

**Bernardo Mountain Preserve Update August 2007 through February 2008
San Dieguito River Park**



BACKGROUND

The annual summary report documents the management actions taken on Bernardo Mountain. This document is intended to demonstrate management activities since August 2007. Most activity, other than site visits and patrol, occur during the fall and spring. The typical fall management actions were altered because of the October 2007 wildfires. The typical spring management actions are in progress and will not be greatly altered and most likely expanded.

Most of Bernardo Mountain burned including California gnatcatcher occupied habitat, the oak woodlands and riparian forests of Felicita Creek, and all *ceanothus verrucosus*.

SUMMARY MANAGEMENT ACTIONS

Actions were taken to preserve, protect, and enhance California gnatcatcher nesting habitat and the natural fire recovery processes.

Site Evaluation

The project area, and adjacent open space, was comprehensively evaluated to determine the effects of the fire.

The area was closed to public access immediately after the fire. Steps were taken to control access such as fencing, patrol, and signage. These measures were evaluated frequently. The existing trail system, and adjacent areas, was evaluated to determine maintenance needs and priorities. Priorities were determined based upon the need to ensure minimal impact to adjacent wildlife habitat, including erosion, and public safety.

The North Shore Lake Hodges Trail, that borders the southern portions of the Preserve, was the first SDRP trail to be re-opened and the use was monitored.

The entire preserve was monitored for wildlife and habitat. California Gnatcatchers were observed and documented after the fires. CEVE seedlings became apparent in January 2008.



Photograph Documentation

Park Rangers were given digital cameras immediately following the fires and asked to photo document existing conditions, changes, and work projects. These photographs are stored at SDRP offices.

Patrol for Trespass and Encroachment

The area was visited almost daily by Park staff and/or trained volunteer patrol members. A great deal of effort was made to keep people out of the area immediately following the

fires until the North Shore Trail was re-opened. Prohibiting disturbance of recovery habitat is a priority.

Vegetation, Wildlife, and Focused Biological Surveys

Protocol surveys for California gnatcatcher (*Polioptila californica californica*), coastal cactus wren (*Campylorhynchus brunneicapillus couesi*), and least Bell's vireo (*Vireo bellii pusillus*) will be conducted this spring.



The San Dieguito River Valley Conservancy hired Conservation Biology Institute to work with the Park on post fire habitat recovery projects. Biologist completed the following work:

1. Using aerial photography, map areas of unburned and partially burned native habitat within the Witch fire perimeter, within and adjacent to the San Dieguito River Park (SDRP), GPS locations as possible. Burned areas are defined as no living vegetation remaining. Partially burned and unburned patches (i.e., potential *refugia*) must have living native vegetation and be greater than or equal to 1-2 acres in size (minimum mapping unit).
2. In addition to the general mapping of unburned and partially burned habitat noted above, more specifically identify locations for future field assessment to determine whether occupied by focal species and locations appropriate for restoration and active management.

3. Generally characterize the dominant vegetation species and degree of burn (if any) for unburned/partially burned patches. Document any wildlife species observed in patch. Identify potential sources for irrigation.

Gnatcatchers were recorded on Bernardo Mountain. Further work will occur.

Invasive Plant Species Control Program

The control efforts focused on areas on the south side of Bernardo Mountain. The area of control was expanded to include all of the unburned areas that contain coastal sage scrub.

Weeds were controlled with herbicide and applied by a reputable weed control contractor.



Habitat Enhancement Projects

On the south side of the mountain, native plants were installed to aid in erosion control projects at drainages.

Previous projects are thriving and have been maintained by controlling weeds and access.

On the north side of the mountain, 100 *ceanothus verrucosus* (CEVE) plants were installed on a previously bulldozed slope where no other CEVE plants existed. CSS plants were also installed near barrier fences as an adjunct to the closure.

Seeding

Hundreds of pounds of seed that were stored at the Park office was lost to fire. Seed was donated to the Park after the fire and 70 pounds were distributed on the south side of Bernardo Mountain in areas previously seeded and where the weed species were controlled.

Artemesia californica	67 pounds
Brickellia californica	3 pounds

Seed was hand scattered by SDRP staff prior to winter rains in January 2008. Seeding occurred on the south side of Bernardo Mountain and focused on the following sites and conditions:

Invasive Plant Species Control Program Areas – Seeding occurred in order to facilitate the establishment of native plants in this area.

Habitat Enhancement Project - Seed was scattered in open areas and around established plants.

