

**San Diego Association of Governments  
West Bernardo Mountain HMA  
Enhancement & Restoration  
San Dieguito River Park, JPA.  
Quarterly Progress Report  
Reporting Period: April 1 – June 30, 2024  
Submission Date: JULY 2024  
SANDAG Contract Number: S1125508**

## **Quarterly Status Report Overview**

**PLEASE DO NOT CHANGE OR ALTER THE FORMATTING OF THIS DOCUMENT!**

SANDAG has developed a standardized grant monitoring and tracking program for the Environmental Mitigation Program (EMP) Land Management Grant Program. The purpose is to collect information on individual projects and the grant program as a whole for reporting to the Regional Habitat Conservation Taskforce, SANDAG Policy Advisory Committees, and the SANDAG Board of Directors. SANDAG monitors grantees through invoices, progress reports, performance measures, and designated photograph points. These standardized reporting templates and instructions for submittal are included below.

**Work Performed this Period:**

1. **Task 1- INVASIVE SPECIES CONTROL: 90% done year 1**
  - a. No weed control work, other than monitoring, was scheduled due to CAGN activity.
  - b. The technique of first removing thatch from the previous years weed growth prior to applying herbicides seemed to be more effective than just applying herbicides.
  - c. It would have been beneficial to apply herbicide after March 15th as the opportunity to spray weeds lasted into April.
  - d. Coastal sage scrub (CSS) within the restoration site has responded incredibly well to dethatch work and herbicide applications.
    - i. Robust CSS growth over entire site.
    - ii. Healthy population of seedlings and annual natives.
    - iii. Coastal sage scrub recovery here is such that planting cactus may no longer be a good strategy.
      1. Cactus scrub may be of low quality because of CSS expansion.
        - a. Cactus take 8-10 to grow to a height consider nesting habitat.
        - b. CSS plants may overtake cactus.
2. **Project Re-evaluation**
  - a. In 2021 the site was more barren and lagging in recovery from the 2007 wildfires.
  - b. 2023/2024 and 2022/2023 winter provided normal or above normal rain fall which combined with herbicide and dethatch work is greatly responsible for the surge in CSS recovery and seedling health.
  - c. The site originally identified in 2021 for the bulk of the cactus planting (Cactus enhancement 3 on the map) was excluded due to regular grazing by resident mule deer.
  - d. The alternative site ("A" East Cactus on map) is regenerating well and the planting of cactus may now be more impactful then beneficial.
    - i. Invasive annual weed control here will likely continue to accelerate the CSS recovery.
    - ii. Removing thatch here will likely accelerate the CSS recovery.

- iii. There are opportunities for cactus to be installed for habitat diversity.
  - e. Site “B” West Cactus is regenerating well.
    - i. Invasive annual weed control here will likely continue to accelerate the CSS recovery
    - ii. There are opportunities for cactus to be installed for habitat diversity.
    - iii. There are opportunities for cactus scrub enhancement near the bottom close to other cactus scrub.
    - iv. Good volunteer project site.
    - v. Herbaceous recover was observed in areas that were dethatched and sprayed.
  - f. South Cactus Site
    - i. Cactus should be planted here since there is heavy disturbance and other cactus scrub located nearby.
    - ii. Good volunteer project site.
- 2. Task 2- HARVEST, GROW, DELIVER CACTi: 100% done year 1
  - a. cactus order- 1000 to be delivered in 2024 or early 2025
  - b. Additional cactus was harvested and delivered to Native West to increase the amount of 2024/25 rooted cactus available to take advantage of helicopter transportation
- 3. Task 3 – INSTALL ROOTED CACTUS. 85% done year 1
  - a. SDRP tested strategies for moving cactus up slope.
    - i. Cactus Gurney.
      - 1. Sketch and some details on the cactus gurney that was built and tested are provided below.
      - 2. 2 people can carry a maximum of 30 potted cacti
      - 3. Very effective
    - ii. Modular Load Harness (“Versamule”)
      - 1. Effective but strenuous depending on load weight.
      - 2. Maximum #30 potted cacti.
      - 3. Trash can is a cheap and effective container for the versamule but should withstand cactus spines.

