




MEMORANDUM

August 7, 2020

TO: MEMBERS, PORT COMMISSION
Hon. Kimberly Brandon, President
Hon. Willie Adams, Vice President
Hon. Gail Gilman
Hon. Doreen Woo Ho

FROM: Elaine Forbes
Executive Director 

SUBJECT: Informational presentation on Heron's Head Park Living Shoreline Project, San Francisco Bay Restoration Authority grant, and sole-source contract with Literacy for Environmental Justice.

DIRECTOR'S RECOMMENDATION: Information Only – No Action Required

EXECUTIVE SUMMARY

The Port of San Francisco created Heron's Head Park over 20 years ago. The park has evolved over the past two decades, including the addition of the EcoCenter in 2010 and expansion and improvement of the park in 2012. Heron's Head Park has become a valued natural and community resource that supports diverse habitat and attracts a diverse population to the waterfront. The Park has experienced significant erosion along its southern shoreline and infestation of the wetlands by non-native plants. In 2018, the Port studied erosion that has adversely affected Heron's Head Park, analyzed alternatives for stabilizing the shoreline, and has since developed plans for a living shoreline to mitigate erosion and improve habitat value.

The proposed living shoreline project is essential to enable Heron's Head Park's resilience in future decades. The project would construct a stabilized shoreline comprised of natural materials, restore wetland plant habitat, and engage the community in realizing its vision of stable, resilient, natural shorelines on the southern waterfront. It offers a unique opportunity to achieve the Port's goals to implement nature-based shoreline infrastructure and restore and improve other park features.

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In 2018, the Port applied for a grant from the San Francisco Bay Restoration Authority (SFBRA) to fund project implementation. In July 2020, the SFBRA authorized disbursement of \$297,000 to the Port to begin the wetland plant restoration and community outreach components of the living shoreline project.

With this informational item, Port staff seeks to present the proposed project, funding sources, first grant award and related contract to the Port Commission. At the next Port Commission meeting on September 8, 2020, Port staff will request the Port Commission's approval to accept and expend \$297,000 in SFBRA grant funds for the first phase of wetland habitat restoration at Heron's Head Park, which consists of two years of wetland revegetation, with no matching funds from the Port. At the September 8, 2020 meeting Port staff will also present additional detail regarding the scope of the first SFBRA grant-funded work and request Port Commission authorization for its Executive Director to execute a sole-source contract with Literacy for Environmental Justice (LEJ) to conduct the work. LEJ is a community-based, City-certified local non-profit organization that offers unique capability to deliver both the plants and community engagement required for the project. Port staff will subsequently seek Board of Supervisors approval to accept and expend SFBRA grant funds. The authorization to execute a sole source contract would not be subject to Board of Supervisors review.

Strategic Plan Objectives

The Port's on-going operation and maintenance of Heron's Head Park supports the Port's strategic objectives, and the proposed shoreline resilience project would further support those objectives as follows:

Goal #1 Evolution, Objective #3: *Improve Port open spaces to provide publicly desired amenities and activities.* Heron's Head Park is a valued Port asset enjoyed by a wide range of visitors for activities ranging from running, to birdwatching, to family-focused recreation, and environmental education programs now offered through the EcoCenter community facility in Heron's Head.

Goal #2 Resiliency, Objective #1: *Increase resilience of Port assets and services.* The Heron's Head Park Shoreline Resilience project would protect the shoreline and adjacent marsh from rapid loss of acreage to erosion and create capacity for sea level rise adaptation. We have heard through the Waterfront Plan Waterfront Resilience Program community engagement processes that San Franciscans value this type of open space and urge the Port to include nature-based approaches to shoreline adaptation and resilience improvements.

Goal #3 Engagement, Objective #2: *Partner with City departments and government agencies, Port tenants, and stakeholders to educate and promote waterfront projects and activities.* Funding from the San Francisco Bay Restoration Authority would support outreach to inform the community about the Heron's Head Park Shoreline Resilience project and the potential for nature-based infrastructure to serve as shoreline protection and adaptation to sea level rise. The Port's on-going partnership with San Francisco

Recreation and Parks Department to provide public programs offered at the EcoCenter provides additional opportunity to inform the community about the project.

