BERNARDO MOUNTAIN MANAGEMENT AREA
MARCH 2006 THROUGH JULY 2007

Prepared for:
San Diego Association of Governments

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1.0 BACKGROUND

Bernardo Mountain is located north of Lake Hodges, west of I-15. The primary goal of this habitat conservation project is to protect the habitat of the federally listed coastal

California gnatcatcher, as well as other listed and sensitive animal species such as coastal cactus wren and sensitive plant and wildlife species that are covered under the Multiple Habitat Conservation Plan ("MHCP").

The San Dieguito River Park (SDRP), a local government agency, owns 140 acres of the site and the San Dieguito River Valley Conservancy owns the remaining 180 acres. SDRP assumed responsibility to manage the Conservancy's 180 acres in coordination with its own property as one management unit.

2.0 SUMMARY OF MANAGEMENT ACTIONS

Actions were taken to preserve, protect, and enhance California gnatcatcher nesting habitat. Actions were focused on areas where the majority of gnatcatcher and cactus wren had been previously documented.

2.1 Site Evaluation

The project area, and adjacent open space, was comprehensively evaluated to determine if edge effects were changing and to identify other potential threats to the integrity of the preserve.

A habitat enhancement site (Section 2.6) was monitored in order to determine maintenance needs and evaluate success. In addition, two Eagle Scout Coastal Cactus Wren Restoration Projects that were installed in 2006 and 2007 were evaluated.

Invasive plant threats were evaluated. The areas where control efforts have taken place (Section 2.5) were the focus of the evaluations. No new invasive plant threats were identified and in the spring of 2007, the total area where invasive plant species are being controlled increased because of previous success and also because of drought conditions that limited the extent of the infestation.

The existing trail system and public use throughout the preserve, and adjacent areas, was evaluated to determine maintenance needs and priorities. Maintenance issues were evaluated and priorities were determined based upon the need to ensure minimal impact to adjacent wildlife habitat, including erosion, and public safety.

As part of the trails program, a better connection from the North Shore Lake Hodges Trail and the Bernardo Mountain Summit Trail was created and extensively monitored for sustainability, usage, and success of the closure of an associated redundant trail.

The entire preserve was monitored for wildlife and habitat. Some observed species are: California gnatcatcher, red diamond rattlesnake, California quail, greater roadrunner, mule deer, coyote, California kingsnake, red tailed hawk, California whiptail, and northern harrier.

2.2 Photograph Documentation

Digital photographs documenting existing conditions were taken. Before and after photographs were taken of new projects. Backup copies of the photographs are routinely made. Photographs were taken of a habitat enhancement and erosion control project, the new connection from the North Shore Trail, the obliteration project associated with the new connection, invasive plant species control, plants, and wildlife and signs of wildlife.

2.3 Patrol for Trespass and Encroachment

The management area was visited weekly by Park staff and/or trained volunteer patrol members. The areas of the preserve that have high trail usage and sensitive species were patrolled more often and frequent contact with the public occurred. The trail to summit was patrolled. Park staff is skilled at using "authority of the resource technique" and have contacted rule violators based upon the need to preserve the area.

In addition to time spent patrolling, Park staff was at the management area making public contact while installing and maintaining trail and habitat projects. A great deal of effort was made to explain the reason behind management decisions especially with regards to the new trail connection and old trail obliteration projects (section 2.10)

The Park received a request to have a running event on the trails of Bernardo Mountain. The request was denied pending the completion of the management plan for the area.

2.4 Vegetation, Wildlife, and Focused Biological Surveys

2.5 Invasive Plant Species Control Program

The overall goals of the invasive plant species control effort (habitat enhancement project also) are to connect patches of native vegetation in order to function as a larger block of habitat and expand areas of high quality coastal sage scrub. The effort focused on controlling weeds, mostly black mustard and tocalote thistle, in areas where sensitive species have been documented and where re-emerging coastal sage scrub exists.

The control efforts expanded last year's program and focused on maintaining the area as weed free as possible therefore allowing for the recruitment of native seedlings and easier movement of native wildlife. Several seedlings were observed and the entire site was seeded as part of a Seeding Project (section 2.7).

