

San Diego Association of Governments
PROCTOR VALLEY VERNAL POOL PROJECT
15th Quarterly Progress Report (FINAL)
Reporting Period: January 1, 2016 – March 31, 2016
SANDAG Contract Number: 5001972

Summary

The Chaparral Lands Conservancy (TCLC) submits the fifteenth and final report for the Proctor Valley Vernal Pool Project (Project) EMP grant. Project activities during this period included restoration and management (Task 3), and grant reporting and administration (Task 4).

TCLC has completed Project tasks to implement planning, permitting, restoration and management, and Project and grant administration and management. During the EMP grant period, the six-acre ORV Site A location of the Proctor Valley Vernal Pool Project has been transformed from mostly bare and compacted ground that had been severely damaged by past off-road vehicle use to a vibrant recovering ecosystem of vernal pools and coastal sage scrub. Vehicle-trenched and weed infested remnant vernal pools have been repaired, weeded, and seeded and now support restored communities of vernal pool crustaceans including the endangered San Diego fairy shrimp, frogs and toads, and common and endangered plants. Bare and weedy uplands have also been repaired, weeded, planted, and seeded to support a recovering and thriving community of coastal sage scrub plants, insects, reptiles, birds, and mammals including several endangered and sensitive species. This spring, the Project site was alive with blooming plants, humming insects, skittering lizards, and birdsong.

Work to implement all EMP grant tasks was conducted and important results and most EMP grant deliverables were achieved. Some EMP grant deliverables to increase populations of several endangered, sensitive, and/or MSCP covered vernal pool and uplands animal and plant species was partially successful with some results remaining unknown or not achieved due to poor environmental conditions or altered Project conditions in accordance with permits. EMP grant funds for the Project have been exhausted, but the EMP grant leveraged significant additional funding from other grant sources so the Project will continue and is scheduled for completion in 2017. TCLC anticipates that



efforts to increase populations of several endangered, sensitive, and/or MSCP covered vernal pool and uplands animal and plant species will ultimately be successful as the Project continues.

A summary of work under each category of the EMP grant agreement scope of work is provided below.

Planning (Task 1)

Planning for the Proctor Valley Vernal Pool Project was completed previously. There were no planning expenses during this period.

Overall, Project planning work achieved all quantifiable results and deliverables in accordance with the EMP grant agreement including vernal pool and cultural resource pool surveys and mapping and preparation of detailed restoration plans. The following is a summary of all planning work conducted or orchestrated by TCLC for the Project:

- TCLC conducted extensive and systematic vernal pool location surveys that had never been conducted for Proctor Valley and that documented many additional existing vernal pools at the Project site.
- TCLC retained a contractor to conduct cultural resources surveys and prepare a report.
- Land surveyors were retained to conduct a highly detailed micro-topographic survey of the Project site to facilitate fine-scale vernal pool restoration mapping as required by the USFWS.
- TCLC prepared a Proctor Valley Vernal Pool Restoration Plan for the entire Proctor Valley area and a companion detailed work plan for the Project site. Together the plans provide details on implementation of Project restoration and monitoring work and were used as a Project description for various permit applications (below). To address concerns raised by the EMP Working Group and U.S. Fish and Wildlife Service (USFWS), vernal pool fauna expert D. Christopher Rogers of the University of Kansas was retained to review the draft Plan and to provide recommendations on management to address complicated issues pertaining to endangered San Diego fairy shrimp and the weedy versatile fairy shrimp.
- TCLC staff finished the restoration plans following dismissal of contractors for unreasonable delays in preparing the plans.

Permitting (Task 2)

Permitting for the Proctor Valley Vernal Pool Project was completed previously. There were no permitting expenses during this period.