Goal #4 Equity: *Ensure Port activities advance equity and public benefit and attract a diversity of people to the Waterfront.* Protecting Heron’s Head Park will preserve a valuable public asset that is used by a diversity of users, including residents and youth from Bayview Hunters Point neighborhoods, seeking healthy activities and connection to nature in an area of the City where there is less access to such benefits.

Goal #5 Sustainability, Objective #2: *Enact measures to protect the Bay and its ecosystems:*

- a) *Explore natural infrastructure alternatives (e.g. wetlands, horizontal levees, and “living shorelines”) in all shoreline stabilization and improvement projects.*
- b) *Implement City Biodiversity Goals and best sustainable practices in all open space improvement projects.*

Feasibility study and biological assessment completed to date indicate that nature-based shoreline stabilization would effectively protect the wetlands. If constructed, the proposed living shoreline project would be the Port’s first realization of Strategic Plan Goal #5(a).

Background

In the 1970s, the Port began placing fill in San Francisco Bay (the Bay) to construct a proposed “Pier 98” cargo terminal. The project was discontinued and left unimproved for decades. In the late 1990s, the Port worked with the San Francisco Bay Conservation and Development Commission (BCDC) to resolve regulatory problems related to the fill by developing a beneficial use, expanding and enhancing tidal wetlands that had naturally established at the site over 20 years since construction ceased, and constructing park amenities including a 1/3- mile spur of the San Francisco Bay Trail, picnic areas, and native plant landscapes. In 1998, the former Pier 98 opened to public as Heron’s Head Park. In 2010, the EcoCenter at Heron’s Head Park opened. In 2012, the Port used general obligation bond funds to expand the park to include a new picnic area, paved walking paths, an off-leash dog play area, and improved parking.

Heron’s Head Park today is an approximately 21-acre peninsula, comprised of seven acres of wetlands and tidal ponds, and 14 acres of public open space. It is a highly valued resource for both wildlife and people. It is utilized by over 100 species of migratory and resident birds each year and includes habitat for two endangered species: a bird, the California Ridgway’s rail, and a plant: California seablite. Heron’s Head Park is also a valuable resource for public access, recreation, and education, visited by thousands of San Francisco Bay Area residents annually. Recent surveys of park visitors found that 75% are San Francisco residents. Most visitors surveyed come to Heron’s Head Park for exercise and to experience time in nature for their health and enjoyment.

In 2010, the EcoCenter at Heron's Head Park was opened to the public as an environmental education and community center. The Port partners with San Francisco Recreation and Parks Department (RPD) which has been leading outdoor environmental education programs at Heron's Head Park since 2011, and in 2018 assumed management of the EcoCenter. The EcoCenter provides equitable and accessible programs that support free and low-cost recreational, educational, and volunteer activities at Heron's Head Park. Many community and environmental organizations use the park and the EcoCenter for meetings, small events, and field trips. Recent events include EcoCenter playday, bi-lingual family storytelling about wetlands, Honey harvests, Fishing 101, and California Coastal Clean-Up day. This summer, RPD launched the first summer program at Heron's Head Park, "Wetlands Explorers Day Camp", serving children living in the 94124 zip code and eligible for 100% waiver of camp fees.

The work that the Port has done over the past 21 years has transformed a blighted mass of fill in the Bay into a valuable natural and community resource. However, over the years since the wetlands and park were created, the shoreline at Heron's Head Park has experienced subsidence, erosion from wind-waves and tidal flows, and a low supply of suspended sediment in Bay waters needed to replenish the marsh. These forces have caused a loss of both wetland acreage and quality. In the most impacted area, the shoreline has retreated up to 50 feet from its 1999 location. One of the tidal ponds is consistently flooded rather than tidally flushed, essentially returning that former pond habitat to open Bay water. Without protecting the shoreline from erosion, Heron's Head Park is expected to lose two more acres over the next 30 years. Additionally, the wetland plant habitat that is the basis of the site's ecological function has decreased in size and suffers from invasion by non-native species. Now, Heron's Head Park needs protection, maintenance and stewardship.

