

SAN FRANCISCO BAY RESTORATION AUTHORITY

Staff Recommendation
June 18, 2021

Colma Creek Restoration and Adaptation Project

Project No. RA-028
Project Manager: Joshua Bradt

RECOMMENDED ACTION: Authorization to disburse up to \$595,000 to the City of South San Francisco to prepare technical studies, undertake community engagement, perform design and engineering work, and develop a permit acquisition plan for habitat restoration and sea level rise adaptation actions at the mouth and lower reaches of Colma Creek. The restoration and adaptation actions are expected to expand marsh habitat, increase flood protection, and provide public access at the mouth of Colma Creek in San Mateo County.

LOCATION: Lower Colma Creek; City of South San Francisco: San Mateo County; Measure AA Region: West Bay

MEASURE AA PROGRAM CATEGORY: Safe, Clean Water and Pollution Prevention Program; Vital Fish, Bird and Wildlife Habitat Program; Integrated Flood Protection Program; Shoreline Public Access Program

EXHIBITS

Exhibit 1: [Project Location and Site Map](#)

Exhibit 2: [Project Designs and Photographs](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS

Staff recommends that the San Francisco Bay Restoration Authority adopt the following resolution and findings:

Resolution:

The San Francisco Bay Restoration Authority hereby authorizes the disbursement of an amount not to exceed five hundred ninety-five thousand dollars (\$595,000) to the City of South San

Francisco to prepare technical studies, undertake community engagement, perform design and engineering work, and develop a permitting and CEQA plan for the Colma Creek Restoration and Adaptation Project (“the project”). The restoration and sea level rise adaptation actions are expected to expand marsh habitat, increase flood protection, and provide public access at the mouth of Colma Creek in South San Francisco (Exhibit 1).

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Authority 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 Authority funding.

Findings:

Based on the accompanying staff recommendation and attached exhibits, the San Francisco Bay Restoration Authority hereby finds that:

1. The proposed authorization is consistent with The San Francisco Bay Restoration Authority Act, Gov. Code Sections 66700-66706.
2. The proposed authorization is consistent with The San Francisco Bay Clean Water, Pollution Prevention and Habitat Restoration Measure (Measure AA).

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends that the Authority authorize a grant of up to five hundred and ninety-five thousand dollars (\$595,000) to the City of South San Francisco to prepare technical studies, undertake community engagement, perform design and engineering work, and develop a permitting plan that identifies required permits and anticipated CEQA determination for the Colma Creek Restoration and Adaptation Project (“the project”). The restoration and sea level rise adaptation actions are expected to expand marsh habitat, increase flood protection, and provide public access at the mouth of Colma Creek in South San Francisco (Exhibit 1).

The proposed project consists only of planning and design, with a significant focus on community engagement in the design process. In addition, to plan for community involvement in the future restoration work, the project includes creation of a test plant nursery and community education on restoration planting using that nursery. This design work builds upon the planning and community engagement of the Resilient South City project of 2017-2018, which was a part of the Resilient by Design Challenge that brought together local residents, public officials and local, national and international expert teams to develop innovative community-based solutions to sea level rise, severe storms, flooding and earthquakes throughout the bay area. Further design concepts and community engagement continued after the Resilient by Design Challenge as the “Colma Creek Connector” project from 2019-2020.

The project aims to reshape the banks of tidal reaches of Colma Creek and the Bay shoreline to restore and expand tidal marshes and critical habitat for the Ridgway's rail and other wildlife. The restoration project will also have significant flood mitigation benefits and will be designed to provide for expanded public access to nature and a vital new connection for the disadvantaged

community to access the Bay and Bay Trail. The newly formed San Mateo County Flood and Sea Level Rise Resiliency District (“District”), which may be a source of implementation funds, is very supportive of utilizing nature-based solutions as part of its holistic approach to building resiliency to climate change-related impacts of sea level rise, flooding, and coastal erosion. This grant would provide critical support for aligning stakeholders around the feasibility of a restoration-led approach to this multi-benefit project.