**iii. Helicopter**

- a. SDRP has tentatively secured helicopter assistance.
- b. Method for moving cactus is to be determined.
- c. Without an influx of labor this seems to be the only option of planting the upper slopes of Bernardo Mountain with container plants. This lesson can be applied to adjacent preserves and future projects.

**b. Installed rooted cacti**

- 1. Tested our identified methods for transporting and planting cactus from the bottom of the restoration site, where there is vehicle access, to the upper areas of the restoration site (See Map below).
  - a. It was determined that having potted cactus on hand would be effective: Native West delivered 400 cacti.
    - i. Cactus was needed to take advantage of the longer wet season.
      - 1. Provided legitimate and effective opportunities for volunteers.
      - 2. SDRP coordinated with Native West to choose the most well rooted cactus
    - ii. Cactus was needed to test methods for restoring the upper areas of the restoration site.
      - 1. Staff Only utilizing cactus gurney and versamule.
      - 2. Staff and Volunteers utilizing cactus gurney and versamule.
    - iii. SDRP maintaining cactus - Remaining cactus to be planted in 2024/2025
  - b. Upper areas of the restoration site are very difficult to plant and not practical without additional resources like helicopter or without an influx of almost free labor like CalFire Inmate Crews.

- i. Overall the methods are very effective for the lower restoration sites.
- ii. Overall the methods are not effective for the upper section of the restoration site.
  1. Too far from vehicle
  2. Steep slope.
  3. Inefficient
  4. Stamina issues with all forms of labor.

Provide the exact work start date, a description of the work completed under each task, and percent complete. Add additional tasks as necessary

### **Work Anticipated Next Period**

This does not need to be task specific but should include a short paragraph or bullet point list of activities anticipated for next quarter.

- **Next work period: July, August, September.**
- **Finalize plant installation plans.**
- **Engage SANDAG staff in discussions of changing the restoration project strategy and boundaries.**
  - **SDRP proposes:**
    - **To continue invasive species control work and to possibly dethatch the upper areas of the restoration site (East Cactus Site A)**
    - **To plant cactus in the south restoration sites and the bottom of the west restoration site.**
    - **Choose a new planting site for most of the rooted cactus.**
      - **Located on San Dieguito River Park controlled preserved land.**
        - **Two sites have been identified**
        - **Same general area as the original site.**
        - **Additional benefit of being near “hill 506” which is a site that once had CACW.**
      - **More accessible.**
        - **Alleviates the need for helicopter.**
        - **More likely to be maintained and expanded as part of SDRP habitat management general operations.**
    - **Safety**
      - **Current site had 2 large bee hives**
      - **Easier for volunteers, staff, contractors to manage slope.**
    - **Site will still provide an additional CACW territory and meet the goals of the original project proposal.**

**EMP Land Management Grants**  
*Quarterly Progress Report Template*

**Issues to Note**

Please provide a brief description of any issue(s) encountered during the reporting period and any steps taken to address the issue(s).

**SEE ABOVE**

**Photographs & Figures**

**SEE BELOW**

**SDMMP Project Page**  
**Updated April 22, 2024.**

**Performance Measures**

Please include the Project's Performance Measures for each Quarterly Invoice and Progress Report in order to receive reimbursement.





**Apri 2024-** Volunteers and Rangers delivered and installed cactus in the East Restoration Site (A).





**JUNE 2024-** Cactus and black sage competing. Located on Bernardo Mountain HMA in a restoration site. Example of what could occur at this site.



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**June 2024** – Invasive species continued to grow after the March 15 nesting season date to stop work. Additional herbicide work would have been very beneficial especially in the most difficult areas.





**June 2024** – Artemisia Californica seedlings taking advantage of the shade of the dead CSS plant. West (B) Planting Site.





