



April 28, 2014

**San Marcos Foothills Preserve
Long-Term Open Space Management Plan
Santa Barbara, California**



Prepared for:
**Santa Barbara County
Community Services Department
Parks Division**
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**San Marcos Foothills Preserve
Open Space Management Plan
Santa Barbara, California**

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1.0 INTRODUCTION

This long-term management plan contains: a description of the 200-acre San Marcos Foothills Preserve property and the adjacent 10-acre San Marcos Foothills Santa Barbara County Park property; the property's existing environmental resources; a discussion of recreation opportunities; current land management activities performed by County staff and volunteers; and recommended future management actions to ensure the protection of resources and the continued enjoyment of the Preserve and Park property for future generations. This plan builds upon the 2010 Interim Management Plan prepared by the Santa Barbara County Parks Department. This long-term management plan was prepared by Watershed Environmental, Inc. for the Santa Barbara County Community Services Department, Parks Division.

The San Marcos Preserve property is a unique place that affords the public the opportunity to experience and be a part of the natural environment. The power of this experience eloquently expressed by the great American naturalist and preservationist John Muir, who in 1918 wrote, "*....in every walk with nature one receives far more than he seeks.*"

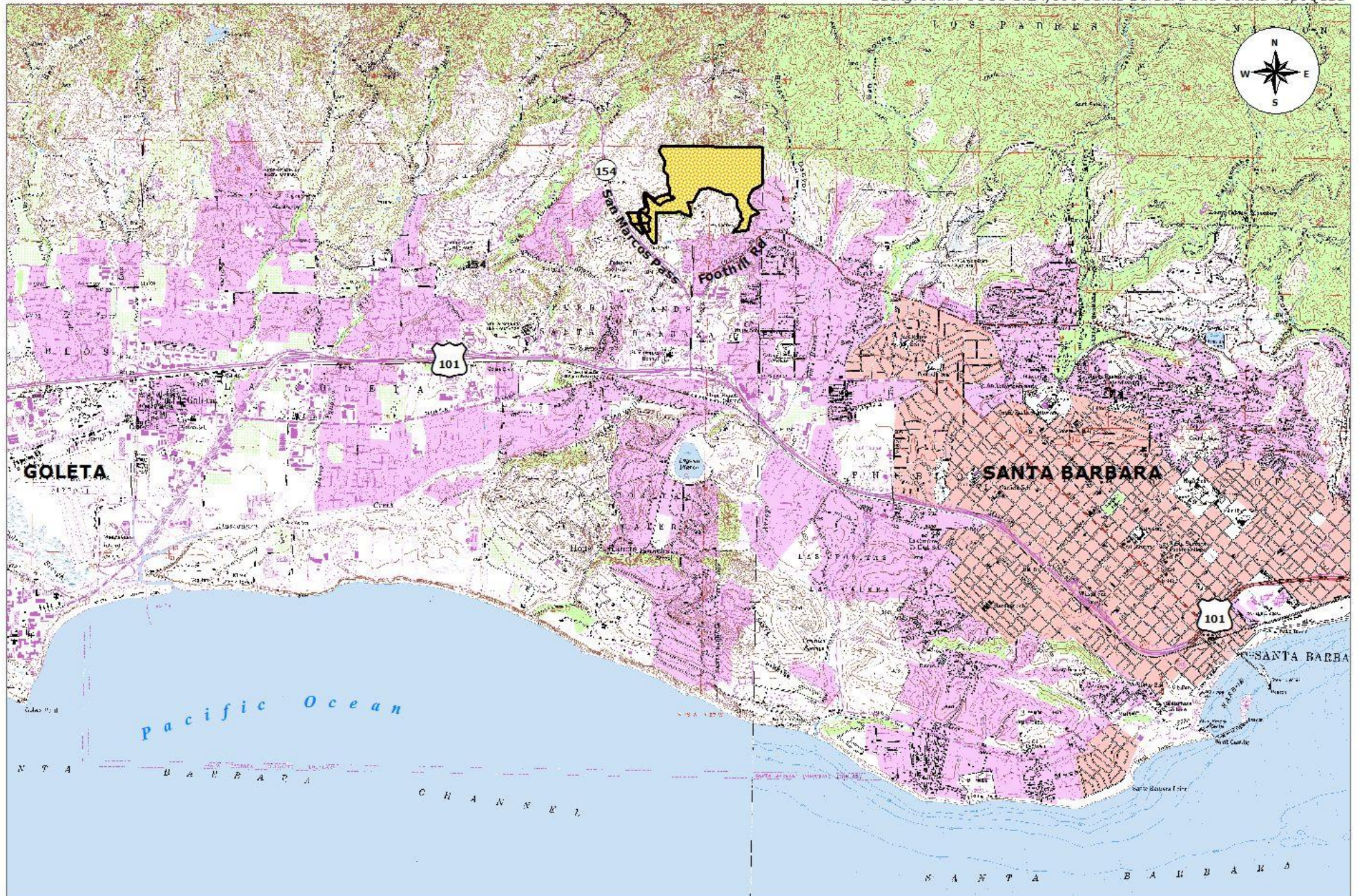
This long-term open space management plan is intended to support the Community Services Department's "Connecting People to Opportunities" mission, which is:

to provide community, cultural, and recreational resources that sustain and enhance quality of life for all who live, work, and play in Santa Barbara County.

1.1 LOCATION OF SAN MARCOS FOOTHILLS PRESERVE

The San Marcos Foothills Preserve and Park property are located in the foothills of the Santa Ynez Mountains, east of Highway 154 and north of Foothill Road (Figure 1). The Santa Barbara City limits lie approximately ¼ mile south of the Preserve property. Adjacent land use includes: Highway 154 to the west, agricultural ranch property to the north, residential neighborhoods to the east, and mixed residential and agricultural ranch property to the south.

The Preserve and Park properties are adjacent to two County-approved residential development areas: the Preserve at San Marcos Terrace and the Preserve at San Marcos Meadows. Construction of the Meadows development began in 2008 and as of November 2013 is still in progress. Construction of the Terrace development has not begun and as of November 2013 remains undeveloped with no paved roads or structures. The Meadows development, when fully built, will contain 7 single-family residential lots, one multifamily lot with 5 affordable condominium units, and a 20-acre undeveloped private conservation area. The Meadows development is 69.5 acres in size, with 22.35 acres to be developed and 47.16 acres protected by private conservation easements. The Terrace development will include 8 single-family residences and is 91.76 acres in size. Development will occur on 18.62 acres and 73.14 acres are protected by private conservation easements. The Preserve at San Marcos residential development contains a total of 120.30 acres that are protected by private conservation easements. These private conservation easements are contiguous to the Santa Barbara County San Marcos Foothills Preserve and San Marcos Foothills Park properties (Figure 2). With the exception of a trail easement that runs along the western edge of the Preserve at San Marcos Terrace development area, the public is prohibited from entering the Meadows and Terrace private conservation areas.

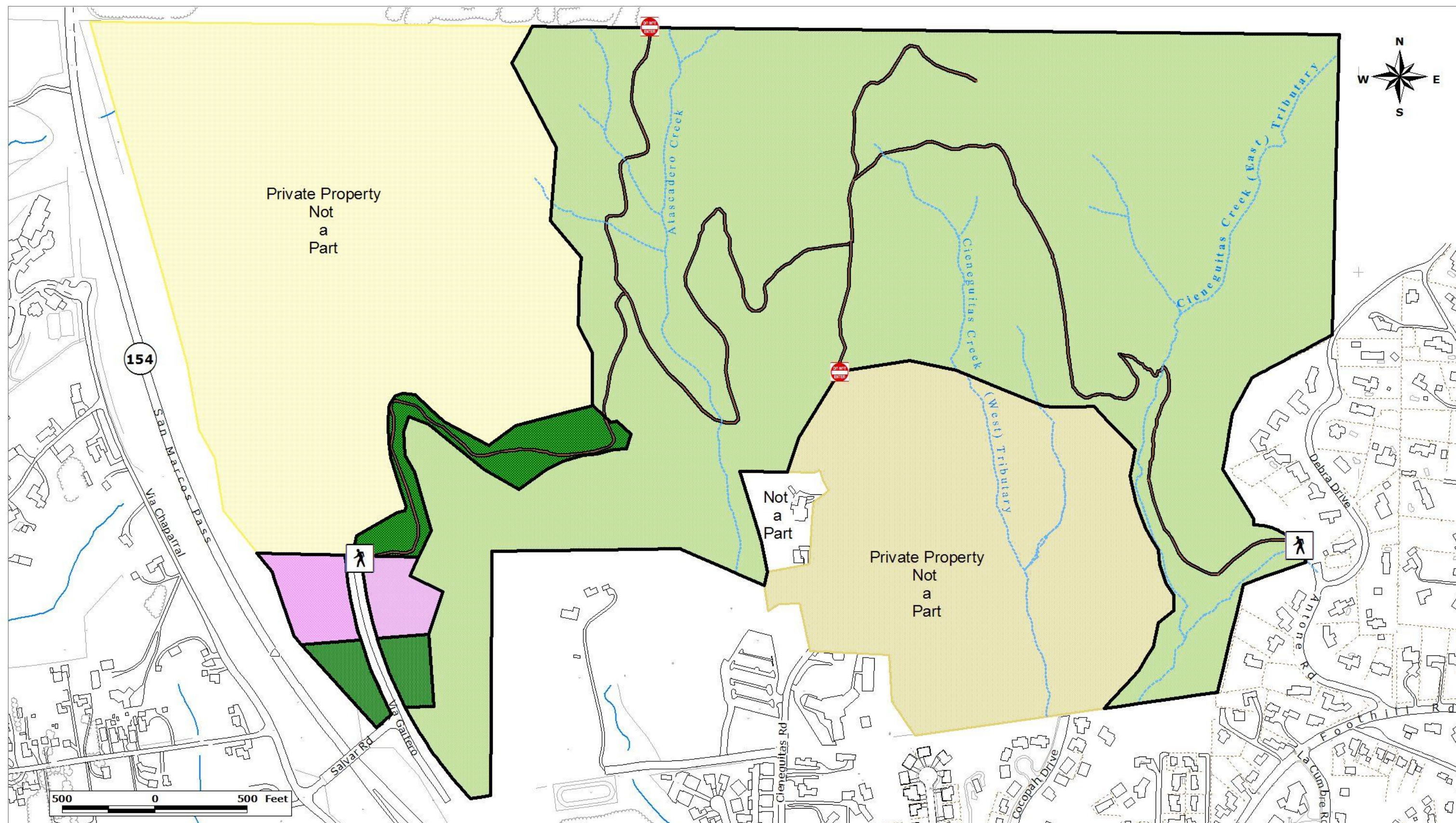


 San Marcos Foothills Preserve Open Space

1 0 1 Miles

Figure 1. Location Map

**San Marcos Foothills Preserve
Long-Term Open Space Management Plan**



Legend

- San Marcos Foothills Preserve Property
- San Marcos Foothills Preserve Open Space (200 acre)
- Future SBCO Park (10 acre)
- SB Soaring Assoc. (6 acre)



Private Property - No Access



Trailhead



Existing Open Space Trails



Creek

Adjacent Private Property

Meadows Development Area

Terrace Development Area

Figure 2. Site Map

San Marcos Foothills Preserve
Long-Term Open-Space Management Plan

The main public access is at the western portion of the Preserve at the end of Via Gaitero Road. Secondary neighborhood access is on the east side from the end of Antone Road. The 10-acre Park property consists of three distinct parcels separated by Via Gaitero Road and by two smaller parcels owned by the Santa Barbara Soaring Association (refer to Figure 2). The Park property and the adjacent Soaring Association property are all undeveloped.

1.2 PURPOSE OF MANAGEMENT PLAN

This long-term management plan serves as a guide for stewardship of the 200-acre San Marcos Foothills Preserve property and the 10-acre San Marcos Foothills Park property for the next 10 years. The County of Santa Barbara Community Services Department, as the property owner, has the ultimate responsibility to manage the properties. However, the Community Services Department is a public agency charged with acting on the public behalf to “provide, maintain, and manage community, cultural, and recreational resources that sustain and enhance quality of life for all who live, work and play in Santa Barbara County.” The Preserve and Park are public property managed by a public agency, and as such the public and the Community Services Department share the responsibility to manage and maintain the San Marcos Foothills Preserve and Park areas.

The terms “steward” and “stewardship” are used throughout this management plan and refer specifically to how humans use the land and its environmental resources (i.e., the plants, animals, minerals, soil, and water). The terms refer to the person(s) responsible for the sustainable long-term care of the land and its environmental resources. Aldo Leopold, the famous American author, scientist, ecologist, and environmentalist, was an early advocate for sustainable land-use practices and environmental stewardship. He coined the phrase “land ethic” in his book *A Sand County Almanac* (1949) to describe mankind’s relationship to the land and the animals and plants that grow upon it. Collectively, as stewards of this public land, our goal is to preserve the environmental and cultural resources that exist on the property, to enhance and restore the resources that are degraded, and to manage the land in a sustainable manner so that future generations can experience and enjoy the San Marcos Foothills Preserve and Park property.

The purpose of this Management Plan is to provide a comprehensive guide for the long-term management of the San Marcos Foothills Preserve’s unique natural, cultural, and scenic resources while providing for compatible, passive, trail-based recreational activities. This Management Plan is intended to:

- Create an inventory of the natural resources that exist within the 200-acre Preserve and 10-acre Preserve Park, including rare, endangered, or sensitive plant and animal species
- Identify key management issues and strategies needed to protect environmental and cultural resources, including: habitat restoration, environmental monitoring, sensitive species protection, erosion repair, and wildfire hazard reduction
- Identify existing public access locations and trails, trailheads, and trailhead parking
- Identify suitable locations for future recreational improvements, including: new trails, footbridges, restrooms, picnic areas, benches, and scenic view points
- Create a priority-based list of resource management actions

1.3 GUIDING PRINCIPLES

- **Preserve and Manage** the property and protect as open space for its biologic, scenic, and archeological resources
- **Provide** outdoor passive recreational opportunities while protecting and preserving the environment
- **Encourage** visitors to explore and experience nature
- **Invite** the public to learn about natural processes, ecology, ecosystems, habitats, watersheds, flora, and fauna
- **Support** education, research, and artistic use
- **Collaborate** with the surrounding community, user groups, and volunteers

1.4 HISTORICAL LAND USE

The first people to live on the San Marcos Foothills Preserve property were the Native American Chumash people. The Chumash were a hunter-gatherer society that lived in small villages and settlements. The archaeological record indicates that a few of their villages were occupied approximately 10,000 years before the present (M. Hogan 2008). The nearest known Chumash village site to the San Marcos Foothills Preserve was a village called Kaswa'a near Cieneguitas Creek that existed after the Spanish Mission Era (SBMNH 2013). Chumash territory included central and southern coastal regions of California, throughout portions of what is now San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties, and extended along the coast from Morro Bay to Malibu, including the Channel Islands.

