workforce development for Bayview and Hunters Point residents, invasive Algerian sea lavender removal, test plots for the endangered California seablite, and native marsh plant propagation and plantings. The vegetation management work is ongoing, requiring phases of invasive removals and native marsh plantings over a span of 5 years. In 2021 the Port secured funding from the Ocean Protection Council and in 2022 secured funding from the California Department of Fish and Wildlife to go towards construction of the nature-based solutions and additional habitat enhancement post-construction.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, 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.

A direct impact of sea level rise in the San Francisco Bay Area is the loss of wetland habitat due to erosion. This project would restore habitat function and protect the shoreline from erosion by implementing nature-based solutions to buffer wave energy. The project will enable sea level rise adaptation for the 30-year design life of the project, and the reef ball component of the project is expected to provide habitat for fish larvae recruitment and growth of oysters beyond the 30-year project life. The project will benefit Ridgway's rail and California seablite, both of which are listed endangered species, and benefit the scientific community and public agencies by sharing nature-based solutions from the project.

To ensure project success, this project leverages in-kind support and funding from the San Francisco Bay Restoration Authority (SFBRA), California Ocean Protection Council, Hanson Aggregates, California Department of Fish and Wildlife, and the Port's own funds (see "Project Financing" section below). In addition, the Port has partnered with Literacy for Environmental Justice and other community organizations to lead community engagement and workforce development, and San Francisco University's Estuary and Ocean Science Center to assist with workforce development and communication with the scientific

community. The project has also secured and will leverage SFBRA funds in a future phase which will include monitoring to ensure the lessons of the project can be shared widely.

The project advances statewide goals and is consistent with regional and local plans below:

- **Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California (USFWS 2013)** – This project advances Recovery Objective #3 to recover “a healthy ecosystem function supportive of tidal marsh species.” The proposed revegetation supports the plan’s objectives by actively restoring native wetland plant species, including California seablite, and by providing potential habitat for Ridgway’s rail (formerly California clapper rail).
- **San Francisco Bay Joint Venture** – The project advances the Habitat Goals listed by the Joint Venture by protecting and enhancing 13.5 acres San Francisco Bay's tidal marsh and flats to benefit waterfowl, shorebirds, and other wildlife. The proposed project is listed as a Tier 1 priority project in the Joint Venture’s 2019 Priority Projects List.
- **North American Waterfowl Management Plan (2012)** – the project advances the plan’s overarching goal #2 to provide “wetlands and related habitat sufficient to sustain waterfowl populations at desired levels, while providing places to recreate and ecological services that benefit society” by enhancing roosting habitat for numerous migratory waterfowl in the San Francisco Bay, one of the listed areas in the management plan.
- **California State Wildlife Action Plan (2015 update)** – the project helps implement the plan’s goals to (1) “Maintain and increase ecosystem and native species distributions in California while sustaining and enhancing species abundance and richness”; (2) “Maintain and improve ecological conditions vital for sustaining ecosystems in California”; and (3) “Maintain and improve ecosystem functions and processes vital for sustaining ecosystems in California” by increasing native oyster populations, reducing key invasive species populations, increasing acres of tidal marsh habitat, increasing acres of structural diversity and restoring ecological function of tidal marsh habitat.
- **San Francisco Bay Subtidal Habitat Goals Report (2010)** – the project uses integrated habitat restoration approaches promoted in Chapter 10 of this planning document and advances the Restoration Goal of “Increasing native oysters in San Francisco Bay within 8,000 acres of suitable habitat within 50 years” by placing reef balls in the subtidal area.
- **Baylands Ecosystem Habitat Goals (2015 update)** – the project uses recommended actions to restore native oyster beds in suitable areas, enhance Pacific herring spawning areas, enhance critical avian stopover sites, and reestablish California seablite.
- **San Francisco Estuary Comprehensive Conservation and Management Plan (2016)** – The proposed project directly supports the plan’s objectives by implementing two actions specified by the plan: Action 3: Protect, restore, and enhance tidal marsh and tidal flat habitat and Action 5: Protect, restore, and enhance intertidal and subtidal habitats.
- **The San Francisco Bay Shoreline Adaptation Atlas (2019)** – The Adaptation Atlas identifies appropriate sea level rise adaptation measures in “operational landscape units” around San Francisco Bay and includes the shoreline of Heron’s Head Park as an area where “beaches could be created to protect remaining marshes such as Heron’s

Head marsh. Efforts to encourage plant species with more vertical structure, such as *Suaeda californica* [California seablite], could be appropriate in this constrained environment.”