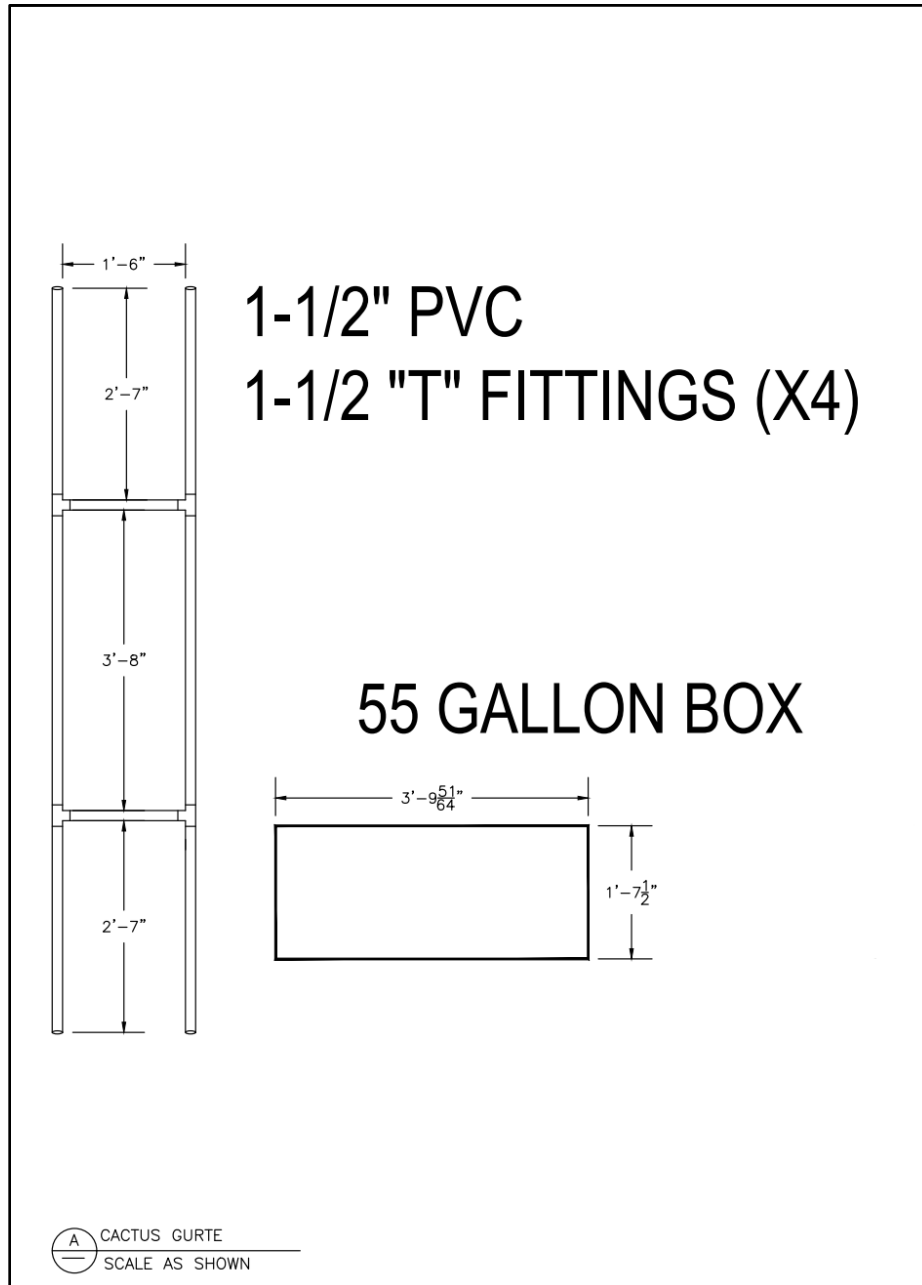
**June 2024** – Tarweed species occupying area that was dethatched and sprayed.



