SAN FRANCISCO BAY

RESTORATION AUTHORITY

Annual Report

Fiscal Year 2023 - 2024

The San Francisco Bay Restoration Authority (Authority) is a regional agency created to raise and allocate funds for shoreline projects that will protect, restore, and enhance the San Francisco Bay. The Authority's funding comes from the $12 Measure AA parcel tax of 2016.

The Authority is a vital source of local, long-term funding for projects that help us realize the significant environmental, recreational and flood protection benefits of restoring tidal wetlands and wildlife habitat. The Authority was created by the California Legislature in 2008 to find solutions to the need for new, local funding to replace reduced funding from traditional sources. Its enabling legislation gives the Authority the unique capacity to raise funds throughout the Bay Area and the oversight capacity to ensure transparency and prevent waste. Its purpose is restoration, not regulation.

THE AUTHORITY HAS:

- A Governing Board of local elected officials
- An Advisory Committee (AC) to represent the community and public agencies
- An Independent Citizens Oversight Committee made up of members of the public
- Staff from state and regional agencies

This report highlights the Authority's activities and initiatives from July 1, 2023 - June 30, 2024 (fiscal year 2023-2024, or FY 23-24).

MEASURE AA FUNDING SUMMARY

The Authority's seventh Request for Proposals (RFP), issued in July 2023, netted 15 applications requesting $70 million dollars for restoration projects. With approximately $25 million to allocate each year, the Authority selects projects based upon their alignment with the objectives of Measure AA and the scale of their impact.

In the Fiscal Year 2023 - 2024 the San Francisco Bay Restoration Authority authorized **$25.5 million** to **11 returning projects**, and **two new Community Grant projects**.

This year, nearly all of our funding went towards projects that had previously received Authority grants. The new funding is helping these projects move into new phases – from planning to design to implementation and monitoring.

Since the start of the Authority's grant programs, a total of **$164 million** has been authorized to-date to **41 projects**, leveraged by over **$244 million** from local, state, federal and other funding.

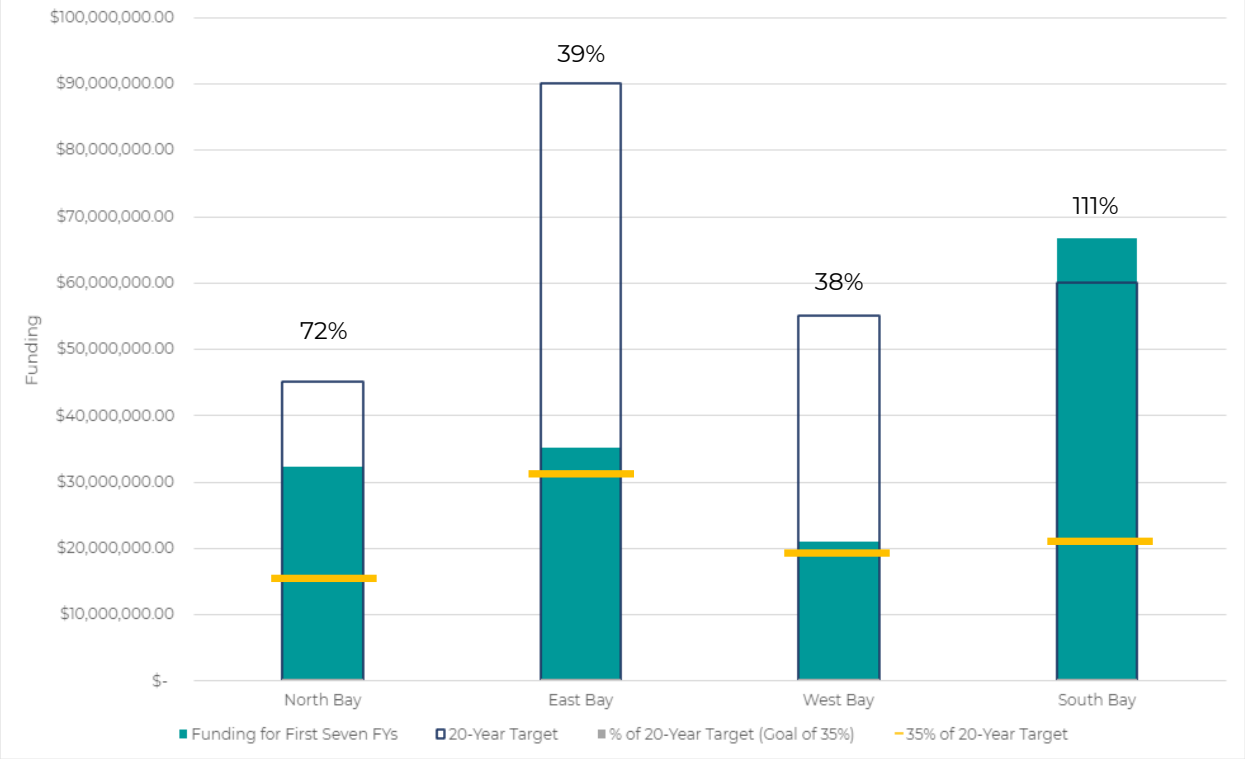
South San Francisco Bay Shoreline Project. Photo: Joey Kotfica, MTC

Measure AA requires that 50% of the total net revenue generated during its 20-year term is allocated to the four Bay Area regions, defined as the North Bay (Sonoma, Marin, Napa and Solano Counties), East Bay (Alameda and Contra Costa Counties), West Bay (City and County of San Francisco and San Mateo County) and South Bay (Santa Clara County) in proportion to each region's share of the Bay Area's population, as determined in the 2010 census. The other 50% is to be allocated without regard to county.

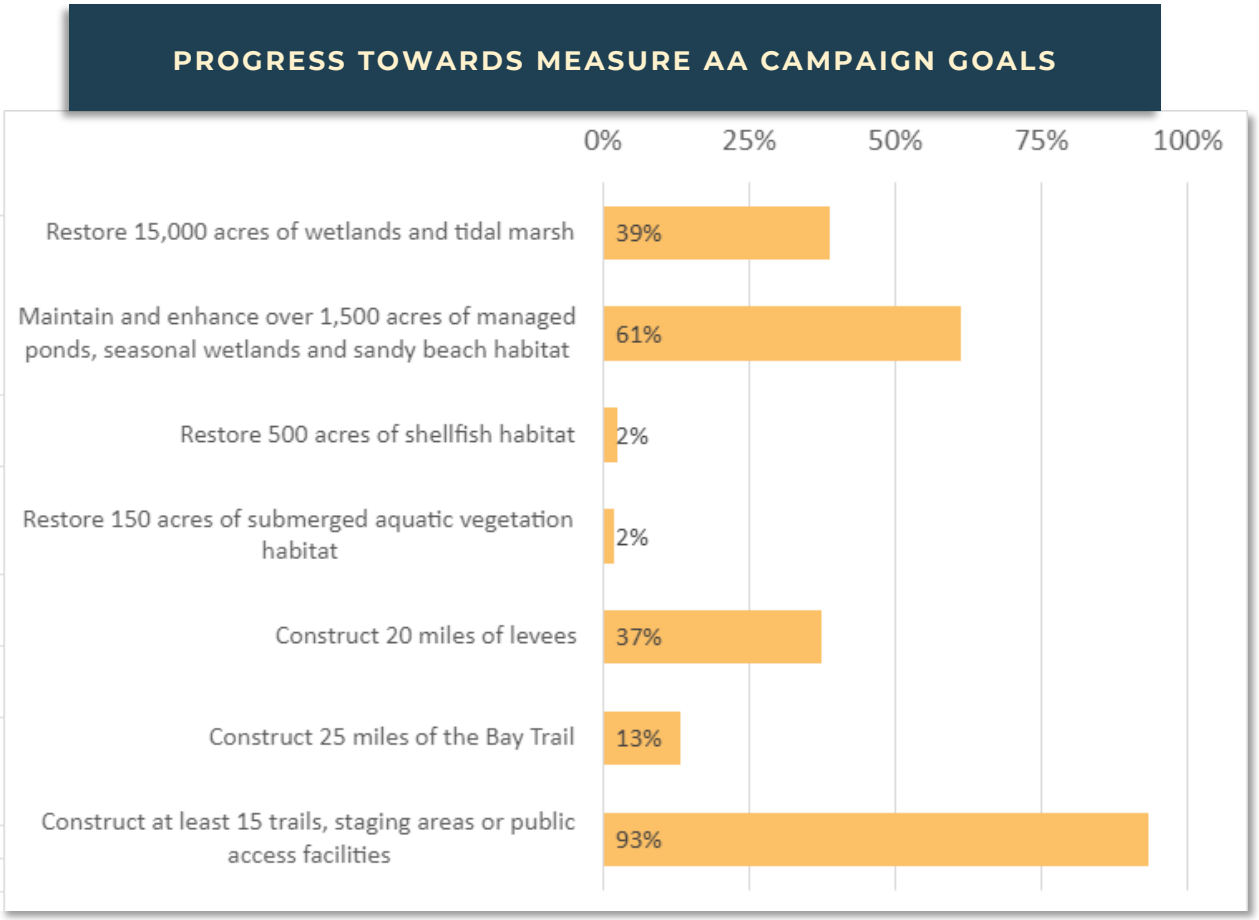
The chart below shows the 20-year targets for each region and our progress towards them. FY 23-24 represents the seventh year of the Authority's Measure AA grantmaking, meaning we are 35% through our grantmaking program. The yellow line indicates 35% of the 20-year regional funding targets. To date, each region has been allocated over 35% of their funding goal. The South Bay has already exceeded its 20-year regional funding goal.