The first Europeans to arrive in the Santa Barbara region were Spanish explorers, part of the Juan Rodríguez Cabrillo 1542 expedition. The Cabrillo expedition had three ships that sailed from Mexico up the coast of California. Cabrillo's ships landed in Ventura on October 10, 1542, in Santa Barbara on October 13, 1542, and Point Conception on October 17, 1542 (SDHC 2013). The expedition spent approximately one month on San Miguel Island waiting for wind conditions to improve before continuing their journey northward. The expedition is believed to have gone as far north as the town of Santa Cruz, California before returning to San Miguel Island on November 23, 1542. Juan Rodriguez Cabrillo broke his leg during the latter part of the expedition and died on January 3, 1543 while on the island. The expedition remained on San Miguel Island for three months, during which time they had extensive contact with the Chumash people. The Cabrillo expedition laid claim to all the Alta California land they discovered on behalf of Spain. However, Spain's colonization of Alta California did not begin in earnest until 1769, marking the beginning of the Mission Era.

Colonization was led by a Franciscan priest named Junipero Serra, which began with the construction of the San Diego Mission in 1769, and progressed northward to San Francisco. A mission and *presidio* (Spanish word meaning "fortified military settlement") were constructed at intervals of approximately 30 miles, or one day's ride on horseback. The Santa Barbara Mission was built in 1786 by Father Fermin Lasuen. A total of 21 missions were constructed between San Diego and San Francisco between 1769 and 1823 (California Missions Resource Center 2013). The colonization by the Spaniards had deadly consequences for the Chumash people and other Native Americans living in California. The population of Native Americans living in California is estimated to have been about 300,000 in 1769 at the beginning of the

Spanish Mission Era and is believed to have declined to 200,000 by 1821 (PBS 2013). Estimates of the pre-European Chumash population range from 10,000–15,000 people (Kroeber 1925). However, by 1900 only 200 Chumash had survived Spanish colonization. The Native American population decline during the Mission Era was a direct result of the introduction of diseases from Europe, loss of land, forced labor, direct violence, and religious persecution inflicted upon the native peoples by the Spanish Army and Catholic Church.

During the Mission Era, the lands around and between the missions were subdivided into large Spanish land grants. Land grants were given to the Catholic Church for each of the 22 missions, while the land adjacent to the Missions was granted to the presidios as pueblos and were the property of Spain. In 1782, 17,826.17 acres of land were granted for the Santa Barbara Pueblo (UC Berkeley 2013) and in 1786, 283 acres of land were granted to the Santa Barbara Mission (State Lands Commission 1982). The San Marcos Foothills Preserve property is located within the historic Santa Barbara Pueblo land grant. In 1822, the citizens of Mexico won their independence from Spain and the government subdivided the former pueblo lands. In 1833, secularization of the missions began, and so between 1782 and 1822 the Santa Barbara Preserve property was probably only used for hunting and cattle and sheep grazing.

After the US victory in the Mexican-American War of 1846-1848, the US annexed all of Texas and purchased all of California from Mexico for 15 million dollars (History Channel 2013). The portion of the Santa Barbara Pueblo land grant that contained the San Marcos Foothills Preserve property was at one time part of the massive La Paloma Ranch, which extended from Gaviota to Santa Barbara. La Paloma Ranch's extensive land holdings, including an 800-acre parcel containing the San Marcos Foothills Preserve property, were gradually subdivided and sold between the late 1800s and the early 20th century. Between 1912 and 1920, Santa Barbara was home of the Flying A Studios silent film production company, which is thought to have filmed several silent movies on the San Marcos Foothills Preserve property. Meanwhile, the property remained undeveloped and continued to be used for cattle and sheep grazing.

When World War II ended in 1945, there was a housing boom in Santa Barbara, and the areas east and south of the San Marcos Foothills Preserve property were developed into single-family homes. The California Department of Transportation also widened State Highway 154 on the west side of San Marcos Foothills Preserve property around this time. During 1945-1960, the San Marcos Foothills Preserve property remained undeveloped. A dairy farm was located for a short period on a portion of the property near the northern end of Cieneguitas Road and an attempt was made to farm avocados on the hill north of Cocopah Drive. The primary use of the property continued to be cattle grazing.

Beginning around 1970, several investors and developers proposed to develop the San Marcos Foothills Preserve property. The County of Santa Barbara had zoned the property (which at that time was 377 acres in size) for single-family residential development, with a minimum parcel size of 1 acre per residence. Under this zoning, 377 single-family homes could potentially have been constructed on the property. However, in 1980, after several failed development proposals were submitted for the property, the County of Santa Barbara conducted an environmental constraints analysis of the 377-acre property and took action to rezone it as a "planned residential development" with a maximum of 75 units. In 1990, another residential

development known as Bridle Ridge was proposed on the property. It included 75 residences, a community center/ranch headquarters, and equestrian facilities. After nine years of planning and environmental review, the County Planning Commission and Board of Supervisors denied the Bridle Ridge project in 1999 because “the environmental resources and scenic qualities of the site were not sufficiently protected, and neither the open space nor the clustering of building was maximized” (SBCO 2005).

In 2006, a development plan by Bermant Development Corporation for the 377-acre property called the “Preserve at San Marcos” was approved by the County of Santa Barbara Planning Commission and Board of Supervisors. The Preserve at San Marcos clustered development into two areas called the “Terrace” on the western side of the property and the “Meadows” on the eastern side (refer to Figure 2). The Meadows development, when fully built, will contain 7 single-family residential lots, one multifamily lot with 5 affordable condominium units, and a 20-acre undeveloped, private conservation area. The Meadows development is 69.5 acres in size, with 22.35 acres to be developed and 47.16 acres protected by private conservation easements. The Terrace development will include 8 single-family residences within the 91.76-acre area. Development will occur on 18.62 acres and 73.14 acres will remain protected by private conservation easements. As part of the Preserve at San Marcos development plan, three parcels totaling 10 acres were donated to Santa Barbara County Parks for public park purposes, two parcels totaling 6.06 acres were donated to the Santa Barbara Soaring Association, and a 200-acre parcel was donated to the Trust for Public Land. That 200-acre parcel was later, in turn, donated to the County of Santa Barbara under the stipulation that it be used as a public open space and preserved in perpetuity. The Preserve at San Marcos residential development contains a total of 120.30 acres that are protected from development and disturbance by private conservation easements. These private conservation easements are privately owned, but are contiguous with the 200-acre San Marcos Foothills Preserve property.

1.5 CURRENT AND POTENTIAL FUTURE USE OF SAN MARCOS FOOTHILLS PRESERVE

The 200-acre San Marcos Foothills Preserve property was donated by the Trust for Public Land to the County of Santa Barbara on January 10th 2007 (TPL 2007). The intent of the donation, and the reason the Trust chose the County to be the land’s long-term steward, is to ensure that that the Preserve property will be protected as open space for its biological, scenic, and archaeological resources. At the time the property was donated, it retained its original land-use zoning of *Planned Residential Development*. The zoning of the property has since been changed to *Recreational Land Use*. Three park parcels were donated to the County of Santa Barbara in November 2005 when the Preserve at San Marcos development project was granted final approval by the County Board of Supervisors. The three parcels are also zoned for *Recreational Land Use*. Santa Barbara County Code, Chapter 35, Land Use and Development Code (SBCO 2011) allows a variety of recreation-related structures to be developed on properties with this zoning designation. However, any development on land zoned for recreational use may be subject to environmental review and permitting before any structures could be built. The County of Santa Barbara Community Services Department has no plans to build any structures on the 200-acre San Marcos Foothills Preserve property. The Preserve property is currently managed for passive recreational use and will continue to be managed as such for the foreseeable future.

A conceptual plan for the 10-acre park property was prepared in 2004-2005 by the Preserve at San Marcos developer in cooperation with the County Parks Department. This conceptual plan envisioned passive recreational activities on the park property and was developed for the purpose of assessing potential environmental impacts associated with development of the park (SBCO 2005). The conceptual park plan included: a parking lot for 30 vehicles, an information kiosk at the trailhead, a public restroom building, five family picnic areas, two group picnic areas with a total of 15 picnic tables, a playground area for children, and open space areas for spontaneous recreational activities. Conceptual park plans also included an improved trail to a scenic view point at the eastern end of the park property where five benches, a seatwall, a small amphitheater, and an unmanned information kiosk would be located. The Community Services Department currently has no plans to build any structures or public park facilities on the park property. Prior to embarking on any development plan for the 10-acre park property, the Community Services Department (in conjunction with the County Parks Commission) would assess the public need for facilities and would solicit public input on the type and siting of public park amenities as part of the future park planning process.

The Santa Barbara County Parks Department has been managing the 200-acre Preserve and 10-acre Park property for passive recreation by the public in accordance with the December 2010 Interim Management Plan (SBCO 2010). The following day-use passive recreation activities on the 200-acre Preserve property are currently allowed under the Interim Management Plan:

- Hiking (on trail only)
- Dog walking (on trail and on leash only)
- Bird-watching
- Kite flying
- Orienteering and similar activities

The following activities are prohibited under the Interim Management Plan:

- firearms or hunting, including pellet and paintball guns
- alcohol consumption
- biking
- horseback riding
- grazing animals
- overnight stays or camping
- incompatible commercial use
- harvesting of plants, animals, and other natural features (except by permit for cultural activities by members of the Chumash community and for scientific or educational purposes) per Santa Barbara County Code, Chapter 26; nor feeding wildlife
- flying of remote-controlled airplanes
- use of motorized vehicles or equipment, except for emergency vehicles and as authorized by the County for purposes of habitat restoration or maintenance
- fires of any kind
- smoking

In addition, small construction projects, including fencing, signage, waterbars, and foot bridges, etc., are consistent with the goals of this management plan and activities, and will be undertaken as necessary and with appropriate notification and permitting.

2.0 DESCRIPTION OF PRESERVE AND PARK PROPERTY

2.1 PRESERVE PROPERTY TOPOGRAPHY & DRAINAGE

The 200-acre Preserve property is located in the foothills of the Santa Ynez Mountain Range within the Goleta Slough Watershed. The topography consists of a series of north- to southward-trending ridges and valleys. The property generally slopes south and increases in steepness toward the northern end of the property. Elevations range from a low of 275 ft. along the south-central end of the property to a high of 630 ft. along the northeastern property edge. Two creeks traverse the property, Atascadero Creek to the west and the eastern and western forks of Cieneguitas Creek to the east (refer to Figure 2). The segments of these creeks within the Preserve property are seasonal-intermittent (dashed blue line) streams that convey surface water during and following major storm events, but are generally dry during the summer and fall (USGS 2012).

2.2 FUTURE PARK PROPERTY TOPOGRAPHY & DRAINAGE

The 10-acre Preserve Park property gently slopes toward the south and southeast. Elevations range from a high of 483 ft. in the northern portion of the park to a low of 378 ft. in the southern portion of the park. There are no creeks or drainages within the 10-acre Park property (USGS 2012).

2.3 EXISTING PARKING AND PUBLIC ACCESS POINTS

The 200-acre Preserve has two designated public access points: one on the western edge of the property and the other on the eastern edge. The main access point to the Preserve, the western access point, is located at the northern end of Via Gaitero Road. The other is located at the northern end of Antone Road near the intersection with Debra Drive (refer to Figure 2). Both of these access points can be reached via paved public roads from Foothill Road (State Highway 192).

The western access location on Via Gaitero is near the entrance to the Preserve at San Marcos Terrace residential development (development had not begun as of November 2013) and can be reached from Foothill Road by heading north on Via Chaparral, making a right on Salvar Road, and a left on Via Gaitero. On-street parking is available on the edge and sides of Via Gaitero and can accommodate 50 or more vehicles. The entrance to the San Marcos Foothills Preserve is marked by a sign with the County of Santa Barbara Community Services logo containing the park hours and rules and regulations. There is also a park map provided under a small informational pergola.

The eastern access location on Antone Road is in a residential neighborhood and can be reached from Foothill Road by heading north on Antone Road and just past Debra Dr. On-street parking is provided on the west side of Antone Road, where the road dead-ends at the park entrance gate. Parking is very limited at this location and can only accommodate 4-5 cars. The entrance is marked by a sign with the County of Santa Barbara Community Services logo containing the park hours and rules and regulations.

2.4 EXISTING TRAIL SYSTEM AND MAINTENANCE ACCESS

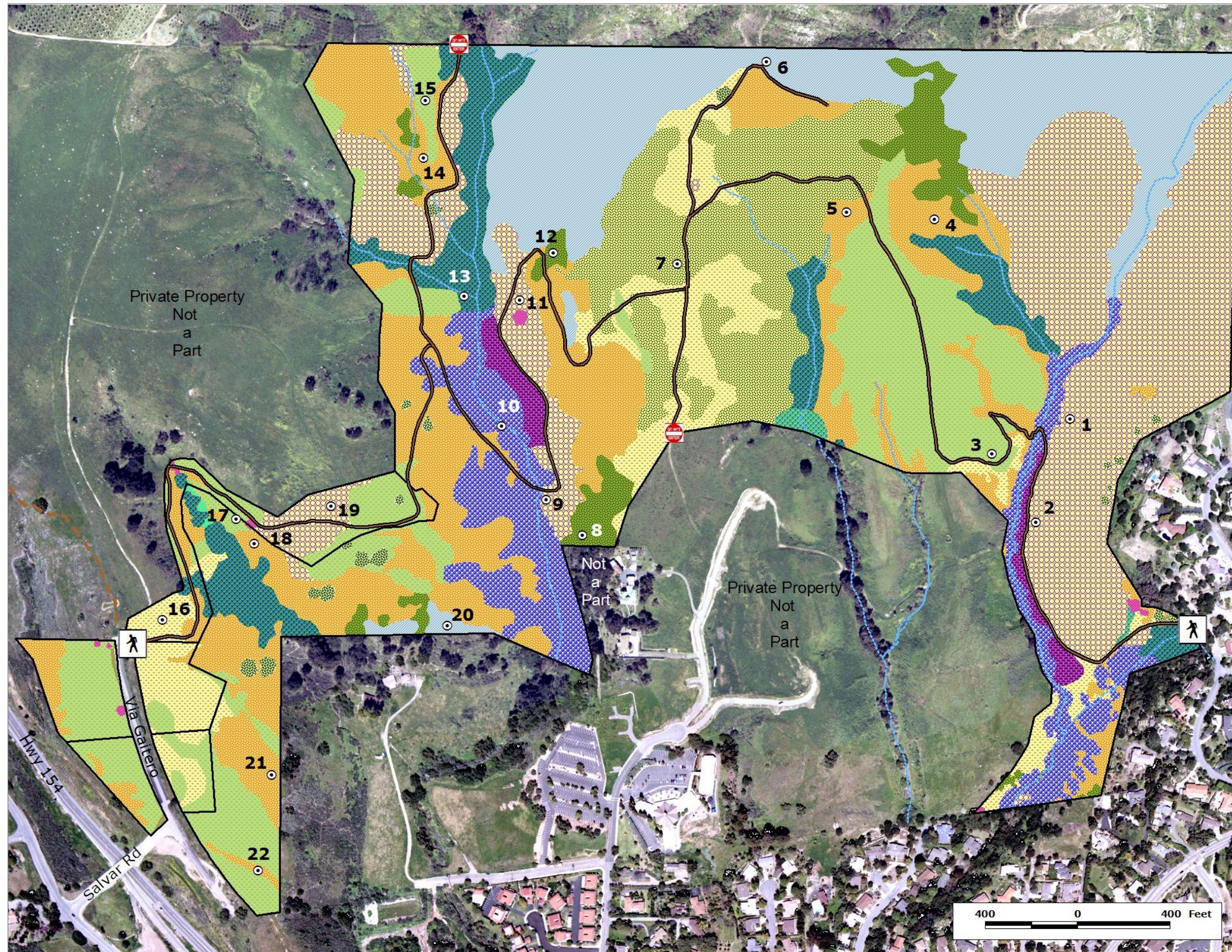
The Preserve property has a 2.6-mile-long, unpaved hiking trail that is open to the public. The trail runs in a west-to-east direction and mostly follows old dirt roads that were created and used historically for cattle and sheep ranching. The trail is marked at regular intervals by brown fiberglass trail marker posts with white stickers and the word 'trail' in blue, along with the Santa Barbara County Parks logo. The Parks Department provides "mutt mitts" for dog pick-up and a trashcan at both entrances to the Preserve property, but does not provide any other services or amenities. Visitors should bring their own drinking water and anything else they may need before heading out on the trail. The trail crosses Atascadero Creek on a culverted dirt road maintained by Southern California Edison to access their electrical transmission towers and power lines in the northern portion of the property. The trail also crosses the east fork of Cieneguitas Creek on a narrow, ad hoc footbridge that consists of several bolted-together 4x4 wooden posts. (This structure is intended to be easily dismantled and portable.) The trail climbing out of and into the creek and onto the ridgelines separating the creeks is fairly steep. Visitors should have good health and fitness if they intend to walk the entire 2.6-mile-long trail.