Invasive Species Control Area: Artemesia Californica nestled inbetween older coastal sage scrub plants

The area of control was expanded due to the success of previous efforts and low rainfall. Part of the area that was previously scarified, uphill from the Habitat Enhancement Project (section 2.6), was treated as was the area adjacent to the new trail connection and near the obliterated trails intersection with North Shore Lake Hodges Trail. In addition, weed control occurred in and around the habitat enhancement project.

Control efforts have been successful and the project site is distinguishable while looking at Bernardo Mountain from the south side of Lake Hodges.

Weeds were controlled with herbicide and applied by a reputable weed control contractor (Section 4.3). SDRP staff also performed weed control work. The same areas will be monitored and treated annually if native recruitment continues or until other priorities for weed control become apparent. Between March 2006 and June 2007, approximately 136 hours were spent controlling invasive species.

2.6 Habitat Enhancement Project

The overall goal of the habitat enhancement project is to connect patches of native vegetation in order to function as a larger block of habitat and expand areas of high quality coastal sage scrub. This year's effort focused on controlling weeds, repairing irrigation, installing container plants, and hand scattering CSS seed.

The project consists of the restoration of an approximately 1-acre site that was chosen based upon its location next to an area where sensitive species have been documented, the existence of re-emerging coastal sage scrub, close proximity to existing stands of healthy stands of native vegetation, need for erosion control, and reasonable access.

The project was implemented in the Winter 2004 and a diverse mix of species was utilized. During the 2007 winter months, a few replacement plants were installed in areas where previous plantings were unsuccessful. Plants were also installed in locations where there was a need to occupy open space and provide more cover. *Rhamnus crocea* (Redberry) was planted to encourage use of the site by hermes copper (*Lycaena hermes*) butterfly, a

threatened species that has been documented in nearby Poway and uses the plant to host caterpillars. Also, two days of planting cactus with volunteers occurred and these plantings were focused on the area above the original project area.

A gravity fed irrigation system was maintained through the 2006 summer and fall months. The system is no longer needed and scheduled for removal.

The native plants seem to be flourishing and are benefiting from weed control efforts. Small amounts of invasive plants exist and there is approximately 98% native coverage, including new seedlings and a healthy population of tarweed (*hemizonia fasciculate*). The site now contains good quality native habitat and provides a healthy connection between two larger, healthy, stands of CSS. Wildlife has been observed at the site.

2.6.1 Additional Habitat Enhancement Projects

Two scout Coastal Cactus Wren Restoration Projects were implemented adjacent to two other existing cactus wren projects. The four projects together occupy about 2/3 of an acre The projects consisted of weed clearing, planting of primarily prickly pear (*opuntia litoralis*) cacti cuttings and some cholla (*opuntia oricola*) and CSS species container plants. The newly planted vegetation was mulched and a gravity fed irrigation system was installed. Seeding also occurred on both sites (section 2.7).

A 1000-foot section of old roadbed was obliterated as part of a project to reconfigure the connection between the Lake Hodges North Shore Trail and the Bernardo Mountain Summit Trail. Soil was recovered from the downhill side of the old road cut and returned to the roadbed then planted with native species. Rocks were redistributed in order to shade soil and plants and provide habitat for reptiles and insects. The entire section was seeded with Artemesia californica. Approximately 45 spiny redberry (Rhamnus crocea), 25 coastal sage scrub species

(coastal sage, black sage, white sage, encilia), and 35 prickly pear cactus were planted. The container plants were concentrated at the junction with the North Shore Trail. The work will result in a much-enhanced native habitat by way of the rehabilitation of approximately 1000 feet of redundant trail that currently bisects coastal sage scrub that is occupied by sensitive species.

2.7 **Seeding**

Due to the success of the collection and distribution of seed that was part of a One Time Seeding Project, a second seed project was implemented. A great deal of resources was used in order to identify seed collection sites.

SDRP staff, Urban Corps of San Diego, RECON Native Plants Inc., and CDF fire crews collected coastal sage scrub seed from plants in the Lake Hodges and San Pasqual Valley area. Species (all dominant plants of the southern side of the mountain) and quantities collected are listed below.