- **Sediment for Survival: A Strategy for Resilience of Bay Wetlands in the Lower San Francisco Estuary (2021)** – This regional sediment strategy aims to inform management and beneficial reuse of sediment, specifically including re-use of coarse sand and gravel beach material mined from San Francisco Bay for uses such as the coarse material beach to be constructed by this project, to advance resilience of tidal marshes and tidal flats to climate change.

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

The project is designed to stabilize the shoreline and provide ecological services for 30 years with sea level rise projections taken into consideration. The Port will oversee the maintenance of the project for the expected project life. In addition, the reef balls are expected to continue to provide benefit past the expected project life of 30 years because oysters can continue to grow on the reef balls once they have been established.

The Port has prepared extensively for the project and having been in consultation with the Bay Restoration Regulatory Integration Team, has secured all necessary permits, and satisfied both NEPA and CEQA. The Port will be able to begin the project immediately.

4. Project delivers multiple benefits and significant positive impact.

The project will provide shoreline stabilization, enhance habitat for wildlife, and prepare the project area for sea level rise over the next 30 year (see “Project Description” section and “Selection Criteria” section, #2 and #3 above).

In addition, the project will benefit the economically disadvantaged communities of Bayview and Hunters Point adjacent to the park, whose residents will not only enjoy continued access to park amenities and wildlife but will also benefit from visiting the enhanced habitat while using the trails and enjoying open space at the site and through opportunities to learn about the native plantings and invasive weed control as part of the programs at the Environmental Education Center.

The project will benefit the region’s economy by providing jobs in plant propagation at LEJ’s Candlestick Point Native Plant Nursery and supporting green infrastructure job training and workforce development to four youth Eco-Apprentices in Bayview Hunters Point. For workforce development, the project will provide a year-long field training on bay ecology, native plant restoration, invasive plant control, and project monitoring to transitional youth who are residents of the Bayview and Hunters Point communities. Gaining these skills and network of professionals will allow the apprentices to compete for professional jobs in the growing field of habitat restoration.

This project is timely as it will occur during a period of park and community revitalization events planned for the Bayview and Hunters Point neighborhoods through a community outreach grant authorized by the Conservancy’s Board on September 6, 2018 which

engages the community in recently enhanced areas of the shoreline at Candlestick Point, Yosemite Slough, and India Basin – all nearby.

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

With initial funding from SFBRA, the Port and LEJ have already begun to engage with the surrounding communities with the intent to inform, build trust, and receive input on the desired outcomes of the project. LEJ is a non-profit environmental education and youth empowerment organization created specifically to address the ecological and health concerns of the Bayview, Hunters Point and surrounding communities of southeast San Francisco. LEJ offers paid internships to transitional youth (ages 18-25) from the Bayview or Hunters Point neighborhoods through their Eco Apprentice Program, which prepares participants for rewarding environmental careers. This project will fund 10 or more Eco Apprentices who will assist LEJ staff in developing community workshops, coordinating volunteer stewardship days, propagating, and planting native marsh plants in the park. LEJ's native plant nursery, located in Hunters Point, specializes in growing locally adapted native species for shoreline and coastal upland habitats and will be used to propagate native marsh plants for this project.

Stakeholder groups included in outreach and engagement include the following community-based organizations and committees:

- Port Southern Waterfront Advisory Committee
- City and County of San Francisco Recreation & Parks Department's EcoCenter Advisory Committee
- Bayview Hunters Point Environmental Justice Taskforce
- India Basin Neighborhood Association
- Bayview Hunters Point Mobilization for Adolescent Growth in our Communities (BMAGIC) Parks Collaborative

The Port and LEJ will prepare workshops on how nature-based solutions are implemented in the park for sea level rise adaptation and encourage an open line of communication and feedback from the communities to the project team.