There are other existing trails on the property, including relic cattle trails, abandoned dirt roads from previous ranching operations, and unauthorized trails leading from the Cieneguitas Road and Cocopah Drive residential neighborhoods onto the privately owned Preserve at San Marcos development property and the public San Marcos Foothills Preserve property. At this time, the Community Services Department asks the public only to use the well-marked, authorized trail system. Any new trails that are added in the future by the Community Services Department will be well marked and posted.

2.5 EXISTING VEGETATION/HABITAT TYPES

The 200-acre Preserve and 10-acre Park property contain a variety of vegetation/habitat types: chaparral, coastal sage scrub, coast live oak woodlands, arroyo willow/coast live oak riparian woodlands, coast live oak savanna, native perennial grasslands, non-native annual grasslands, and non-native stands of mustard/poison hemlock. Table 1 provides a summary of the vegetation/habitat types on the Preserve and Park. Figure 3 contains a map of the vegetation on the Preserve and Park properties.

There are two areas on the San Marcos Foothills Preserve property that deserve special recognition: the first is a 1.6-acre site adjacent to Atascadero Creek and the other is a 0.96-acre site adjacent to the east fork of Cieneguitas Creek, where habitat restoration has been performed by Channel Islands Restoration, Parks staff, and over 200 volunteers from the community. This organization and the community volunteers began their restoration efforts in 2010 and have worked cooperatively with the County Community Services Department to successfully restore these once severely disturbed and degraded areas, converting them into high-quality coastal sage scrub habitat. The Community Services Department acknowledges the work of this organization and all the volunteers that have spent countless hours restoring 2.2 acres of native vegetation/habitat on the San Marcos Foothills Preserve property.



- Vegetation Community**
- Chaparral
 - Individual Coast Live Oak
 - Coast Live Oak Savannah
 - Coast Live Oak Woodland
 - Coastal Sage Scrub
 - Disturbed Coastal Sage Scrub
 - Disturbed/Dirt
 - Habitat Restoration Area
 - Native Grassland
 - Non-Native Annual Grassland
 - Ornamental
 - Riparian CLO Woodland
 - Riparian Scrub
 - Ruderal ~ (Mustard/Hemlock/Thistle/Tree Tabacco)
 - Arroyo Willow/CLO Riparian Woodland
 - Seep-Freshwater Marsh
- Vegetation Sample Site
- Private Property - No Access
- Trailhead
- Creek
- Existing Open Space Trails
- Dedicated Trail Easement

**Figure 3. Map of Vegetation/
Habitat Types**

San Marcos Foothills Preserve
Long-Term Open-Space Management Plan

Watershed Environmental, Inc. 4/28/14

Table 1. Vegetation/Habitat Types

Vegetation Type (canopy cover)	Area (sq. ft.)	Area (acres)
200-Acre San Marcos Foothills Preserve Property		
Arroyo Willow/CLO Riparian Woodland	642,585	14.75
Chaparral	1,343,839	30.85
CLO Riparian Woodland	556,436	12.77
CLO Woodland	265,315	6.09
Coast Live Oak Savanna	888,193	20.39
Coastal Sage Scrub	1,616,396	37.11
Disturbed/Dirt	3,326	0.08
Habitat Restoration Area	95,744	2.20
Individual Coast Live Oak	45,414	1.04
Native Perennial Grassland	995,834	22.86
Non-Native Annual Grassland	460,763	10.58
Ruderal Non-Native (Mustard/Poison Hemlock)	1,763,154	40.48
Ornamental (Eucalyptus, Pine, Pepper)	8,183	0.19
Riparian Scrub	4,194	0.10
Seep/Freshwater Marsh	22,624	0.52
Subtotal 200-acre Preserve Property	8,712,000	200.00
Vegetation Type (canopy cover)	Area (sq. ft.)	Area (acres)
10-Acre Park Property		
Arroyo Willow/CLO Riparian Woodland	0	0.00
Chaparral	0	0.00
CLO Woodland	12,816	0.29
Coast Live Oak Savanna	0	0.00
Coastal Sage Scrub	0	0.00
Native Perennial Grassland	59,193	1.36
Non-Native Annual Grassland	2,615	0.06
Ruderal Non-Native (Mustard/Poison Hemlock)	1,089	0.03
CLO Riparian Woodland	1,587	0.04
Seep/Freshwater Marsh	199,843	4.59
Riparian Scrub	76,598	1.76
Ornamental (Eucalyptus, Pine, Pepper)	77,012	1.77
Disturbed/Dirt	4,347	0.10
Individual Coast Live Oak	500	0.01
Habitat Restoration Area	0	0.00
Subtotal 10-acre Park Property	435,600	10.00

2.6 EXISTING FLORA AND FAUNA

The San Marcos Foothills Preserve is home to diverse flora and fauna. The property has remained undeveloped and relatively undisturbed by past ranching activities. It contains at least 6 distinct plant community/habitat types that are dominated by native plant species and two that are dominated by non-native species. The non-native vegetation exists in areas that were significantly disturbed by previous land-use activities.

While the majority of the property is relatively unchanged, the same cannot be said for the adjacent areas. The property is in many respects like an island surrounded by a sea of residential development, a major highway, and avocado farms. Terrestrial wildlife must either be born on the Preserve property or must navigate this sea of development in order to arrive at or leave the site. Terrestrial wildlife movement normally occurs along stream and creek channels, which serve as relatively safe corridors.

However, the Preserve property is at the headwaters of Atascadero and Cieneguitas Creeks, which do not extend northward beyond the San Marcos Foothills Preserve boundary into the Los Padres National Forest. Therefore, wildlife residing in the National Forest can only reach the Preserve property by passing through the avocado ranches and residential properties that exist between the Preserve and the National Forest. This fact is critically important to understand when considering how to manage the habitat and wildlife that occur onsite. With the exception of birds, most of the wildlife species that exist here are trapped, and will not be easily replaced by natural recruitment from adjacent areas if they are lost.

Table 2 contains a list of wildlife species that are expected to occur, that are known to occur, and that have a potential to occur on the Preserve and Park property. Table 3 contains a list of plant species known to occur on the Preserve and Park property.

Table 2. Wildlife Species Expected, Known, and with a Potential to Occur on the Preserve and Park Property

Common Name	Scientific Name
Amphibians and Reptiles	
Arboreal Salamander	<i>Aneides lugubris</i>
Black-bellied Slender Salamander	<i>Batrachoseps nigriventris</i>
California Nightsnake	<i>Hypsiglena torquata</i>
California Striped Racer	<i>Masticophis lateralis lateralis</i>
California Tree Frog	<i>Pseudacris (=Hyla) cadaverina</i>
Coast Gartersnake	<i>Thamnophis elegans terrestris</i>
Coast Horned Lizard	<i>Phrynosoma coronatum</i>
Coast Range Newt	<i>Taricha torosa</i>
Common King Snake	<i>Lampropeltis getulus</i>
Ensatina	<i>Ensatina eschscholtzii</i>
Gopher Snake	<i>Pituophis catenifer</i>
Mountain Kingsnake	<i>Lampropeltis zonata</i>
Pacific Tree Frog	<i>Pseudacris (=Hyla) regilla</i>
Ringneck Snake	<i>Diadophis punctatus</i>
Silvery Legless Lizard	<i>Anniella pulchra</i>
Southern Alligator Lizard	<i>Elgaria multicarinata</i>
Southern Pacific Rattlesnake	<i>Crotalus oreganus helleri</i>
Southwestern Pond Turtle	<i>Emys marmorata</i>
Western Fence Lizard	<i>Sceloporus occidentalis</i>
Western Patchnose Snake	<i>Salvadora hexalepis</i>
Western Rattlesnake	<i>Crotalus viridis</i>
Western Skink	<i>Eumeces skiltonianus</i>
Western Toad	<i>Bufo boreas</i>
Western Yellow-Bellied Racer	<i>Coluber mormon</i>
Birds	
Acorn Woodpecker	<i>Melanerpes formicivorus</i>
Allen's Hummingbird	<i>Selasphorus sasin</i>
American Crow	<i>Corvus brachyrhynchos</i>
American Goldfinch	<i>Spinus tristis</i>
American Kestrel	<i>Falco sparverius</i>
American Pipit	<i>Anthus rubescens</i>
American Robin	<i>Turdus migratorius</i>
Anna's Hummingbird	<i>Calypte anna</i>
Ash-Throated Flycatcher	<i>Myiarchus cinerascens</i>
Band-Tailed Pigeon	<i>Columba fasciata</i>
Barn Owl	<i>Tyto alba</i>
Barn Swallow	<i>Hirundo rustica</i>
Bewick's Wren	<i>Thryomanes bewickii</i>
Black Phoebe	<i>Sayornis nigricans</i>
Black Swift	<i>Cypseloides niger</i>
Black-Chinned Hummingbird	<i>Archilochus alexandri</i>
Black-Headed Grosbeak	<i>Pheucticus melanocephalus</i>
Black-Throated Gray Warbler	<i>Setophaga nigrescens</i>
Blue Grosbeak	<i>Passerina caerulea</i>
Blue-Gray Gnatcatcher	<i>Polioptila caerulea</i>
Brown Creeper	<i>Certhia americana</i>
Brown-Headed Cowbird	<i>Molothrus ater</i>
Bullock's Oriole	<i>Icterus bullockii</i>
Bushtit	<i>Psaltiriparus minimus</i>

Common Name	Scientific Name
<i>Birds</i>	
California Quail	<i>Callipepla californica</i>
California Thrasher	<i>Toxostoma redivivum</i>
California Towhee	<i>Pipilo crissalis</i>
Canyon Wren	<i>Catherpes mexicanus</i>
Caspian Tern	<i>Hydroprogne caspia</i>
Cassin's Kingbird	<i>Tyrannus vociferans</i>
Cattle Egret	<i>Bubulcus ibis</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Chipping Sparrow	<i>Spizella passerina</i>
Cliff Swallow	<i>Hirundo pyrrhonota</i>
Common Poorwill	<i>Phalaenoptilus nuttallii</i>
Common Raven	<i>Corvus corax</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Costa's Hummingbird	<i>Calypte costae</i>
Dark-Eyed Junco	<i>Junco hyemalis</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Eurasian Collared Dove	<i>Streptopelia decaocto</i>
European Starling	<i>Sturnus vulgaris</i>
Fox Sparrow	<i>Passerella iliaca</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Great Blue Heron	<i>Ardea herodias</i>
Great Horned Owl	<i>Bubo virginianus</i>
Greater Roadrunner	<i>Geococcyx californianus</i>
Great-Tailed Grackle	<i>Quiscalus mexicanus</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Hermit Thrush	<i>Catharus guttatus</i>
Hooded Oriole	<i>Icterus cucullatus</i>
Horned Lark	<i>Eremophila alpestris</i>
House Finch	<i>Carpodacus mexicanus</i>
House Wren	<i>Troglodytes aedon</i>
Hutton's Vireo	<i>Vireo huttoni</i>
Killdeer	<i>Charadrius vociferous</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Lawrence's Goldfinch	<i>Spinus lawrencei</i>
Lazuli Bunting	<i>Passerina amoena</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
Lincoln's Sparrow	<i>Melospiza lincolnii</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Long-billed Curlew	<i>Numenius americanus</i>
Mallard	<i>Anas platyrhynchos</i>
Marbled Godwit	<i>Limosa fedoa</i>
Marsh Wren	<i>Cistothorus palustris</i>
Merlin	<i>Falco columbarius</i>
Mourning Dove	<i>Zenaida macroura</i>
Northern Flicker	<i>Colaptes auratus</i>
Northern Harrier	<i>Circus cyaneus</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Northern Pygmy Owl	<i>Glaucidium gnoma</i>
Northern Rough-Winged Swallow	<i>Stelgidopteryx serripennis</i>
Nuttall's Woodpecker	<i>Picoides nuttallii</i>
Oak Titmouse	<i>Bacolophus ridgwayi</i>

Common Name	Scientific Name
Birds	
Orange-Crowned Warbler	<i>Oreothlypis celata</i>
Pacific-Slope Flycatcher	<i>Empidonax difficilis</i>
Phainopepla	<i>Phainopepla nitens</i>
Purple Finch	<i>Carpodacus purpurus</i>
Red-Breasted Sapsucker	<i>Sphyrapicus ruber</i>
Red-Shouldered Hawk	<i>Buteo lineatus</i>
Red-Tailed Hawk	<i>Buteo jamaicensis</i>
Red-Winged Blackbird	<i>Agelaius phoeniceus</i>
Rock Dove	<i>Columba livia</i>
Rock Wren	<i>Salpinctes obsoletus</i>
Rose-Breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Ruby-Crowned Kinglet	<i>Regulus calendula</i>
Rufous Hummingbird	<i>Selasphorus rufus</i>
Rufous-Crowned Sparrow	<i>Aimophila ruficeps</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Say's Phoebe	<i>Sayornis saya</i>
Sharp-Shinned Hawk	<i>Accipiter striatus</i>
Song Sparrow	<i>Melospiza melodia</i>
Spotted Towhee	<i>Pipilo maculatus</i>
Townsend's Warbler	<i>Setophaga townsendi</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Tricolored Blackbird	<i>Agelaius tricolor</i>
Turkey Vulture	<i>Cathartes aura</i>
Vaux's Swift	<i>Chaetura vauxi</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
Violet-Green Swallow	<i>Tachycineta thalassina</i>
Western Kingbird	<i>Tyrannus verticalis</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Western Screech Owl	<i>Otus kennicottii</i>
Western Scrub-Jay	<i>Aphelocoma californica</i>
Western Tanager	<i>Piranga ludoviciana</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Whimbrel	<i>Numenius phaeopus</i>
White-Breasted Nuthatch	<i>Sitta carolinensis</i>
White-Tailed Kite	<i>Elanus leucurus</i>
White-throated Swift	<i>Aeronautes saxatalis</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Wilson's Warbler	<i>Cardellina pusilla</i>
Winter Wren	<i>Troglodytes hiemalis</i>
Wrentit	<i>Chamaea fasciata</i>
Yellow Warbler	<i>Dendroica petechia</i>
Yellow-Headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Yellow-Rumped Warbler	<i>Dendroica coronata</i>
Zone-Tailed Hawk	<i>Buteo albonotatus</i>
Mammals	
American Badger	<i>Taxidea taxus</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Big-Eared Woodrat	<i>Neotoma macrotis</i>
Black Bear	<i>Ursus americanus</i>
Black Rat	<i>Rattus rattus</i>
Black-tailed Jackrabbit	<i>Lepus californicus</i>
Bobcat	<i>Lynx rufus</i>

