

Lunada Canyon Wetland Restoration Project

Final Report

February 2005

The Palos Verdes Peninsula Land Conservancy (Conservancy) began work on the Lunada Canyon Preserve Wetland Restoration Project on August 1, 2004. The Conservancy received funding from the Wetlands Recovery Project's Small Grants Program to restore a degraded wetland area that covers approximately one acre of the 20 acre Lunada Canyon Preserve, located in Rancho Palos Verdes, California. The area that at one point supported a healthy riparian ecosystem was, when the project began, inundated with non-native vegetation including myoporum (*Myoporum laetum*), Spanish bayonet (*Yucca aloifolia*) and fennel (*Foeniculum vulgare*).



Before the restoration work began, a community meeting was held to inform neighbors what type of work the Conservancy was undertaking. This informal gathering focused on existing conditions at the preserve and the benefits that a restored wetland would provide for the native fauna, water quality, and erosion control of the immediate area. Initial concerns regarding a possible increase in public access were replaced with enthusiasm for the benefits of the project.



The Conservancy began its work on the project in late summer 2004. The majority of time was spent extracting non-native vegetation from the riparian area. Chainsaws were employed to fell the trees and the Conservancy's 4x4 truck was utilized to pull the debris out of the narrow ravine. The extracted material was brought to a green waste container that the City of Rancho Palos Verdes donated specifically for the project. The stumps were left intact in the ground to avoid disrupting the stream banks. After the woody debris had been removed from the canyon, the bottom of the riparian area was revealed. It was discovered that there had been a substantial amount of garbage dumped into the canyon over the years.

The second phase of the project began in September with work that involved both Conservancy staff and volunteers. A volunteer day was organized and more than 20 large bags of garbage, along with larger pieces of metal and fencing, were hauled out of the project area.

In an effort to eradicate non-native plant species from the project site, Conservancy staff spent the majority of September performing weed management activities. The primary target was fennel (*Foeniculum vulgare*), a plant that has extended its viability through massive seed distribution and has displaced the majority of native riparian plants from the Lunada Canyon Preserve. Control efforts consisted of both mechanical and chemical means. A riparian-safe herbicide was sprayed, and hand weeding was done where appropriate. Due to the massive amount of non-native seeds in the ground, the Conservancy will have to maintain this area for years to come.



In the summer of 2004, several Boy Scouts and a Girl Scout approached the Conservancy with a desire to partner in the completion of their Eagle Scout and Gold Award projects. The first Boy Scout that contacted the Conservancy was interested in a project that would provide the surrounding neighborhood an appreciation for the natural aspects of the preserve. It was decided that since the restored area had such limited access, a trail should be built from the paved road to the riparian area. After a two month planning period, the scout assembled a crew and constructed a rustic trail that stretches approximately a quarter of a mile; terminating at an overlook that will be utilized by school groups in learning about the restored wetland.



The Gold Award is the Girl Scouts' highest honor. It requires the scout to complete a project that satisfies a need in their community. After meeting with the interested Girl Scout and considering the options that would fulfill the project's requirements, it was decided that an interpretive area be constructed overlooking the restored riparian area. This would provide not only a resting area for hikers, but also a bird watching area and a picnic spot. The scout worked throughout the month of October designing, planning, and installing the bench and stepping stones that lead up to the site. She completed her project in October with approximately 57 hours contributed to the restoration project.

After funding was allocated to this project, the Conservancy's native plant nursery began the propagation of riparian plants needed to complete the project. Nursery staff utilized the plant palette suggested by the Restoration Ecologist in the report detailing the restoration process. A five-month propagation period proved to be enough time for the plants to be ready for installation in December.



The final step in the Lunada Canyon restoration was the establishment of the native plants in the project site. Yet another scout volunteered to manage this portion of the project. It was determined that the beginning of December would be an appropriate time to plant in hopes that there would be adequate precipitation since there was no funding for irrigation. The Eagle Scout candidate recruited more than 40 volunteers for his project.

The willow cuttings (*Salix lasiolepis*), mulefat cuttings (*Baccharis salicifolia*), giant rye grass (*Leymus condensatus*), and mugwort (*Artemisia douglasiana*) were planted either within the perennial stream or close enough so that they did not need supplemental irrigation to establish themselves. In consultations with the Restoration Ecologist, it was made clear that any upland/bank species planted would not survive without some form of irrigation. Since the preserve is not equipped with an existing irrigation system, a supplemental water source called Dri-Water was used with each plant. This product is placed against the root ball of the plant and provides water for up to 90 days, the most crucial period of time for the plant's establishment. The Conservancy donated the 588 Dri-Water containers to be used for the project.

The Lunada Canyon Preserve Wetland Restoration Project was completed in late January. The project can be deemed a success on multiple levels. The restoration of an acre of wetland was achieved, providing quality habitat for both flora and fauna, minimizing erosion, and improving water quality. Overall, the project's funding proved to be equally divided between the Small Grants Program and the Conservancy/local community. Almost 50% of the project's costs were donated, proving that a shared cost structure of 1:1 is achievable. Most importantly, a myriad of volunteers, neighbors, school groups, and scout troops were exposed to habitat restoration, at the same time understanding the importance of a wetland ecosystem.