SPECIES	POUNDS	Comments
Encelia	9	Pure seed
Coyote Brush (Baccharis pilularis	82	Estimated seed per bag by cleaning one bag. 41 bags x 2 pounds
ARTEMESIA- wet	56.5	Weighed wet immediately after collection
ARTEMESIA- dry	40.25	Dry one week.
ARTEMESIA	180	Chipped. Dry. Collected by Recon
ARTEMESIA	208	Chipped. Dry. Collected by Recon

Artemesia seed – just seed heads minimal branches

Seed collecting labor was analyzed to determine which technique would be most efficient. The Urban Corps were least efficient due to quality of seed collected and cost. CDF was most efficient due to cost and the amount of seed collected but the collection site had to contain pure stands of quality seed in order for the crews to easily identify which seed should be collected. Identification of such stands proved difficult this year, contrary to the previous year. Collection by a RECON seed specialist was equal in efficiency to the Urban Corps but the quality of seed was superior. SDRP staff was least effective due to cost and the use of Park staff for this purpose is unrealistic because of other more pressing responsibilities.

Seed was hand scattered by SDRP staff prior to winter rains in January 2007. Seeding occurred on the south side of Bernardo Mountain (see figure 3) and focused on the following sites and conditions:

- Invasive Plant Species Control Program –seeding occurred in order to facilitate the establishment of native plants in this area. This area, along with the adjacent Habitat Enhancement Project, produced the most seedlings from the 2006 One Time Seeding Project. With invasive plants controlled, it is again expected to prove to be an area that will benefit from this project.

- Habitat Enhancement Project - With invasive plants controlled, there was a higher rate of success here from last years seed project compared with other areas. Seed was scattered in open areas and around established plants. The upper portions of the site, which are primarily planted with prickly pear cactus, were densely seeded. This area, above the focused Habitat Enhancement Project, seems to still be affected by the now controlled inundation of tocalote thistle and mustard. In the cactus area, there are minimal seedlings present from last year's effort. Low rain fall totals are probably also to blame.

- Erosion control – drainages were again densely seeded, especially the two drainages near the Habitat Enhancement Project where erosion control, previous seeding, and container planting had occurred. There are minimal seedlings present from last year's effort.

- Recovering Coastal Sage Scrub- Seed was scattered in areas where there was evidence of conversion back to native habitat. Some indicators were seedlings, isolated stands of native species, deer weed, and somewhat healthy but weedy stands of CSS species. There are minimal seedlings present from last year's effort.

- Scarified soil above the Habitat Enhancement Project - In 2006, the soils were scarified by hand crews that raked the soil removing dead plant material and lightly breaking up the topsoil. This area was occupied by tocalote thistle and mustard. There was a substantial decrease in weed coverage in 2007 due to less than normal rainfall and additional weed control efforts. There are minimal seedlings present from last year's effort.

- Obliterated Trail – The junction of the obliterated trail and the North Shore was heavily seeded and the entire length of obliterated trail was also seeded with less density.

- New Connection from the North Shore Lake Hodges Trail to the Bernardo Mountain Summit Trail – the area around newly constructed connection was seeded. There was also an Eagle Scout coastal sage scrub habitat project here that included the clearing of weed material from the area, planting and irrigating of 50 native plants, and adding seed.

Seeding did not occur in pure stands of invasive species. With the low rainfall totals and the highly competitive situation associated with weed monocultures, it was assumed that the seedlings would not be successful. Also, a more efficient use of the seed was in the areas mentioned above. The elimination of grasslands is unlikely as a result of this project but the area identified will be enhanced as part of future management activities and seeding. The portion originally identified, as non-native grasslands that were not seeded will be isolated until weed control occurs or future seeding projects are done. Other areas that showed no progress from last years seeding project were also omitted Specific species of seed and where it was distributed was based on the existing plant species and was determined by the preserve manager. See figure 4.

2.8 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.

A draft "Meet the Neighbor" brochure was developed. The brochure contained interesting information about Bernardo Mountain, the San Dieguito River Park, The San Dieguito River Valley Conservancy, recreation opportunities, and fire safety. The brochure is intended to elicit support for management activities at Bernardo Mountain and Lake Hodges and also the goals of the San Dieguito River Park. Along with the brochure, the plan was to distribute the following information:

- *Living Close to Nature: How to protect the wilderness from human influences while living in harmony with wildlife*
- *Don't Plant A Pest* brochure.

2.8 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 (see Section 2.3).