AUTHORIZED FUNDING THROUGH FY 2023-2024 COMPARED TO MEASURE AA 20-YEAR TARGET

Progress is shown compared to % expected at 7-year-mark (35%)



During the campaign for Measure AA in 2016, a number of important restoration goals were identified that could be achieved if the Measure passed. The Authority tracks our progress against these goals at the point projects receive funding. Notably, funding for two access amenities at Lower Walnut Creek this year brings us from 80% to 93% of the goal to construct 15 new access facilities. Other funding this year went towards projects that have already been tallied in this chart or, in the case of the new acres of upland and transition habitat at Deer Island, projects making progress in categories that aren't included as a Campaign Goal but are in the Performance Measures Table below. While transition zone habitat is not included in the Campaign Goals, it is critical shoreline habitat for wildlife migration during high tides and also for engaging communities in stewardship on the shoreline when access to more sensitive habitat is not feasible.



The Authority has developed a performance dashboard hosted on the EcoAtlas at www.ecoatlas.org/dashboard/sfbraDashboard.php to provide an accessible and easily understood means for the public to see the Authority's progress.

FY 23-24 PROJECT FUNDING

Between July 2023 and June 2024, the Authority allocated funding to the following projects.

New Community Grants:

- $200,000 to Ninth Root (through fiscal sponsor Coastal Quest), to conduct the Sacred Spaces Planning Project, consisting of collecting planning data, holding community engagement workshops, and creating plans for habitat and public access enhancements along the Damon Marsh Trail, including a series of climate-resilient and culturally relevant wellness zones at Martin Luther King, Jr. Regional Shoreline in East Oakland.

- $300,000 to Mycelium Youth Network to develop and implement the Storytelling Shoreline Futures: Youth Visioning and Action project. The project will consist of empowering and educating youth on shoreline and climate justice issues through the power of storytelling, conducting shoreline habitat restoration and enhancement; and hosting a community event involving shoreline restoration activities, artmaking, and role-playing games that emphasize the preservation and enhancement of the shoreline.

Funding for New Phases of Ongoing Projects:

- $2,423,000 to Marin County Flood Control District to implement the Deer Island Tidal Basin Wetlands Restoration Project: Phase 1 Construction, consisting of restoring 71.1 acres of tidal baylands; enhancing flood protection measures along 9,600 linear feet of existing levees, including the creation of 5,500 linear feet of ecotone slopes along the levees and raising of 2,800 linear feet of levee; and conducting three years of post-construction monitoring and adaptive management at Deer Island Basin Complex, Novato, Marin County.

- $600,000 to the East Bay Regional Park District to prepare a 100% engineering design and plan, cost estimates, and permit applications for the Hayward Marsh Restoration Project, Phase 2. The project will plan for the restoration of Hayward Marsh from a managed brackish marsh into a mosaic of more natural shoreline habitats that are tidally connected to the bay and optimal for supporting wildlife, public access, and climate resilience. In 2020, the Authority authorized an award of $500,000 for the initial phase Hayward Marsh Restoration Project. During Phase 1, EBRPD conducted the environmental studies and community engagement necessary to develop three restoration design alternatives and the selection of a preferred alternative. Phase 2 will continue to develop the current engineering design to a final, 100% engineering design and plan.

- $1,852,750 to West County Wastewater District to advance the North Richmond Living Levee and Collaborative Shoreline Adaptation Plan by developing 65% design drawings and draft environmental documents for a 0.65-mile section of living levee and 7 acres of tidal marsh restoration and by conducting studies and developing 30% design drawings and collaborative strategies for a living levee at two adjacent areas of shoreline in North Richmond, Contra Costa County.

North Richmond Living Levee site

- $1,700,000 to Golden Gate National Parks Conservancy to advance the Evolving Shorelines Project at Bothin Marsh project, which consists of enhancing habitat and realigning a segment of the Bay Trail at Bothin Marsh Open Space Preserve in Marin County. This grant is for preparing plans and designs, conducting community engagement, and conducting environmental studies in support of environmental review and permitting for the project.

- $3,734,489 dollars to the City of San Leandro for San Leandro Treatment Wetland For Pollution Reduction, Habitat Enhancement, And Shoreline Resiliency: Phase 2 , which will 1) convert a 6.9-acre wastewater storage basin adjacent to San Leandro's Water Pollution Control Plant to a multi-benefit freshwater treatment wetland that will remove wastewater-borne nitrogen, phosphorus, and contaminants of emerging concern, including completion of final permitting for the conversion, and 2) develop a shared vision for community-based shoreline resilience planning efforts and scope a Shoreline Master Plan for the City of San Leandro, Alameda County. Planning for the project, which was funded by an Authority grant authorized in April 2018, involved holding two public workshops to prioritize community-based outcomes, solicit feedback on conceptual designs, and enhance general community engagement.

- $1,155,000 to the San Francisco Bay Bird Observatory for levee slope and transition zone enhancement to benefit western snowy plovers and marsh-dependent wildlife, as part of Phase 2 of the South Bay Salt Pond Restoration Project at the Eden Landing Ecological Reserve in Alameda County. These early habitat enhancement actions will benefit threatened and endangered species at Eden Landing while Ducks Unlimited completes final designs and permits for the restoration of 1,300 acres of tidal marsh and enhancement of 800 acres of managed ponds.

- $5,730,000 to Sonoma Land Trust to acquire Camp 3 Ranch, a 1,480-acre privately-owned hay farm in Sonoma County for habitat protection and restoration and open space preservation, with limited public access and recreation as Phase 3 of the San Pablo Baylands Collaborative Protection and Restoration (CPR) Project. The diked agricultural baylands of Sonoma County, including Camp 3 Ranch, represent one of the most significant remaining opportunities for tidal wetland restoration in San Francisco Bay. In particular, Camp 3's location as the point of outflow for adjacent protected properties makes it a keystone property for future restoration as laid out in the Sonoma Creek Bayland Strategy.

Camp 4, adjacent to Camp 3. Photo: Sonoma Land Trust

- $1,936,000 was awarded to Point Blue Conservation Science for Phase 2 of Restoring wetland-upland transition zone habitat in the North Bay with STRAW. Phase 2 consists of restoring approximately 1.1 acres of critical wetland-upland transition zone habitat at the American Canyon Wetlands, engaging STRAW (Students and Teachers Restoring a Watershed) participants on site, and offering early career training and workforce development that focuses on historically underserved communities.

- $2,500,000 was allocated for the Bay Restoration Regulatory Integration Team (BRRIT), and $2,000,000 of additional funds was accepted by the Authority for continued operation of the BRRIT for an additional five years. The objective of the BRRIT is to improve the permitting process for restoration projects by dedicating agency representatives to review project information for consideration as a team and process permit applications in the most efficient possible manner.

Augmentations to Ongoing Projects:[1]

- Lower Walnut Creek Restoration Project, $3,000,000 to the Contra Costa County Flood Control and Water Conservation District to augment the grant of $7,929,855 previously authorized by the Authority. This augmentation was needed to implement the public access portion of the project, which had a higher estimated cost due to both inflation and design updates needed to address changes in as-built site conditions compared to the original design.

- Coyote Hills Restoration and Public Access Project, $100,000 to the East Bay Regional Park District to contribute towards 1 year of post-construction veg management, including watering, weeding, monitoring, and replanting natives as needed to ensure habitat establishment.

Lower Walnut Creek. Photo: Contra Costa County

[1] Augmentations generally fund increased or unexpected project costs that do not substantially alter the scope of the project.

AUTHORITY MILESTONES

In this Fiscal Year, the Authority made significant headway in delivering the benefits of Measure AA in an equitable manner, working collaboratively with the region's tribes and tribal groups, and seeing funded projects making progress.

In May 2024, the Governing Board adopted **Equity Guidelines** through the passage of Resolution 122. The Guidelines evolved from Resolution 70, which adopted recommendations for implementing Measure AA to benefit economically disadvantaged communities. The majority of the recommendations were intended to be accomplished within two years. Recognizing the need for Equity Guidelines that would extend through the remainder of the Measure AA parcel tax period, staff collaborated with the Advisory Committee (AC) and Community Based Organizations to develop guidance that will last the full length of Measure AA's 20-year term. The Equity Guidelines identify actions to further equitable outcomes in six areas:

- Representation
- Outreach and Partnership
- Applications and Grants
- Meaningful Engagement
- Project Benefits
- Accountability and Transparency

On May 3, 2024, the Governing Board adopted **Tribal Engagement Recommendations** through the passage of Resolution 123. Alongside the Authority's focus on equity, we have also sought to improve our tribal engagement work to provide tribes with equitable access to the Measure AA Grant Program and the benefits that Measure AA projects provide. As a first step, Authority staff reviewed recommendations that were gathered by other natural resource agencies. Staff took this initial step to minimize the burden of requests to tribes to educate natural resource agencies. Staff then conducted outreach to San Francisco Bay Area tribes and tribal organizations, ultimately working directly with five tribal representatives to refine the draft Tribal Engagement Recommendations with their feedback. After providing opportunities for additional feedback to the redline version of the draft recommendations from tribal representatives, AC, and Board, the Board adopted the recommendations.

