

SAN FRANCISCO BAY RESTORATION AUTHORITY

Staff Recommendation
February 28, 2025

**INVASIVE SPARTINA REMOVAL AND TIDAL MARSH RESTORATION PROJECT
PHASE 2**

Project No. RA-020
Project Manager: Erica Johnson

RECOMMENDED ACTION: Authorization to disburse up to \$4,000,000 to the California Invasive Plant Council for the continued eradication of invasive cordgrass (invasive *Spartina*) and enhancement of critically important tidal marsh and mudflat habitat throughout the entire nine county San Francisco Estuary from July 1, 2025, to June 30, 2027 (“the project”). The project includes invasive *Spartina* monitoring and treatment, native tidal marsh revegetation, California Ridgway’s rail monitoring, construction of high tide island habitat for Ridgway’s rails, and workforce development in partnership with the regional San Francisco Estuary Invasive Spartina Project led by the State Coastal Conservancy and U.S. Fish and Wildlife Service.

LOCATION: Counties of Marin, Sonoma, Napa, Solano, Alameda, Contra Costa, San Mateo, Santa Clara, and San Francisco.

MEASURE AA PROGRAM CATEGORY: Vital Fish, Bird and Wildlife Habitat Program; Integrated Flood Protection Program.

EXHIBITS

Exhibit 1: [Project Maps](#)

Exhibit 2: [Staff Recommendation October 2, 2020](#)

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 4 million dollars (\$4,000,000) to the California Invasive Plant Council for the continued eradication of invasive cordgrass and enhancement of critically important tidal marsh and mudflat habitat throughout the entire nine county San Francisco Estuary from July 1, 2025,

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to June 30, 2027. The project includes invasive *Spartina* monitoring and treatment, native tidal marsh revegetation, California Ridgway's rail monitoring, construction of high tide island habitat for Ridgway's rails, and workforce development in partnership with the regional San Francisco Estuary Invasive Spartina Project led by the State Coastal Conservancy and U.S. Fish and Wildlife Service.

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 employed in carrying out the project.
3. A plan for acknowledgement of Authority funding.
4. Evidence that all permits and approvals required to implement the project have been obtained.
5. Evidence that the grantee has entered into agreements sufficient to enable the grantee to implement, operate, and maintain the project.

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).
3. The grantee is not required to enter into a project labor agreement per Resolution 22 due to the fact that there are no unions representing aquatic herbicide application.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends that the Authority disburse up to four million dollars (\$4,000,000) to the California Invasive Plant Council (Cal-IPC) for the continued eradication of invasive *Spartina* and enhancement of critically important tidal marsh and mudflat habitat throughout the entire nine county San Francisco Estuary (Exhibit 1 Project Maps) ("the project").

Pacific cordgrass (*Spartina foliosa*) is an important native species in the Estuary's tidal marshes. Pacific cordgrass contributes to the base of the food chain in the Estuary and provides habitat where a variety of species forage, nest, and hide from predators. In the early 1970s, the U.S. Army Corps of Engineers introduced Atlantic cordgrass, *Spartina alterniflora*, for erosion control. This species subsequently hybridized with the native Pacific cordgrass, colonizing open mudflats, the mid and high marsh, and adjacent upland transition habitats. It also outcompetes other native vegetation, presenting a significant problem for the native marsh community of plants and wildlife. Given that substantial resources are being invested in restoring marshes

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along the Bay shoreline, and that invasive *Spartina* can quickly colonize newly restored marshes, in 2000 the State Coastal Conservancy (the state project lead) and U.S. Fish and Wildlife Service (the federal project lead) initiated the San Francisco Estuary Invasive Spartina Project (ISP). On October 2, 2020, the Authority authorized \$4,000,000 to Cal-IPC to implement the Invasive Spartina Removal and Tidal Marsh Restoration project. The previous authorization consisted of two seasons of treatment and monitoring, the propagation and installation of 36,000 native marsh plants over two winters, three seasons of Ridgway's rail call count surveys, and an updated 2012-2020 population estimate for the endangered Ridgway's rail. Cal-IPC, in partnership with lead contractor Olofson Environmental Inc. (OEI), held 16 professional training and workshops for Conservation Corpsmembers, local weed management groups, local Audubon chapters, and other volunteer groups. Cal-IPC also started a quarterly email newsletter that goes out to over 200 organizations and contacts in the region and created a new project website where members of the public and partners can get information, access reports, and submit inquiries. The work of the previous authorization was completed in December of 2023.