Maintenance occurred on the irrigation system to repair hoses that were damaged by wildlife, probably coyotes that were chewing on the hoses. Part of the system was restored in order to reach newly installed plants and the plants still requiring supplemental watering. The system will be removed in 2007. Other systems were installed and maintained that watered Eagle Scout projects and these were retained.

Newly installed plants, as part of the obliteration and new connection project were diligently watered by Park staff and their watering truck.

2.9 Fencing Materials and Signage

320 feet of lodge pole fencing was purchased and installed at the connection between the North Shore Lake Hodges Trail and the Bernardo Mountain Summit Trail. Fencing was also used to close the obliterated section of old trail.

A sign was developed, similar to existing Park signage, that welcomes trail users to the Bernardo Mountain Preserve and encourages appropriate usage. The 12”x16” sign reads “Welcome to the San Dieguito River Park Bernardo Mountain Preserve. It is very important to: Stay on designated trails, Do not remove anything found here, Do not disturb wildlife, Bring extra water, Keep dogs leashed and on the trail at all times, Know and obey all Park rules. Please remember that access to natural areas is dependent upon our ability to take care of the land. If abuses are observed please contact the San Dieguito River Park”. In addition, signs used for identifying closed areas were purchased. These signs read “Wildlife Area. Please Keep Out”.

2.10 Trail Rehabilitation

Park staff addressed the most pressing trail issue, which was the intersection of Lake Hodges North Shore Trail (LHNST) and the Bernardo Mountain Summit Trail (BMST). The general area contains sensitive species such as California gnatcatcher and cactus wren.

Through a process of working with the trails community, biological consultants, and Park staff, a decision was made to reconfigure the connection between the two trails in order to provide a better trail experience and a much-enhanced gnatcatcher and cactus wren habitat.

The Park obliterated approximately 1000 feet of trail that bisected quality CSS occupied by gnatcatchers and coastal cactus wren. The abandoned section was partly rehabilitated (see sections 2.5 and 2.6.1 and 2.7). Soil was recovered from the downhill side of the previously bulldozed road cut and placed back onto the roadbed. Hand crews raked the soil and dispersed salvaged rocks. Rocks were used to control erosion, block the route, shade plants, seed, and soil, and piled up in order to provide habitat for reptiles, insects, and small mammals.

A connection was created closer to Felicita Creek where the LHNST intersects with the creek therefore eliminating the shortcutting and redundant trail. The trail section was created in a disturbed area then fenced in order to direct trail users through the landscape and prohibit shortcutting. Maintenance has occurred on one of the two turns and will require additional work as soils settle and stabilize. The trail exceeds a 10% slope in two places for runs of 20 feet and also includes two switchback turns; both are conditions that are not ideal for trail management, however these conditions are acceptable because of the total gain in coastal sage scrub habitat associated with the obliterated trail and minimal impact to adjacent habitat during construction. The trail was fit into a small area so as not to disturb existing habitat and the overall distance is relatively short. This connection may need annual maintenance but that will be negligible because of the extra care taken during the initial construction. The trail is being diligently monitored and maintained to ensure sustainability.

3.0 PLANNED MANAGEMENT ACTIONS JUNE 2007 – JUNE 2008

The focus of management actions for 2007 and 2008 are to maintain the preserve in its current state and work to enhance site conditions for the benefit of wildlife, specifically California gnatcatcher and coastal cactus wren.

3.1 Biological monitoring

Two sets of survey were conducted in 2006 as a continuation of monitoring the flora and fauna within the preserve. Targeted rare plant surveys for San Diego thornmint (*Acanthomintha ilicifolia*), San Diego ambrosia (*Ambrosia pumila*), Orcutt's brodiaea (*Brodiaea orcuttia*) and Variegated Dudley (Dudley variegate) were done between May 1 and June 15, 2006. Areas were surveyed with extra effort focused on those areas having appropriate microhabitats or other indicators for the potential presence of a target species. None of the species targeted by the survey were observed. Two consecutive years of surveys failed to find these species within the preserve despite adequate survey conditions (weather and habitat). Therefore, it is unlikely they occur on Bernardo Mountain. Two exotic species found in the areas where San Diego thornmint and Orcutt's brodiaea had a potential to exist are *Brachypodium distcahyon* and tocalote. Removal of these exotics could encourage the introduction or reintroduction of thornmint, small flowered morning glory, Palmer's grappling hook, Orcutt's bordiaea and other clay endemics.