PROJECT MILESTONES

This year, we also saw our funded projects advancing shoreline restoration, public access, flood control, water quality, and wildlife habitat protection around the Bay.

In December 2023, the South Bay Salt Pond Restoration Project, partners, and the U.S. Fish and Wildlife Service opened a 300-acre former industrial salt pond in San Mateo County to the Bay with a celebration marking the 20th anniversary of their joint restoration venture. This major milestone event is part of an ambitious 50-year effort to restore 15,000 acres of historic wetlands to tidal marsh and other habitats.

Levee Breach at South Bay Salt Ponds. Photo: South Bay Salt Pond Restoration Project

Point Blue Conservation Science's Restoring wetland-upland transition zone habitat in the North Bay with STRAW project completed Phase 1 - restoring approximately 1.3 linear miles of critical wetland-upland transition zone habitat in the North Bay, engaging over

5,000 participants at three sites. Phase 2 funding was awarded this Fiscal Year.

Sonoma Land Trust completed acquisition of the 1,150 acre Camp 4 as part of the San Pablo Baylands Collaborative Protection and Restoration Project. Situated in the heart of the Sonoma Creek Baylands, the property will be restored to tidal marsh wetlands after a century of agricultural use, most recently as an organic hay farm. Camp 4 sits between the San Pablo Bay National Wildlife Refuge and the Napa-Sonoma Marshes Wildlife Area and is encircled by seven miles of tidal slough channels. This makes it an essential part of the broader wetland network which, when restored, will act as the most critical defense area against rising sea levels in the San Francisco Bay Area. In June 2024, the Governing Board authorized $5,730,000 to Sonoma Land Trust to acquire the 1,480-acre Camp 3 Ranch property.

The Invasive Spartina Project completed its Authority funded work. The project team successfully accomplished their objectives: complete two seasons of Spartina monitoring and treatment across 70,000 acres of marsh habitat, install 36,000 native plants, conduct rail surveys at 125 sites each year, and conduct outreach.

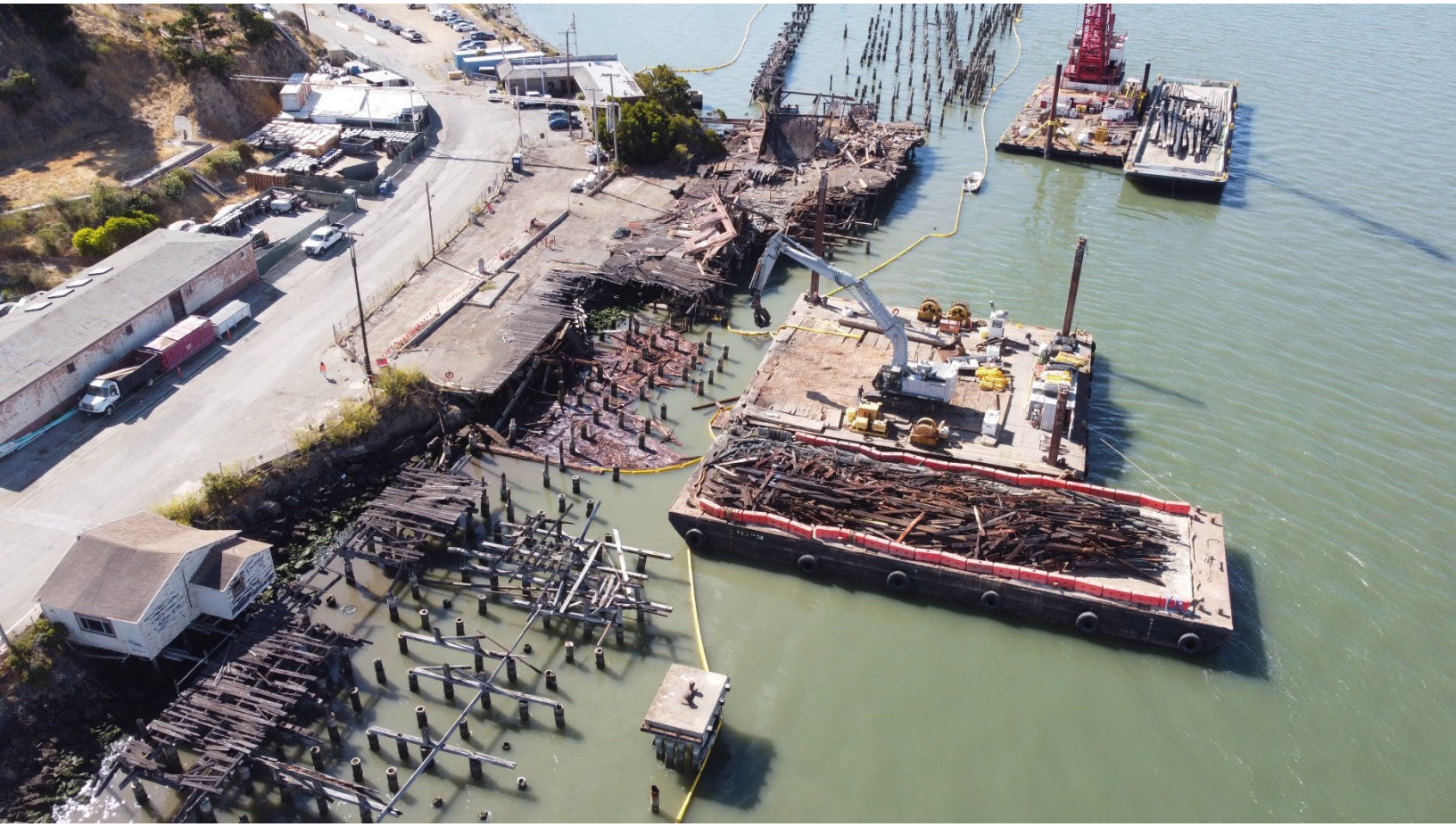
Phase 1 of the Hayward Marsh Restoration Project was completed in December of 2023. The project team has been awarded funds for Phase 2 of the design project which will produce 100% engineering designs for habitat and public access improvements that will adapt and transition as sea level rises.

The Colma Creek Restoration and Adaptation Project was completed. This planning and design project had a significant focus on community engagement in the design process. The 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.

Rendering of the restored Colma Greek. Photo: Hassell Studio

Phase 1 of the North Richmond Living Levee Project was completed in January 2024 including 30% designs and technical studies for the living levee section adjacent to the West County Wastewater Plant and the Collaborative Shoreline Adaptation Plan for the North Richmond shoreline. Funding awarded this Fiscal Year will go towards the next phase of design and scoping work on the living levee and adjacent parcels.

Demolition of Terminal 4 in Richmond, the largest derelict wharf in Bay, was completed between July and December 2023. The 12,000 sq ft warehouse, 1000' pier, 1300 sq ft dockmasters office, and 2,473 derelict pilings- total of 2,128 tons of debris – was removed. Remaining work to construct enhanced rock slope protection with crown plantings, seaweed cobbles, and oyster reef elements will occur in 2024, followed by 5 years monitoring through 2029.



Demolition of Terminal 4. Photo: City of Richmond

SAN FRANCISCO BAY
RESTORATION AUTHORITY

Projects Map

PROJECT BENEFITS *to* ECONOMICALLY DISADVANTAGED COMMUNITIES

The Authority seeks to address social equity by prioritizing eligible projects that offer benefits to Economically Disadvantaged Communities (EDC), defined as a community with a median household income of less than 80% of the area median income. A project's ability to provide benefits to these communities is determined by multiple factors, including the direct involvement of local community groups; ongoing community participation and support; the use of strategies to increase relevance of messaging and outreach; and the ability to alleviate multiple stressors within communities including, but not limited to, addressing the need for additional recreational amenities, resilience to climate change, reductions in pollution burden, greater civic engagement, workforce development, and enhanced leadership development opportunities.

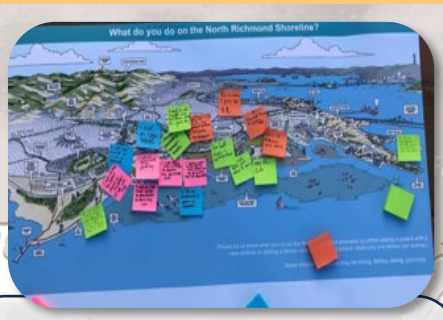
Previously, the Authority displayed one social equity metric on the Performance Measures table, which was the percentage of projects that benefit an EDC. Using the same metric, staff have prepared a table (below, "Benefits to Economically Disadvantaged Communities, Cumulative Fiscal Years") that provides some additional details about the Authority projects' benefits (project type, habitat type and acres) and functionality (public access facilities, trails, levees) that are likely be realized by an EDC. Staff have prepared an accompanying map (below, page 17) with examples of projects that staff and grantees have indicated as providing benefits to EDCs. The project examples draw from both our Competitive Grant Rounds and Community Grant Rounds and provide key highlights that show strong community leadership, partnership, and participation in the development and implementation of Authority funded projects.

