

**San Diego Association of Governments  
Rare Dune Species Restoration Project  
Nature Collective  
Quarterly Progress Report  
Reporting Period: January 1, 2024 – March 31, 2023  
Submission Date: April 19, 2024  
SANDAG Contract Number: S1125507**

## **EMP Land Management Grants**

### ***Rare Coastal Dune Species Habitat Restoration Project – 2024 Q1 Progress Report***

## **Quarterly Status Report Overview**

During this reporting period Nature Collective staff planted container plants and spread seed throughout the project boundary. We hosted four volunteer events to hand-pull weeds and irrigate new plantings. We continued with hand and chemical weed control throughout the project boundary.

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#### Work Performed this Period:

##### 1. Task 1- Seed Collection & Propagation

During this quarter we continued with propagation of seed in our nursery. We are 50% complete with seed collection and propagation efforts.

##### 2. Task 2- Work & Monitoring Plan

This task has been completed.

##### 3. Task 3- Seeding & Planting

During this quarter NC staff spread seed for rare dune species along the west side of Highway 101. Table 1 shows the quantities of each species. For the Coulter's salt bush (*Atriplex coulteri*) seed we installed one permanent 1 sq ft quadrat pinned to the ground on south facing slope of the entrance site. We mixed 1.1 grams of seed with vermiculite and sand to hold down the seed and keep it moist. We disturbed the soil slightly with a gardening knife and lightly covered the seed with soil. Rain was forecasted for the next morning. The Nuttall's acmispon seed was from a California Botanic Garden (CBG) seed bulking project. Seed was grown from 52 maternal lines that were collected from West Basin in 2015. CBG will continue to grow the plants because not much seed has been produced.

Table 1. Seed Spread in Q1 2024

<i>Species</i>	<b>Grams</b>	<b>Date Spread</b>	<b>Date Collected</b>	<b>Source</b>	<b>Location Spread</b>
<i>Atriplex coulteri</i>	1.1	1/2/24	6/29/23	Santa Helena	WBD entrance
<i>Acmispon prostratus</i>	1.81	1/29/24	12/28/23	California Botanic Garden	Debris removal area

We began planting during winter 2024 in areas where weeds were present and high foot traffic was observed in order to increase biodiversity, suppress weeds and discourage trampling of the dunes. We planted 160 1-gallon containers on three different dates, one of which was the GOIN event.

Table 2. Container Plants Installed in Q1 2024

<b>Species</b>		<b>Quantity (1-gal)</b>			
<b>Common name</b>	<i>Scientific name</i>	<b>1/8/2024</b>	<b>02/24/24</b>	<b>02/26/24</b>	<b>Total</b>
Sea cliff buckwheat	<i>Eriogonum parvifolium</i>	40	30	20	90
Beach primrose	<i>Camissoniopsis cheiranthifolia</i> <i>ssp. suffruticosa</i>	15	30	20	65
Beach bur	<i>Ambrosia chamissonis</i>	0	5	0	5
<b>Total</b>		55	65	40	<b>160</b>

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Photo 1. NC staff installing container plants



Photo 2. Nuttall's acmispon seedling

We plan to plant more container plants next fall/winter once the plants have a sufficient root system. We are 40% complete with this task.

#### 4. Task 4- Maintenance

During this quarter we continued with maintenance- we completed multiple site visits to hand-pull weeds, assess site conditions and determine other management needs. We had four volunteer events this quarter, volunteers' hand-pulled non-native and invasive species including yellow sweetclover (*Melilotus indicus*), European sea rocket (*Cakile maritima*), tecolote (*Centaurea melitensis*) and crystal iceplant (*Mesembryanthemum crystallinum*). Volunteers and NC staff irrigated newly installed container plants during multiple site visits. We are 30% complete with the maintenance task.

NC staff conducted multiple chemical weed control efforts within the West Basin Dunes this quarter. Our staff was careful to avoid rare plant species while spot spraying clusters of non-native weeds. We used a total of 10oz of Roundup Custom (aquatic approved Glyphosate) for foliar spot treatments mixed at 2.5%.

NC staff installed a fence path to discourage trampling of the dunes around new plantings. This area is used as a beach access point from Highway 101.

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Photo 3. Before plant installation and weed control



Photo 4. After plant installation and weed control



Photo 5. Fence installation for beach access



Photo 6. Volunteers hand-pulling sweetclover

#### **5. Task 5- Monitoring**

After reviewing the data and determining that there is little change in vegetation cover between quarters and additional unnecessary monitoring is contributing to trampling and disturbance of the project site, we have decided to limit transect monitoring to bi-annually. We will collect transect data in April, once peak native and weed cover is observed. We are 30% complete with the monitoring task.

#### **6. Task 6- Reporting & Media**

During this period, we completed quarterly reporting. We are 30% complete with reporting.

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#### 7. Task 7- GOIN Program

We had our first GOIN event on February 24<sup>th</sup>. Schools from Escondido participated in the event with our Ecologist and Educators. The schools were split into three rotations where they learned monitoring techniques, planting, weeding, and participated in a beach trash clean-up. We are 50% complete with the GOIN task.



Photo 7. GOIN attendees installing container plants



Photo 8. GOIN attendees observing plant species

#### 8. Task 8- Administrative

Stevie Steele, Ecologist/Project Manager, oversaw and participated in daily planning, project management, invoicing, monitoring and restoration tasks during this period. We are approximately 30% complete with this task.

#### Work Anticipated Next Period

We will continue with irrigation of new plantings and weed control using hand removal methods. We anticipate starting seed collection late next quarter.

#### Issues to Note

As stated in the last quarterly report- after project planning began, we determined that we will more than likely not be able to meet two of our performance measures including “*Atriplex coulteri* – 200 individuals restored” and “*Phacelia stellaris*” – 200 individuals restored”. However, we anticipate restoring 400+ individuals of *Chaenactis orcuttiana* ssp. *glabriuscula* (Orcutt’s yellow pincushion) to replace those performance measures. Orcutt’s yellow pincushion is listed at California Rare Plant Rank 1B.1 – “Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California” and has only 20 presumed extant occurrences in California. (CNPS, RPP 2023) We do not expect to meet the original performance measures due to the lack of seed available to ethically collect as well as the difficult germination requirements.

#### Photographs & Figures

All maps are included in Appendix A following this report.

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## Performance Measures



2024 Q1  
Performance Measu

## References

California Native Plant Society (CNPS), Rare Plant Program (RPP). 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 20 July 2023].

## Appendix A: Maps



# Map B: Photo Monitoring Points



Photo Monitoring Points - September 2023

# Map C: Transect Monitoring Locations



Transect Monitoring Locations - September 2023