



Ballona Wetlands Community Restoration Project SCC #18-121 Final Report

July 2025

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Prepared for: California State Coastal Conservancy



Ballona Wetlands Project Site, May 2025



I. Introduction

The Bay Foundation (TBF), in partnership with California Department of Fish and Wildlife (CDFW), Friends of Ballona Wetlands (FBW), and community volunteers conducted a project to remove invasive vegetation while broadening public involvement and stewardship in the tidal portion of “Area B” in the Ballona Wetlands Ecological Reserve (Fig 1). This report is a summary of the monitoring results from the June 2019 through July 2025 and serves as the final monitoring report for the “Ballona Wetlands Community Restoration Project”, specifically for the wetland area south of Culver Boulevard (Fig. 1; CDP# 5-15-1427).

Table 1. Work Plan tasks from the California State Coastal Conservancy grant #12-121.

Task	Task Title	Deliverable
1	Outreach & Community Engagement	• summary reports
2	Permitting & Pre-restoration Monitoring	• permits & summary reports
3	Implementation	• progress reports
4	Post-restoration Monitoring & Maintenance	• Final report
5	Project Management	• Summary reports

For the duration of the project, the work was focused on the five tasks that were defined in the California State Coastal Conservancy Funded Work Plan (SCC# 18-121; Table 1). Early on, these tasks included permitting, coordinating and subcontracting with project partners, and baseline monitoring, which was conducted on 24 September 2019. Once the restoration efforts began on 6 December 2019, the tasks shifted to public outreach and community engagement, further restoration efforts, scientific monitoring, and site maintenance, as circumstances allowed. TBF and partners hosted 30 restoration events with the public, interns and/or staff between 2019 and 2023. A total of 301 people having worked on the site. More than 10,600 pounds of non-native vegetation were removed. The project spanned the COVID-19 Pandemic, which required that TBF redefine the community engagement and project goals in 2020-2022. The last restoration event occurred in March 2023.

II. MONITORING:

Site monitoring in late May 2025 consisted of an overall assessment of the wetland using the California Rapid Assessment Method (CRAM) of depression wetlands, an assessment of the percent cover of native and non-native vegetation, species richness and veg mapping. Incidental wildlife and associated bird activity were recorded during the project period, and photo point photographs were captured.



Figure 1. Map of the Wetland Area (right; CDP # 5-15-1427) within the yellow oval. Inset: regional map with Marina del Rey to the left of the site and the project site indicated with a yellow star.

A. California Rapid Assessment Method (CRAM)

CRAM provides an overall assessment of the condition of the wetland, resulting in a score between 25-100 points. Annual CRAM assessments were done 2019-2025, except for 2023 & 2024 (Table 2). This information suggests that after a substantial amount of restoration effort, the ecological condition of project area in 2022 had improved slightly to a CRAM score that is equivalent to the mean of 11 southern California depressional wetlands (58; Solek & Stein 2012). By 2025, the CRAM score for the project area declined to 55, suggesting a slight deterioration in the ecological condition of the project area, which is expected in such an area that is surrounded by invasive species and subject to a lack of site management. One can expect that a continued lack of management, without mitigation of the surrounding invasive species, will almost certainly result in further diminishment of the ecological condition of the project area.

Table 2. Summary of scores from the California Rapid Assessment Method for depressional wetlands (* = baseline).

Year	2019*	2020	2021	2022	2023	2024	2025
CRAM Score	55	54	57	58	NA	NA	55

B. Vegetation Mapping

The baseline vegetation mapping surveys were conducted on 21 November 2019 in the Wetland Area. Annual vegetation maps were created 2020-2025, except for 2023 & 2024 (Fig 3). Baseline conditions in the Wetland Project Area were characterized by intermixed non-native ice plant (*Carpobrotus spp.*) and

native salt grass (*Distichlis spicata*) with some other natives, such as pickleweed (*Salicornia pacifica*), existing both intermixed and in small patches. Six months after the restoration efforts began, native cover was recorded throughout, however ice plant was present in large amounts throughout the site. The ice plant was subsequently removed in this portion of the project area, as reflected by the higher native cover identified in 2021 (Fig 3). Native cover continued to increase through 2022. Non-native vegetation spread into the areas previously described as occupied by natives due to restoration efforts, between 2022 and 2025. This change in intermixing of native and non-native vegetation is likely due to the heavy rains in the winters of 2022-2023 and 2023-2024, coupled with a reduction in restoration efforts during that same time period.