In future annual reports, staff will track additional metrics in accordance with the forthcoming Five-Year Equity Work Plan and there will be ongoing work with the Authority's Advisory Committee to provide feedback on metrics, analysis, and communication around equity work and goals. Staff are also coordinating with the Wetlands Regional Monitoring Program (WRMP) to look at equity in the region broadly, share information, and improve SFBRA's social equity metrics. The WRMP provides support to the Authority and the region to conduct the more nuanced and complex analysis to better understand equity in shoreline restoration. Staff anticipate that the 2024-25 Annual Report will include data from the WRMP on demographic representation of Authority staff, Governing Board, and Committees, and maps that more broadly define vulnerable communities by multiple factors.

Benefits to Economically Disadvantaged Communities, Cumulative Fiscal Years				
Performance Measures	**Unit**	**Amount Benefiting EDCs**	**Total**	**% Benefitting EDCs**
Projects Authorized by the Governing Board	Projects	29	41	71%
Types of Projects				
Measure AA Program Areas Addressed **Note: Grants can address multiple Program Areas.**				
Clean Water	Grants	17	24	71%
Habitat Restoration	Grants	30	47	64%
Flood Protection	Grants	15	24	63%
Public Access	Grants	23	35	66%
Habitat Restoration and Enhancement				
Number of restoration plans to be completed	Plans	17	36	47%
Total Acres of Habitat Restored and Enhanced	Acres	5500.8	7617.0	72%
Levee Construction				
Miles of Levee to be Constructed	Miles	6.2	7.5	82%
Public Access				
Miles of Bay Trail to be constructed	Miles	3.3	3.3	100%
Miles of other trail to be constructed (non-Bay Trail)	Miles	9.8	10.3	95%
Number of Water Trail sites expected to be constructed	Sites	0	1	0%
Public Access Facilities	Facilities	10	14	71%

FUNDED PROJECTS *that* BENEFIT ECONOMICALLY DISADVANTAGED COMMUNITIES

Phase 1 of Restoring Wetland-Upland Transition Habitat in the North Bay with STRAW restored 1.3 miles of critical habitat and engaged over 5,000 students, teachers, and their families. Approximately 40% of the schools Point Blue partners with are in low-income communities. The projects also trained college interns in climate-smart conservation principles. Phase 2 will offer early career training and workforce development that focuses on historically underserved communities.



The North Richmond Shoreline Living Levee Project aims to provide critical flood protection and sea level rise adaptation through a 0.65-mile section of living levee and 7 acres of tidal marsh. Driven by the community, this project demonstrates an example of a highly collaborative, multi-benefit restoration project.

Completed by the West Oakland Environmental Indicators Project (WOIEP), the Oakland Shoreline Leadership Academy recruited residents of EDCs living on or near the shoreline in Oakland. This 6-month program allowed participants to explore the intersection of environmental and social community needs to actively participate in a community-led shoreline habitat restoration planning process.

The Sacred Spaces Planning Project, facilitated by Ninth Root, will plan for habitat and public access enhancements at the Martin Luther King, Jr. Regional Shoreline in Oakland. Ninth Root aims to create naturally restored, climate adaptive, spiritual and mental health-oriented wellness zones.

The Port of San Francisco partnered with Literacy for Environmental Justice (LEJ), a non-profit environmental education and youth empowerment organization, to hire "Eco-Apprentices" from low-income backgrounds with a passion for conservation to restore and enhance wetlands along the Bayview-Hunters Point community's shoreline for Phase 1 of the Heron's Head Shoreline Resilience Project.

Led by Planting Justice, the Bay Restoration Youth Engagement and Service Learning Project in East Oakland developed workshops for youth interns on environmental justice issues and habitat restoration techniques in addition to leading shoreline cleanups and other restoration-related activities at the Martin Luther King Jr. Regional Shoreline. With support from the Sogorea Te' Land Trust, an urban Indigenous women-led organization, workshop topics included land rematriation, Bay Area Native American history, and local environmental justice issues.

Through a Community Task Force, partnerships with local Community Based Organizations, and the development of an Equitable Development Plan, residents of the Bayview-Hunters Point neighborhood have been actively involved in the planning and design process of the 900 Innes Remediation Project.

The SAFER Bay Planning Project will lead to coastal flood protection for communities in East Palo Alto and Menlo Park. Building on ongoing outreach to local communities conducted by two Community Based Organizations (Nuestra Casa and Climate Resilient Communities), this project will benefit local residents by reducing flood risk and associated flood insurance requirements while increasing access to natural areas providing physical and mental health benefits for community members.

The Baylands Habitat Restoration and Community Engagement Project hires local youth as paid restoration interns and utilizes partnerships between Grassroots Ecology and Climate Resilient Communities to engage and empower local communities in East Palo Alto where the population consists largely of working-class people of color.

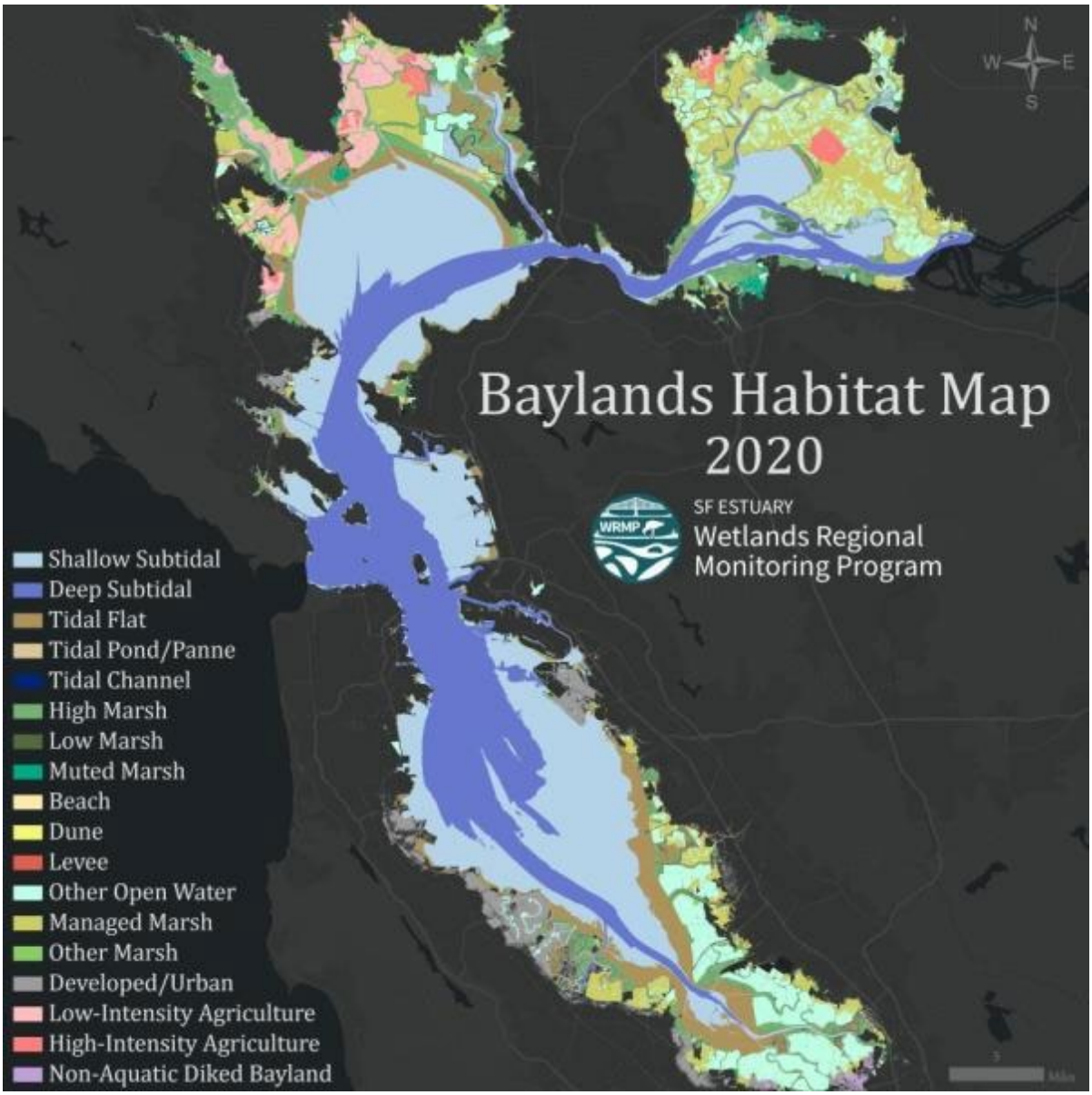
SAN FRANCISCO BAY RESTORATION AUTHORITY
FUNDED BY MEASURE AA

NEW AUTHORITY PERFORMANCE MEASURES *from the* WETLANDS REGIONAL MONITORING PROGRAM

The San Francisco Estuary (Estuary) Wetlands Regional Monitoring Program (WRMP) is a collaborative science driven program that coordinates and implements regional monitoring of the Estuary's wetlands. More information about the WRMP and regional efforts can be found at www.wrmp.org. WRMP and Authority staff have worked together to align key restoration project metrics and show the impact of Authority funded projects on wetland restoration in the region.