Overall, Project permitting work achieved all quantifiable results and deliverables in accordance with the EMP grant agreement including obtaining a right-of-entry permit for the Project site and complex compliance with several environmental laws. The following is a summary of all permitting work conducted or orchestrated by TCLC for the Project:

- TCLC submitted the Proctor Valley Vernal Pool Restoration Plan, companion detailed work plan for the Project site, and a cultural resources report to the City of San Diego (City) Public Utilities Department to facilitate compliance with the California Environmental Quality Act and issuance of an entry permit for Project restoration and management work.
- TCLC entered into a formal partnership with the U.S. Fish and Wildlife Service Partners for Fish and Wildlife program to support the Project and to prepare all necessary information and facilitate compliance with the federal Endangered Species Act (ESA) and National Historic Preservation Act (NHPA) for Project restoration and management work. The USFWS consulted with the California State Historic Preservation Office and prepared a NEPA Categorical Exemption, National Historic Preservation Act Section 106 Compliance Memo, and Biological Opinion authorizing the Project.
- TCLC prepared a Preliminary Jurisdictional Determination and Preconstruction Notification to obtain a final Clean Water Act section 404 Nationwide Permit from the U.S. Army Corps of Engineers for Project restoration and management work under the federal Clean Water Act.
- TCLC prepared Notice of Intent to Comply with the General Water Quality Certification Order for Small Habitat Restoration Projects to obtain authorization from the San Diego Regional Water Quality Control Board for Project restoration and management work under the California Porter-Cologne Water Quality Control Act.
- TCLC prepared an application package and obtained a California Endangered Species Act “Scientific, Educational, or Management Permit” from the California Department of Fish and Wildlife for Project restoration and management work.
- TCLC requested and received permission from the California Department of Fish and Wildlife to enter the Rancho Jamul Ecological Reserve to collect seed and conduct Project monitoring.

Project permitting was highly complicated because the Project involved work on vernal pool wetlands, one of the most regulated natural resources in California. TCLC staff conducted extensive research and discussion with the City and regulating agencies on the appropriate course of permitting for the Project. This process was particularly complicated because local offices of regulating agencies had not previously permitted a pro-active vernal pool restoration project, that is a project that was not mitigation to offset development harm to vernal pools. In the past, agency scrutiny was typically focused on the



development portion of projects impacting vernal pools rather than the details of restoration work. In just one example, in past projects the USFWS required nothing more from vernal pool restoration projects than the presence of unidentified species of fairy shrimp as an indicator of success. In contrast the Proctor Valley Vernal Pool Project is the first where the USFWS has required project elements addressing the weedy versatile fairy shrimp including best management practices to prevent introduction or spread of the species, monitoring, and contingency planning. Overall, the details of the Project garnered unprecedented agency scrutiny that in turn required significant additional TCLC staff time and expense for permitting.

Restoration and Management (Task 3)

Restoration and management work during this period included preparation and installation of closure signs. All other Project restoration and management was completed previously for the purposes of EMP Grant Agreement billing. Actual Project restoration and management is continuing into the future with other funding.

Overall, Project restoration and management work achieved most quantifiable results and deliverables in accordance with the EMP grant agreement including habitat restoration to increase the extent and quality of six acres of vernal pools and coastal sage scrub, to increase populations of several threatened, endangered, and sensitive species, and to conduct public outreach, education, and engagement to support Project goals. The following is a summary of all restoration and management work conducted or orchestrated by TCLC for the Project:

- TCLC staff solicited bids, selected contractors, and prepared contracts for habitat restoration, seed bulking, monitoring, GIS work, and fencing.
- HELIX Environmental Planning conducted habitat restoration work for the first two and one-half years of restoration including grading, erosion control, seed collection, propagation of container plants, planting and seeding, maintenance weeding and watering, and installation of Burrowing owl burrows.
- D&D Wildlife Habitat Restoration continued habitat restoration work including seed collection, propagation of supplemental container plants, planting and seeding, and maintenance weeding and watering.
- Alpine Fence conducted fence repair work.
- AJP Consulting Corporation was selected by TCLC for GIS mapping of completed restoration work and plant seed sources.