The project proposes to address Bay shoreline landscapes at the mouth of Colma Creek, as well as the tidal reaches of Colma Creek, by exploring the feasibility of each element below for integration into the final design:

- New tidal marsh at creek edges and expanded creek section from the Caltrain corridor all the way to the Bay, creating critical habitat for the Ridgway’s rail (and other species), while also reducing flood risks and risks from projected sea-level rise;
- A seepage slope or wetland for treatment of stormwater discharged into the creek at two key pump stations, building upon lessons learned from similar past projects;
- Public access under Caltrain & under 101 through adapting a Union Pacific Railroad right-of-way that connects all the way to the Bay Trail;
- Bay shoreline restoration for expanded tidal marsh and boardwalk Bay Trail, designed to enable marsh migration and protection in the event of sea level rise;
- A new Bay Water Trail access site; and
- Mudflat and subtidal habitat enhancements.

As the lead applicant, the City of South San Francisco has been a major contributor to previous stages of this project by connecting the design team with the community and other local stakeholders such as the Water Quality Control Plant and Parks & Recreation Department. The shoreline park is currently maintained by the City of South San Francisco, and the Planning Department and Capital Works will be responsible for design review at key submission stages of this design effort. The design team lead by Hassell Studio has shown significant commitment to this project and the community of South San Francisco over the last three years. Hassell team members have embedded themselves in the community to seek input and to advocate for funding and stakeholder buy-in needed to progress this project from the Resilient by Design concept.

The project has broad community support to date, achieved through ongoing outreach in partnership with local community organizations. Throughout the Resilient by Design and the subsequent Colma Creek Connector planning processes, the team has engaged the South San Francisco community over an 18-month period to raise awareness of flood risk and the potential to transform Colma Creek into a public and ecological asset. This includes continuing engagement for Resilient South City, an effort to reconnect people to the water with a following of more than 500 local community members on Facebook and an extensive list of partner agencies, from the South San Francisco Mothers Club to Genentech’s Employee Sustainability Club.

The project team plans to draw on the experience of the Mission Blue Nursery and The Association of Ramaytush Ohlone (ARO) to bring a storytelling and educational approach to a shoreline site as a temporary test nursery and outdoor classroom. This shoreline site would be used to grow plant species appropriate for native species habitat restoration and would provide a hands-on experience for the community engaged in this stage of the project.

This project aims to illustrate the benefits of nature-based adaptation and will face cultural barriers with some stakeholders, who are not yet convinced of the benefits of this approach. The history of adaptation along the creek has been defined by various decision-makers pursuing flood control at the expense of restoration. Further there are multiple agencies responsible for land adjacent to the creek who will need to be aligned around the purpose and approach to this project. The project team will continue its extensive outreach to overcome these barriers.

The project looks to deliver critical public access along the creek to the Bay Trail as well as adapting the existing Bay Trail for the benefit of both expanded habitat and better flood performance of the creek. Further the project team also intends to design a new San Francisco Bay Water Trail access site, which would be used to launch kayaks and other small non-motorized craft. San Francisco Bay Area Water Trail is a growing network of non-motorized boat launching and landing sites to enjoy the historic, scenic, cultural, and environmental richness of San Francisco Bay and its nearby tributary waters.

Site Description:

The lower reaches of Colma Creek have a history of flooding since the former Baylands were drained and built over with industrial development in the early stages of the City’s development. In 1964 the Colma Creek Flood Control Zone was established by the San Mateo County Flood Control District, which constructed flood control facilities that replaced the natural creek conditions for three miles upstream from the Bay. The project site spans along both sides of the creek from Linden Avenue to the Bay, including 7 pump stations owned and operated by the City of South San Francisco Department of Public Works. The site also includes the Caltrain corridor bridge, Highway 101 box culvert, four other vehicular bridges, and one pedestrian bridge.

The site is fully within the tidal reaches of the creek and includes several unique sections, constructed between 1975 to 2006. The areas at the mouth of Colma Creek include tidal marshlands at the creek fringe adjacent to the Bay Trail elevated on an un-engineered berm. Significant mudflat and tidal marsh habitat for the California Ridgeway’s rail exists at the mouth of the creek. The edges of the creek upstream are predominantly defined by sediment build up on the banks as well as invasive species and areas of low habitat value. Significant opportunity for expanded tidal habitat exists between these areas and publicly owned sites along the creek, including the aforementioned pump station sites. The Union Pacific rail corridor, currently used by only one freight customer, extends through the site, heading north along an underpass beneath Highway 101. An additional decommissioned Union Pacific right-of-way corridor without tracks curves towards the south, eventually aligning with the creek and terminating at the existing Bay Trail and pedestrian bridge adjacent to the South San Francisco Water Quality Control Plant. These additional rights-of-way have the potential to provide the safest and least disrupted public access, while also enabling greater areas of habitat restoration along the creek.