Recently, the WRMP completed the Baylands Habitat Map (BHM) 2020 for the region, which is the foundational analysis for the tidal habitats and diked baylands for the region. The data represents habitats during the year 2020. The mapping effort established an automated and standardized approach that can be replicated consistently in years to come, and track changes over time. Updated mapping will be provided every five years, with the next set of maps representing the year 2025.

The WRMP has provided the four new metrics (tidal marsh extent, patch size, patch shape, and connectivity) for Authority funded projects up to 2020, and these are described further below.



Tidal Marsh Extent

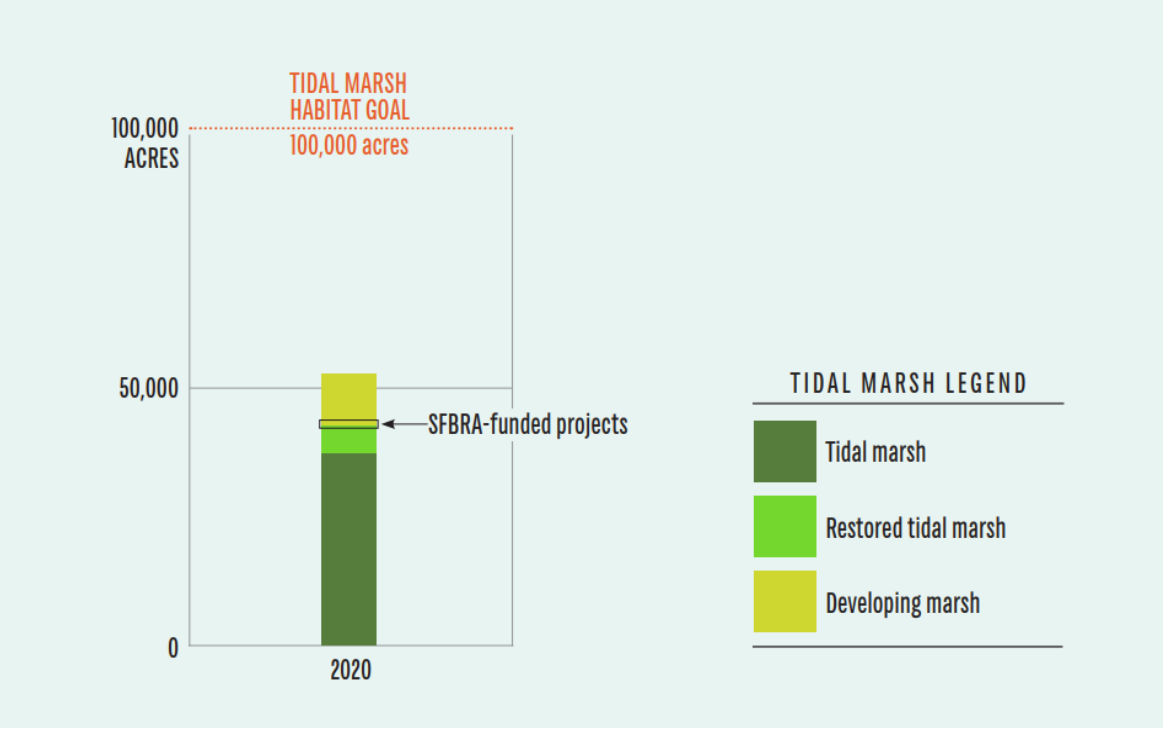
This metric combines the mapped tidal habitats in the BHM 2020 and restoration project data from Eco Atlas Project Tracker tool. Project Tracker is a regional tool to track restoration projects, to allow for better analyses of changes in habitat extent and landscape-scale conservation planning. The graph below tracks progress toward a regional goal of increasing tidal marsh habitat to 100,000 acres as established by the 1999 Baylands Ecosystem Habitat Goals and the 2015 Baylands Ecosystem Habitat Goals Update. This goal is supported by the 2022 Estuary Blueprint and other regional plans, including the 2022 Implementation Strategy of the SF Bay Joint Venture. The Joint Venture Implementation Strategy endorses the original goal while also encouraging establishment of a total of 125,000 acres of tidal marsh.

The dark green category titled "Tidal Marsh" are existing tidal marshes that never needed restoration (approximately 38,000 acres). The light green category titled "restored tidal marsh" is existing tidal marshes that are due to restoration projects in the recent past. The yellow category titled "Developing into marsh" is areas within restoration projects that don't yet support vegetated tidal marsh habitat, but that will develop into mature, vegetated, and complex tidal marsh habitat in the future. As of the year 2020 the region has 53,400 acres of current and developing tidal marsh habitat.

- 38,000 acres of tidal marsh (never needed restoration, dark green category)
- 5,400 acres restored, currently supporting vegetated tidal marsh habitat (light green category)
- 10,000 acres restored that don't yet support vegetated marsh (yellow category)
- **1,700 of the 15,400 acres of established and developing restored marsh in the Bay is from SFBRA-funded projects.**

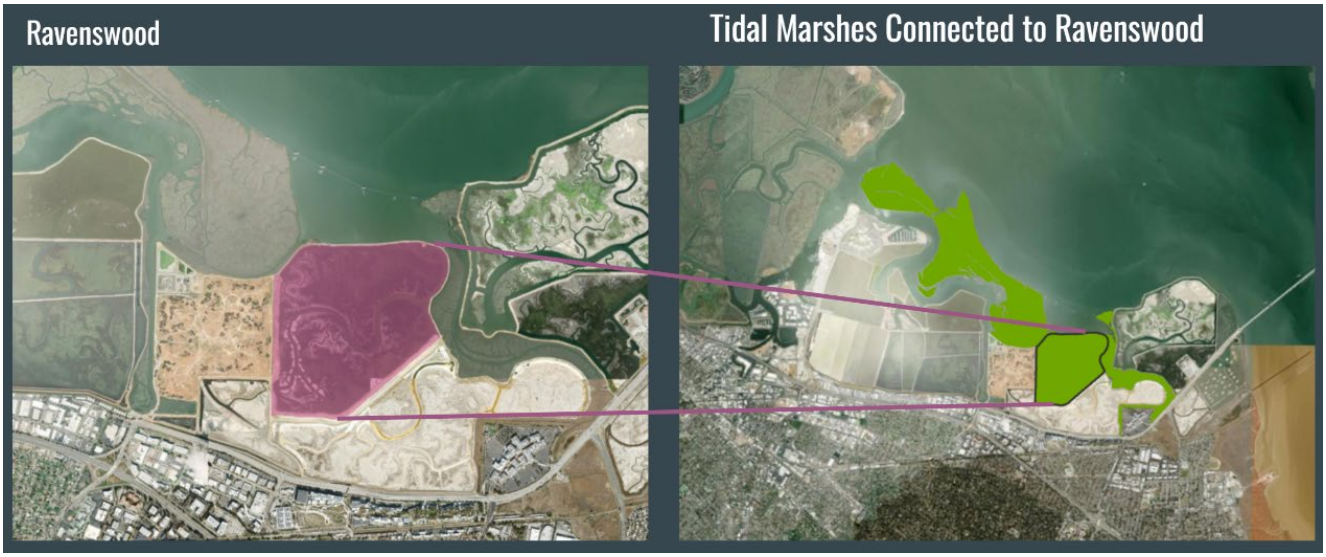
* *Note that the numbers for established and developing restored marsh are currently being finalized, and may be subject to minor changes shortly after this report.*

By 2020, Authority funded projects contributed to approximately 11% of the region's tidal marsh restoration.