- TCLC oversaw habitat restoration and GIS contractors and provided assistance with grading, maintenance weeding, erosion control, and mapping.
- Rocks Biological Consulting and TCLC staff conducted Project monitoring including monitoring of vernal pool hydrology, flora, and fauna to determine baseline conditions in advance of restoration work and to track progress of habitat restoration towards Project goals. Annual Project progress reports were prepared by RBC and TCLC staff for permitting agencies.
- Rancho Santa Ana Botanic Garden (RSABG) propagated the endangered *Navarretia fossalis* for seed bulking.
- TCLC staff designed, ordered, and installed closure signs.
- TCLC staff organized nearly one-hundred volunteer and intern work event hours as a means of public outreach and education to support Project work and goals. Volunteers and interns were led on nature walks to introduce vernal pool resources and Project work, and assisted with suitable habitat restoration activities such as simple topography repair, weeding, and installation of signs.

The Proctor Valley ORV Site A Project site was significantly transformed over the course of the EMP grant schedule. Extensive mechanical and hand grading was conducted to repair twenty-four existing vernal pools that had been severely damaged by off-road vehicles and included repair of pool edges, smoothing tire trenches, and removal of erosion fill. Grading was also conducted to construct nineteen new vernal pools in areas where ORV damage was so extensive that the historic conditions of vernal pools was impossible to determine but where soils were suitable for pools. Excavated soil was used to repair or create Mima mounds and swale areas between pools. Four artificial Burrowing owl burrows were constructed of wood boxes and plastic drain pipe and were installed in newly constructed Mima mounds amidst the vernal pools. Vernal pool and upland plants seed was collected, vernal pools were seeded, and 2,050 uplands container plants were propagated and planted on the site with a 94% survival rate. Twelve pounds of native seed comprised of species known to provide habitat for the Quino Checkerspot butterfly was sown on several Mima mounds on the site. Maintenance was conducted and consisted of hand watering of plants and weeding, and application of animal repellent on container plants. Please see the attached photographs and map illustrating restoration work from 2012 – 2015.

Rigorous monitoring of vernal pool hydrology, animals, and plants was conducted onsite and at control pools to identify baseline conditions and to track progress towards Project goals. Baseline monitoring for the vernal pool restoration project was performed in 2010 – 2011 and 2011 – 2012. Restoration monitoring was initiated in 2012 – 2013 and continued in 2013 – 2014, 2014 – 2015, and 2015 – 2016. Monitoring included surveys of existing and constructed pools on Proctor Valley ORV A Project site as well as nearby control pools at the Rancho Jamul Ecological Reserve and City of San Diego Cornerstone Lands. Monitoring activities use a combination of methods: The Hydrogeomorphic approach to



Assessing Wetland Functions of Vernal Pools was used to track vernal pool hydrology and flora, the Macroinvertebrate Bioassessment Method to Assess California Vernal Pools was used to track vernal pool crustacean fauna, and the Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods was used to track fairy shrimp. Transect monitoring was also conducted to track progress of restored upland vegetation.

Monitoring results show that all restored vernal pools on the Project site are functioning in a manner necessary to support vernal pool animals and plants, an important result given the serious drought conditions in two out of the four years of active restoration. Monitoring results between 2012 and 2015 show all Project site pools have met Project goals for the measured capacity of vernal pools to collect and retain water in at least one year of monitoring.

In turn, functioning Project site vernal pools now provide increased habitat for both common and sensitive vernal pool animals and plants. Monitored Project site pools support common vernal pool crustacean fauna and common vernal pool plants. Project site vernal pool habitat has been significantly expanded for the endangered San Diego fairy shrimp, several restored vernal pools now support the endangered San Diego button-celery, and four-hundred spreading navarretia plants are being propagated for seed bulking to seed the site in the next wet season. Two-striped garter snakes have been observed in Project site pools feeding upon dense populations of Western spadefoot toad tadpoles.

Monitoring in restored Project site uplands coastal sage scrub vegetation shows that goals have either been met or significant progress is being made towards establishment of native species diversity and cover and reduction of weeds. In turn, restored coastal sage scrub now provides increased habitat and populations of sensitive plant species including Munz's sage and Orcutt's brodiaea. Habitat has been directly increased for endangered Quino checkerspot butterflies through seeding, and Burrowing owls, San Diego horned lizards, orange-throated whiptail lizards, and threatened California gnatcatchers have been observed utilizing restored coastal sage scrub on the Project site.