Common Name	Scientific Name
Mammals	
Botta's Pocket Gopher	<i>Thomomys bottae</i>
Broad-footed Mole	<i>Scapanus latimanus</i>
Brush Mouse	<i>Peromyscus boylii</i>
Brush Rabbit	<i>Sylvilagus bachmani</i>
California Ground Squirrel	<i>Spermophilus beecheyi</i>
California Mouse	<i>Peromyscus californicus</i>
California Myotis	<i>Myotis californicus</i>
California Pocket Mouse	<i>Chaetodipus californicus</i>
California Vole	<i>Microtus californicus</i>
Coyote	<i>Canis latrans</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Eastern Fox Squirrel	<i>Sciurus niger</i>
Feral Cat	<i>Felis catus</i>
Gray Fox	<i>Urocyon cinereoargenteus</i>
Hoary Bat	<i>Lasiurus cinereus cinereus</i>
House Mouse	<i>Mus musculus</i>
Long-Eared Myotis	<i>Myotis evotis evotis</i>
Long-Tailed Weasel	<i>Mustela fre</i>
Merriam's Chipmunk	<i>Tamias merriami</i>
Mountain Lion	<i>Felis concolor</i>
Mule Deer	<i>Odocoileus hemionus</i>
Ornate Shrew	<i>Sorex ornatus</i>
Pallid Bat	<i>Antrozous pallidus</i>
Raccoon	<i>Procyon lotor</i>
Red Fox	<i>Vulpes vulpes</i>
Ringtail	<i>Bassariscus astutus</i>
Striped Skunk	<i>Mephitis mephitis</i>
Townsend's Big-Eared Bat	<i>Plecotus townsendii</i>
Virginia Opossum	<i>Didelphis virginiana</i>
Western Gray Squirrel	<i>Sciurus griseus</i>
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>

Table 3. Plant and Lichen Species Known to Occur on the Preserve and Park Property

Scientific Name	Common Name	Native (N) Introduced (I)
<i>Achyrrachaena mollis</i>	Blow Wives	N
<i>Acmispon glaber</i> var. <i>glaver</i>	Deerweed	N
<i>Acourtia microcephala</i>	Sacapellote	N
<i>Adenostoma fasciculatum</i>	Chamise	N
<i>Adiantum jordanii</i>	California Maidenhair Fern	N
<i>Agave shawii</i> var. <i>shawii</i>	Shaw Agave	N
<i>Agrostis pallens</i>	Bent Grass	N
<i>Ambrosia psilostachya</i>	Western Ragweed	N
<i>Amsinckia intermedia</i>	Common Fiddleneck	N
<i>Anagallis arvensis</i>	Scarlet Pimpernel	I
<i>Antennaria marginata</i>	White Everlasting	N
<i>Apium graveolens</i>	Celery	I
<i>Araujia sericifera</i>	Bladder-Flower	I
<i>Artemisia californica</i>	California Sagebrush	N
<i>Artemisia douglasiana</i>	Mugwort	N
<i>Asclepias fascicularis</i>	Narrowleaf Milkweed	N
<i>Atriplex semibaccata</i>	Australian Saltbush	I
<i>Avena barbata</i>	Slender Wild Oat	I
<i>Avena fatua</i>	Wild Oat	I
<i>Azolla filiculoides</i>	Mosquito Fern	N
<i>Baccharis glutinosa</i>	Marsh Baccharis	N
<i>Baccharis pilularis</i>	Coyote Brush	N
<i>Baccharis plummerae</i> ssp. <i>plummerae</i>	Plummer's Baccharis	N
<i>Baccharis salicifolia</i>	Mulefat	N
<i>Bloomeria crocea</i> ssp. <i>crocea</i>	Common Golden Star	N
<i>Brachypodium</i> sp.	False Broom	I
<i>Brassica nigra</i>	Black Mustard	I
<i>Brassica rapa</i>	Field Mustard	I
<i>Brickellia californica</i>	California Brickellbush	N
<i>Brodiaea terrestris</i> var. <i>kernensis</i>	Kern Brodiaea	N
<i>Bromus carinatus</i>	California Brome	N
<i>Bromus diandrus</i>	Ripgut Grass	I
<i>Bromus hordeaceus</i>	Soft Chess	I
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red Brome	I
<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>	Wild Morning-Glory	N
<i>Camissoniopsis bistorta</i>	California Sun Cup	N
<i>Capsella bursa-pastoris</i>	Shepherd's Purse	I
<i>Cardionema ramosissimum</i>	Sand Mat	N
<i>Carduus pycnocephalus</i>	Italian Thistle	I
<i>Carex</i> spp.	Sedge	
<i>Castilleja exserta</i>	Purple Owl's Clover	N
<i>Ceanothus crassifolius</i>	Hoaryleaf Ceanothus	N
<i>Ceanothus megacarpus</i>	Bigpod Ceanothus	N
<i>Ceanothus spinosus</i>	Greenbark Ceanothus	N
<i>Centaruea melitensis</i>	Tocalote (Maltese Star-Thistle)	I
<i>Ceratophyllum demersum</i>	Hornwort	N
<i>Cercocarpus betuloides</i>	Mountain Mahogany	N
<i>Chenopodium album</i>	Lamb's Quarters	I
<i>Chlorogalum pomeridianum</i>	Small Soap Plant	N
<i>Cirsium vulgare</i>	Bull Thistle	I
<i>Claytonia perfoliata</i> ssp. <i>perfoliata</i>	Miner's Lettuce	N

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Scientific Name	Common Name	Native (N) Introduced (I)
<i>Clematis lasiantha</i>	Pipestem Clematis	N
<i>Conium maculatum</i>	Poison Hemlock	I
<i>Convolvulus arvensis</i>	Bind Weed	I
<i>Corethrogyne filaginifolia</i>	Cudweed Aster	N
<i>Croton setigerus</i>	Dove Weed	N
<i>Cynara cardunculus</i>	Artichoke (Cardoon)	I
<i>Cynodon dactylon</i>	Bermuda Grass	I
<i>Cyperus eragrostis</i>	Umbrella Sedge	N
<i>Datura wrightii</i>	Jimson Weed	N
<i>Deunandra fasciculata</i> cf.	Fascicled Tarplant	N
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Blue Dicks	N
<i>Dodecatheon clevelandii</i> ssp. <i>clevelandii</i>	Cleveland Shooting Star	N
<i>Dryopteris arguta</i>	Coastal Wood Fern	N
<i>Elymus condensatus</i>	Giant Rye	N
<i>Encelia californica</i>	California Bush Sunflower	N
<i>Eriodictyon crassifolium</i>	Yerba Santa	N
<i>Eriogonum fasciculatum</i>	California Buckwheat	N
<i>Eriophyllum confertiflorum</i>	Golden Yarrow	N
<i>Erodium cicutarium</i>	Redstem Filaree	I
<i>Eschscholzia californica</i>	California Poppy	N
<i>Eucalyptus camaldulensis</i>	River Red Gum	I
<i>Eucrypta chrysanthemifolia</i>	Common Eucrypta	N
<i>Festuca perennis</i>	Italian Ryegrass	I
<i>Festuca</i> sp.	Fescue	
<i>Foeniculum vulgare</i>	Sweet Fennel	I
<i>Galium angustifolium</i> ssp. <i>angustifolium</i>	Common Bedstraw	N
<i>Galium angustifolium</i> ssp. <i>flaccidum</i>	Flaccid Bedstraw	N
<i>Geranium dissectum</i>	Dissected Geranium	I
<i>Hazardia squarrosa</i>	Sawtooth Goldenbush	N
<i>Hesperoyucca whipplei</i>	Our Lord's Candle	N
<i>Heteromeles arbutifolia</i>	Toyon	N
<i>Heterotheca grandiflora</i>	Telegraph Weed	N
<i>Hirschfeldia incana</i>	Summer Mustard	I
<i>Hordeum</i> cf. <i>murinum</i> spp. <i>leporinum</i>	Hare Barley	I
<i>Hosackia</i> sp.	Lotus	
<i>Juncus bufonius</i>	Toad Rush	N
<i>Juncus</i> cf. <i>patens</i>	Spreading Rush	N
<i>Lamarckia aurea</i>	Goldentop	I
<i>Lepidium nitidum</i>	Shining or Common Peppergrass	N
<i>Logfia filaginoides</i>	California Cottonrose	N
<i>Lonicera subspicata</i> var. <i>subspicata</i>	Santa Barbara Honeysuckle	N
<i>Lupinus bicolor</i>	Miniature Lupine	N
<i>Lupinus hirsutissimus</i>	Nettle or Stinging Lupine	N
<i>Lupinus nanus</i>	Sky Lupine	N
<i>Lythrum</i> cf. <i>hyssopifolia</i>	Hyssop Loosestrife	I
<i>Malacothamnus fasciculatus</i> var. <i>nuttallii</i>	Nuttall Bush Mallow	N
<i>Malosma laurina</i>	Laurel Sumac	N
<i>Malva parviflora</i>	Cheeseweed	I
<i>Marah macrocarpa</i>	Wild Cucumber	N
<i>Marrubium vulgare</i>	White Horehound	I

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Scientific Name	Common Name	Native (N) Introduced (I)
<i>Medicago polymorpha</i>	Burclover	I
<i>Melica frutescens</i>	Woody Melic	N
<i>Melilotus indicus</i>	Sourclover	I
<i>Mimulus aurantiacus</i>	Bush Monkeyflower	N
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	California Wishbone Bush	N
<i>Myosotis</i> spp.	Forget-Me-Not	I
<i>Nasturtium officinale</i>	Watercress	N
<i>Nicotiana glauca</i>	Tree Tobacco	I
<i>Opuntia littoralis</i>	Coast Prickly Pear	N
<i>Oxalis Pes-caprae</i> *	Bermuda Buttercup	I
<i>Paeonia californica</i>	California Peony	N
<i>Pennisetum setaceum</i>	Crimson Fountain Grass	I
<i>Phacelia ramosissima</i>	Branching Phacelia	N
<i>Pholistoma membranaceum</i>	White Fiesta Flower	N
<i>Plagiobothrys</i> sp.	Popcornflower	N
<i>Plantago lanceolata</i>	English (Narrowleaf) Plantain	I
<i>Plantago major</i>	Common Plantain	I
<i>Poa annua</i>	Annual Bluegrass	I
<i>Polygonum aviculare</i>	Common Knotweed	I
<i>Polypogon monspeliensis</i>	Rabbitsfoot Grass	I
<i>Potentilla</i> sp.	Potentilla	I
<i>Quercus agrifolia</i>	Coast Live Oak	N
<i>Raphanus sativus</i>	Wild Radish	I
<i>Rhamnus crocea</i>	Spiny Redberry	N
<i>Rhus integrifolia</i>	Lemonade Berry	N
<i>Ribes</i> cf. <i>speciosum</i>	Fuchsia-flowered Gooseberry	N
<i>Ricinus communis</i>	Castor Bean	I
<i>Rubus ursinus</i>	California Blackberry	N
<i>Rumex crispus</i>	Curly Dock	I
<i>Rumex pulcher</i>	Fiddle Dock	I
<i>Salix lasiolepis</i>	Arroyo Willow	N
<i>Salsola australis</i>	Russian Thistle	I
<i>Salvia apiana</i>	White Sage	N
<i>Salvia leucophylla</i>	Purple Sage	N
<i>Salvia mellifera</i>	Black Sage	N
<i>Salvia spathacea</i>	Hummingbird Sage	N
<i>Sambucus nigra</i>	Blue Elderberry	N
<i>Schinus molle</i>	Peruvian Pepper Tree	I
<i>Scrophularia californica</i>	California Figwort	N
<i>Silene gallica</i>	Windmill Pink	I
<i>Silene laciniata</i> ssp. <i>laciniata</i>	Mexican Pink	N
<i>Silybum marianum</i>	Milk Thistle	I
<i>Sisyrinchium bellum</i>	Western Blue-eyed Grass	N
<i>Solanum douglasii</i>	Douglas Nightshade	N
<i>Solanum xanti</i>	Chaparral Nightshade	N
<i>Spergularia</i> sp.	Sandspurry	I
<i>Stachys bullata</i>	California Hedge-nettle	N
<i>Stellaria media</i>	Common Chickweed	I
<i>Stipa miliaceum</i>	Smilo Grass	I
<i>Stipa pulchra</i>	Purple Needlegrass	N
<i>Symphoricarpos mollis</i>	Creeping Snowberry	N
<i>Symphyotrichum chilense</i>	Common Aster	N
<i>Taraxacum officinale</i>	Common Dandelion	I
<i>Toxicodendron diversilobum</i>	Western Poison Oak	N

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Scientific Name	Common Name	Native (N) Introduced (I)
<i>Urtica dioica</i> ssp. <i>holosericea</i>	Hoary Nettle	N
<i>Vicia sativa</i> ssp. <i>Sativa</i>	Spring Vetch	I
<i>Xanthium spinosum</i>	Spiny Clotbur	I/N
<i>Xanthium strumarium</i>	Cocklebur	N
Lichen		
<i>Acarospora obnubila</i> H. Magn.	N/A	N
<i>Acarospora obpallens</i> (Nyl.) Zahlbr	N/A	N
<i>Acarospora robinae</i> K. Knudson	N/A	N
<i>Acarospora socialis</i> H. Magn.	N/A	N
<i>Aspicilia</i> sp.	N/A	N
<i>Buellia badia</i> (Fr.) A. Massal.	N/A	N
<i>Buellia dispersa</i> A. Massal.	N/A	N
<i>Buellia ryanii</i> Bungartz	N/A	N
<i>Buellia sequax</i> (Nyl.) Zahlbr	N/A	N
<i>Buellia tessellata</i> Korber	N/A	N
<i>Caloplaca bolacina</i> (Tuck.) Herre	N/A	N
<i>Caloplaca brattiae</i> W. Weber	N/A	N
<i>Caloplaca epithallina</i> Lynge	N/A	N
<i>Caloplaca impolita</i> Arup	N/A	N
<i>Caloplaca nashii</i> Nav. – Ros	N/A	N
<i>Caloplaca subsoluta</i> (Nyl.) Zahlbr	N/A	N
<i>Caloplaca verruculifera</i> (Wainio) Zahlbr	N/A	N
<i>Candelariella vitellina</i> (Ehrh.) Mull.Arg	N/A	N
<i>Dimelaena californica</i> H. Magn.	N/A	N
<i>Dimelaena radicata</i> (Tuck.) Mull.Arg	N/A	N
<i>Lecanora dispersa</i> (Pers. Sommerf.)	N/A	N
<i>Lecanora muralis</i> (Schreb.) Rabenh	N/A	N
<i>Lecidea laboriosa</i> Mull.Arg	N/A	N
<i>Lecidella carpathica</i> Korber	N/A	N
<i>Lecidella asema</i> Nyl.	N/A	N
<i>Lichenella stipatula</i> Nyl.	N/A	N
<i>Peltula euploca</i> (Ach.) Poelt.	N/A	N
<i>Physcia dimidata</i> (Arn.) Nyl	N/A	N
<i>Placopyrenium stanfordii</i> (Herre) K. Knudson	N/A	N
<i>Rinodina greennarii</i> Bagl.	N/A	N
<i>Rinodina parasitica</i> H. Mayrh. & Poelt.	N/A	N
<i>Thelomma mammosum</i> (Hepp) Mass.	N/A	N
<i>Verrucaria</i> #1	N/A	N
<i>Verrucaria lecideoides</i> (A. Massal.) Trevisan	N/A	N
<i>Xanthoparmelia Mexicana</i> (Gyel.) Hale.	N/A	N

2.7 SENSITIVE SPECIES

Forty-six sensitive species were identified in the Preserve at San Marcos Final Environmental Impact Report (Santa Barbara County 2005) as recently observed, expected to occur, and with a potential to occur. Given the proximity of the San Marcos Foothills Preserve and Park property to the Preserve at San Marcos development, we have used the same sensitive species list (Table 4) with updates to reflect the species status as of July 2013. Sensitive species considered are those listed by the U.S. Fish and Wildlife Service (USFWS), U.S. National Marine Fisheries Service (USNMFS), the California Department of Fish and Game (CDFG), or the California Native Plant Society.