Erosion control – Seed was used along with straw wattles and bales and plants in drainages.

Obliterated Trail – The junction of the obliterated trail and the North Shore was seeded.



Community Outreach

Community outreach has occurred directly with people using the trail system. While on patrol, evaluating site conditions, or installing and maintaining projects, public contact is common and staff utilizes these opportunities to educate visitors.

Trash Removals and General Maintenance

The visitor use areas of the preserve are patrolled and cleaned frequently. The trails are kept clean during routine visits.

Fencing Materials and Signage

Hundreds of feet of fencing was installed in order to control access. Access to Felicita Creek (oak woodland and riparian) and areas that contained *ceanothus verrucosus* were the focus of the fencing.

Erosion Control

Extensive Erosion Control occurred. Drainages that intersected the trail were stabilized using weed free straw wattles and bales, plants, rock, and jut netting. Erosion control measures were installed on the “ceanothus tunnel trail” in order to facilitate seed establishment.



Ceanothus Verrucosus Study

A PhD student is working on a population dynamics model for *Ceanothus verrucosus* and is utilizing the burned areas of Bernardo Mountain in order to get post fire data on CEVE.

The project involves monitoring plots to assess seedling survival.

CEVE is such a rare species that little data is available so this project is of great importance. CEVE seed only germinate after fire so this is a rare opportunity to get some quality data on seedling establishment and survival

Trail Rehabilitation

The trail that connects the Lake Hodges North Shore Trail (LHNST) and the Bernardo Mountain Summit Trail (BMST) was maintained. Trail work occurred on one of the two turns and will require additional work as soils settle and stabilize. The trail is being diligently monitored and maintained to ensure sustainability.

Post-fire Emergency Actions Needed for Recreational Access and Habitat Preservation plan

A plan was developed that identified emergency actions needed for (1) recreational access, (2) erosion control, (3) habitat protection. The plan set forth criteria for managing recreational activity with the goal of providing access without damaging the recovering habitat. The plan was for the entire trail system including Bernardo Mountain.



MANAGEMENT PARTICIPANTS

SDRP

The San Dieguito River Park Joint Powers Authority (JPA) implemented the Bernardo Mountain management plan and fire response and recovery.

The River Park has significant responsibilities for acquisition, trail construction and maintenance, habitat restoration, cultural preservation and interpretation within the San Dieguito River Valley Corridor, which crosses five municipal jurisdictions in San Diego County. The JPA owns and manages approximately 2,336 acres of natural open space, and operates and maintains 22 miles of non-motorized multi-use trails for public access as part of the planned 55-mile-long Coast to Crest Trail, which is included in the California State Recreational Trails Plan as a California Trail Corridor. In addition, the JPA has restored and operates a historic house museum, the Sikes Adobe Historic Farmstead; and conducts numerous educational activities in the form of interpretive displays, habitat restoration work parties in the field, and outreach programs that focus on watershed protection.

Urban Corps of San Diego

Urban Corps is a locally-based nonprofit that provides education and paid service project opportunities to young adults aged 18-25 who have dropped out of high school and have no job or job training so they can learn new skills while contributing to the quality of life in the San Diego area. Their participation increases the connection these young people feel to their community, their environment, and their own future. Urban Corps is proud to have served more than 4,000 youth since 1989. The mission of the Urban Corps of San Diego is to provide job training and educational opportunities to young adults, in the fields of conservation, recycling, and community service which will assist youth in becoming more employable, while protecting San Diego's natural resources and instilling the importance of community involvement.

The Urban Corps helped install erosion control measures.

Kelley and Associates

Kelley and Associates, a business specializing in weed control in areas where native plants exist, was hired to do invasive species control (Section 2.5) Kelley and Associates was hired for the work in the spring of 2008.

California Department of Forestry

CDF Puerta La Cruz camp crews are made up of inmates who are trained to conduct fire suppression activities. When available they assist the Park with certain management activities. The crews helped install fencing and erosion control.

RECON Native Plants Inc.

Container plants were purchased from Recon Native Plants Inc., a local nursery and environmental services business. Recon specializes in local native plants. Recon was also

hired to do seed collecting. Seed was collected from plants in the Lake Hodges and San Pasqual Valley area.

Conservation Biology Institute

The Conservation Biology Institute (CBI) provides scientific expertise to support the conservation and recovery of biological diversity in its natural state through applied research, education, planning, and community service.

CBI assisted the Park with the Post-fire habitat assessment projects.

Griffith Biological

Griffith was hired for the bird surveys.