Final Report to the Alameda County Fish & Game Commission
2022 Propagation Fund Award

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Overview

The Chavez Park Conservancy was awarded a $4,740 grant by Alameda County's Fish and Game Commission in April of 2022 to create a Pollinator Habitat at Cesar Chavez Park at the waterfront park in Berkeley. In late fall of 2022, 123 California native shrubs and perennials and 14 native trees provided by the City of Berkeley, were successfully installed in the park. Expenses incurred directly for the project were $4,853 (Table 1). Additional costs for supplies (additional watering jugs) were covered by the Chavez Park Conservancy. Approximately 100 additional volunteer hours were invested into site preparation and installation. Plants were specially selected to support native pollinators and were established across five sites in the park (Figure 1).

Date	Cost	Item	Vendor
7/7/2022	$273.86	Irrigation hoses, shut-off valve	Mendo Mills, Willits
10/6/22	$367.05	Shrub shelters, pin flags	Forestry Supplies, Jackson, MS
10/11/22	$1,104.08	Native plant starts	Watershed Nursery, Richmond
10/28/22	$32.91	Watering jug	Ace Hardware, Martinez
10/29/22	$63.93	Pointed trenching shovel	Outdoor Supply Hardware, Berkeley
11/18/22	$110.44	Auger rental	Home Depot, Emeryville
11/18/22	$64.86	Bamboo supporting stakes	Home Depot, El Cerrito
11/20/22	$160.60	Supporting stakes and hardware	Home Depot, Emeryville
11/21/22	$2,675.00	Labor - 6 Corpsmembers x 2 days	Civicorps, Oakland
Total	$4,852.73		

Table 1. Expenses Chavez Park Pollinator Habitat

Figure 1 – Native Pollinator Habitat planting sites (white polygons) at Chavez Park

Background

Late in the 1970s a 90-acre landfill situated adjacent to the city of Berkeley's Marina was retired, capped, covered with soil, and converted for use as a public park. The park is maintained by the city's Parks, Recreation & Waterfront Department. In the early 1980's a 3.5-acre section of the park close to the bay became a pioneering California native plant demonstration project, installed by the DAWN (Design Associates Working with Nature) organization with funding from the City and State Coastal Conservancy. After receiving no irrigation and minimal care, many of the larger native trees and shrubs along with a variety of non-native landscape trees and shrubs planted prior and subsequently, are still there, providing a welcome experience for visitors. However, now, 40 years after installation, many of the of the natives planted have become decadent and are dying of old age (Figure 2).

In early 2020 interested community volunteers formed a not-for-profit 503(c)3 organization, the Chavez Park Conservancy, to address many issues of the 90-acre park, importantly including protections for the migratory burrowing owls which overwinter at the park and of the 3.5-acre DAWN project area. With the support of the city, the organization has removed invasive weeds that were threatening natives, pruned back dead shrubs and trees and installed and maintained 42 native shrubs and perennials and one 5-gallon Torrey Pine in a pilot planting prior to this project. Funding granted by the Alameda Fish and Game Commission provided much needed support for a larger native pollinator habitat planting project to recover some of the native plant cover that had been lost over the years and add additional pollinator resources to it.

Figure 2 – Bayside site with decadent and dead California lilac shrubs and weed cover prior to project

Methods

In July 2022 arrangements were made with the Watershed Nursery for the growing of needed starts of California native shrubs, perennials and needle grass to be ready for planting in mid-November. The shrubs and perennials were grown in D40 and D16 containers, the grasses were in smaller SC (stubby cell) containers. A contract was drafted with the Oakland Civicorps, an organization offering job training and education in conservation and recycling careers to individuals in underserved areas, to provide paid Corpsmembers for the planting work. Needed supplies such as hand tools, hoses, watering containers, shrub shelters and support stakes were acquired. The city generously provided access to a water source, an on-site storage bin for supplies, a secure area to stage the starter plants after delivery, and hand tools.

Beginning on August 27, 2022, preparation of the five selected sites began in earnest with the assistance of six members of the Coast Guard Auxiliary removing large dead standing shrubs (Figure 3). On the same day and continuing through early November numerous volunteer stewardship events were conducted by Conservancy volunteers focused on further preparation removing weeds such as Kikuyu grass and short-pod mustard and clearing thatch, dead wood, and other debris.