Sensitive insects

The monarch butterfly is the only sensitive insect occurring on the property (Table 4). Monarchs inhabiting winter roosting sites (usually groves of eucalyptus trees) are considered special animals by the CDFG.

Sensitive reptiles

Sensitive species that are expected to occur on the property include the coast horned lizard, coastal whiptail, silvery legless lizard, and coast patch-nosed snake (Table 4). No sensitive amphibians are known or expected to occur on the Preserve or Park property.

Sensitive birds

There are 19 different species of sensitive birds known (previously observed) and/or expected to occur on the Preserve and Park property (Table 4). Nine of the species are raptors (birds of prey) and 2 are owls. Other sensitive birds include: great blue heron, great egret, snowy egret, loggerhead shrike, California horned lark, yellow warbler, Southern California rufous-crowned sparrow, and grasshopper sparrow. Of the 19 sensitive bird species, 5 (Cooper's hawk, white-tailed kite, horned lark, rufous-crowned sparrow, and grasshopper sparrow) are known to nest on or near the Preserve and Park property.

Sensitive mammals

There is only one sensitive mammal known to occur on the Preserve and Park property: the Townsend's big-eared bat. There is the potential for 14 other sensitive mammal species to occur on the Preserve and Park property (Table 4). Twelve of the 15 sensitive mammal species identified as potentially occurring on the property are bats, while other sensitive mammals include the San Diego black-tailed jackrabbit, ringtail, and American badger.

Sensitive plants

There are two rare plant species known to occur on the Preserve and Park property (Santa Barbara honeysuckle and Plummer's baccharis) and 6 sensitive plant species that have not been documented as occurring on the Preserve or Park property but that have the potential or are expected to occur on the property (Table 4).

Table 4. Sensitive Wildlife Species Observed, Expected, or Potentially Occurring on the Preserve and Park Property

Common Name	Scientific Name	Occurrence	State/Federal Status
Insects			
Monarch Butterfly	<i>Danaus plexippus</i>	Observed	SA
Reptiles			
Coast Horned Lizard	<i>Phrynosoma coronatum</i>	Expected	CSC
Coast Patch-Nosed Snake	<i>Salvadora hexalepis virgulata</i>	Expected	CSC
Coastal Whiptail	<i>Cnemidophorus tigris multiscutatus</i>	Expected	SA
Birds			
Great Blue Heron	<i>Ardea herodias</i>	Observed	SA
Great Egret	<i>Casmerodias albus</i>	Observed	SA
Snowy Egret	<i>Egretta thula</i>	Observed	FSC
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	Potential	E/delisted
American Kestrel	<i>Falco sparverius</i>	Observed	MNBMC
Merlin	<i>Falco columbarius</i>	Observed	CSC
Cooper's Hawk	<i>Accipiter cooperii</i>	Observed	CSC
Sharp-Shinned Hawk	<i>Accipiter striatus</i>	Observed	CSC
Golden Eagle	<i>Aquila chrysaetos</i>	Expected	CSC, CFP
Ferruginous Hawk	<i>Buteo regalis</i>	Expected	CSC
Red-Tailed Hawk	<i>Buteo jamaicensis</i>	Observed	--
Red-Shouldered Hawk	<i>Buteo lineatus</i>	Observed	--
Northern Harrier	<i>Circus cyaneus</i>	Observed	CSC
White-Tailed Kite	<i>Elanus leucurus</i>	Observed	MNBMC, CFP
Western Burrowing Owl	<i>Speotyto cunicularia hypogaea</i>	Observed	FSC, MNBMC
Short-Eared Owl	<i>Asio flammeus</i>	Observed	CSC/MNBMC
Barn Owl	<i>Tyto alba</i>	Observed	--
Great Horned Owl	<i>Bubo virginianus</i>	Observed	--
Western Screech Owl	<i>Otus kennicottii</i>	Observed	--
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Observed	FSC, MNBMC, CSC
CA Horned Lark	<i>Eremophila alpestris actia</i>	Observed	CSC
Yellow Warbler	<i>Dendroica petechia</i>	Observed	FSC, CSC
Warbling Vireo	<i>Vireo gilvus</i>	Expected	--
So. Cal. Rufous-Crowned Sparrow	<i>Aimophila ruficeps canescens</i>	Observed	CSC
Grasshopper Sparrow	<i>Ammodramus savannarum perpallidus</i>	Observed	MNBMC
Mammals			
Yuma Myotis	<i>Myotis yumanensis</i>	Expected	FSC
Long-Eared Myotis	<i>Myotis evotis</i>	Expected	FSC
Fringed Myotis	<i>Myotis thysanodes</i>	Expected	FSC
Hairy-Winged Myotis	<i>Myotis volans</i>	Expected	FSC
Small-Footed Myotis	<i>Myotis ciliolabrum</i>	Expected	FSC
Townsend's Big-Eared Bat	<i>Plecotus townsendii</i>	Observed	FSC, CSC
Western Red Bat	<i>Lasiurus blossevillii</i>	Expected	FSC, CSC
Pale Big-Eared Bat	<i>Corynorhinus townsendii pallescens</i>	Expected	FSC, CSC
Western Mastiff Bat	<i>Eumops perotis</i>	Expected	FSC, CSC
Big Free-Tailed Bat	<i>Nyctinomops macrotus</i>	Expected	CSC
Pallid Bat	<i>Antrozous pallidus</i>	Expected	FSC, CSC

Common Name	Scientific Name	Occurrence	State/Federal Status
Mammals			
Spotted Bat	<i>Euderma maculate</i>	Expected	FSC, CSC
San Diego Black-Tailed Jackrabbit	<i>Lepus californicus bennetti</i>	Expected	CSC
Ringtail	<i>Bassariscus astutus octavus</i>	Expected	CP
American Badger	<i>Taxidea taxus</i>	Expected	SA
Plants			
Catalina Mariposa Lily	<i>Caoachortus catalinae</i>	Potential	CRPR 4.2
Club-Haired Mariposa Lily	<i>Calochortus clavatus</i> ssp. <i>clavatus</i>	Potential	CRPR 4.3
Coulter Goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Expected	CRPR 1B.1
Plummer's Baccharis	<i>Baccharis plummerae</i> ssp. <i>plummerae</i>	Observed	CRPR 4.3
Robinson Peppergrass	<i>Lepidum virginicum</i> var. <i>robinsonii</i>	Expected	CRPR 1B.2
Santa Barbara Bedstraw	<i>Galium cliftonsmithii</i>	Expected	CRPR 4.3
Santa Barbara Honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	Observed	CRPR 1B.2
Vernal Barley	<i>Hordeum intercedens</i>	Expected	CRPR 3.2

Status Code Definitions

CRPR = California Native Plant Society's Rare Plants Ranks (1B—rare and endangered in CA and elsewhere; 3—need more information to review; 4—limited distribution; 0.1 – Seriously threatened in CA, 0.2 – Moderately threatened, 0.3 – Not very threatened)

CP = California Protected

CSC = California Species of Special Concern

FP = Fully Protected

FSC = Federal Species of Concern (former US Fish and Wildlife Service Category 1 or 2 taxon).

MNBMC = Fish and Wildlife Service; Migratory Nongame Birds of Management Concern

SA = Special Animal (California) birds

-- = Bird nests protected by CDFW code 3503

2.7.1 Species Descriptions

The following are descriptions of sensitive wildlife and plant species that are known to occur on the San Marcos Foothills Preserve and Park property. For a complete list of plant and animal species, including those that are *expected* to occur or have the *potential* to occur at the project site, refer to Table 4.

Grasshopper sparrow (*Ammodramus savannarum*)

A small (4-5 in.) songbird, the grasshopper sparrow is a furtive resident of open grasslands with patches of bare ground. Mostly brown with an unmarked, buffy breast, the bird has a large, flat-shaped head and a dark crown with a pale stripe down the middle. This sparrow has a short tail and its back has black and chestnut streaks. The sexes look very alike. Juveniles have a streaked breast. Its regular song is two staccato notes followed by a long, insect-like buzz.

As its name implies, this species favors grasshoppers, but it eats other insects as well. The bird forages on the ground, locating prey by sight in bare patches and then



pouncing on the insect. It paralyzes prey by pinching the insect's thorax.

In breeding season, grasshopper sparrows form cup-shaped nests of grass stems and blades. The nests are very well concealed on the ground, and usually have a dome made of overhanging grasses with a side entrance. Eggs, which typically come in clutches of 3-6, are white with light, reddish-brown speckles. Parents prepare grasshoppers to feed to the nestlings by shaking off the insects' legs.

Grasshopper sparrow populations are declining throughout their range from habitat loss, fragmentation, and degradation.

Visual confirmation of grasshopper sparrow presence is generally more reliable than singing records, although these birds are often heard and not seen due to their cryptic coloring, habitat characteristics, and small size. Historic observation records show that grasshopper sparrows do not have a strong preference for native or nonnative grasslands. Rather, they have extremely particular preferences for habitat that can be found only in some parts of both native and nonnative grasslands. The occurrence of boulders in the grasslands does not appear to be a controlling factor in nest site selection, as nest sites are found in areas completely lacking any boulders. The boulders do, however, provide permanent perch sites, and locations with boulders were found to have higher nest site densities than areas lacking boulders.

In Santa Barbara County—and throughout California—the grasshopper sparrow subspecies *A. s. perpallidus* has declined in numbers due to habitat loss and alteration. Overgrazing may reduce the area of suitable habitat available to grasshopper sparrows by eliminating low shrubs, such as *Artemesia* and *Hazardia* used as perches and reducing the relative density of grass cover. The San Marcos Foothills Preserve property provides high-quality summering habitat for grasshopper sparrows, which are known to breed at the site. Due to its declining status, the grasshopper sparrow is a species of local concern, a California Species of Special Concern, and a Migratory Nongame Bird of Management Concern.

The population size of breeding pairs of grasshopper sparrows on the Preserve property is highly variable. Surveys in 1999 found 19-21 individuals, 2000 surveys found 32-35 individuals, 2001 surveys found 42-47 individuals, 2002 surveys found 5-6 individuals, and surveys in 2003 found 11-13 individuals (Holmgren 2004). These estimates of individuals were based primarily on the observation of male grasshopper sparrows singing on territory. Female grasshopper sparrows do not sing on territory and are difficult to observe during the breeding season. Thus, the estimate of the total number of breeding pairs assumes that all males with established territories found mates.

The perch sites used by an individual give a good approximation of territory size. The observed average territory size was 1.16 acres ($n = 42$). This corresponds well with the 0.91-acre grasshopper sparrow Southern California territory size reported by Collier in 1994 (Vickery 1996).

Grasshopper sparrows are known generally to avoid grasslands with extensive shrub cover (Vickery 1996) and forest edges (Wiens 1969). This is thought to be due to higher predation and brood parasitism rates near habitat edges. The majority of the grasshopper sparrow nest sites on the property occur in grassland vegetation at least 100 ft. from trees and tall (>3 ft. high) shrubs.

Studies of grasshopper sparrows in coastal California show a preference for a fairly thick but low cover of grasses that have a variety of taller forbs, which they use for singing perches (Shuford 1993). A study of structural characteristics of occupied grasshopper sparrow territories found significant differences in basal area cover of grass, shrub cover, litter depth, and bare ground compared to non-territories (Whitmore 1981).



Grazing intensity and year-to-year variation in seasonal winter rainfall are factors that are most likely to affect the structural characteristics of grasslands that grasshopper sparrows prefer (Shuford 1993). On the San Marcos Foothills Preserve property historic cattle grazing, climatic conditions, prey availability, and predators are the most likely factors affecting the grasshopper sparrow population size. The improvement of grasshopper sparrow habitat is an unintentional consequence of cattle grazing. The use of grazing animals and/or mowing to control weeds in grassland habitat on the San Marcos Foothills Preserve and Park property is highly recommended as a management tool to maintain grasshopper sparrow breeding habitat.

Burrowing owl (*Athene cunicularia*)

This ground-dwelling bird has much longer legs than other small owls. They live in open country and are often seen during daylight hours standing erect on the ground or on posts. About the size of a screech owl, they measure 9-11 in. tall. The adult is boldly spotted and barred and the juvenile is buff-colored below. The males tend to be paler and larger in size. These owls are at home on golf courses, road cuts, and at airports.



The burrowing owl's head is rounded, with no ear tufts. Its eyes are yellow and they have whitish eyebrows, a white chin stripe, and a short tail. When agitated, its head bobs or the owl bows with a quick bending motion of the legs. Their alarm call sounds a lot like a rattlesnake.

A yearlong resident of open, dry grassland and desert habitats, these birds are also found as residents in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats. This small owl is found throughout California in appropriate habitats and has been noted to occur as high as 5,300 ft.