PROJECT FINANCING

U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program (via a grant to the Conservancy)	\$987,000
San Francisco Bay Restoration Authority	\$297,000
San Francisco Bay Restoration Authority* (pending)	\$803,000
California Ocean Protection Council	\$1,667,000
California Department of Fish and Wildlife	\$1,493,000
Port of San Francisco	\$541,000
Project Total	\$5,788,000

Conservancy funds will derive from a \$1,000,000 grant to the Conservancy from the U.S. Fish and Wildlife Service's National Coastal Wetlands Conservation Grant Program. The Conservancy will retain \$ 13,000 of the federal grant for its administrative costs.

*San Francisco Bay Restoration Authority (SFBRA): The SFBRA has authorized \$297,000 for the first phase of the project, which includes native plant propagation and planting, invasive weed control, community engagement, and job training. SFBRA staff anticipates recommending an additional award of \$803,000 for the tidal salt marsh enhancement and monitoring components of the project, which will take place after construction of the coarse beach and rock groynes.

Hanson Aggregates (Hanson): Hanson operates a sand and gravel processing facility at the Port's Pier 92, located approximately 1 mile from the project area. Hanson will donate coarse beach material dredged from central San Francisco Bay to the Port for coarse beach construction. This is an in-kind donation with a commercial value estimated at \$417,000.

Unless specifically labelled "Required Match" the other sources of funding listed above, and the in-kind donation are provided as estimates and for informational purposes. The Coastal Conservancy does not typically require matching funds or in-kind contributions, 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 4.5 of Division 21 of the Public Resources Code authorizes the Conservancy to undertake projects and award grants in the nine-county San Francisco Bay Area. Section 31162, subsection (b) authorizes the Conservancy "to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance." Consistent with this subsection, the project will protect and restore ecological functioning of shoreline habitat and adapt to climate change by stabilizing the shoreline against erosion and sea level rise.

Section 31162, subsection (d) authorizes the Conservancy "to promote, assist, and enhance projects that provide open space and natural areas that are accessible to urban populations for recreational and educational purposes." Consistent with this subsection, the project will enhance a natural area that is located on a highly urbanized waterfront and accessible to the surrounding populations via the San Francisco Bay Trail.

Consistent with Section 31163(c), the proposed Project is a priority for funding because it: (1) is supported by multiple adopted local and regional plans, mentioned above in the Conservancy Selection Criteria section #2; (2) is multijurisdictional/serves a regional constituency by enhancing a park that is a resource of regional significance and connects to regional trail networks; (3) can be implemented in a timely way; (4) provides opportunities for benefits that

could be lost if implementation does not continue; and (5) includes matching funds from multiple sources.

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

Consistent with **Goal 8, Objective C** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will be implemented using nature-based solutions to construct a shoreline that is resilient to sea level rise until 2050.

Consistent with **Goal 12, Objective A** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will protect 13.5 acres tidal marsh and subtidal habitat by using nature-based sea level rise adaptation strategies to maintain ecological functions of the habitat for wildlife.

Consistent with **Goal 12, Objective D** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will enhance 7 acres tidal wetlands and subtidal habitat by removing invasive Algerian sea lavender, planting native marsh plants, and using reef balls to enhance the subtidal habitat.

CEQA COMPLIANCE:

The wetland enhancement component of the project is categorically exempt from review under CEQA Guidelines Section 15304 (14 Cal. Code Regs. §15304) as a minor alteration to land and vegetation which does not involve the removal of healthy, mature or scenic trees. The project enhances up to 13.5 acres of land by removing invasive plants and planting native wetland plants.

The shoreline stabilization component of the project, consisting of constructing 2 acres of coarse gravel beach and placement of 60 reef balls and 16,00 linear feet of woody debris is categorically exempt from review under CEQA Guidelines Section 15333 (14 Cal. Code Regs. Section 15333) which exempts projects under 5 acres in size that protect habitat for fish, plants, or wildlife. The examples of projects exempt under this section, which are not intended to be limiting, include stabilization of a stream or riverbank with native vegetation or other bioengineering techniques to reduce erosion and sedimentation. (Section 15333(d)(5)). The proposed shoreline stabilization is under 5 acres and will protect a wetland habitat area using a nature-based strategy with the primary purpose of reducing erosion from sea level rise. There will be no significant adverse impact on endangered, rare, or threatened species or their habitat, no known hazardous materials at or around the project site and, given the scale and methodology, no potential for cumulatively significant effects.

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