As part of the park and habitat stewardship efforts, Port staff recognized the need to evaluate erosion and habitat degradation affecting Heron's Head Park. In 2012, the Port received \$665,000 from a legal settlement resulting from the 2007 Cosco Busan oil spill¹ to develop a living shoreline for Heron's Head Park. Using these funds, Port staff and partners have undertaken planning and engineering to develop a design to maintain and enhance the ecology of Heron's Head Park, and to provide a case study for nature-based shoreline resilience. The work funded by the Costco Busan settlement includes:

- Site analysis of erosion, habitat and environmental degradation, and engineering design to stabilize the shoreline and restore habitat. This work was conducted by Environmental Science Associates, under contract to the Port.
- Development of a marsh revegetation workplan which would implement the first two years of an anticipated five-year plant habitat restoration effort.

¹ A settlement agreement with multiple parties representing the natural resources and recreational assets and services impacted by the 2007 was approved in 2012. The \$665,000 awarded to the Port to design and entitle a living shoreline at Heron's Head Park was approved by the Port Commission as a supplemental appropriation to the FY15-16 capital budget.

Port and Regional Policies

Nationally, regionally, and locally, there is growing interest and environmental value in using natural infrastructure such as “living shorelines”² to stabilize eroding shorelines while also providing ecological value and aesthetic benefits. During the Port’s Waterfront Land Use Plan (WLUP) update process (2015 – 2019), engineering and environmental experts, WLUP Committee members, and the public advocated for natural-systems based approaches to shoreline protection at the Port, particularly on the southern waterfront. Emerging from this process, the WLUP includes the following policies:

- Seek opportunities to build natural infrastructure (e.g. wetlands, horizontal levees, and “living shorelines”) and habitat into shoreline stabilization or improvement projects; prioritize “soft” waterfront edges where feasible and appropriate.
- Seek partnerships and funding to support research and implementation of innovative habitat restoration methods that will improve biodiversity and ecological function around the Port and the Bay.
- Provide more equitable access along the waterfront by increasing the number of free or low-cost activities and events along the waterfront, including activities that promote physical activity, connection with nature, and healthful living for visitors of all ages.

The Heron’s Head Park living shoreline project would be consistent with these policies and would also comply with the Port Biodiversity Policy approved by the Port Commission in 2019 (Resolution No. 19-09), which aligns with the City’s Biodiversity Policy approved by the San Francisco Board of Supervisors in 2018 (Resolution No. 107-18).³

A Heron’s Head Park living shoreline presents a unique opportunity to demonstrate nature-based resilient design and evaluate the feasibility of natural shorelines as a sea level rise adaptation measure. It would protect the existing wetlands from erosion, enabling the wetlands to migrate inland with rising sea level for the next 30 years, through 2050⁴, and create a basis upon which future sea level rise adaptations could be implemented. Through the Waterfront Land Use Plan and Waterfront Resilience Program community engagement processes, the Port understands that San Franciscans value and want nature-based shoreline design to be included in the suite of solutions, including specifically for Heron’s Head Park. The Heron’s Head Living

² Living shorelines, sometimes referred to as nature-based, green, or soft shorelines, are protected, stabilized shorelines made of natural materials such as plants, sand, or rock.

³ The City’s Biodiversity Policy expresses a commitment to protect natural history and citizens’ access to nature. The Port Commission passed its own resolution embracing these City goals and committing to implement measures consistent with the Port’s unique operations and environmental setting.

⁴ The design elevation of the marsh-fringing beach is established to maintain marsh area as the marsh migrates landward with sea level rise. The design criteria are based on guidance for addressing sea level rise issued by the State of California Ocean Protection Counsel (2018) and Bay Conservation and Development Commission (2011).

Shoreline project is incorporated as a case study to build public understanding and expansion of nature-based resilience concepts. This objective is further reinforced in other regional and local plans⁵ that call for nature-based shoreline stabilization and adaptation measures.