PROJECT FINANCING

San Francisco Bay Restoration Authority	\$595,000
Project Total	\$595,000

CONSISTENCY WITH AUTHORITY’S ENABLING LEGISLATION, THE SAN FRANCISCO BAY RESTORATION AUTHORITY ACT:

The proposed project is consistent with the Government Code Section 66704.5 of the Authority’s enabling legislation, and therefore is eligible for grant funding from the Authority. Consistent with Government Code Section 66704.5(a), the project is within the Authority’s jurisdiction, as the mouth of Colma Creek is a shoreline parcel in the San Francisco Bay Area. The City of South San Francisco, a public agency, is an eligible grantee, as defined by Section 66704.5(a). The project involves planning for the restoration and expansion of tidal wetlands and natural habitats on the shoreline, increased flood protection, and the improvement of public access by adapting existing Bay Trail and adding a Bay Water Trail site, making it an eligible project as defined in Section 66704.5(b). Funding this planning project is consistent with Section 66704.5(e), which allows the Authority to award grants for “all phases of planning, construction, monitoring, operation and maintenance” of eligible projects.

CONSISTENCY WITH MEASURE AA PROGRAMS AND ACTIVITIES:

The proposed project is consistent with all four of the programs of Measure AA.

The project would support the Safe, Clean Water and Pollution Prevention Program’s purpose to provide clean water for fish, birds, wildlife and people through planning for the restoration of wetlands that provide natural filters and remove pollution from the Bay’s water and enhancing creek outlets where they flow into the Bay. The design team will explore opportunities for treating stormwater discharged to the creek through use of a seepage slope or wetland processes at two key pump stations.

The project is consistent with the Vital Fish, Bird and Wildlife Habitat Program’s purpose to significantly improve wildlife habitat that will support and increase vital populations of fish, birds, and other wildlife in and around the Bay by planning to restore wetlands and other Bay and shoreline habitats to benefit wildlife, including shorebirds, waterfowl and fish. The project design team plans to create important “stepping stone” marsh habitat, which would increase connectivity across Central Bay for Ridgway’s rail.

The project supports the Integrated Flood Protection Program’s purpose to use natural habitats to protect communities along the Bay’s shoreline from the risks of severe coastal flooding caused by storms and high-water levels by planning to provide nature-based flood protection through wetland and habitat restoration along the Bay’s edge and at creek outlets that flow to the Bay. The project design will expand habitat for existing rail populations, while creating a much-needed zone of natural serenity for residents and workers within this industrial area crowded with regional transportation infrastructure. New tidal marsh at creek edges and expanded creek section will also reduce flood risks and risks from projected sea level rise.

The project meets the Shoreline Public Access Program’s purpose to enhance the quality of life of Bay Area residents, including those with disabilities, through safer and improved public access, as part of and compatible with wildlife habitat restoration projects in and around the Bay. Public access will be improved by creating a trail within a Union Pacific Railroad right-of-way

extending from the Caltrain corridor, through an underpass beneath Highway 101, all the way to the Bay Trail. The design team also intends to integrate a new Bay Water Trail access site into the project plans.

CONSISTENCY WITH MEASURE AA PRIORITIZATION CRITERIA:

1. **Greatest positive impact.** This project would expand the marsh at the Bay edge and restore a new marsh along the edges of Colma Creek, creating a space where marshes can move toward the head of tide as sea level rises (as called for in the 2015 Baylands Goals Science Update). The Central Bay area has very limited tidal marsh restoration opportunities, particularly for creating habitat for birds without conflict with San Francisco International Airport (SFO). This project would create important “stepping stone” marsh habitat, which would increase connectivity across the Central Bay for Ridgway’s rail. It presents a unique chance to expand habitat for existing rail populations, while creating a natural area that can be enjoyed by residents of surrounding disadvantaged communities. The dense population of rails in the Colma Creek marsh is very unusual for the Central Bay. There has been speculation that rails trying to disperse up the peninsula “pile-up” in the Colma Creek marsh, because they have little habitat to the north to move into. Increasing marsh area, including small patches further up the creek, would create space for more rails. Better habitat support for rails along Colma Creek would hopefully result in more dispersing rails reaching other marshes, thus improving connectivity between the North and South Bay segments of the population.
2. **Greatest long-term impact.** Re-grading shoreline and creekside land offers an opportunity to ensure long term marsh habitat persistence by providing zones for marsh migration with rising seas. The design of restored and expanded tidal habitat zones aims to reduce flood risk now and mitigate against projected sea level rise for these low-lying areas of South San Francisco. Significant for adapting to sea level rise is the opportunity for reconnecting the residents of South City to the Bay and engaging a whole new generation in the stewardship and adaptation of their shoreline.
3. **Leveraging resources and partnerships.** Previous stages of the project have been supported by philanthropic, state, and regional funding sources. This project’s earliest phase of work was the Resilient South City project, part of the Resilient by Design - Bay Area Challenge, funded by the Rockefeller Foundation and the State Coastal Conservancy (Conservancy). Following this, the Colma Creek Connector project was funded by an SB1 Adaptation Planning Grant via Caltrans with support from the Metropolitan Transportation Commission (MTC) and the Bay Area Regional Collaborative (BARC), and a Priorities Conservation Area grant via MTC and the Conservancy. The project has been able to shape other work being done in the area, influencing the direction and options being explored through the current South San Francisco General Plan Update. The work has also brought diverse stakeholders to the table as partners in this work, including the City of South San Francisco, San Mateo County, and the District, as well early engagement with Caltrans, SamTrans, SFO, U.S Fish & Wildlife and multiple community partners. The project proposes to upgrade part of a freight corridor and a disused right-of-way for public access enabling more restoration area adjacent to the creek. Finally, there is potential to fund the construction of the project through funding available via the District. Parcel taxes for properties adjacent to

the creek have collected reserves of around \$16 million, which the District has expressed an eagerness to put towards restoration projects that can also illustrate a flood benefit for the creek. The District, BARC, Greenbelt Alliance, and the Bay Area Council submitted letters of support for the project, included in Exhibit 3.

4. **Economically disadvantaged communities.** The Colma Creek project and a large proportion of South City sits within the Economically Disadvantaged Communities identified in the Authority's 80% Area Median Income Map. Further, 42.9% of the City's population were born outside the USA, with 36.6% Asian and 34% of Hispanic/Latino ethnicity. This project will provide much needed access to nature via Colma Creek, and through the provision of a path to the Bay. South San Francisco currently has little to no access along this corridor. Access to open space, both physically and visually, is integral for good mental health. Cal Enviro Screen identifies a number of challenges for this area of South San Francisco, largely defined by the freeway and industrial uses. This project is an important part of the City's ambitions to turn that around for the benefit of the community. This stage of the project will also engage with the Association of Ramaytush Ohlone to understand how this project can best serve, and tell the story of, the original custodians of this land.
5. **Benefits to economy.** The City of South San Francisco's shoreline and Colma Creek's historic creek floodplain areas are highly developed, supporting a wide range of small to large business parks, warehouses, manufacturing operations, and biotech industries that provide local and regional economic benefit. Further these businesses are accessible via transportation infrastructure which is also within the shoreline area and historic floodplains of Colma Creek. The flood reduction benefits of the project designs will positively impact the economy by preserving this access and decreasing flood risk to businesses. Potential construction during future project implementation phases would also provide employment opportunities.
6. **Engage youth and young adults.** The project has been engaging with local community groups since its inception and will continue to do so moving forward. It has been commonly understood by the project team that the success of the restoration project is reliant on the community, and in particular the younger population of Colma Creek. In an earlier phase of the project, the team created a children's storybook that tells the story of the restoration of Colma Creek and distributed it directly and through their community partners to hundreds of local families. A key component of the current stage of the project is to further engage with the students of South San Francisco High School's Earth Club, in partnership with the Mission Blue Nursery. The design will prioritize low-tech solutions to allow for community members to be involved in the planting and maintenance of the habitat. The Mission Blue Nursery will play a key role in growing native species for the project and engaging the students in this process to build capacity for them to contribute to future stages of the restoration.
7. **Monitoring, maintenance, and stewardship.** The project proposes to facilitate planning for future maintenance responsibilities between the City and the District. The implementation plan will also address potential financial tools for delivery and maintenance. The test planting nursery site and its associated engagement activities are targeted at building capacity within

the community for future community-led stewardship of the project. The contributions of the Association of Ramaytush Ohlone will add value in this endeavor. After construction, the team plans to coordinate with Point Blue, Invasive Spartina Project and USGS to track how the local rail population changes as a result of the restoration. Throughout the design process, the project's measures of success will be based on the community engagement activities and the level of enthusiasm for the project measured by visitors to the test planting site and involvement in the volunteer planting days.