With the support of the Authority and other funders, ISP partners have reduced the invasive *Spartina* in the San Francisco Estuary by 97% across the 70,000-acre project area, revegetated over 40 sites with approximately 620,000 native tidal marsh plants, and constructed and planted 82 high tide refuge islands to enhance critical native habitat. While the project has been very successful at reducing invasive *Spartina*, regional eradication is the goal due to the ability for the invasive to hybridize with the native cordgrass, which is a crucial plant for native tidal marsh restoration efforts. The Ridgway's rail population estimate, funded in part by the Authority, allowed the ISP to make substantial progress proposing changes to the U.S. Fish and Wildlife Service (USFWS) permit for treatment, which had restricted sites from treatment due to careful management of Ridgway's rails. The next few years are a critical period for this project because a new permit for 2023-2033 from the USFWS provides the opportunity to remove invasive *Spartina* from 6 marsh sites, equating to over 200 acres of infested tidal marshes located in the East Bay region (Exhibit 1 Project Maps), that had been restricted from treatment since 2011. This is critical to the project because continued spread from these sites adds to the timeline, workload, and footprint of the ISP. It is important that the project team be able to handle these sites thoroughly over the next three years, while maintaining progress on the rest of the sites in the San Francisco Estuary because studies have shown how the invasive can "ride the tide" and spread to other areas in the San Francisco Estuary and outside to other wetlands along the California coast. This work will bring us closer to a goal where invasive *Spartina* could be low maintenance with little ability to spread.

The proposed project will implement the following tasks from July 1, 2025, to June 30, 2027:

Task 1. Management, Administration, and Outreach: The grantee will manage the project in partnership with State Coastal Conservancy, USFWS, and the lead planning and implementation contractor OEI. Cal-IPC manages about 9 contractors to implement the project components described below. The grantee will also manage project outreach via the project website, incoming inquiries, quarterly newsletters sent broadly throughout the region, coordinate educational presentations to interested groups, and support recruitment of candidates for the workforce development program described in more detail below.

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Task 2. Invasive Spartina Treatment and Monitoring (includes workforce development):

Over two seasons, mapping and treatment (using a low toxicity herbicide) of invasive *Spartina* will be completed at 222 sites throughout 70,000 acres of tidal marshes and mudflats in the San Francisco Estuary. A thorough inventory of the invasive *Spartina* throughout the Estuary will be completed by specially trained biologists and mapping equipment such as GPS-enabled field tablets. Mapping of invasive *Spartina* locations will help document the progress of the previous year's treatment and will also be used to direct treatment crews later in the season to invasive *Spartina* patches. For situations in which biologists are unclear whether *Spartina* plants are invasive (hybrid) species or not, leaf samples are taken and sent to a lab for genetic testing.

Workforce development: As a part of this program, up to 20 young adults from local colleges and environmental workforce development programs will be recruited for early career biological field technician positions that will include training with the project's highly skilled staff and supporting their work in GIS mapping and field treatment protocols under this program. Through technical training and direct site-based environmental field work opportunities, the project will support the emerging generation of field contractors and professionals needed to work on restoration in the next decades.

Task 3. Native Revegetation: Approximately 32,000 native plants, including Pacific cordgrass and marsh gumplant, will be propagated and planted where invasive *Spartina* has been removed, and in adjacent upland transition zone areas to enhance habitat for the endangered Ridgway's rail and other wildlife seeking refuge from high tides. Some of the key planting areas are Bair Island Ecological Reserve, Eden Landing Ecological Reserve, Citation Marsh in San Leandro, Cogswell Marsh in the Hayward Regional Shoreline, and Oro Loma Marsh in the East Bay.