Figure 2. Vegetation map of the Ballona project area with vegetation areas delineated by the dominant plant species. The dominant species for each area is: 1 = *Elymus triticoides* (N); 2 = *Distichlis spicata* (N); 3 = *Anemopsis californica* (N); 4 = *Euthamia occidentalis* (N); 5 = *Salicornia pacifica* (N); 6 = *Carpobrotus edulis* (E). *(N) indicates California native species; (E) indicates exotic species.

C. Vegetation Cover

In 2025, the percent cover, species richness, and native and non-native vegetation were assessed using the point intercept method with three haphazardly placed, non-overlapping 100m transects (Fig 3). Additional species outside the transect areas were recorded but not included in the data analysis.



Figure 3. Satellite image of the wetlands site with 100m transect locations used for vegetation surveys. Inset: regional location of Ballona Wetlands (star), south of Marina del Rey and Ballona Creek.

Of the 94 observations made during the surveys, the total species richness (19 species) captured in the point intercept method included 7 California native species and 12 non-native species (Table 3). The average percent cover of native species was 39.4% (SD = 13.9), while that of non-natives was 69.7% (SD = 26.2; fig 4). The layering of vegetation accounts for the total cover being greater than 100 percent. Other California native species, such as the Chairmaker's bulrush, *Schoenoplectus americanus* (Cyperaceae) and Marsh Jaumea, *Jaumea carnosa* (Asteraceae), were also observed outside of the transect locations. Equally, several noxious non-native species, such as Castor Bean, *Ricinus communis* (Euphorbiaceae) and Crown Daisy, *Glebionis coronaria* (Asteraceae) were also present outside of the transect locations.

Table 3. List of plant species captured in the point intercept survey method, along three transects in the Ballona Wetland project site (May 2025). N/E column indicates whether the species is native or exotic.

N/E*	Species	Family
N	<i>Anemopsis californica</i>	Saururaceae
E	<i>Atriplex prostrata</i>	Amaranthaceae
E	<i>Avena barbata</i>	Poaceae
E	<i>Bromus diandrus</i>	Poaceae
E	<i>Carpobrotus edulis</i>	Aizoaceae
E	<i>Cortaderia seloana</i>	Poaceae
N	<i>Cressa truxillensis</i>	Convulvulaceae
N	<i>Distichlus spicata</i>	Poaceae
N	<i>Elymus triticoides</i>	Poaceae
N	<i>Euthamia occidentalis</i>	Asteraceae
E	<i>Euphorbia terracina</i>	Euphorbiaceae
N	<i>Heliotropium cicutaria</i>	Heliotropiaceae
E	<i>Medicago polymorpha</i>	Fabaceae
E	<i>Melilotus indicus</i>	Fabaceae
E	<i>Polypogon monspeliensis</i>	Poaceae
E	<i>Raphanus sativus</i>	Brassicaceae
E	<i>Rumex crispus</i>	Polygonaceae
N	<i>Salicornia pacifica</i>	Chenopodiaceae
E	<i>Sonchus oleraceus</i>	Asteraceae