Although often considered diurnal, these birds are almost entirely nocturnal, or at least crepuscular (active at dawn and dusk). They are generally considered to be diurnal because they frequently perch conspicuously during daylight hours, especially early morning and late afternoon, at or near the entrance to their burrow or on a nearby low post. It is also not uncommon to see groups of burrowing owls. They are said to be the most gregarious owl in North America and are believed to be semicolonial. During the period when they have nestlings or recently fledged young, one or both owls are usually perched on guard very near the entrance to the nest burrow. Burrowing owls in the northern parts of their range may winter to the south, as far as Central

America, but are mostly residents in California. There may be some type of movement downslope to lower elevations in the winter.

This ground owl preys mostly on insects, small mammals, reptiles, birds, and carrion. They usually hunt from a perch, and have been observed hovering, displaying hawk dives, and hopping on the ground while chasing prey.

Some of the burrowing owl's predators include prairie falcons, red-tailed hawks, Swainson's hawks, ferruginous hawks, northern harriers, golden eagles, foxes, coyotes, and domestic dogs and cats.

The male conducts his courtship display in front of the burrow. Actual breeding occurs anywhere from March through August, with the peak activity in April and May. Clutch size is 2-10 eggs, but on the average, 5-6 white eggs are the norm. The young emerge from their burrow at approximately 2 weeks and are flying by about the fourth week. Usually 95 percent of the young fledge.

This owl typically nests in the old burrow of a ground squirrel, badger, or other small mammal, although they may dig their own burrows in soft soil. The actual nest chamber is lined with excrement, pellets, grass, feathers, and other debris, but sometimes is unlined. Where burrows are scarce, pipes, culverts, and even nest boxes may be utilized.

The burrowing owl's numbers have been markedly reduced in California for at least the past 60 years. Conversion of grasslands to agriculture, other habitat destruction, and poisoning of ground squirrels has contributed to this reduction in numbers in recent decades. Particularly within the past 5 years, the decline of burrowing owls in California appears to have greatly accelerated because of habitat loss caused by increased residential and commercial development (CDFG 2006).

Burrowing owls are only known to overwinter occasionally in the South Coast of Santa Barbara and have been sighted at More Mesa, Ellwood Beach, and Salt Marsh; in agricultural fields off Patterson Avenue; and in abandoned ground squirrel burrows associated with isolated boulders within the Preserve at San Marcos Terrace development area. Based on records from the Santa Barbara Museum of Natural History and information provided by Mark Holmgren with the San Marcos Foothills Coalition, it appears that one to two owls sporadically overwinter on the Preserve property. Burrowing owls, when present, typically arrive at the Preserve in mid-to-late October and continue to frequent the site through the winter until early March. The western burrowing owl is a California Species of Special Concern where it breeds and has been designated a Federal Species of Concern by the U.S. Fish and Wildlife Service.

Cooper's hawk (*Accipiter cooperii*)

Cooper's hawks occur throughout the United States, southern Canada, and Mexico in open woodlands, savannas, riparian forests, and, occasionally, in agricultural fields. Distinguished by their exceptionally large heads and long tails, Cooper's hawks measure approximately 17 in. tall and boast wingspans of up to 31 in. Sometimes seen perching on telephone poles, they are known to prey on songbirds and small mammals.



Cooper's hawks are common transients and winter residents throughout Santa Barbara County, arriving as early as August and occasionally lingering through April. Cooper's hawk populations appear to have declined since the 1950s. They are now uncommon breeders on the South Coast of Santa Barbara County, although nests are sometimes found in foothill canyons. Suitable Cooper's hawk habitat occurs in oak woodlands on the Preserve and Park property. Cooper's hawks have been designated a California Species of Special Concern. Observation records from 1997 suggest that this species may have nested on the Preserve property in oak woodland habitat adjacent to Atascadero Creek.

Horned lark (*Eremophila alpestris*)



Horned larks occur throughout North America from Alaska to northern Florida, and are easily identified by their distinctive black "horns." Preferring open, sparsely vegetated areas, horned larks are regularly found in agricultural fields, devegetated areas, grasslands, and sand dunes.

Several local subspecies of horned larks have been described: the subspecies *E. a. actia* is an uncommon, year-round resident in Santa Barbara County. Horned larks are known to breed near the Preserve at San Marcos in both Goleta and Santa Barbara, though much of their habitat has been lost to development. The horned lark has been designated both a California Species of Special Concern and a Federal Species of Concern (photo credit Mark F. Wallner, eNature.com).

Loggerhead shrike (*Lanius ludovicianus*)

Loggerhead shrikes occur in diverse semidesert scrub, grassland, savanna, coastal sage scrub, open riparian woodland, and agricultural habitats throughout most of the United States and central Canada.



Distinguished from their cousin the northern shrike by beak shape, wing markings, and behavior, loggerhead shrikes hunt insects and small rodents in open or brushy areas.

On the South Coast, loggerhead shrikes are common transients and winter visitors, and are regularly seen in Santa Barbara, Goleta, and Carpinteria beginning as early as July. Loggerhead shrikes are known to occur on the Preserve and Park property in the fall and winter, but they are not known to breed there. The birds have been designated a California Species of Special Concern.

Southern California rufous-crowned sparrow (*Aimophila ruficeps*)

A small (5-6-in.), secretive bird, the Southern California rufous-crowned sparrow has a conspicuous black "whisker" mark and a rufous (reddish) crown. There is a darker rufous eye stripe on its gray head, and its breast and belly are unstreaked gray. Juveniles have buff-colored breasts with faint streaking and little, if any, rufous marking.



This bird lives in open oak woodlands, coastal sage scrub habitat, and treeless dry uplands with grassy vegetation and bushes, often near rocky outcrops. Females lay 3-5 white or slightly bluish eggs in a neat nest of plant fiber and grasses on or near the ground. The rufous-crowned sparrow's song is a rapid, pleasing jumble of notes-- a down-slurred "dear, dear, dear" and a thin, plaintive "tseeee." In the spring, males often sing in the early morning from the tops of boulders, but otherwise they are usually on the ground. If disturbed, they will fly to a nearby rock for a short survey before returning to the grass.

In Santa Barbara County, the coastal subspecies *A. r. canescens* is found on moderate to steep, rocky, south- and west-facing slopes vegetated with an open cover of coastal sage scrub or chaparral. It has been observed in foothill and mountain environments in the South Coast of Santa Barbara County, in the Santa Ynez Mountains, along the North Coast of Santa Barbara County near Lompoc, and throughout Vandenberg Air Force Base (Collins 1999). Rufous-crowned sparrows have been observed in coastal sage scrub habitat on the San Marcos Foothills Preserve and Park property, and are known to breed onsite. This species is protected as both a California Species of Special Concern and a Federal Species of Concern.



Townsend's big-eared bat (*Plecotus townsendii*)

Townsend's big-eared bats are uncommon and locally distributed in coastal and lower montane habitats throughout California. *P. t. pallescens* inhabits coastal areas of California from about Gaviota south into northern Baja California and east through the deserts and Great Basin of the western United States. This is the subspecies that is known to occur on the Preserve and Park property. The Santa Barbara Museum of

Natural History has historic records of this species roosting within the old Highway 154 bridge over San Antonio Creek. However, Caltrans replaced the old bridge and the new one is not known to support a roosting colony of this species.

White-tailed kite (*Elanus leucurus*)

Formerly known as black-shouldered kites, these birds once ranged from Georgia to Florida, across the southern United States and northern Mexico, to California and Oregon. The population was decimated during the 1800s and early 1900s when the medium-sized raptor was shot as a "chicken hawk" and for sport. By the 1920s only about 70 pairs remained in an isolated area of central California. Protection by the Migratory Bird Treaty Act, education, changes in farming practices, and introduction of the house mouse all helped its recovery.

Egg-laying begins in late February and continues through late May, with clutches of 3-5 brown-mottled eggs laid about 2 days apart. This species is known to lay a second clutch of eggs after the chicks from the first set have fledged. Favorite nesting trees are willows, California sycamores, and oaks.

White-tailed kites' primary prey items are mice, and they forage in a wide range of habitats to obtain their



food. During the non-breeding season, white-tailed kites use communal roosting sites as communication centers for finding prey hotspots. The kite's past population decline and subsequent recovery have been closely tied to such human activities as housing development, hunting, and farming. White-tailed kites are somewhat adaptable, however, and can sometimes be observed hunting in the grassy areas along highways or in abandoned fields and orchards.

White-tailed kites are common year-round residents of Santa Barbara County's South Coast. Population numbers have been known to vary dramatically over time, and it appears that kites are currently increasing in the region. Several breeding events are suspected to have occurred in recent years at More Mesa, along Cieneguitas Creek, and in the Winchester Canyon area (Rincon 1998). White-tailed kites have historically nested on the Preserve at San Marcos property near Highway 154 and on the San Marcos Foothills Preserve property near the eastern tributary of Cieneguitas Creek. They are fully protected by the California Department of Fish and Wildlife and are listed as a Federal Species of Concern by the U.S. Fish and Wildlife Service.

Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*)

A dicot in the *Caprifoliaceae* family (honeysuckle), Santa Barbara honeysuckle is a clambering shrub native to California and endemic (limited) to California. Growing between 3-8 ft. tall at elevations less than 300 ft., this species is found scattered among coastal sage scrub and woodland/chaparral communities on the south side of the Santa Ynez Mountains from Carpinteria to Goleta and the Refugio Canyon area; Mission La Purisima inland in Birabent Canyon; and on Santa Cruz Island. Its leaves vary from oval to oblong in shape. Its fruit are red to orange-yellow, and flowers are various shades of yellow. Santa Barbara honeysuckle is listed by the California Native Plant Society as a List 1B species, meaning it is rare and endangered in CA and elsewhere.



Plummer's baccharis (*Baccharis plummerae* ssp. *plummerae*)



Plummer's baccharis is a perennial shrub in the *Asteraceae* (sunflower) family that is endemic to California and occurs in shaded canyons in riparian woodlands and coastal sage scrub habitats near the coast and inland on the transverse ranges in Ventura, Santa Barbara, and San Luis Obispo Counties and the Santa Barbara Channel Islands. Plants grow to a height of 6 ft. tall and typically occur at elevations up to 1,400 ft. The leaves are .33-1.7 in. long, linear to oblanceolate, entire to finely bristle-toothed. The plants are dioecious with white male and female flowers with a green calyx. The bloom period is typically between mid-August and mid-October. Plummer's baccharis occurs on the Preserve property within the Atascadero Creek riparian corridor and is listed by the California Native Plant Society as a List 4 species, meaning it has limited distribution and is on a watch list.

3.0 MANAGEMENT GOALS, OBJECTIVES, AND GUIDELINES

3.1 GOALS

The goals of this management plan are:

- 1) *To manage the land in a sustainable manner so that future generations can experience and enjoy the San Marcos Foothills Preserve and Park property***
- 2) *To preserve and protect the property's environmental and cultural resources***
- 3) *To provide public access to the property***
- 4) *To enhance and restore the property's degraded habitats***

3.2 OBJECTIVES

This Open Space Management Plan's objectives are to:

- **Describe appropriate public uses and restrictions**
- **Preserve and protect sensitive wildlife and plant species**
- **Preserve, protect, and manage environmentally sensitive habitat**
- **Identify areas in need of exotic, invasive weed removal and management**
- **Identify areas in need of erosion control to protect water quality**
- **Ensure protection of cultural resources**
- **Provide educational and research opportunities**
- **Ensure neighborhood compatibility**

3.3 GUIDELINES

3.3.1 *Public Use, Access, and Recreation*

- Public use of the Preserve and Park shall be designed to serve people of all ages, including those who are disabled or have disabilities.
- Public access to the Preserve and Park shall be managed to ensure that visitor use does not exceed the carrying capacity of the parking areas, picnic grounds, trails, and other facilities.
- Recreational activities within the Preserve shall not jeopardize the safety of others and shall not cause damage or harm to environmentally sensitive habitat or species.

3.3.2 *Sensitive Species Protection and Habitat Enhancement*

- Populations of sensitive wildlife and plants on the Preserve and Park property shall be preserved and protected.
- Management activities such as trail maintenance and invasive exotic weed removal shall not harm sensitive species.
- The habitat that sensitive species depend upon shall be managed to ensure the continued survival and reproductive success of the species.

3.3.3 *Environmentally Sensitive Habitat Protection and Enhancement*

- Environmentally sensitive coast live oak woodlands, riparian woodlands, wetlands/seeps, and native perennial grassland habitats on the Preserve and Park property shall be preserved and protected.

- Environmentally sensitive habitat shall be managed to maintain habitat functions, natural process, and native species diversity.
- Plant materials (plants, seeds, and cuttings) used for habitat restoration/enhancement purposes shall be derived from local sources within the Goleta Slough watershed.
- The Community Services Department, in cooperation with nonprofit organizations, shall seek grant funds to perform habitat restoration and improve water quality.

3.3.4 Invasive Exotic Plant Removal and Management

- The removal and management of invasive exotic species shall be performed in a manner that is most effective over the long term and that minimizes the impact on human health, the environment, and non-target organisms.

3.3.5 Erosion Control and Water-Quality Protection

- Visitor use and land management activities shall not contribute to erosion or stream sedimentation.
- Existing eroded gullies shall be stabilized and repaired to prevent continued erosion and stream sedimentation. Gully repairs shall use bioengineering and other stabilization techniques described in the publication *Groundwork – A Handbook for Small-Scale Erosion Control in Coastal California* (Marin Resource Conservation District 2007) or other similar publications.

3.3.6 Cultural Resource Protection

- The location of known cultural resource sites on the Preserve and Park property shall remain confidential information.
- Future trails and park facilities shall be sited to avoid known cultural resources sites.
- The Community Services Department shall coordinate with the County archaeologist and the local Chumash community before performing any major ground disturbance activities in the Preserve or Park.

3.3.7 Education and Research

- The use of the Preserve and Park by school groups and others for educational purposes shall be encouraged by the Community Services Department.
- Educational materials and signage developed by the Community Services Department shall support primary, secondary, and college-level curriculum.
- The Community Services Department may on an individual, case-by-case basis, authorize use of the Preserve property and grant off-trail access for academic field research and performance of environmental field surveys.
- The Chumash community shall be consulted by the Community Services Department when preparing educational materials about the Chumash history and culture.

3.3.8 Neighborhood Compatibility

- Public use of the Preserve and Park, including management activities, shall be conducted in a manner respectful of adjacent owners' property rights.
- Future development of park facilities shall preserve neighbors' viewshed.

4.0 STEWARDSHIP ACTION ITEMS

The Santa Barbara County Community Services Department, Parks Division, is responsible for the planning, development, maintenance, and operation of multiple public areas, including: day-use parks, beaches, pools, group areas, trails, on- and off-leash dog parks, open spaces, campgrounds, and the Cachuma Lake recreation area in unincorporated areas of Santa Barbara County. The stewardship action items below are specific to the San Marcos Foothills Preserve and Preserve Park property. These action items provide a framework for long-term management that is intended to preserve, protect, and restore (where needed), the natural environment and cultural resources that exist on the property, while simultaneously providing public access.

4.1 PUBLIC USE, ACCESS, AND RECREATION

The Preserve, as of November 2013, has 2.6 miles of hiking trail open to the public (refer to Figure 2). Trails are subject to temporary closure during performance of maintenance activities and following major rainfall/storm events to prevent trail damage and erosion. Visitors are encouraged to call the Parks Division at (805) 568-2461 or visit the Parks website at <http://countyofsb.org/parks/default.aspx?id=7536> to inquire about any temporary trail closures.