Marsh Patch Size, Shape, and Connectivity

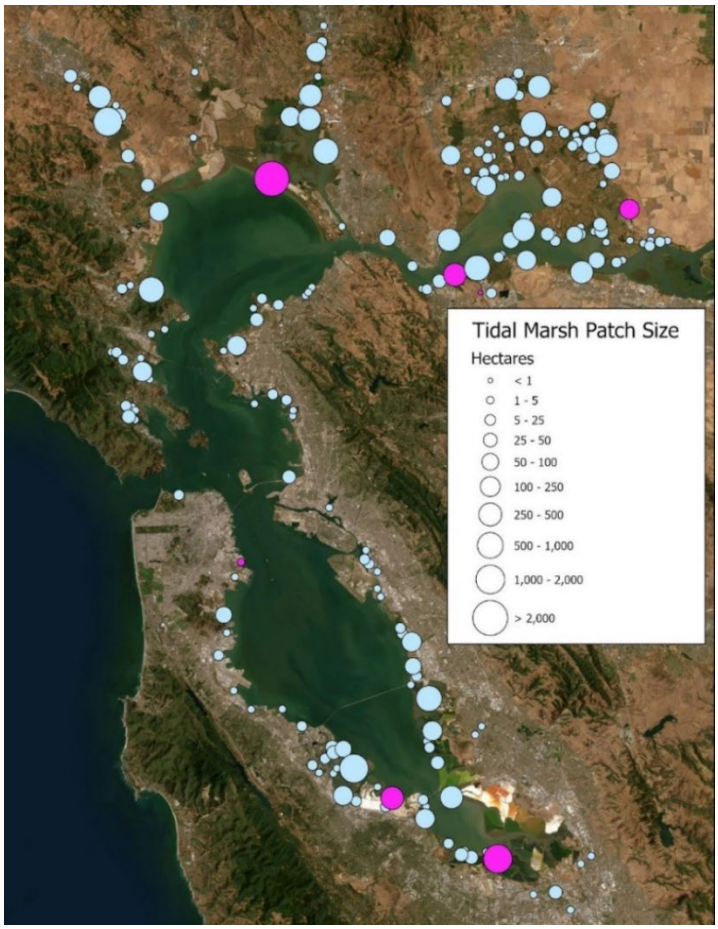
The BHM 2020 can also help assess the habitat function and ecological values using the marsh size, shape and connectivity to other tidal marsh habitat. In this analysis, we look at areas of marsh that are functionally connected (all marsh areas are less than 60 meters apart) referred to as "patches." The assumption is that the marsh areas are close enough together that wildlife can easily move between them regularly. The size of functionally connected marshes can increase with the addition of one or more projects. An example below is Ravenswood Marsh (305 acres), which was breached in the winter of 2023. The addition of Ravenswood now functionally connects two other patches, Grecco Island and Deepwater Slough (663 and 120 acres respectively) and creates a larger marsh patch size (1088 total acres). For this example, Bair Island was excluded but would contribute to an even larger patch size. This analysis only includes completed restoration projects, where the earthwork has been completed, not projects in the planning stages.



While marsh patches of all sizes are valuable, larger marshes can support larger wildlife populations, greater species diversity, and more complex habitats. Where smaller sites exist due to space and habitat limitation, their value extends beyond their size because they can serve as a stepping stone to support wildlife movement through the larger landscape and provide access to nature for people despite not being able to support larger wildlife populations.

Authority projects (shown in pink in the adjacent map) contribute to both large and small patch sizes:

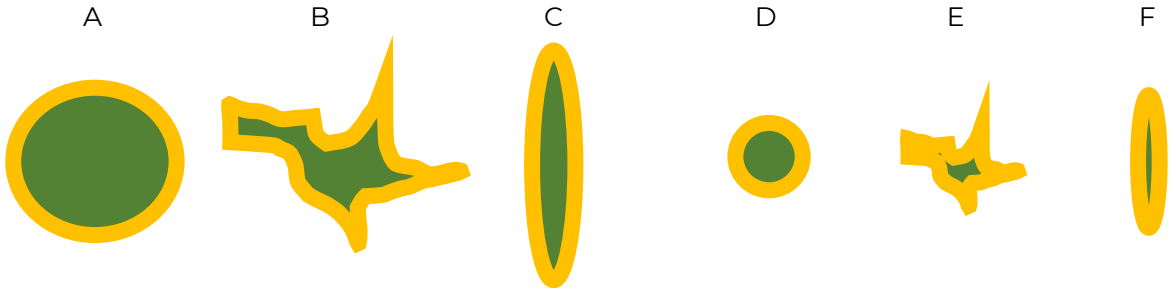
- 2 small sites under 10 acres (1-5 hectares category)
- 2 sites between 400-700 acres (100-500 hectare categories)
- 2 sites between 1,000-5,000 acres (250-2,000 hectare categories)
- 1 site over 15,000 acres (over 2,000 hectare category)



Projects as of 2020

Tidal Marsh Patch Shape

Marsh patch size takes into consideration both size and compactness of a marsh to understand habitat complexity. A rounder, more compact marsh has a larger interior core and larger core to edge ratio. Marsh edges tend to be less complex habitat and is the most susceptible to stressors coming from outside of the marsh. A compact marsh that is also small will still have a lot of edges (higher edge to core ratio) that is of lower quality habitat. A marsh of the same acreage that is less compact, will have a smaller core to edge ratio. As an example, see the figures below. The green is “core habitat” while the yellow represents “edge habitat.” Figures A and D are the most compact.. However, figure D, while more compact than figure B, has less core habitat due to its smaller size. When comparing Figure D to other marsh shapes of similar size (E and F), Figure D has the most core habitat.



Petaluma Marsh, Photo by Robert Janover

Alviso Slough Marsh, Photo by Eve Meier

Example projects with different marsh shape are Petaluma Marsh (image left) and Alviso Slough (image right). Petaluma Marsh is a large compact marsh that supports a lot of complex core habitat and includes plenty of winding channels. Alviso Slough is a narrow, fringing marsh that is a much simpler marsh system adjacent to a paved trail. At Alviso Slough, marsh wildlife are more susceptible to trail users and face increased risk from upland predators like foxes and cats.

Authority funded projects generally increase the overall compactness (or high-value "core" habitat) of a marsh patch. **Authority funded projects increased the compactness of the marsh patches they are a part of by an average of 12%.**

Tidal Marsh Patch Connectivity

The WRMP analyzed the connectivity of marsh patches to other patches by modeling how easily the endangered Salt Marsh Harvest Mouse (SMHM) could move through the landscape. Marsh patches that the mice could move between were considered effectively connected patches. Although the analysis was done with the SMHM as the basis due to these species' small size we can assume effectively connected patches will support the movement and connectivity of other tidal marsh wildlife. This analysis looks at Authority funded projects through 2024 (2,580 acres of completed tidal marsh restoration projects. Note that the analyses above only considered through 2020). **Authority projects have contributed to 16,660 acres of connected habitat.** This equates to about 6.5 times the Authority's actual project acreage to date (2,580 acres).

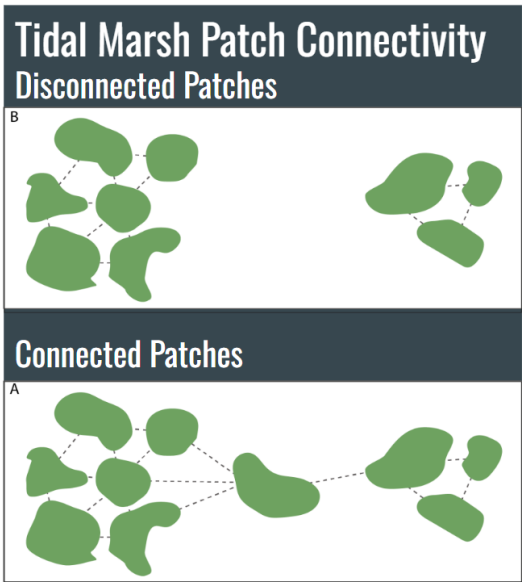


Figure from San Francisco Estuary Institute, modified from Saura, S., & Pascual-Hortal, L. (2007)

PERFORMANCE MEASURE TABLE[2]

Performance Measure Table for Fiscal Year 2023-24 and Cumulative Fiscal Years			
Performance Measures	**Unit**	**Amount (FY 23-24)**	**Cumulative**
Projects Authorized by the Governing Board	Projects	2	41
Types of Organization Funded			
Public Agency	Projects	0	19
Non-Profit Organization	Projects	2	19
Private For-Profit Entity	Projects	0	1
Public-Private Partnership	Projects	0	0
Multi-Agency Partnership or Joint Powers Authority	Projects	0	2
Types of Projects			
Measure AA Program Areas Addressed **Note: Grants can address multiple Program Areas.**			
Clean Water	Grants	4	24
Habitat Restoration	Grants	7	47
Flood Protection	Grants	2	24
Public Access	Grants	7	35
Pilot or demonstration projects	Grants	1	10
Special projects	Grants	0	2
Project Phases Funded			
Pre-Construction Only Grants	Grants	5	29
Construction Grants	Grants	5	24
Post-Construction Grants Only	Grants	1	3
Habitat Restoration and Enhancement			
Number of restoration plans to be completed	Plans	3	36

[2] This table does not include targets. However, progress toward the Measure AA Campaign Goals is shown on Page 5, and progress toward the 20-year funding targets by region is shown on Page 4.