The success of EMP grant deliverables to increase populations of several endangered, sensitive, and/or MSCP covered vernal pool and uplands animal and plant species was partially successful with some results remaining unknown or not achieved due to poor environmental conditions or altered Project conditions in accordance with permits. Through the course of Project permitting it was determined that the Project site does not provide suitable habitat for Riverside fairy shrimp, Orcutt's grass, Otay Mesa mint, and Dunn's mariposa lily. Drought in two out of the four years of restoration work since 2012 also precluded availability of seed for sensitive vernal pool plant species and coastal sage scrub rare plant species, thereby delaying or preventing seeding of vernal pools with little mouse-tail, spreading



navarretia, toothed calico flower, and seeding or planting coastal sage scrub with Palmer's ericameria, San Diego barrel cactus, San Diego goldenstar, and Variegated dudleya. Documented use of the site by sensitive and MSCP covered species not identified as EMP grant deliverables – San Diego horned lizards, orange-throated whiptail lizards, and threatened California gnatcatchers – somewhat offsets the absence of EMP grant deliverable species.

TCLC anticipates that efforts to increase populations of several endangered, sensitive, and/or MSCP covered vernal pool and uplands animal and plant species will ultimately be successful as Project implementation continues through 2017. TCLC was successful in leveraging EMP grant funding to secure significant additional funding to expand the original EMP grant project on the six-acre ORV Site A to include the adjacent thirteen-acre ORV Site B for a total of nineteen acres, to initiate restoration and management activities at the ORV Site B, and to continue restoration and management activities at both ORV site A and B through the 2016-2017 water year. Planned restoration and management activities that will continue at the ORV Site A through 2017 include seed collection for vernal pool and uplands plants, supplemental seeding of vernal pools including rare vernal pool plants, propagation and planting or seeding of supplemental uplands container plants including rare plants, maintenance weeding and watering, and monitoring.

One EMP grant deliverable to conduct public outreach with installation of a vernal pool educational kiosk Project site was not carried out due to agency concerns over drawing negative attention and vandalism to the restoration site and Project. Resource agency property owners have made significant progress in reducing harmful activities in Proctor Valley but vandalism of signs is still common and agencies were concerned with possible vandalism of restored vernal pools. Some signs have been vandalized but there has been no evidence of vandalism of Project restoration work. EMP funding for the educational kiosk was used instead solely for site closure signs and includes replacements for any vandalized signs. Additional TCLC staff time was also dedicated to organize volunteer work events to achieve the same public outreach and education goals as the kiosk.

Grant Reporting and Administration (Task 4)

Grant reporting and administration work was completed previously for the purposes of EMP Grant Agreement billing. Actual Project grant reporting and administration is continuing into the future with other funding.

Grant reporting and Project administration work conducted over the course of the EMP grant agreement included oversight of contracts implementation and billing, Project accounting, maintenance of insurance policies, and grant billing and reporting.