4.1.1 Management Issues

At the public kickoff meeting for this management plan on February 20, 2013, members of the public expressed their desire for the allowance of equestrian and mountain bike use on trails while other citizens spoke in favor of continuing the bicycle and equestrian prohibition, citing environmental resource protection concerns. Trail use is a complex issue that can pit one user group against another, particularly when one or two user groups are banned. The County Parks Division has struggled with this issue for many years. A recent trail use survey of the Tunnel, Rattlesnake, and Cold Spring trails performed by the Front Country Trails Multi-Jurisdictional Task Force (FCTMJTF 2011) found that 1,519 people used the trails during a two-day survey period and revealed that: 93% of trail users were hikers, 3% were runners, 4% were on bicycles, and less than 1% were on horseback. Included with these trail users were 209 dogs. Assuming there was one dog per person, approximately 14% of the total number of visitors had a dog. The most striking result of this survey was the sheer number of people using the trails and the number of dogs accompanying them.

Given the trail user group statistics from 2011, which revealed that very few bicyclists and equestrians would make use of the trails on the Preserve, the County has decided to prohibit both activities from the Preserve public access areas. Aside from the significant factors of erosion caused by bicycling and equestrian use of the trails, the primary environmental concern with equestrian use of the trails is the introduction of noxious weeds from seed contained in horse droppings. This concern is a valid one, as some plant seeds are capable of passing through a horses' digestive tract and germinating (Ansong M., Pickering C. 2013, and Cash D., Barney L., Gagnon S. 2013). In addition, trail safety is a major factor, with skittish horses, fast-moving bicycles, and hikers all sharing the same narrow passageways.

Considering the sensitive biological and cultural resources present on the Preserve property, the single most important thing that the Parks Division can do to protect

these resources is to require that visitors remain on designated trails, keep all dogs on leash, pick up after their dogs, and dispose of waste properly.

4.1.2 Allowable Uses and Prohibited Activities

Visitors may use the Preserve and future park between the hours of 8:00 a.m. and sunset 365 days a year. Public use is limited to passive recreation (non-motorized) on designated, approved trails and within the park facilities area (except as noted below):

“Allowable use” includes:

- ✓ **Hiking on designated, marked trails**
- ✓ **Birdwatching**
- ✓ **Trail running**
- ✓ **Dog walking (on trail and on leash only)**

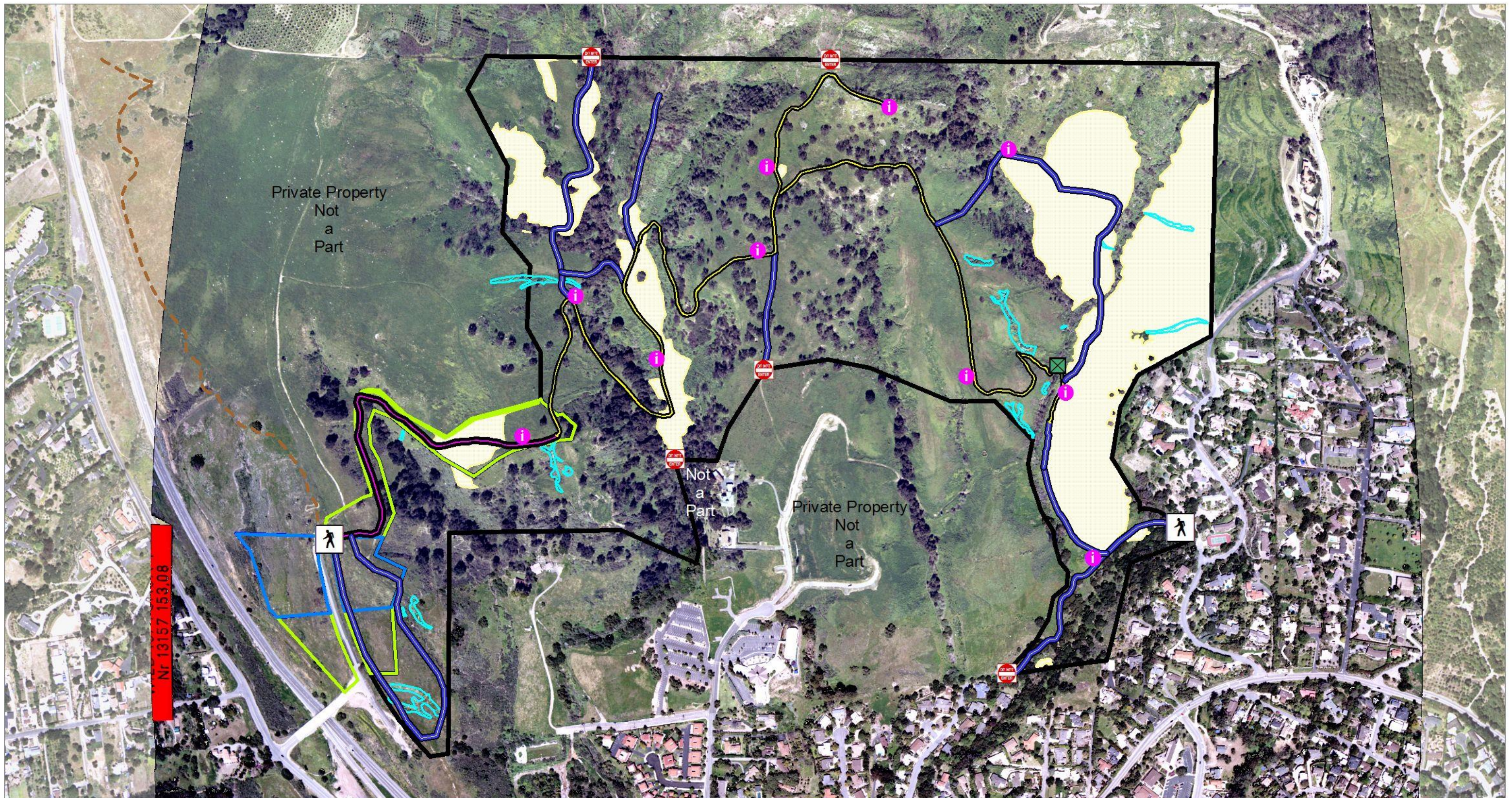
Prohibited activities include:

- **Alcohol consumption**
- **Bicycling**
- **Horseback riding**
- **Campfires, including portable stoves**
- **Camping**
- **Collecting plants, animals, or other objects** (except by permit for cultural activities by members of the Chumash community and for scientific or educational purposes) per Santa Barbara County Code, Chapter 26
- **Commercial use** (without a permit from SBCO Parks Division)
- **Feeding wildlife**
- **Hunting, killing, or harassing wildlife**
- **Operation of motorized vehicles or equipment** (except for emergency vehicles and law enforcement, and as authorized by the County for purposes of habitat restoration or maintenance)
- **Operation of remote-controlled airplanes, helicopters, gliders, or vehicles, etc.**
- **Smoking**
- **Use of firearms, including pellet and paintball guns**

Allowable uses and prohibited activities with the park may vary slightly from those described above depending upon the type of facilities that are constructed within the park. The Community Services Department shall clearly post allowable park uses and restrictions at the entrance to the park once it has been constructed.

4.1.3 Recommended Improvements

The opportunity exists for the trail segment that begins at the western access point on Via Gaitero and heads east through the County Park property to be made handicap accessible (refer to Figure 4). This segment of the trail is currently open to the public. The route follows an existing dirt road and has a relatively gentle gradient that could be improved to make the trail wheelchair accessible. The engineers and economic feasibility of making this segment of trail handicap accessible should be examined more closely by the Community Services Department and Parks Commission.



Recommended Improvements

- Remove Non-Native Ruderal Plants
- Erosion Repair
- Interpretive Site and Bench
- Bridge Repair

- San Marcos Foothills Preserve Open Space (200 acre)
- Future SBCO Park (10 acre)
- SB Soaring Assoc. (6 acre)

Hiking Trail System

- Trail Addition
- Handicap Trail
- Existing Open Space Trail
- Dedicated Trail Easement



Trailhead



Private Property - No Access

Figure 4. Recommended Improvements

San Marcos Foothills Preserve
Long-Term Open-Space Management Plan

4.2 SENSITIVE SPECIES PROTECTION

The Preserve and Park property are home to a few protected wildlife species and a few rare wildlife and plant species (refer to Table 4 for a complete list). It is also home to a host of plant and animals that are not protected or rare, but that do serve important functions in the ecosystem. The Preserve is a place where these sensitive species, along with the non-sensitive species, can exist without being disturbed or harmed by human activities.

4.2.1 Management Issues

The vast majority of the sensitive wildlife species known to occur on this property are birds and bats. Birds and bats are highly mobile and are not typically disturbed by humans engaged in passive recreation on trails. Bats are nocturnal and not expected to be disturbed by daytime visitors to the Preserve or Park. While many birds nest in trees and tall shrubs, there are some sensitive bird species (grasshopper sparrows, Southern California rufous-crowned sparrow, and horned larks) that are known to breed on the Preserve and Park property and that nest on or near the ground. These birds can be disturbed by people and their pets if they are engaged in off-trail activities or if they allow their dogs to roam off-leash. Birds that are nesting in trees or tall shrubs will likely not be disturbed by people or their pets unless they are engaged in a prohibited activity like flying model airplanes or helicopters.

There are also a few sensitive plants known to occur on the Preserve and Park property (Santa Barbara honeysuckle and Plummer's baccharis), and a few other sensitive plants that are not known to occur but could potentially occur (refer to Table 4). Sensitive plant populations are not known to occur in the portion of the Park property where future park facilities will be located and are not expected to be disturbed by visitors engaged in passive recreation on the trails, or by performance of routine trail maintenance activities.

4.2.2 Recommended Management Actions

As long as visitors to the Preserve and Park engage in the listed allowable, passive recreational activities (refer to Section 4.1.2) and keep their pets on leash, there is no need to implement additional sensitive species protection measures.

To ensure protection of sensitive biological resources, we recommend that an SBCO-approved biologist perform sensitive species surveys prior to the construction of new trails and prior to the start of habitat restoration activities in new areas.

4.3 SENSITIVE HABITAT PROTECTION

The Preserve and Park property are located within the Goleta Community Plan's Eastern Goleta Valley planning area (SBCO 2012). In this planning area, the following habitat types are considered environmentally sensitive:

- Riparian woodland corridors
- Monarch butterfly roosts
- Sensitive native flora
- Coastal sage scrub
- Oak woodlands
- Vernal pools
- Native grasslands

- Wetlands
- Raptor/Turkey Vulture roosts
- Critical wildlife habitat
- Wildlife corridors

The Preserve and Park property contain riparian woodland, sensitive native flora, coastal sage scrub, oak woodlands, native grasslands, wetlands, raptor/turkey vulture roosts, and possibly wildlife corridors (refer to Figure 3 for locations).

4.3.1 Management Issues

Public use of the Preserve and Park is not anticipated to damage or cause harm to environmentally sensitive habitat, provided that the public follows the allowable uses and restrictions described in this management plan (refer to Section 4.1.2). The greatest threat to the sensitive habitats that exist on the Preserve and Park property are damage from illegal activities such as off-road motor vehicle use; damage from natural disasters such as drought, floods, landslides, and wildfires; and introduction of disease and pests.

4.3.2 Recommended Management Actions

As long as the public follows the allowable uses and restrictions policies described in this management plan (refer to Section 4.1.2), there is no need to implement any other management actions to protect environmentally sensitive habitat on the Preserve and Park property. In the event that illegal and/or prohibited activities are observed, the proper response would be to call 911 and report the incident so that the authorities can take action.

We recommend that the procedures described in the Adaptive Management section of this plan (Section 5.0) be followed in the event that there is a natural disaster or introduction of a destructive disease or pest.

4.4 INVASIVE EXOTIC VEGETATION

Since the European colonization of North America, nonnative plants and animals—many of which evolved in Central Asia and the Mediterranean—have dramatically altered California's ecology and biodiversity (Mooney, Hamburg, and Drake 1986). Almost all of California's native plant communities have, in some way, been changed by the presence of these exotic species. In some cases, the effects have been dramatic, leading to shifts in species composition, ecosystem structure and function, hydrologic processes, fire regimes, and the extinction of native organisms. While some widespread exotic organisms have become completely naturalized and will remain important features of the California landscape, others are pests that should be eradicated wherever they occur (California Native Plant Society 1996).

The California Invasive Plant Council (CIPC) is a nonprofit organization whose mission is "to protect California's lands and waters from ecologically damaging invasive plants through science, education and policy." The CIPC defines 'invasive plants' as "*non-native plants that threaten wildlands....that 1) are not native to, yet can spread into, wildland ecosystems, and that also 2) displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes* (CIPC 1999). The CIPC uses a three-tiered ranking system to categorize the threat posed by invasive plant species:

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

4.4.1 Management Issues

While most of the Preserve and Park property contain natural habitat dominated by native vegetation, there are approximately 40.51 acres that are almost entirely dominated by three non-native, broad-leaved, annual plant species: 1) black mustard, 2) poison hemlock, and 3) wild radish. We have labeled these stands of non-native plants “ruderal.” This term describes disturbed areas containing non-native, weedy vegetation (refer to Figure 3 for locations). A list of invasive plants listed by the CIPC and known to occur on the Preserve and Park property is provided in Table 5.

4.4.2 Recommended Management Actions

Controlling or eliminating all nonnative plant species within the Preserve and Park property would not only be impractical and unsuccessful, but also prohibitively expensive. Therefore, we are recommending that management of invasive exotic plants be directed first toward plants listed on the CIPC High (i.e., highly invasive) list. Plants with a CIPC High ranking spread the quickest and cause the most ecological damage. The secondary management focus should be directed toward the large stands of ruderal vegetation in the eastern portion of the Preserve property (refer to Figure 4). The dominant plant species within the areas mapped as ruderal (black mustard, poison hemlock, Italian thistle) are all ranked by the CIPC as Moderate (moderately invasive). The permanent removal of these ruderal stands will be a long-term project that will require repeated eradication efforts and replanting with native plants.