Performance Measures	Unit	Amount (FY 23-24)	Cumulative
Specific species targeted for restoration	List of specific target species for restoration	salt marsh harvest mouse, Ridgway's rail, American Avocet, American green sturgeon, black rail, burrowing owl, California fescue, California least tern, California sage brush, California sea blite, California vole, canvas back duck, Chinook salmon, Delta smelt, eel grass, longfin smelt, mallard duck, marsh gumplant, northern harrier, northern pintail, Olympia oysters, ornate shrew, red knot, Pacific cordgrass, Pacific herring, Pacific rockweed, purple needle grass, salt marsh common yellow-throat, salt marsh wandering shrew turtle, San Pablo song sparrow, snowy egret, steelhead trout, sticky monkey flower, Suisun shrew, tidewater goby, Western pond turtle, Western sandpiper, Western snowy plover, yarrow	
Number of acres of habitat to be constructed (restored, maintained, and/or enhanced) divided by type			
Beach Habitat	Acres	0	2.2
Managed Ponds	Acres	4	74.3
Tidal Marsh Complex	Acres	57	5832.7
Other Bayland	Acres	2.6	21.6
Seasonal Wetland	Acres	0	842.5
Other Subtidal	Acres	0	38.0
Shellfish Habitat	Acres	0	12.1
Submerged Aquatic Vegetation Habitat	Acres	0	3.0
Transition Habitat	Acres	24.6	195.5
Upland Habitat	Acres	13.3	595.1
Total acres	Acres	101.8	7617.0
Levee Construction			
Miles of Levee to be Constructed	Miles	0	7.5
Public Access			
Miles of Bay Trail to be designed	Miles	2	16.23

Performance Measures	Unit	Amount (FY 23-24)	Cumulative
Miles of Bay Trail to be constructed	Miles	0	3.3
Miles of other trail to be designed (non-Bay Trail)	Miles	0.5	10.83
Miles of other trail to be constructed (non-Bay Trail)	Miles	0.5	10.3
Number of Water Trail sites expected to be designed	Sites	0	5
Number of Water Trail sites expected to be constructed	Sites	1	1
Public Access Facilities	Facilities	2	14
Youth Involvement			
Percentage of projects with significant youth involvement component	Percent of Grants	60.0	45.3
Number of youth to be engaged	People	2367	8540
Benefits to Economically Disadvantaged Communities			
Percentage of projects providing benefits to economically disadvantaged communities	Percent of Grants	60.0	62.7
Volunteer Involvement			
Volunteer time	Hours	21,475	87,185
Number of unique volunteers expected to participate in restoration	Volunteers	322	1,657
Geographic Distribution of Funds Authorized			
North Bay	Dollars	$11,789,000.00	$32,314,318.44
East Bay	Dollars	$10,942,239.00	$35,165,709.86
West Bay	Dollars	-	$20,903,733.00
South Bay	Dollars	-	$66,636,079.00
Baywide	Dollars	$2,738,704.00	$8,903,704.00
Total	Dollars	**$25,469,943.00**	**$163,923,544.30**

Performance Measures	Unit	Amount (FY 23-24)	Cumulative
County Statistics			
Number of Grants within each County			
North Bay			
Sonoma	Grants	1	7
Napa	Grants	1	7
Solano	Grants	0	9
Marin	Grants	2	13
East Bay			
Contra Costa	Grants	1	9
Alameda	Grants	6	22
West Bay			
San Francisco	Grants	0	8
San Mateo	Grants	0	9
South Bay			
Santa Clara	Grants	1	6
Funding by County			
North Bay			
Sonoma	Dollars	$6,267,625.00	$7,219,500.00
Napa	Dollars	$1,936,000.00	$2,453,500.00
Solano	Dollars	-	$2,064,606.00
Marin	Dollars	$4,123,000.00	$10,381,763.44
East Bay			
Contra Costa	Dollars	$4,852,750.00	$18,077,314.00
Alameda	Dollars	$5,789,489.00	$14,191,728.00
West Bay			
San Francisco	Dollars	-	$6,391,700.00
San Mateo	Dollars	-	$3,774,515.00
South Bay			

Performance Measures	Unit	Amount (FY 23-24)	Cumulative
Santa Clara	Dollars	-	$113,827,021.00
Multi-County	Dollars	$3,038,704.00	$26,736,698.00
Matching Funds			
Total dollars matched by other funding sources	Dollars	$21,920,000.00	$244,832,457.00
Other Contributions			
Private contributions	Dollars	-	-
Other government contributions	Dollars	$375,000.00	$1,875,000.00
Administrative Costs from Tax Revenue			
Program administrative costs from tax revenue as a percentage of the total tax proceeds collected[3]	Percent of Funds	5.91%	4.9%

[3] In addition to the 5% from Measure AA, interest earnings are used to fund administrative operations.

FINANCIAL SUMMARY, FISCAL YEAR 2023-2024

The Restoration Authority received the seventh year of parcel tax funds in FY 23-24 totaling $25,901,253. Investment and other revenue totaled $4,408,670 and local and regional government contributions for the Bay Restoration Regulatory Integration Team (BRRIT) were $275,000, for a total revenue of $30,584,923 (Table 1). The combined seven-year total revenue for the Restoration Authority is $189,939,416.

Table 1. Statement of Revenues

General Revenue	FY 17/18	FY 18/19	FY 19/20	FY20/21	FY21/22	FY22/23	FY23/24	Total
Measure AA Special Tax	$25,313,504	$25,499,815	$25,601,057	$25,703,961	$25,762,786	$25,853,508	**$25,901,253**	**$179,635,884**
Investment Income	$37,608	$528,927	$495,650	$181,129	$222,173	$2,565,602	**$4,399,507**	**$8,430,596**
Miscellaneous	$12,942	$20,107	$17,214	$19,199	$9,190	$10,121	**$9,163**	**$97,936**
Revenue Local and Regional Government (for BRRIT)	-	$375,000	-	$375,000	$375,000	$375,000	**$275,000**	**$1,775,000**
Total Revenue	$25,364,054	$26,423,849	$26,113,921	$26,279,289	$26,369,149	$28,804,231	**$30,584,923**	**$189,939,416**

Administrative Summary

The beginning administrative fund balance was $4,525,691. During FY 23-24, $1,295,063 (5% of the Measure AA tax revenue) and $4,408,670 (investment income and other revenue) was transferred into the account, totaling $10,229,424 available for administration operations (Table 2). Staff implemented the work plan approved at the June 30, 2023 meeting of the Governing Board. A total of $1,817,857 was approved for the FY 23-24 administrative operating budget. A total of $1,531,969 was expended to administer the Authority. The ending administrative fund balance was $8,697,455.

Table 2. Administrative Revenues and Expenses

	Budget	Actual
Investment Income and Other Revenues	$600,000	**$4,408,670**
Expenditures		
Staffing, Professional Fees, Overhead, and Other	$1,817,857	**$1,531,969**
Ballot Costs	-	**-**
Total Expenditures	$1,817,857	**$1,531,969**
Other Financing Sources (5% of Measure AA revenue)	$1,290,750	**$1,295,063**
Net Change in Fund Balances		
Net change in Fund Balance for FY 23/24	$72,893	**$4,171,764**
Fund Balance - Beginning (from end of FY 22/23)	$4,525,691	**$4,525,691**
Administrative Fund Balance - Ending	$4,598,584	**$8,697,455**

Since the Authority began receiving Measure AA funds, $8,981,794 (5% of the Measure AA tax revenue) and $8,510,938 (investment income and other revenue) has been transferred into the account for administrative operations, totaling $17,492,732 (Table 3). A cumulative total of $8,795,277 has been expended.

Table 3. Multi-Year Administrative Revenues and Expenses

	FY 16/17*	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	Total
Investment Income, Other Revenues, and Other Financial Sources									
Investment Income and Other Revenues		$50,550	$549,034	$512,864	$200,328	$213,769	$2,575,723	$4,408,670	**$8,510,938**
Other Financing Sources (5% of Measure AA revenue)		$1,265,675	$1,274,991	$1,280,053	$1,285,198	$1,288,139	$1,292,675	$1,295,063	**$8,981,794**
Total		$1,316,225	$1,824,025	$1,792,917	$1,485,526	$1,501,908	$3,868,398	$5,703,733	**$17,492,732**
Expenditures									
Staffing, Professional Fees, Overhead, and Other	$223,571	$471,885	$807,708	$1,028,444	$1,225,755	$1,222,601	$1,175,081	$1,531,969	**$7,687,014**
Ballot Costs	-	-	$369,421	$369,421	$369,421	-	-	-	**$1,108,263**
Total Administrative Expenditures	$223,571	$471,885	$1,177,129	$1,397,865	$1,595,176	$1,222,601	$1,175,081	$1,531,969	**$8,795,277**
Administrative Based Fund Balance - Ending									**$8,697,455**

*Administrative costs incurred in 16/17 while preparing for receipt of Measure AA funds minus Pre-Measure AA funds.

Project Summary

The project-based budget (95% of the tax revenue plus local government contributions for the BRRIT[4]) included approved projects, county administrative fees, and fees for the special tax assessment consultant. A total of $24,288,378 was allocated for projects in FY 23-24 for a grand total of $162,927,162 allocated for the first seven years with Measure AA funds (Table 4). As of June 30, 2024, a total of $87,819,344 was expended on projects, leaving a remaining allocated grant balance of $75,107,818.

[4] In addition to providing Measure AA funds to BRRIT agencies, the Authority also collects voluntary contributions from the Bay Area Toll Authority (the funding arm of the Metropolitan Transportation Commission), East Bay Regional Park District, and Santa Clara Valley Water District, and distributes them to the BRRIT agencies. The State Coastal Conservancy also contributes funds directly to BRRIT agencies.