In addition to the plant surveys, protocol surveys for California gnatcatcher (*Polioptila californica californica*), coastal cactus wren (*Campylorhynchus brunneicapillus couesi*), and least Bell's vireo (*Vireo bellii pusillus*) were conducted again in May and June 2006.

Fourteen gnatcatcher breeding territories were detected, including two single males, and twelve pairs. Five cactus wren home ranges were detected. No least Bell's vireo were detected within the survey area or downstream in the willow-dominated riparian habitat closer to Lake Hodges. A total of 71 species of birds were observed. Several cowbirds were also observed in the preserve.

3.2 Habitat Management

The preserve will continue to be regularly patrolled and evaluated for intrusion into wildlife habitat. If a change in the quality of habitat is detected, actions will be taken in order to maintain the existing quality.

The primary focus of habitat restoration projects will be the area of the obliterated trail and the new trail connection. Eventually the disturbed site which the new trail passes through will be vegetated with coastal sage scrub species and the trail will further blend into the landscape. The obliterated trail will be enhanced in order to create more habitat for gnatcatchers and coastal cactus wren. SDRP staff will grow *Artemisia californica* in containers to be planted in the area. Scout habitat enhancement projects will be directed to this area.

The Habitat Enhancement Project (section 2.6) is mostly completed but will be maintained, and may also be expanded with assistance from volunteers, although the first priority for planting will be at the obliterated trail area.

Eagle Scouts will continue to be encouraged to do California Gnatcatcher and Coastal Cactus Wren Projects and may use plants grown at the Park offices.

Rhamnus crocea (Redberry) will be purchased and continue to be planted in order to encourage the use of the site by hermes copper (*Lycaena hermes*) butterfly.

The Invasive Plant Species Control Program (section 2.5) will continue and the areas previously treated will be maintained. Expansion of this program will occur in areas where there are trail closures and also to expand the original area. The slope above the Habitat Enhancement Project will be expanded so that seed projects will be more successful.

Seed collecting will occur and distribution will be focused on areas where there is successful weed control and where recovering coastal sage scrub exists. Seeding will not occur in areas where weed monocultures exist. Seed will also be distributed on the obliterated trail section and new trail connection.

Outreach to the neighboring public will occur. Packets will be distributed to approximately 225 households near Bernardo Mountain with the assistance of volunteers.

The Information will consist of:

- San Dieguito River Park fact sheet that discusses issues specific to Bernardo Mountain, the SDRP trail system, and fire and brush management.

- *Living Close to Nature: How to protect the wilderness from human influences while living in harmony with wildlife*
- *Don't Plant A Pest* brochure.

3.3 Trail Management

Trail work will occur in order to stabilize the connection between Lake Hodges North Shore Trail and the Bernardo Mountain Summit Trail. Trail work will also occur in order to provide patrons with a better experience while visiting the Mountain.

Signage will be installed to identify acceptable trail usage, management goals, to direct trail users, and restrict access to sensitive areas.

The overall planning and maintenance of a trail system at Bernardo Mountain will occur and actions will be taken to manage the system based upon the recommendations of the management plan. Additional work may occur in order to control erosion and to protect wildlife habitat.

3.4 Bernardo Mountain Management Plan

A management plan is being developed and should be completed in 2007. The plan provides guidelines for managing both biological and cultural resources on Bernardo Mountain and its surrounding slopes, identifies public access and use issues, and addresses fire management at the urban-wild land interface..

3.5 General Management Actions

The project area, and adjacent open space, will continue to be comprehensively evaluated to determine edge effects and potential threats to the integrity of the preserve. The management area will be visited weekly by Park staff and/or trained volunteer patrol members. Trash will be removed. The areas of the preserve that have trail usage and sensitive species will be patrolled more often and frequent contact with the public should occurred.

Before and after photographs will be taken of new habitat enhancement, erosion control, and trail projects. Existing projects will continue to be documented. Incidents of trespassing, encroachment, and other maintenance projects will be photo documented as will the area in general.

4.0 MANAGEMENT PARTICIPANTS

4.1 SDRP

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 2,736 acres of natural open space, and operates and maintains 32 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.

4.2 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 collect seed at Lake Hodges.