Figure 3. – Removal of dead vegetation from the Meadow site with Coast Guard Auxiliary

Figure 4 – Bayside site after removal of herbaceous weed cover and thatch

Beginning on November 19 and over the course of two weeks, volunteers installed the native shrubs, perennials herbs, and grasses (Figure 4). While hand tools were employed for much of the work, a battery-operated drill with a 2' auger bit and a gas-powered larger auger were used to excavate many of the holes in the occasionally hard packed and rocky soils found at the sites. Each hole was watered prior to planting. After each plant was placed in the ground, the hole was backfilled with native soil and watered (Figure 5). A 1-2" high circular soil berm was constructed around each plant to form a water

basin. Each plant was protected from rodents and dogs by a rigid mesh plastic mesh plant protector and fixed in place with bamboo stakes and zip ties (Figure 6).

Figure 5 – Plant installation at Meadow site

Figure 6 – Bayside site after plantings complete

In August the city unexpectedly offered to provide 14 native trees in 5-gallon pots for planting. Enhancing structural diversity with increased tree canopy improves habitat value for some pollinators and wildlife. The offer was accepted, and the trees were incorporated into the project. Supplies were acquired and, with the help of the Corpsmembers over the course of several days starting November 21, the trees were planted and staked (Figure 7). Using a gas-powered auger with a 10" bit and various hand tools holes were excavated. Each tree was placed in the hole and backfilled with native soil. Around each tree a large watering basin was constructed, and the tree was attached to two supporting six-foot wooden stakes (Figure 8). Trees were planted in two sites not previously identified in the grant proposal, where trees had already previously been planted.

Figure 7 – Civicorps members installing tree in the Northern Woodland

Figure 8 – Northern Woodland after trees installed

Results

123 native shrubs, perennials and grasses were planted in four sites as indicated in Figure 1: Meadow, South Corner, Bayside and Northern Woodland by conservancy volunteers (Figures 9, 10 and 11). The trees were planted in two sites: Northern Woodland and Southern Woodland. Final placements in each site can be seen in Table 2.

Figure 9– Meadow site after completion

Figure 10 – South Corner nearing completion

Figure 11 – Chavez Park Conservancy volunteers November 19, 2022

Distribution of Plants

Species	Quantity	South Corner	Meadow	Bayside	North woodland	South woodland
Achillea millefolium	5		5			
Artemisia californica	5			3	2	
Ceanothus thrysiflorus	21	7	4	7	3	
C. thyrsiflorus hybrid "Dark Star"	3				3	
Epilobium canum	10	2	3	3	2	
Eriogonum arborescens	5	1			4	
Eriogonum fasciculatum	5		2		3	
Eriogonum latifolium	5		4		1	
Frangula californica	5	1	3		1	
Grindelia stricta var. angustifolia	10		5	5		
Hesperocyparis macrocarpa	8				5	3
Phacelia californica	10	3	6		1	
Pinus torreyana	7				3	4
Quercus agrifolia	1		1			
Salvia leucophylla	5		2	3		
Scrophularia californica	5		2	3		
Stipa pulchra	20		20			
Symphyotrichum chilense	5		5			
Totals	**135**	**14**	**62**	**24**	**28**	**7**

Table 2 – Plant placements

Next Steps

The plants will require maintenance consisting of regular irrigation and as needed weeding and upkeep of their protective cage or tree stakes. The plants will need to be watered at least every two weeks for a year in order to properly establish themselves. The existing group of volunteers have organized a calendar and scheduled coverage through February 2023. Recruiting other groups is now in process. For irrigation hand watering or significant rains are the only options because there is no piped water on site. The city has given access to a water spigot which is no closer than 200 feet to any of the planting sites. A 4-wheeled garden hose reel cart with 300-feet of high-quality garden hose allows volunteers to bring water nearer to each site. From the hose end 6-gallon watering containers are filled and used to hand water each plant basin. Throughout the year the plants will be monitored and in one year an evaluation will be conducted to determine what further maintenance is needed.

Recognition

This project would not have been possible without the dedicated efforts of many individual and organizations. Special thanks go out to Chavez Park Conservancy board members Martin Nicholas, Jutta Burger, Carol Denney, and Lana Lew. Community volunteers included Carlene Chang, Helen Canin, Clyde Crosswhite, Karen Brusin, Kathy Turner, Becca Todd and Lee and Nancy Tempkin. Berkeley Department of Parks and Recreation provided valuable material support, protected storage and guidance. Civicorps provided abundant labor well beyond what was anticipated.