Heron's Head Living Shoreline Project

Considering these policies and the need to address the conditions that threaten the habitat and recreational value of the park, Port staff have developed plans for the Heron's Head Park Living Shoreline project that would achieve the following objectives:

1. Stabilize the southern shoreline and protect it from continued erosion and subsidence;
2. Restore native plant vegetation to enhance biodiversity and ecological function;
3. Create a resilient shoreline that can adapt to a moderate amount of sea level rise through 2050;
4. Create youth employment and community engagement opportunities through hands-on involvement in park restoration activities.

With funding from the Cosco Busan settlement Port staff and project partners have completed a 65% engineering design and applied for regulatory agency permits to implement in the following components:

- **Shoreline stabilization**: Construction would include placement of coarse sand and gravel stabilized by rock and cobble groynes⁶ and installation of subtidal reef structures to support habitat for oysters, herring larvae, and other native plants and animals. This would restore the originally designed habitat at Heron's Head Park, and the new beach, restored wetland plant community, and constructed oyster reefs would provide new habitat area and diversity. The sand/gravel shoreline would be dynamic, enabling wetlands to migrate with rising sea level so that some wetland habitat and key public access features remain through mid-century.
- **Revegetation**: The project would include five years of on-going, strategically timed removal of non-native species and replanting with locally adapted native wetland plants, improving habitat value, combating a significant infestation by invasive Algerian sea lavender, and providing youth employment opportunities.
- **Monitoring and stewardship**: With acceptance of grant funds, the living shoreline project would include five years of revegetation and post-construction monitoring of project outcomes.

Project Phasing, Cost and Funding

⁵ [San Francisco Baylands Ecosystem Habitat Goals Science Update](#) (2015), the [USFWS Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California](#) (2013), the San Francisco Bay Comprehensive Conservation and Management Plan (2016), the [San Francisco Bay Joint Venture](#) Tier 1 Priority Project list, the [San Francisco Bay Shoreline Adaptation Atlas](#) (2019) and the [New Life for Eroding Shorelines report](#) (2020).

⁶ A low wall or barrier built out into the water from the shore to abate erosion and/or drifting of material.

The total estimated cost to implement the above-listed project components, based on 65% engineering design, and assuming use of locally available sand and gravel, and five years of monitoring and stewardship is \$3.35 Million. The estimated cost, funding status, and opportunities to implement the project in phases are summarized below.

Scope	Schedule	Estimated Cost	Funding Status
<p>Wetland revegetation, Phase 1: First two of proposed five years of wetland plant habitat restoration</p>	<p>Fall 2020 through Fall 2022.</p>	<p>\$297,000</p>	<p>SFBRA Governing Board authorized award of \$297,000, subject to Port Commission and Board of Supervisors approval (proposed September 2020)</p>
<p>Shoreline stabilization</p>	<p>August through January of any year, pending funding.</p>	<p>\$2.46 Million</p>	<p>Currently unfunded. Grant application for \$1.0 Million submitted to National Coastal Wetlands Conservation Program. Port staff continues to pursue funding opportunities.</p>
<p>Wetland revegetation Phase 2: Three additional years of wetland habitat restoration</p>	<p>Upon completion of shoreline stabilization. If shoreline stabilization is never realized, phase 2 revegetation could continue and would have habitat value as a stand-alone improvement.</p>	<p>\$494,000</p>	<p>SFBRA staff has recommended for grant funding. Task-specific award is subject to future SFBRA Governing Board approval. Task-specific authorization to accept and expend grant funds for this scope would be subject to Port Commission and Board of Supervisors approval.</p>

Post-Construction Monitoring	From completion of shoreline construction through five years after completion.	\$308,000	Same as above.
Total Estimated Project Cost		\$3.56 Million	

Public and government appreciation of the environmental and social value of coastal protection and habitat restoration has led to creation of public funding sources that Port staff is pursuing to contribute to project implementation. Current funding status is as follows:

1. San Francisco Bay Restoration Authority. The San Francisco Bay Restoration Authority (SFBRA) is a regional agency created to fund shoreline restoration projects in San Francisco Bay. It allocates funds raised by a parcel tax approved by voters in the nine Bay Area counties in 2016. In November 2018, the Port applied for grant funds for the Heron’s Head Living Shoreline Project, which included a component for youth employment and engagement with the surrounding Bayview Hunters Point neighborhood. In April 2019, the SFBRA notified the Port of its recommendation to award up to \$1,100,000 to fund the marsh revegetation, habitat stewardship, and monitoring components of the Heron’s Head Park Living Shoreline project, subject to approval of project-specific scope and budget by its governing board, and authorization to execute a grant agreement with the recipient.

To enable the Port to begin growing plants needed for the proposed project, some of which are rare and must be collected from protected populations and grown in a nursery for up to a year before planting, and planting test plots at Heron’s Head Park, SFBRA and Port staff agreed to divide the proposed 5-year revegetation effort into two phases: the first phase would include the first two years of revegetation; the second phase would be the additional three years. On July 17, 2020, the SFBRA voted unanimously in favor to award \$297,000 to the Port to implement first phase of marsh revegetation, consisting of collecting, cultivating, planting, and maintaining marsh vegetation for two years. Port staff will support project management but will not contribute any funds to this phase. Port staff will seek approval from the Port Commission and the San Francisco Board of Supervisors to receive and expend the \$297,000 funding from SFBRA.

2. National Coastal Wetlands Conservation Grant Program. The National Coastal Wetlands Conservation (NCWC) Grant Program annually awards grants of up to \$1 Million to State agencies to protect, restore, and enhance coastal wetlands. The Port partnered with the California State Coastal

Conservancy to apply for \$1 Million in NCWC funds to support the Heron's Head Park Living Shoreline Project. Funding award recommendations are expected in January 2021. If the Port is selected to receive funding, acceptance of grant funds would be subject to Port Commission and Board of Supervisors' authorization.

Environmental and Regulatory Requirements

- The project has been reviewed for compliance with CEQA by the San Francisco Planning Department and determined to be categorically exempt.
- The Port has applied for permits to construct the project from the US Army Corps of Engineers, the Bay Conservation and Development Commission, the San Francisco Bay Regional Water Quality Control Board, and the US Fish & Wildlife Service.

Project Partnerships

Port staff have maintained ongoing engagement with community stakeholders and partners about programs and activities at Heron's Head Park and the EcoCenter and park improvement needs. The Port has presented the Heron's Head Park Living Shoreline project concept to stakeholders including the Southern Waterfront Citizens' Advisory Committee, Golden Gate Audubon Society's Conservation Committee, the EcoCenter Advisory Committee, and the San Francisco Biodiversity Working Group, and has received enthusiastic support.

Port staff proposes to implement the living shoreline project in phases based on funding availability and independent utility. The five years of restoring wetland vegetation that the SFBRA intends to fund would function independently to improve habitat value at Heron's Head Park, regardless of whether the rest of the living shoreline project is ultimately completed. With SFBRA funding, the Port would initiate the first two of the anticipated five years of marsh revegetation. Work during the first two years would include collecting plant materials of specified species and cultivating plants in a nursery to produce and plant approximately 17,000 plants over 20,000 – 30,000 square feet of intertidal zone. Concurrent habitat stewardship would include manual removal of invasive species and strategic replacement of native plants in cleared areas. The remaining three of anticipated five years would then be implemented, subject to SFBRA authorization to award additional funds recommended to be awarded.

The first two years of wetland plant habitat restoration would also include community outreach. With technical support from Port staff, youth working on revegetation would develop content and presentation materials and present the purpose, potential beneficial and adverse impacts, and desired outcomes of the living shoreline project to key community stakeholders during the first year of habitat restoration work. These community outreach efforts would not only foster broader awareness of the project, they would also create an opportunity for those working on the revegetation effort to develop their understanding of the scientific

basis for the work they are doing and practice professional presentation skills. Additionally, these presentations may offer a vision to communities in southeast San Francisco of how nature-based shorelines may serve as an option for sea level rise adaptation.