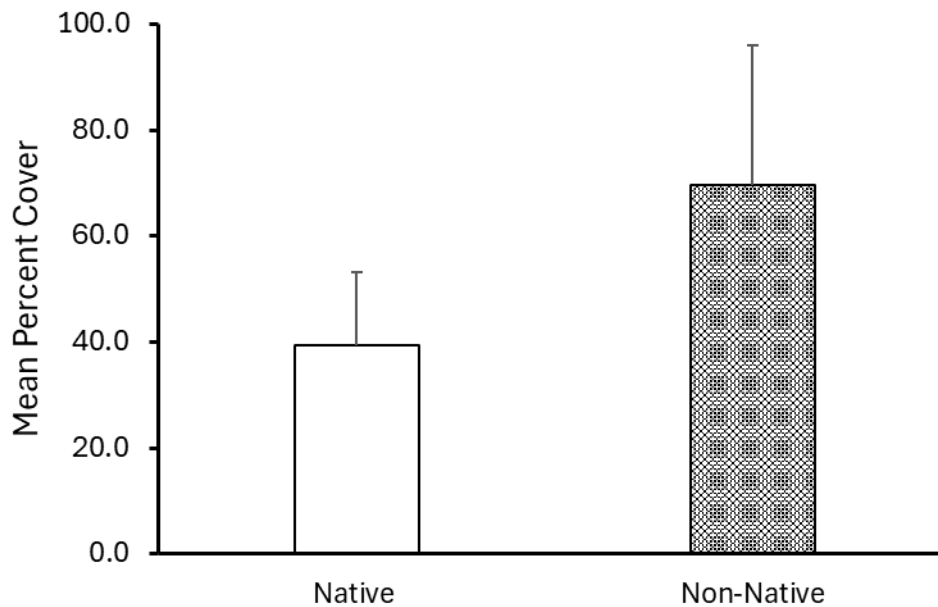


Figure 4. The mean relative percent cover of native (open bar) and non-native (patterned bar) plant species in the Ballona Wetland study area in June 2025. Error bars indicate one standard deviation from the mean.



D. Avian Fauna

An avifauna survey was conducted during the monitoring period. The Area Search bird survey method is ideal for a project area of this size. All birds recorded within the hour-long area search were recorded. A total of ten bird species from 10 families were observed in the project area (Table 4). None of the birds observed during the area search survey are of special concern. That said, it was unusual and exciting to spot the lazuli bunting perched in the site.

Table 4. Bird species identified within the Wetland Project Area.

Common Name	Scientific Name	Family
Allen’s Hummingbird	<i>Selasphorus sasin</i>	Trochilidae
American Crow	<i>Corvus brachyrhynchos</i>	Corvidae
Common Yellowthroat	<i>Geothlypis trichas</i>	Parulidae
Great Egret	<i>Ardea alba</i>	Ardeidae
Great Blue Heron	<i>Ardea Herodias</i>	Ardeidae
House Finch	<i>Haemorhous mexicanus</i>	Fringillidae
Lazuli Bunting	<i>Passerina amoena</i>	Cardinalidae
Mallard	<i>Anas platyrhynchos</i>	Anatidae
Snowy Egret	<i>Egretta thula</i>	Ardeidae
Song Sparrow	<i>Melospiza melodia</i>	Passerellidae

E. Additional Fauna

All other wildlife taxa observed during the monitoring period were recorded as they were encountered or observed incidentally. No direct surveys were performed for these taxa. A total of six Lepidopteran species, one dragonfly, a reptile and an amphibian were encountered during monitoring (Table 5). Please note that this is not an exhaustive list of the species that make use of the Wetland Project Area.

Table 5. Incidentally observed wildlife species identified within the Wetland Project Area during the monitoring period, late May, 2025.

Common Name	Scientific Name	Phylum/Order
Fiery Skipper	<i>Hylephila phyleus</i>	Arthropoda/Lepidoptera
Saltmarsh Moth	<i>Estigmene acrea</i>	Arthropoda/Lepidoptera
Monarch Butterfly	<i>Danaus plexippus</i>	Arthropoda/Lepidoptera
Cabbage Butterfly	<i>Pieris rapae</i>	Arthropoda/Lepidoptera
Western Buckeye	<i>Junonia grisea</i>	Arthropoda/Lepidoptera
Flame Skimmer	<i>Libellula saturata</i>	Arthropoda/Anisoptera
Baja California Chorus Frog	<i>Pseudacris hypochonrdiaca</i>	Chordata/Anura
Southern California Legless Lizard	<i>Anniella stebbinsi</i>	Chordata/Squamata

F. Photo Points

Photographs were taken from each end of the three transects in the project area (figs 3 & 5). The variability of vegetation in the site reflects the inundation regimes that occur at this site.