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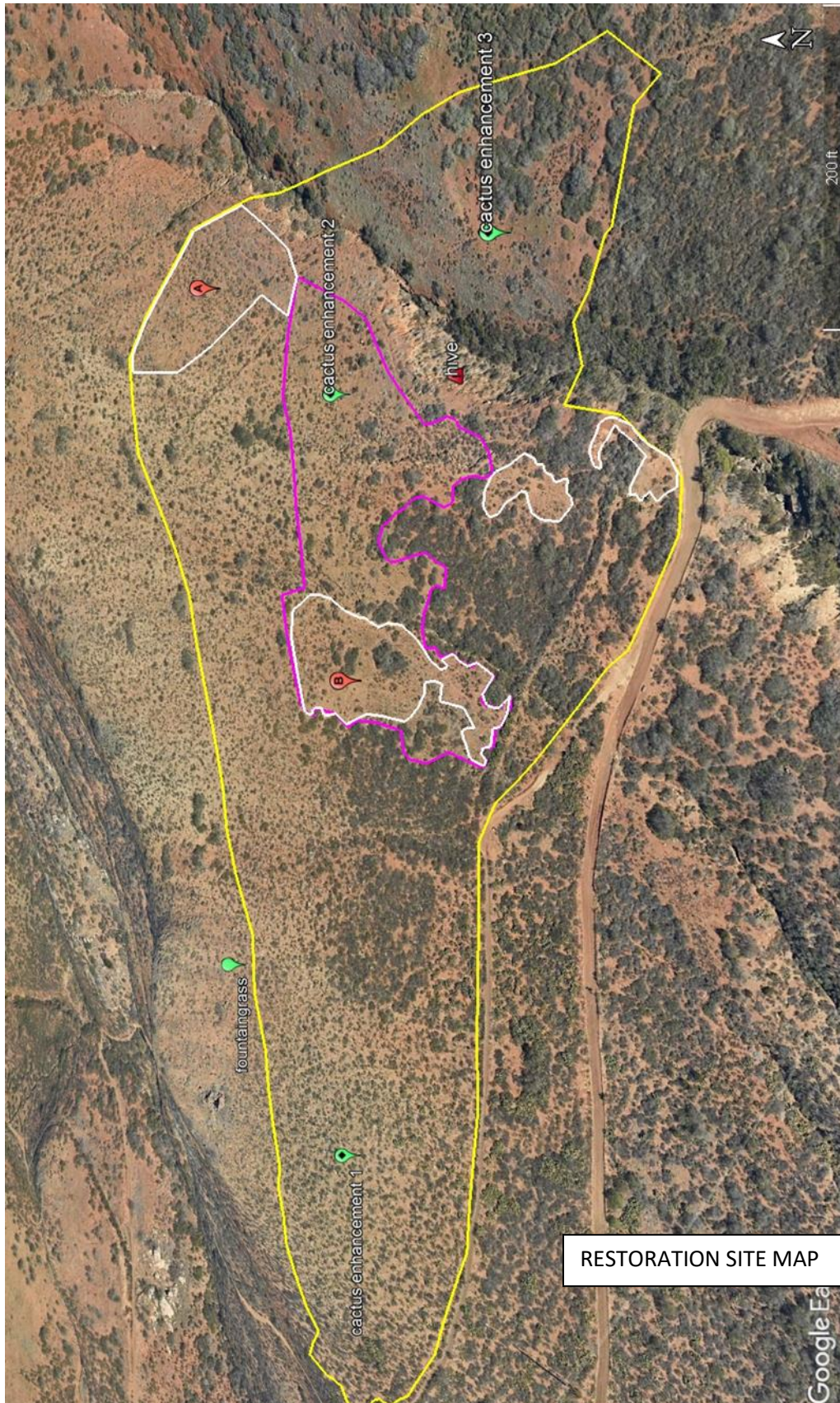
**April 2024** – Dying fountain grass and CSS recovery.



**Cactus Gurney:** Made from schedule 40 PVC pipe and durable plastic container. The center of the frame is for the 55-gallon tote, specifically HDX's (brand) durable plastic container to fit. The container is held in by pressure. All materials used to make this gurney can be found at most hardware stores.



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RESTORATION SITE MAP