

SAVE THE BAY

Final Report Prepared for Honda Marine Science Foundation



Save The Bay is grateful for Honda Marine Science Foundation's investment in our programs and activities through a grant of \$75,000 over two years for our San Francisco Bay Transition Zone Restoration Project. We are happy to provide a summary of the impact we achieved with your help.

We successfully achieved or exceeded all our goals for the project, as outlined in our grant proposal, and the project was completed in the projected timeline.

Restoring Bay habitat for clean water, climate change adaptation and resilience

Save The Bay **actively restored 80 acres of crucial habitat in transition zones at six sites**, which include five native plant nurseries, in Alameda, Marin, Santa Clara, and San Mateo Counties. **We engaged 10,650 youth and adult volunteers** (students, corporate groups, and community members who attended our public days). Volunteers completed activities such as cleaning local native seeds and transplanting seedlings; together, **they donated approximately 31,950 hours** of their time.

With their help, Save The Bay:

- Propagated and **planted 93,000 native plants**
- Cleared **108,000 pounds of invasive weeds**
- Removed **14,000 pounds of trash**

Save The Bay partnered with the California Coastal Conservancy to include **two new sites that are the largest in our history**: 48 acres at Bel Marin Keys in Novato and 10 acres at Ravenswood Pond in Menlo Park. Our staff have successfully completed the first phase of new restoration projects at these sites, and have contracted with Ducks Unlimited to begin further work at Ravenswood—adding an additional 16 acres to that project.

Save The Bay continued to implement **innovative, cost-effective techniques that show rapid results, at a larger scale** than ever before. We overhauled our nursery operations at several sites to propagate increased levels of native plants, expanding our use of a new *rhizomatous* species mix to widen our footprint within existing staffing levels. These species use a unique method of

reproducing that **allows us to rapidly propagate the plants at scale and impede invasive weeds** from returning to cleared areas.

We built 80 raised beds at Ravenswood to facilitate this method, and are also in the process of building 80 beds at Bel Marin Keys. We have developed a streamlined process that allows our staff to do pre-construction, then integrates volunteers to help with specific tasks.

Seed collection has been exceptionally effective, with more staff dedicated to that activity and a high volume of seed being cleaned. Our new seed blower at Palo Alto Baylands is efficient at producing pure seed with no plant debris mixed in.

To prevent contamination of our sites, we implemented new nursery **safety protocols to minimize the risks of infection by the plant pathogen *Phytophthora***. We are proud to report that as a result of our efforts to maintain pathogen-free nursery facilities, we passed a rigorous certification conducted by the Santa Clara Valley Water District.

On an ongoing basis, Save The Bay publicizes and disseminates the results of our restoration projects, both in scientific forums and through partnerships. During the grant period, **we presented each year at two prominent conferences:** the State of the Estuary Conference and Restore America’s Estuaries National Summit.



Educating the next generation of Bay stewards

Through our Restoration Education Program, Save The Bay continued to deliver free science-based, outdoor environmental education programs to diverse student groups, offering the next generation of Bay Area residents the knowledge and inspiration they need to become effective Bay stewards.

Over the two years of the grant, **we hosted 4,280 youth from 70+ schools; approximately half attended schools that are underserved.**¹ Many of the youth who participated had never before visited the Bay shoreline, despite living in close proximity to it.

Through multiple offerings and program customization, Save The Bay ensures that students and community members of diverse backgrounds, identities, and abilities have access to our programs. **Our science educators helped students develop their STEM (science, technology, engineering, and math) skills, while leading them in one of the following customizable modules:**

¹ Title 1 status, or at least 40% eligible for free/reduced-price lunch

- A **versatile, one-day field trip** that offers students grades K-12 an introduction to the Bay and wetlands restoration
- A **two-day program** that engages high school students in the science of tidal marsh restoration, including analyzing soil and assessing biodiversity
- A program where students visit the shoreline during **three trips in different seasons** to participate in the complete cycle of tidal marsh restoration

Our program allows students to have a powerful hands-on experience, while making a significant and measurable impact on Bay preservation and wetland restoration. Our program allowed students to have a powerful hands-on experience, while making a significant and measurable impact on Bay preservation and wetland restoration. Students participated in many habitat restoration activities that directly contribute to our yearly restoration goals, such as:

- Cleaning native plant seeds
- Native plant propagation and transplanting
- Removal of invasive weeds
- Shoreline trash removal

Save The Bay focused more than ever on connecting youth from diverse ethnic, racial, and socioeconomic groups to the Bay's unique ecology. We trained staff to provide bilingual instruction, updated our program materials and procedures, and increased the number of materials we offer in translation. Through our **bus transportation stipend fund**, we eliminated the most significant barrier to participation for the schools with greatest need, **and over the grant period enabled approximately 1,700 additional youth to participate.**

One way Save The Bay evaluates the effectiveness of our education program and deepens our relationships with teachers is through Teacher Surveys. This information is used to improve the quality of our program offerings and ensure that our students and teachers receive an enriching experience with Save The Bay. Results from the recent surveys are summarized as follows:

- The field trip met my expectations: 96% agreed
- The field trip provided appropriate work projects for the students: 98% agreed
- The field trip provided active/hands-on learning opportunities: 98% agreed
- The field trip provided students with a sense of responsibility for the Bay through active stewardship: 94% agreed
- The instructor was enthusiastic, interacted well with my students and knowledgeable about content: 97% agreed

*"I love getting the opportunity to see my kids play outdoors. Because they are urban kids, they don't have an opportunity to do that very often in nature. It is their chance to be explorers for a day."
 –Tracy Dordell, veteran Oakland public school teacher*

Challenges

Save The Bay's multiple restoration sites are now spread at quite a distance geographically, which hinders the amount of time our limited field staff can spend at each. Keeping up with weeds is an ongoing challenge, as is making repairs related to pests (such as jackrabbits) chewing through the irrigation. We also struggled with a challenge around water supply for irrigation, and put a successful solution in place. Previously, at Bel Marin Keyes, our staff were filling four 200 pound barrels with water to irrigate the plants, which was very labor intensive inefficient. We adopted a new system that utilizes a giant "rain for rent" water tank that holds almost 5,000 gallons; the company comes to fill it periodically. While it is more expensive, it provides a consistent supply of water and allows staff to use their time and energy more strategically.

In the last year, we committed to serving a greater number of students from underserved schools in our education program. This has been a challenge to accomplish, as it has required taking on larger programs—sometimes groups of up to 75 students. We have had to find creative ways to run enough activities at once, manage the large groups, and still providing the same learning opportunities. However, this has also been an excellent opportunity to reach a greater number of underserved youth.

In Conclusion

Support from Honda Marine Science Foundation was instrumental to the success Save The Bay achieved over the last two years, which benefitted the lives of diverse residents throughout the Bay Area. Your partnership helped us continue our work restoring wetlands, battling climate change threats, and connecting people of all ages to the shoreline. Thank you for your investment in Save The Bay, and in our region's unique natural environment and communities.