Task 4. High Tide Refuge Islands: Twenty high tide refuge islands will be permitted and constructed within selected marshes to provide higher elevation refugia for mammals and birds, including Ridgway's rail, during king tide events. These refuge islands are likely to coincide with native revegetation locations, such as the ones listed above.

Task 5. Ridgway's Rail Surveys: Annual rail call-count surveys will be conducted during the breeding season from January through April. Surveys will be conducted at each site by OEI and Point Blue Conservation Science staff, using the North American Protocol at 62 transects to track the status of Ridgway's rail populations in compliance with the project's USFWS permit. This data will be compiled into an annual report that is shared broadly with permitting and resource agencies and provides a substantial amount of the available regional monitoring data for Ridgway's rails in the bay that is only collected by five entities in a limited number of Bay wide sites.

The overall goal of the ISP is to maintain healthy shoreline habitats by keeping the Estuary's tidal marshes and mudflats free of invasive *Spartina*. The ISP aims to stop invasive *Spartina* spread and reduce the amount of invasive *Spartina* to a low monitoring level. For this project phase, the ISP expects to:

- Reduce remaining *Spartina* by 40-50% in previously restricted sites, enhancing 216 acres of marsh and mudflat habitat.
- Grow and install 32,000 native plants in marsh areas where invasive *Spartina* has been removed.
- Design, permit, and construct 20 high tide refuge islands.

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- Provide workforce training for 20 paid interns.

Cal-IPC is a 501(c)(3) non-profit organization that works to reduce invasive plants in California. They have been partnering with the Conservancy since 2019 to successfully implement the ISP and managed the previous Authority grant. See Exhibit 2 for more information about Cal-IPC and their qualifications as a potential grantee.

Site Description: The project area encompasses 70,000 acres of intertidal wetland and mudflat habitat of the Estuary. See Exhibit 2 for more information.

PROJECT FINANCING

San Francisco Bay Restoration Authority	\$4,000,000
Environmental Protection Agency -	
SF Bay Water Quality Improvement Funds	\$1,000,000
Wildlife Conservation Board	\$2,000,000
State Coastal Conservancy	\$1,075,000
USFWS National Coastal Wetlands Conservation	\$950,000
Santa Clara Valley Water District	\$75,000
Project Total	\$9,100,000

The Invasive Spartina Project has secured all the other funding listed above, necessary to complete the tasks described for a two-year period.

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

Consistent with Section 66704.5(a) Cal-IPC is a non-profit entity and the proposed project is within the counties of the Authority’s jurisdiction.

Consistent with Section 66704.5(b) the proposed project will restore, protect, and enhance tidal wetland by planting 32,000 native plants in tidal marshes, removing invasive *Spartina* which outcompetes native plants and disrupts tidal marsh ecological functions, and construct high tide refuge islands habitat for wildlife.

Consistent with Section 66704.5(e), this project includes planning, construction, and monitoring.

CONSISTENCY WITH MEASURE AA PROGRAMS AND ACTIVITIES:

The proposed 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

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of fish, birds, and other wildlife in and around the Bay. The project will restore wetland habitat to benefit wildlife such as the salt marsh harvest mouse, Ridgway's rail, and native marsh plants.