4.3 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 2006 and in 2007.

4.4 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 collect seed at Lake Hodges.

4.5 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.

4.5 Biological Monitoring

Dossey and Associates was hired for the habitat and plant surveys and Pacific Coast Conservation Alliance for the bird surveys.

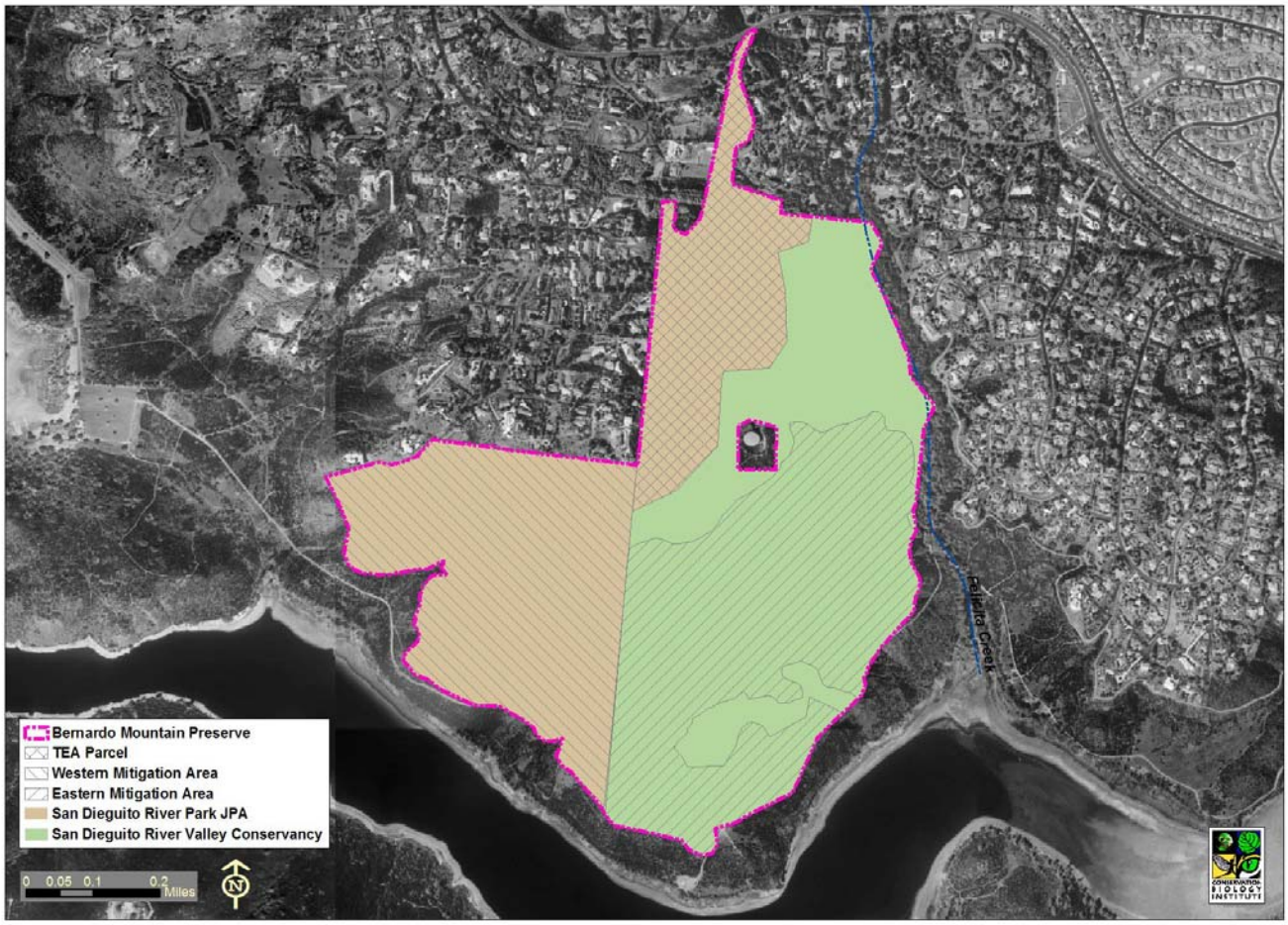

Figure 1. Image was taken from the Bernardo Mountain Management Plan

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.