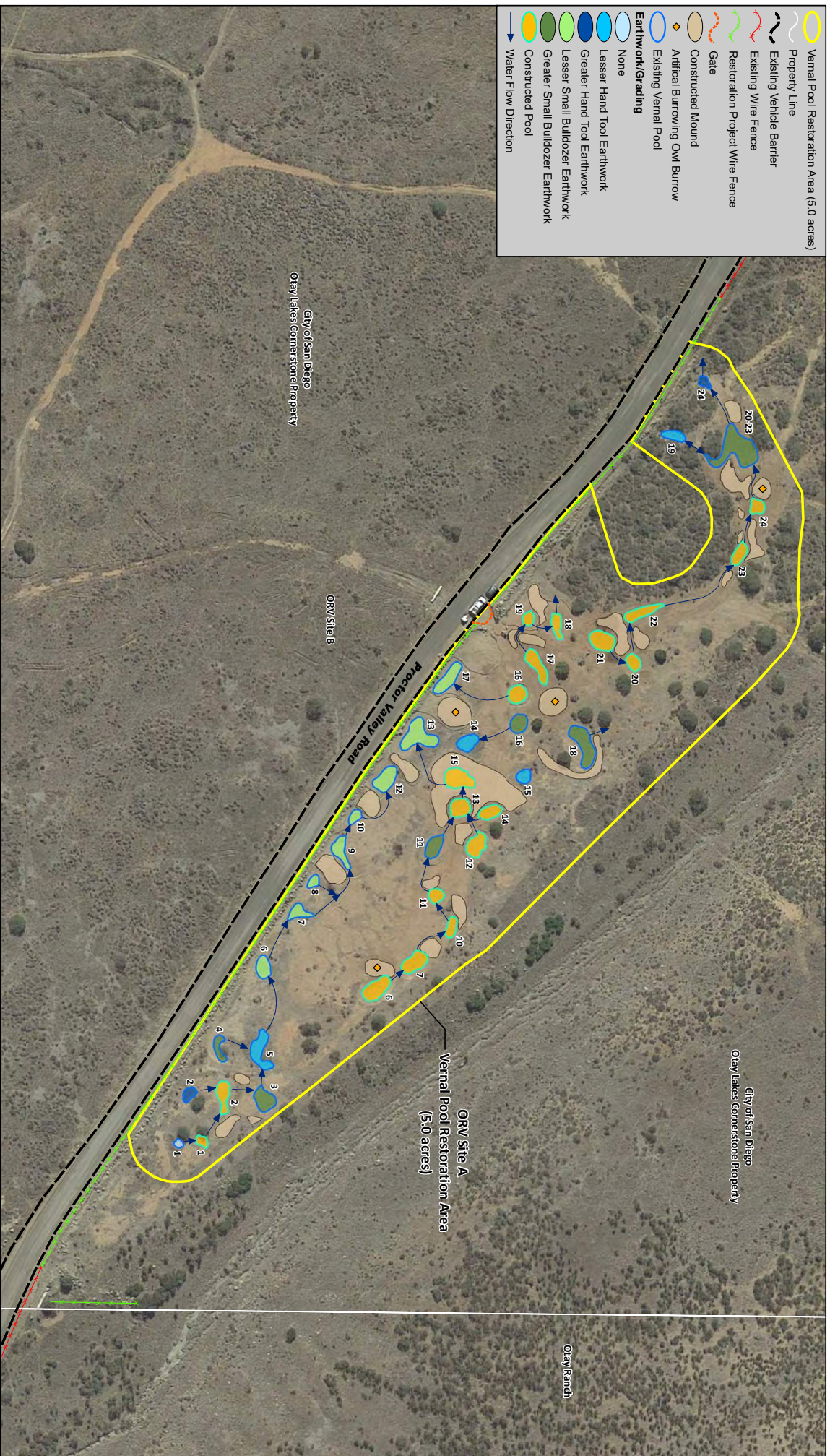
Project Schedule

The Project was completed in accordance with the schedule contained in the EMP Grant Agreement Amendment I.

Project Budget

The Project was completed in accordance with the budget contained in the EMP Grant Agreement Amendment I. Final Project expenditures are detailed in Invoice 12, submitted separately.

Please see below for Project photographs. Please direct any questions to David Hogan at 619 756-3864 or director@chaparralconservancy.org. Thank you for your consideration and SANDAG support to conduct the Proctor Valley Vernal Pool Project.





Proctor Valley ORV Site A EMP grant Project site before restoration work. Ground was compacted and bare and green patches were weeds.





Contractors grading constructed vernal pools.





Proctor Valley ORV Site A EMP grant Project site vibrant coastal sage scrub upland vegetation after restoration.





Proctor Valley ORV Site A EMP grant Project site damaged vernal pool before (above) and after (below) restoration.







Spreading navarretia under propagation for seed bulking by Rancho Santa Ana Botanic Garden.