CONSISTENCY WITH MEASURE AA PRIORITIZATION CRITERIA:

1. **Greatest positive impact.** The project will protect 70,000 acres of tidal marsh and mudflat habitat by removing invasive *Spartina*, enhance tidal marsh habitat by planting 32,000 native tidal marsh plants, and construct and vegetate 20 high tide refuge islands for wildlife. Removing invasive *Spartina* protects native tidal marsh habitat and critical ecosystem functioning. Invasive *Spartina* grows both higher and lower on the tidal elevational gradient than the native Pacific cordgrass, colonizing open mudflats, the mid and high marsh, and adjacent upland transition habitats. It also outcompetes other native vegetation, presenting a significant problem for the native marsh community of plants and wildlife. It reduces biodiversity, degrades foraging habitat (mudflats) for shorebirds and migratory waterfowl, clogs flood control channels, and creates standing water for mosquitoes to breed. Removing invasive *Spartina* will protect native tidal marsh habitat, wildlife, and communities. The project is consistent with the following plans:
 - a. **San Francisco Estuary Blueprint (2022 update):** The project achieves Action 15-5 to reduce total acreage of invasive species cover, Action 15-4 to implement early detection techniques such as DNA sampling, Action 15-1 to implement outreach through pertinent networks, and Action 11-1 to enhance or restore marshes and adjacent uplands.
 - b. **Baylands Ecosystem Habitat Goals Science (2015 update):** The Goals Project called for the large-scale restoration and enhancement of tidal marsh around San Francisco Bay. The 2015 Baylands Goals Science Update calls for restoration and enhancement of a continuous corridor of tidal marsh along the shores of South San Francisco Bay, the eradication of non-native cordgrass and restoring native Pacific cordgrass and recognizes the importance of upland transition zones as refuge habitat for wildlife. Consistent with the Goals Project Science Update recommendations, the project will actively enhance tidal marsh and upland transition zone habitat, remove invasive cordgrass, and plant native cordgrass.
 - c. **Adaptive Management Plan of the South Bay Salt Ponds Restoration Project:** This project is consistent with the South Bay Salt Pond Restoration Project Objective 5 which is to maintain or improve current levels of vector management and manage the spread of invasive species, which when described further in the document specifically names mosquitos and invasive *Spartina*. Consistent with Objective 5, the proposed project will remove invasive *Spartina*, and its removal will prevent the creation of mosquito breeding habitat by invasive *Spartina*, which has clogged channels.
 - d. **Suisun Marsh Habitat Management, Preservation and Restoration Plan:** This plan calls for taking the appropriate steps to restore the ecological values of historic tidal wetland habitat, which includes an effort to lessen the adverse effects of nonnative species. Key restoration activities include nonnative plant control and special-status wildlife protection through surveys, buffers, and monitoring. Consistent with these actions, the proposed project will remove invasive *Spartina*, monitor Ridgway rail populations, including the endangered Ridgway's rail, by conducting

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annual call-count surveys, will enhance degraded upland transition zone habitat with native plants, and construct and plant high tide refuge islands.

See Exhibit 2 for other state and regional plans the proposed project helps to advance.

2. **Greatest long-term impact.** See Exhibit 2 for the greatest long-term impact and Exhibit 1. Project Maps, Restoration Sites Protected by the ISP.
3. **Leveraging resources and partnerships.** See the Project Financing section above for leveraged resources and some partners. There are over 150 landowners and partner entities that are engaged in the project and the project team coordinates site access, permits, and information sharing with these landowners and partners. This includes municipalities (such as the City of San Leandro), port authorities (such as Port of Oakland), water districts (such as Santa Clara Valley Water), regional park districts (such as the East Bay Regional Park District), public health agencies (such as the San Mateo County Mosquito Vector Control District), and nonprofit organizations (such as the Friends of Corte Madera Creek Watershed). Some of these partners actively assist with treatment efforts, provide funding or in-kind support for work in their jurisdiction, and provide access to key sites or outreach to communities.
4. **Economically disadvantaged communities.** Many project sites occur adjacent to economically disadvantaged and environmentally vulnerable communities. Per CalEnviroScreen, there are 557 census tracts overlapping with *Spartina* sites along the Bay shore. In these areas, an average of 34% of residents live below two times the federal poverty level. Despite the proximity of the ISP projects sites to these communities, most of the project's work occurs in environmentally sensitive areas that are difficult or even dangerous to access for the public. During the previous Authority grant, Cal-IPC and OEI provided training to young adults from under-resourced communities through Oakland Civicorps, San Jose Conservation Corps, and Conservation Corps North Bay, including their Spanish-speaking cohort. For this current project phase, Cal-IPC has incorporated a workforce development element that provides paid seasonal internships and will aim to recruit from local workforce development programs (like Civicorps) and colleges. See the Project Summary section, Task 2, where the workforce development program is described.
5. **Benefits to economy.** Work on the project provides employment for Bay Area companies and residents. Contractors OEI, the Watershed Nursery, and HT Harvey are all small local businesses, and OEI is woman-owned. HT Harvey designs and oversees construction of the high tide islands. The Watershed Nursery propagates the thousands of native plants that are used for revegetation each year. OEI serves as the lead contractor overseeing *Spartina* monitoring and treatment, revegetation, and Ridgway's rail monitoring. Most of the project's budget goes to these small contractors. In addition, the project will engage young adults in a paid workforce development program. See the Project Summary section, "Invasive *Spartina* Treatment and Monitoring", where the workforce development program is described.