8. **Coastal Conservancy's San Francisco Bay Area Conservancy Program.** The proposed project is consistent with the San Francisco Bay Area Conservancy Program's Criteria:
- a. The project is supported by local and regional plans including: City of South San Francisco's *General Plan 1999* and *East of 101 Area Plan*, as well as the SF Estuary Partnership's *Comprehensive Conservation and Management Plan 2016*, *The Baylands and Climate Change What We Can Do (Baylands Ecosystem Habitat Goals Science Update 2016)*, *San Francisco Bay Trail Guidelines*, *San Francisco Bay Water Trail Plan*, and the *Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan)*;
 - b. The proposed project serves a regional constituency: The SF Bay Water Trail and SF Bay Trail serve the entire San Francisco Bay by connecting individuals and communities to shoreline launch/dock opportunities, parks and open spaces, and providing alternative transportation routes;
 - c. The proposed project can be implemented in a timely way: The project can be implemented as soon as funding is secured through the proposed authorization;
 - d. The proposed project provides opportunities for benefits that could be lost if not quickly implemented: Extreme weather, higher tides and storm surges are predicted to occur routinely due to climate warming. This project will provide a local model for a nature-based response that promotes resilience rather than a hardened approach such as elevating the existing concrete channel walls that constrain the creek and provide no habitat value;
 - e. Matching Funds or assistance from other sources: This project phase is made possible by past and on-going efforts such as Resilient by Design funded by the Rockefeller Foundation and the Coastal Conservancy. Once the planning phase is complete, the District has expressed interest in funding implementation of restoration projects that reduce flooding.
9. **San Francisco Bay Conservation and Development Commission's Coastal Management Program.** The project is consistent with and meets the following priorities of the San Francisco Bay Plan:
- Tidal Marshes and Mudflats Policy 5: Restore tidal action to tidal marshes and tidal flats that have been diked to the Bay and/or manage historic wetlands to provide important Bay habitat for resting, foraging, breeding.
 - Water Quality Policy 1: Restore the Bay's tidal marshes and conserve water surface area and volume to protect and improve water quality.

- Fish, Other Aquatic Organisms and Wildlife Policy 1: Conserve and restore the Bay's tidal marshes, tidal flats, and subtidal habitat to assure benefits to fish and other aquatic organisms and wildlife for future generations.
- Public Access Policy 4: To ensure the optimum use of the Bay for recreation, enhancing access of waterfront parks by improving Bay trail segments that connect to the waterfront and interpretive programs that inform visitors about the wildlife and habitat values present in the park.

10. **San Francisco Bay Joint Venture's Implementation Strategy.** The project goals and approach are consistent with San Francisco Bay Joint Venture project criteria regarding restoring tidal wetland habitat and engaging the community around stewardship of those landscapes. More specifically the project will improve habitat conditions for the Ridgeway's rail. The project team intends to present the project to the Joint Venture's Conservation Delivery Committee for consideration and addition to its Priority Projects List.

COMPLIANCE WITH CEQA:

The proposed project is statutorily exempt from the requirement to prepare an environmental document under the California Environmental Quality Act and categorically exempt from CEQA under 14 Cal Code of Regulations sections 15262 and 15306, as it involves preparation of feasibility and planning studies for possible future actions that have not yet been approved, adopted, or funded, and basic data collection, research and resource evaluation activities that will not result in serious or major disturbance to an environmental resource. The planning studies will consider environmental factors. The creation of the test plant nursery is categorically exempt from CEQA under 14 Cal Code of Regulations section 15304, as a minor alteration of in the condition of land and vegetation that does not involve the removal of healthy, mature, scenic trees.

Staff will file a Notice of Exemption upon approval of the proposed project.