Table 4. Schedule of Approved Authority Projects

Project Names for Authority Projects	Grant Amount								Cumulative Expenses Through 6/30/2024	Remaining Grant Balance
	FY 17/18	FY18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23	FY 23/24	Total		
South Bay Salt Ponds Restoration Project, Phase 2	7,421,730	600,000	-	-	-	-	1,155,000	9,176,730	4,870,227	4,306,503
South San Francisco Bay Shoreline Project	4,439,406	11,000,000	11,800,000	11,400,000	11,400,000	11,426,673	-	61,466,079	35,599,425	25,866,654
Restoring Wetland-Upland Transition Zone Habitat in the North Bay with STRAW - Phase 1 & 2	2,661,264	-	-	-	-	-	1,936,000	4,597,264	2,661,264	1,936,000
Montezuma Tidal and Seasonal Wetlands Restoration Project - Phase 1 & 2	1,610,000	-	-	-	-	2,100,000	-	3,710,000	1,610,000	2,100,000
Deer Island Basin Tidal Wetlands Restoration Project - Phase 1 & 2	630,000	-	-	-	-	-	2,423,000	3,053,000	594,011	2,458,989
San Leandro Treatment Wetland Project - Phase 1 & 2	539,000	-	-	-	-	-	3,734,415	4,273,415	538,926	3,734,489
Encinal Dune Restoration and Public Access Project	450,000	-	-	-	-	-	-	450,000	450,000	-
Sonoma Creek Baylands Strategy	150,000	22,500	-	-	-	-	-	172,500	172,500	-
Bay Restoration Regulatory Integration Team (BRRIT)	-	2,227,286	316,226	-	1,266,461	482,423	-	4,292,396	3,491,314	801,082
900 Innes Remediation Project	-	4,998,600	-	-	-	-	-	4,998,600	4,998,600	-
Tiscornia Marsh Restoration and Sea Level Adaptation Project	-	968,916	-	-	3,152,847	386,000	-	4,507,763	1,132,181	3,375,582
Coyote Hills Restoration and Public Access Project	-	-	450,000	3,500,000	-	-	100,000	4,050,000	3,950,000	100,000
Lower Walnut Creek Restoration Project	-	-	7,929,855	-	-	-	3,000,000	10,929,855	4,793,629	6,136,226
North Richmond Shoreline Living Levee Project - Phase 1 & 2	-	-	644,709	-	-	50,000	1,852,750	2,547,459	694,709	1,852,750
San Pablo Baylands Collaborative Protection and Restoration Project - Phase 1, 2 & 3	-	-	2,950,000	-	1,317,000	-	5,730,000	9,997,000	1,619,923	8,377,077
Suisun Marsh Fish Screen Rehabilitation Project - Phase 1 & 2	-	-	-	454,624	-	1,263,301	-	1,717,925	538,131	1,179,794
Heron's Head Park Shoreline Resilience Project - Phase 1 & 2	-	-	-	297,000	-	795,222	(155)	1,092,067	341,941	750,126
American Canyon Wetlands Restoration Plan	-	-	-	450,000	-	67,500	-	517,500	502,373	15,127
Oakland Shoreline Leadership Academy	-	-	-	180,000	(5,974)	-	-	174,026	174,026	-
Invasive Spartina Removal and Tidal Marsh Restoration Project	-	-	-	4,000,000	-	-	(37)	3,999,963	3,999,963	-
Long Beach Restoration Design Project	-	-	-	514,500	-	-	-	514,500	361,680	152,820
Hayward Marsh Restoration Project - Phase 1 & 2	-	-	-	500,000	-	75,000	600,000	1,175,000	661,489	513,511
Community Grants Program (includes all community grant projects)	-	-	-	200,000	400,000	600,000	600,000	1,800,000	470,913	1,329,087
Greenwood Gravel Beach Design Project	-	-	-	380,000	-	-	-	380,000	203,729	176,271
Terminal Four Wharf Removal Project	-	-	-	2,300,000	-	2,300,000	-	4,600,000	4,600,000	-
Burlingame Shoreline Park Project	-	-	-	500,000	991,499	-	-	1,491,499	1,287,817	203,682
Colma Creek Restoration and Adaptation Project	-	-	-	595,000	-	-	(95)	594,905	594,905	-
Calabazas/San Tomas Aquino Creek - Marsh Connection Project	-	-	-	3,370,000	-	-	-	3,370,000	2,056,236	1,313,764
Evolving Shorelines Bothin Marsh	-	-	-	-	255,000	-	1,700,000	1,955,000	255,000	1,700,000
Science Elements of the Wetlands Regional Monitoring Program	-	-	-	-	1,457,500	-	1,457,500	2,915,000	1,569,112	1,345,888
De-Pave Park	-	-	-	-	800,000	-	-	800,000	663,009	136,991
Baylands Habitat Restoration and Community Engagement in East Palo Alto	-	-	-	-	688,016	-	-	688,016	219,926	468,090
SAFER Bay Planning Project	-	-	-	-	1,000,000	3,980,000	-	4,980,000	1,688,723	3,291,277
Regionally Advancing Living Shorelines in San Francisco Bay	-	-	-	-	500,000	-	-	500,000	383,230	116,770
Goat Island Tidal Marsh Restoration and Public Access Project	-	-	-	-	-	839,700	-	839,700	42,625	797,075
Berkeley North Basin Project	-	-	-	-	-	600,000	-	600,000	27,807	572,193
Total	$17,901,400	$19,817,302	$24,090,790	$28,641,124	$23,222,349	$24,965,819	$24,288,378	$162,927,162	$87,819,344	$75,107,818

* Bold font indicates completed projects

In addition to the projects, $743,076 was expended on county administration fees for parcel tax collection and $33,588 on the special tax assessment consultant fees (Table 5). Combined with the project expenditures, a total of $18,278,420 was expended for the project-based program in FY 23-24.

Table 5. Project-Based Revenues and Expenses

Revenues	Budget	Actual
Measure AA Special Tax	$25,815,000	**$25,901,253**
Revenue Local Governments (for BRRIT)	$375,000	**$275,000**
Interest Income	-	-
Project Based Funds Available	$26,190,000	**$26,176,253**
Expenditures		
Total Expended for Authority Projects	$23,757,501	**$17,501,756**
County Administration Fees	$750,000	**$743,076**
Special Tax Assessment Consultant Fees	$355,000	**$33,588**
Other	-	-
Total of Project-Based Funds Expended	$24,862,501	**$18,278,420**
5% Transfer out to Administrative Operating Fund	$1,290,750	**$1,295,063**
Net Change in Fund Balances		
Net change in Fund Balance for FY 23/24	$36,749	**$6,602,770**
Fund Balance - Beginning (from end of FY 22/23)	$72,549,119	**$72,549,119**
Project-Based Fund Balance - Ending	$72,585,868	**$79,151,889**

Over the first seven years, $172,725,504 has been available for the project-based program, with $166,971,233 being available for projects after county fees and special tax assessment consultant fees are paid (Table 6). A total of $87,819,344 was expended on projects, so the ending fund balance for the project-based program was $79,151,889. When accounting for the remaining allocated grant balance of $75,107,818 (Table 4), $4,044,071 of unallocated funds remained at the end of FY 23-24.

Table 6. Multi-Year Project-Based Revenues and Expenses

Revenues	**FY 17/18**	**FY 18/19**	**FY 19/20**	**FY 20/21**	**FY 21/22**	**FY 22/23**	**FY 23/24**	**Total**
Measure AA Special Tax	$25,313,504	$25,499,815	$25,601,057	$25,703,961	$25,762,786	$25,853,508	$25,901,253	**$179,635,884**
Revenue from Local and Regional Governments (for BRRIT)	-	$375,000	-	$375,000	$375,000	$375,000	$275,000	**$1,775,000**
Interest Income	-		-	-	$17,594	-	-	**$17,594**
Authority Funds Available	$25,313,504	$25,874,815	$25,601,057	$26,078,961	$26,155,380	$26,228,508	$26,176,253	**$181,428,478**
5% Transfer out to Administrative Operating Fund	$1,265,675	$1,274,991	$1,280,053	$1,285,198	$1,288,139	$1,292,675	$1,295,063	**$8,981,794**
Total Available for Project-Based Program	$24,047,829	$24,599,824	$24,599,824	$24,793,763	$24,867,241	$24,935,833	$24,881,190	**$172,725,504**
Expenditures								
County Administration Fees for Tax Collection	$700,768	$735,669	$737,238	$739,020	$740,712	$742,574	$743,076	**$5,139,057**
Special Tax Assessment Consultant Fees	$56,940	$48,800	$48,804	$48,806	$48,810	$50,576	$33,588	**$336,324**
Other			-	-	-	70	-	**$70**
Amount Available for Projects	$23,290,121	$23,815,355	$23,534,962	$24,005,937	$24,077,719	$24,142,613	$24,104,526	**$166,971,233**
Total Expended for Authority Projects	-	$3,270,870	$18,762,775	$8,686,910	$20,800,497	$18,796,536	$17,501,756	**$87,819,344**
Project-Based Fund Balance - Ending								**$79,151,889**