The rest of the living shoreline project, including construction of the marsh-fringing beach, installation of oyster reef features, and construction management, comprises approximately \$2.57 Million of the \$3.35 Million estimated total cost. Due to seasonal restrictions on construction to prevent impact to special-status species, the work must be completed between August and February. This work is currently unfunded. Port staff will continue to seek funding to support construction of the living shoreline, including the current application for NCWC grant funds.

The Port proposes to partner with the following organizations who would bring unique expertise to the project:

Literacy for Environmental Justice (LEJ). LEJ is a City of San Francisco-certified non-profit local business enterprise (LBE) dedicated to addressing the ecological and health concerns of the communities of southeast San Francisco. LEJ trains youth for rewarding green careers and engages community volunteers to care for their open spaces. LEJ's native plant nursery, located in Hunters Point, specializes in growing locally adapted native species for shoreline and coastal upland habitats, and consequently is uniquely qualified to fulfill the project's need for specified species of wetland plants and the project's goal to engage local youth in the habitat restoration and related community outreach efforts. LEJ is able to provide the required native wetland plants and employ interns through its Eco-Apprentice program to remove invasive species, plant natives, and maintain native marsh vegetation. The Eco-Apprentices are transitional age youth (18-25 years old), generally from the Bayview Hunters Point community, who have a passion for conservation, habitat restoration, and community engagement⁷.

The Port issued a Request for Information (RFI) on July 20, 2020 for contractors that can provide both the plants—including growing in a nursery and planting at the park—and community participation components of the grant-funded scope. The RFI was sent to approximately a dozen native plant nurseries with responses due on August 1, 2020. Of the two responses received, LEJ was the only respondent that can provide plants, youth employment and community engagement.

Port staff proposes to return to the Port Commission with additional detail regarding the scope and budget for the first two years of wetland plant restoration component of the work and request authorization to enter into a sole-source contract with LEJ, subject to approval by the City's Contract Monitoring Division and Office of Contract Administration.

⁷ Learn more about the Eco-Apprentice Program at <https://www.lejyouth.org/index.php/eco-apprentices/>

Pending Port Commission and Board of Supervisors authorization to accept and expend SFBRA grant funds and Port Commission authorization to award a sole-source contract, Port staff proposes to contract with LEJ to implement the first phase of marsh plant habitat restoration beginning Fall 2020 and continuing through the end of 2022.

San Francisco State University Estuary & Ocean Science Center (EOS Center).

The Estuary and Ocean Science Center (EOS) is housed at the Romberg Tiburon Campus of San Francisco State University. Faculty and staff from the EOS Center would lead the effort to collect seeds and cuttings of the endangered California seablite and train LEJ's nursery staff and Eco-Apprentices to propagate seablite in their nursery and plant it at Heron's Head Park. Working alongside EOS Center staff would offer LEJ staff and interns meaningful work experience and exposure to careers in the field of ecological restoration.

San Francisco Recreation and Parks Department (RPD). RPD is a valuable partner in the Port's efforts to provide free or low-cost activities as Heron's Head Park that are intentionally developed to meet community needs. RPD now proposes to provide funding to restore vegetation and install park amenities comprising a small nature play area in the portion of Heron's Head Park burned by a grass fire on July 4th, 2020.

Next Steps

The Port has supported stewardship of Heron's Head Park for over 20 years. The proposed living shoreline project is essential to support Heron's Head Park's resilience in future decades. At the next Port Commission meeting, Port staff intends to request Port Commission authorization to accept and expend \$297,000 in SFBRA grant funds for wetland revegetation at Heron's Head Park and subsequently seek approval by the Board of Supervisors. Port staff also intends to request Port Commission authorization for the Executive Director to execute a sole-source contract with Literacy for Environmental Justice to conduct the grant-funded work, including employing interns to implement the revegetation work and conduct community outreach, subject to providing additional details of the work scope and budget for Port Commission approval at the next Port Commission meeting. Upon the Port Commission's approval, Port staff will seek Board of Supervisors approval to accept and expend the SFBRA grant funds.

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