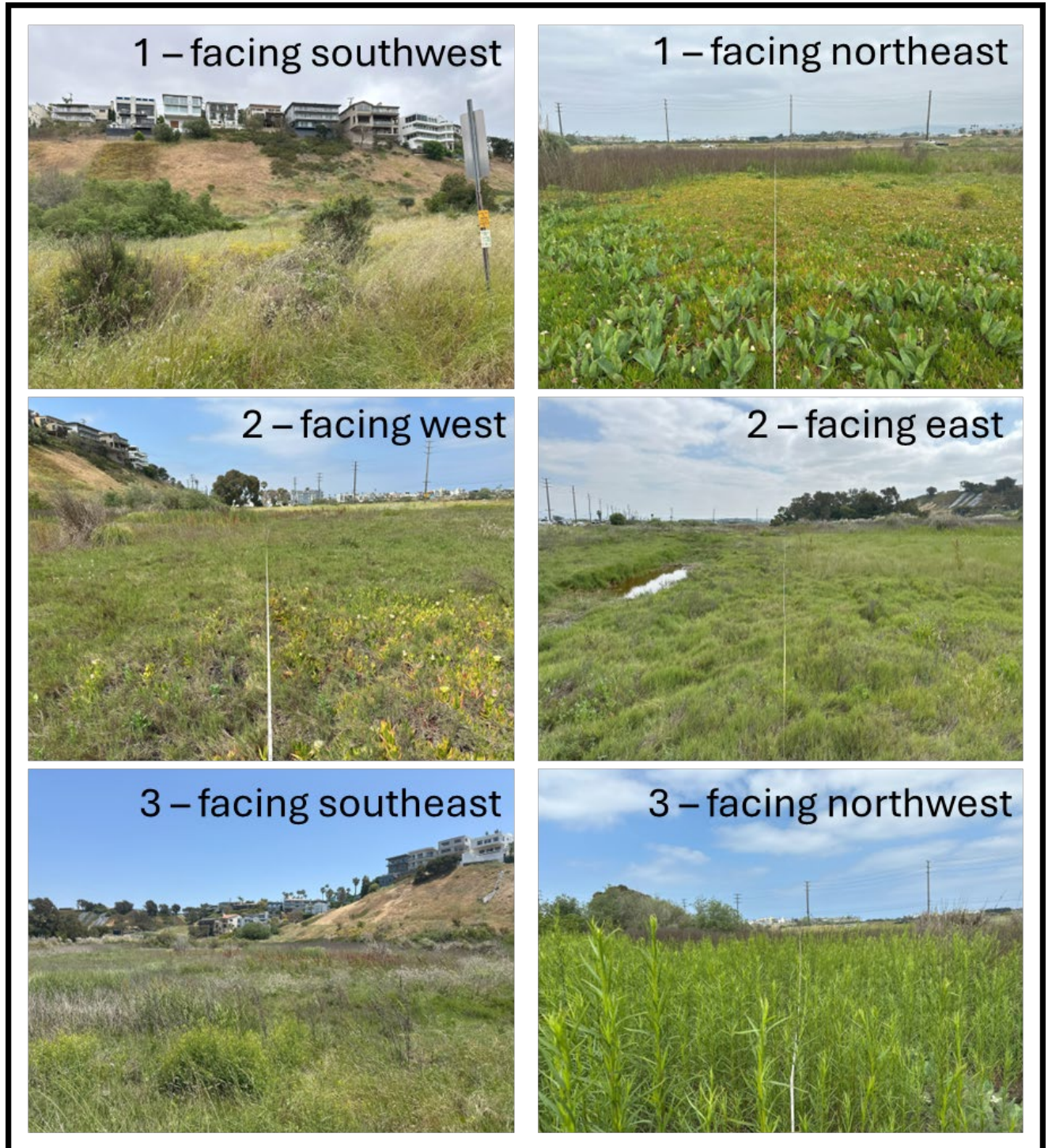


Figure 5. Photographs of the wetland project area in May, 2025 from the ends of the three transects (numbered top to bottom). Refer to the map in figure 3 for transect locations and orientation.

III. Conclusions:

The purpose of this report is to satisfy the requirements of State Coastal Conservancy Grant # 18-121. During this community engagement project, more than 300 members of the community, along with TBF staff and partners, removed more than 10,000 pounds of non-native plants from the site. This is despite conditions during the years-long pandemic and other scheduling conflicts. As the CRAM analysis suggests, the project site showed modest signs of improvement toward more native vegetation through 2022. The fact that the site has returned to a CRAM score equal to that of the 2019 baseline (55) suggests that sites like this, being surrounded by sources of non-native species input, require continued maintenance to achieve a greater dominance of native vegetation. As such, the percent cover of native vegetation is below that of non-native vegetation. Nevertheless, the amount of native vegetation that is present (fig 6) continues to be host to several bird species and other wildlife. Through this project, the community has signaled a strong interest in restoring this site, and the site showed signs of improvement in a relatively short time of three years. Should sustained restoration funds become available, the community would be expected to re-engage and the site to respond favorably.



Figure 6. Photograph of the Ballona Wetlands Project Site (May 2025), illustrating the zonation of vegetation in the marsh, as well as the clear presence of native vegetation that occurs in some areas of the marsh.