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6. **Engage youth and young adults.** Twenty young adults will be engaged in a workforce development program, specifically as paid earlier career biological field technicians. See the Project Description section, where the workforce development program is described.
7. **Monitoring, maintenance, and stewardship.** See Exhibit 2 for information about monitoring and maintenance.
8. **Coastal Conservancy’s San Francisco Bay Area Conservancy Program.** See Exhibit 2 for consistency with the Conservancy’s San Francisco Bay Area Conservancy Program.
9. **San Francisco Bay Conservation and Development Commission’s Coastal Management Program.** See Exhibit 2 for consistency with the San Francisco Bay Conservation and Development Commission’s Coastal Management Program.
10. **San Francisco Bay Joint Venture’s Implementation Strategy.** See Exhibit 2 for consistency with the San Francisco Bay Joint Venture’s Implementation Strategy.

CONSISTENCY WITH AUTHORITY’S INTERIM TRIBAL CONSULTATION

POLICY: The Conservancy sent tribal consultation letters to on the Native American Heritage Commission (NAHC) list for all nine counties of the San Francisco Bay Area in September of 2024 for the ISP. The scope of work to be completed in the proposed project is the same scope described in the Conservancy’s recent consultation letters. A formal consultation was conducted with the Conservancy and one tribe on November 6, 2024. The tribe expressed interest in receiving solicitation for the workforce development component for their tribal youth (young adults). Cal-IPC and Conservancy staff (who also staff the Authority) will work together to conduct outreach to tribes on the NAHC list and other tribal organizations and contacts the Authority may have to share information about the workforce development opportunity. The ISP will treat communications about the new workforce development program as an opportunity to inform tribes about the work of the ISP while also offering a paid workforce development opportunity.

The ISP is also consistent with the Tribal Engagement Recommendations in Authority Resolution 123 for “Outreach and Partnerships” which calls for streamlining project communication, communicating on topics of interest expressed by tribes, and having multiple project touch points. While the Authority did not send consultation letters for this specific authorization, staff found that another project consultation letter may be redundant and that there are upcoming points of communication that may work better to generate interest in engaging with the proposed project.

COMPLIANCE WITH CEQA: The Authority independently reviewed the 2003 “Final Programmatic Environmental Impact Report, San Francisco Estuary Invasive Spartina Project: Spartina Control Program” (“2003 FEIR”) prepared for the ISP pursuant to CEQA, as well as the 2005 “Addendum to the 2003 Invasive Spartina Project Control Program Final Programmatic

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Environmental Impact Report” (“2005 Addendum”) prepared for the ISP pursuant to CEQA, and adopted findings and a Statement of Overriding Considerations at the October 2, 2020 Authority meeting (see Exhibit 2). Since the project activities proposed for funding under this authorization, including the potential environmental impacts and required mitigation measures, are the same activities in the same project area covered by the 2003 FEIR and 2005 Addendum, no further environmental documentation for these treatment activities is required under CEQA.