We recommend that the management actions used to remove and control targeted species follow the CIPC-recommended physical, biological, and chemical control techniques found in the CIPC species accounts, which can be looked up on their website <http://www.cal-ipc.org/> by entering the plant name. Decisions about management/control techniques to be used on targeted invasive exotic species shall follow the Invasive Exotic Plant Removal and Management guideline described in Section 3.3.4 of this plan, which states, “*The removal and management of invasive exotic species shall be performed in a manner that is most effective over the long term and that minimizes the impact on human health, the environment, and non-target organisms.*”

Table 5. Invasive Plants Occurring on the Preserve and Park Property

Latin Name	Common Name	Type	CIPC Ranking
<i>Atriplex semibaccata</i>	Australian saltbrush	annual herb	Moderate
<i>Avena barbata</i>	slender wild oat	annual herb	Moderate
<i>Avena fatua</i>	wild oat	annual herb	Moderate
<i>Brachypodium distachyon</i>	false brome	annual herb	Moderate
<i>Brassica nigra</i>	black mustard	annual herb	Moderate
<i>Brassica rapa</i>	field mustard	annual herb	Limited
<i>Bromus diandrus</i>	ripgut brome	annual herb	Moderate
<i>Bromus hordaceus</i>	soft chess	annual herb	Limited
<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome	annual herb	High
<i>Carduus pycnocephalus</i>	Italian thistle	annual herb	Moderate
<i>Centaurea melitensis</i>	tocalote	annual herb	Moderate
<i>Conium maculatum</i>	poison hemlock	annual herb	Moderate
<i>Cortaderia jubata</i>	jubata grass	perennial herb	High
<i>Cynara cardunculus</i>	artichoke thistle	perennial herb	Moderate
<i>Cynodon dactylon</i>	Bermuda grass	perennial herb	Moderate
<i>Ehrharta erecta</i>	panic veldt grass	annual herb	Moderate
<i>Erodium cicutarium</i>	redstem filaree	annual herb	Limited
<i>Eucalyptus camaldulensis</i>	river red gum	shrub/tree	Limited
<i>Festuca perennis</i>	Italian rye	annual herb	Moderate
<i>Foeniculum vulgare</i>	fennel	perennial herb	High
<i>Genista monspessulana</i>	genista	perennial herb	High
<i>Geranium dissectum</i>	dissected geranium	annual herb	Limited
<i>Helminthotheca echioides</i>	bristly ox tongue	annual herb	Limited
<i>Hirschfeldia incana</i>	Mediterranean mustard	annual herb	Moderate
<i>Hordeum murinum</i>	foxtail	annual herb	Moderate
<i>Hypochaeris glabra</i>	smooth cat's ear	annual herb	Limited
<i>Hypochaeris radicata</i>	rough cat's ear	annual herb	Moderate
<i>Lythrum cf. hyssopifolia</i>	hyssop loosestrife	perennial herb	Limited
<i>Marrubium vulgare</i>	horehound	perennial herb	Limited

Latin Name	Common Name	Type	CIPC Ranking
<i>Medicago polymorpha</i>	bur clover	annual herb	Limited
<i>Myoporum laetum</i>	false sandlewood	shrub/tree	Moderate
<i>Nicotiana glauca</i>	tree tobacco	perennial herb	Moderate
<i>Oxalis pes-caprae</i>	oxalis	annual herb	Moderate
<i>Pennisetum clandestinum</i>	kikuyu grass	perennial herb	Limited
<i>Pennisetum setaceum</i>	crimson fountain grass	perennial herb	Moderate
<i>Phalaris aquatica</i>	Harding grass	perennial Herb	Moderate
<i>Plantago lanceolata</i>	English plantain	annual herb	Limited
<i>Polypogon monspeliensis</i>	rabbitsfoot grass	annual herb	Limited
<i>Raphanus sativus</i>	wild radish	annual herb	Limited
<i>Ricinus communis</i>	castor bean	perennial herb	Limited
<i>Rumex crispus</i>	curly dock	perennial herb	Limited
<i>Salsola australis</i>	Russian thistle	annual herb	Limited
<i>Schinus molle</i>	Peruvian pepper	shrub/tree	Limited
<i>Schinus terebinthifolius</i>	Brazilian pepper	shrub/tree	Limited
<i>Silybum marianum</i>	milk thistle	annual herb	Limited
<i>Stipa miliacea</i> var. <i>miliacea</i>	smilo grass	perennial herb	Limited

4.5 EROSION CONTROL AND PROTECTION OF WATER QUALITY

Until 2006, the Preserve and Park property were periodically grazed by cattle. This land use had some beneficial habitat and wildlife effects, including controlling the spread of palatable weeds such as sweet fennel and thatch removal within the native and non-native grasslands. Grazing probably improved the habitat for nesting grasshopper sparrows. Grasslands are non-equilibrium environments maintained by periodic and/or constant disturbance such as drought, fire, and herbivory (Johnson and Winter 1999). In the absence of fire and drought, grazing was the disturbance that helped maintain the grasslands on the Preserve and Park property.

Historic cattle grazing on the property also had some detrimental environmental effects. Cattle grazing altered the soil properties, and caused erosion of creek banks and drainage channels. Soil characteristics such as porosity, chemistry, nutrient cycling, productivity, and microbiology have all been altered by cattle grazing. Detrimental changes in soil properties caused by cattle include a reduction of short-term nutrient availability and long-term soil nutrient levels and lessened soil organic matter (Robertson 1996).



Grazing also causes soil compaction in locations where cattle congregate, such as shady areas under oak trees, near watering troughs, and along cattle trails. A few large, cattle-induced erosion gullies persist to this day and are still actively eroding even though cattle have not grazed the property since 2006.

4.5.1 Management Issues

Erosion causes sedimentation of creeks and degrades the surface water quality of creeks and drainages. Suspended sediment is detrimental to aquatic biota and can smother invertebrates and amphibian eggs, elevate water temperatures, and correspondingly decrease dissolved oxygen levels. There are several locations on the Preserve and Park properties where large erosion gullies are actively causing downstream sedimentation (refer to Figure 4). Public use of trails during and immediately following large rain events can cause significant erosion and damage trails.

4.5.2 Recommended Management Actions

The erosion gullies that exist on the Preserve and Park property (refer to Figure 4) need to be stabilized, repaired, and revegetated to prevent continued erosion and stream sedimentation. Gully repairs shall use bioengineering and other stabilization techniques described in the publication *Groundwork – A Handbook for Small-Scale Erosion Control in Coastal California* (Marin Resource Conservation District 2007) or other similar publications. The areas where gully repairs have been completed shall be revegetated with appropriate native vegetation derived from the Goleta Slough Watershed.

4.6 CULTURAL RESOURCE PROTECTION



The Santa Barbara Channel region was probably first settled by aboriginal humans some time before 11,000 BPE (before present era). Stratiographic sampling and radiocarbon dating have provided clues to the evolution of local Chumash Native American society and evidence of a rich and complex human history in the Santa Barbara region extending back at least 9,000 years. As a result, Santa Barbara's South Coast hosts a high density of archaeological sites (King 1997).

The federal Archaeological Resources Protection Act of 1979 requires managers of public lands—in this case the County of Santa Barbara Community Services Department—"...to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals" (ARPA Sec. 2(4)(b)). These land managers are also prohibited from disclosing the location of known archaeological sites to the public by Section 304 of the National Historic Preservation Act [16 U.S.C. 470w-3]. Section 304 requires federal agencies, or other public officials receiving grant assistance under the NHPA, to "withhold from disclosure to the public, information about the location, character, or ownership of a historic resource..." if the agency and the Secretary of the Interior agree that its release may (1) cause a significant invasion of privacy, (2) risk harm to the historic resource, or (3) impede the use of a traditional religious site by practitioners.

Section 6(a) of the Native American Graves Protection and Repatriation Act makes it illegal for any person to "... excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit issued under Sec. 7.8 or exempted by Sec. 7.5(b) of this part." The act goes on to prohibit any person from selling, purchase, exchange, transport, or receiving any archaeological resource, if such resource was excavated or removed in violation of the Native American Graves Protection and Repatriation Act.

Some of the local Chumash people have a historic relationship to the San Marcos Foothills Preserve property which includes the collection of sacred and medicinal herbs, collection of materials for basket making, and ceremonial/sacred uses. The Department supports their continued use of the property for these purposes and only asks that when these activities are planned, that they are coordinated with the Department in accordance with the procedures described in this plan.

4.6.1 Management Issues

The construction of new trails, performance of erosion-gully repairs, performance of habitat restoration, and construction of new facilities within the Park and Preserve property will all involve ground disturbance. This has the potential to disturb sensitive archeological resources. It is the responsibility of the County Community Services Department to ensure that management activities and construction of new park facilities do not damage or cause harm to cultural resources.

There is also the potential for members of the public, park employees, volunteers, and contractors working on or visiting the property to discover and remove archeological artifacts.

4.6.2 Recommended Management Actions

In order to protect cultural resources on the Park and Preserve property, we recommend that the Community Services Department consult with the County archaeologist before initiation of any planned ground-disturbing activities to ensure that the activity will not occur within a known cultural resource site. We also recommend that the Community Services Department post signs at the trailheads informing the public that it is illegal to disturb cultural resource sites or to remove, relocate, or transport any cultural resources objects that they may find while visiting the property. Lastly, we recommend that all park employees, volunteers, and contractors working on the Park or Preserve property be given environmental awareness training to inform them about the legal protection of all cultural resource artifacts, and what to do in the event that they encounter an archeological object or human remains while working on the property.

4.7 EDUCATION AND RESEARCH

The proximity of the San Marcos Foothills Preserve and Park property to the City of Santa Barbara and the City of Goleta make it an ideal location for outdoor education and environmental research. The property contains a variety of habitat types and diverse native flora and fauna. There are two locations on the property where habitat restoration is currently taking place. The County Community Services Department supports use of the property for all education levels (primary, secondary, and college/university).

4.7.1 Management Issues

In order to support the Community Services Department's goal of encouraging educational use, the Department will need to provide basic amenities such as restrooms, potable water, and picnic benches or other seating. The department will also need to manage use of the property by educational groups to ensure that demand does not exceed the capacity of the Preserve and Park facilities. Educational use of the property would be limited to on-trail activities and use within designated picnic, view points, and observation areas.

Use of the property for academic research purposes will require that the Community Services Department grant access to off-trail areas of the Preserve and Park property. Researchers typically require repeated access to sampling locations for an extended period of time, and depending upon the type of research being conducted, may also require access to the property during hours when the Preserve and Park are closed to the public. Off-trail use of property could potentially harm or damage sensitive biological resources (i.e., nesting birds and plant populations). Visitors to the Park and Preserve who observe researchers walking and working off-trail may report the incident to authorities or may take it upon themselves to investigate.

4.7.2 Recommended Management Actions

The Community Services Department should, as part of a future master plan for the 10-acre Park site, provide basic amenities (restroom, potable water, and picnic benches) at the Via Gaitero Preserve and Park access location. Basic amenities should be designed to handle (at a minimum) a typical primary and secondary public school class size of 24-32 students. The Community Services Department should create (and make available via their website) educational information about the environmental resources, natural process, and natural history of the Preserve and Park property that support primary-, secondary-, and college-level curricula. The Chumash community should be consulted by the Community Services Department when preparing educational materials about the Chumash history and culture. Use of the Preserve and Park by school groups should be managed by creating a reservation system.

The use of the Preserve and Park property for academic research purposes should be managed by the Community Services Department on a case-by-case basis through a permit process. Researchers should be required to submit in writing a research proposal to the Community Services Department identifying the academic research institution/association type of research, areas they are requesting access to, equipment to be used, frequency of site visits, time of day when site visits will be performed, and anticipated duration of the research data collection effort. The Community Services Department should issue permits and/or letters of understanding indicating approval of requested research.

4.8 NEIGHBORHOOD COMPATIBILITY

Portions of the Preserve and Park property are adjacent to existing single-family residential developments on Cocopah Drive, Debra Drive, and Antone Road. The northern portion of the Preserve property is adjacent to ranch property that is partially planted in avocados and other agricultural crops. The western portion of the Preserve property is adjacent to the Preserve at San Marcos Terrace development private conservation areas. The eastern and southeastern portions of the Preserve

property are adjacent to the Preserve at the San Marcos Meadows development private conservation areas (refer to Figure 2). Future development within the Preserve at San Marcos private conservation areas is prohibited in perpetuity and the current and future property owners are required to manage the conservation areas in accordance with the Preserve at San Marcos Open Space Management Plan (Watershed Environmental 2006).

4.8.1 Management Issues

Conflict can arise when the actions or inactions of one property owner affect adjacent property owners. Problems with residents who live adjacent to a public park or an open space preserve typically involve issues related to loss of privacy and excessive noise, but they can also be safety related. The Preserve and Park property are located in a very high fire hazard area (SBCO 2010b) and the management of vegetation to protect structures on adjacent private property is a valid concern. The County of Santa Barbara wildfire protection 'defensible space' requirements extend 100 ft. from all buildings or structures or up to the property line, whichever is nearer (SBCO Fire Department 2010). There are currently no buildings or structures on the San Marcos Foothills Preserve property and hence the Department is not required or obligated to perform any fire prevention or fuel management activities.

Conversely, management actions and inactions by the adjacent property owners can adversely affect the management of the Park and Preserve property. For example, soil disturbance upslope of the Preserve property may cause sedimentation of creeks and drainages, ornamental landscape vegetation may spread from an adjacent property onto the Preserve property, and noise and dust from adjacent development may impact visitors to the Park and Preserve.

4.8.2 Recommended Management Actions

The best way to prevent neighborhood compatibility issues is through communication. We recommend that the Community Services Department inform the adjacent property owners when large events and/or land management activities on the Preserve and Park property are planned. We also recommend that the Community Services Department communicate regularly with the County Planning and Development Department planner responsible for oversight and enforcement of the Preserve at San Marcos development project. The Community Services Department should also meet with the Santa Barbara County Fire Department to review routes where emergency access vehicles can access the Preserve and Park property.

4.9 VOLUNTEERS

The best way to find yourself is to lose yourself in the service of others.

Mahatma Gandhi

Volunteer groups and individuals are vital to the Community Services Department, and due to limited staff resources, the Department may increasingly rely on them in the future. Volunteers provide a variety of services to the Department, ranging from helping with administrative tasks, preparing educational materials, serving as docents, pulling weeds, and building trails. The donation of volunteer time and expertise allows the Community Services Department to provide public services and maintain facilities that they would not otherwise be able to provide. In return, volunteers are rewarded with the Community Services Department's appreciation for

their community service, and many volunteers report that they feel a deep sense of connection to the place where they have volunteered and a profound sense of accomplishment.

It is responsibility of the Community Services Department to oversee all volunteer activities and to provide a safe environment. The Department takes this responsibly seriously and requires volunteers to sign volunteer agreements and to participate in health and safety training as needed before performing any volunteer activity on the Preserve or Park property. Signed volunteer agreements reduce the Department's liability should a volunteer be injured while on the Department's property and ensure that volunteers are engaging in authorized and approved activities. This documentation also provides information on volunteer hours. By keeping track of the time spent by volunteers, the Department can quantify the value of work done and use the information when applying for grants to fund future projects.

4.9.1 Management Issues

So far, the Department has not had any management issues with volunteers or the work they have performed on the Preserve and Park property. The Department could, however, improve volunteer oversight and effort coordination. Volunteers could also help the Department by keeping better records of time spent and materials purchased for various tasks.

4.9.2 Recommended Management Actions

In order to improve the Community Services Department's oversight of volunteers, we recommend that they institute a volunteer work program agreement. The agreement would: identify the volunteer organization or names of individuals and the specific task(s) to be accomplished, list materials to be purchased and/or used, describe the location of the work project, outline a work schedule, determine access points, list the vehicles and equipment needed, list contribution of Department staff or equipment, and include a worker and site hazard evaluation. Volunteers should complete the volunteer work program agreement prior to the start of the proposed volunteer activity.

5.0 ADAPTIVE MANAGEMENT

5.1 PURPOSE

Adaptive management is a tool for improving and correcting failed resource management actions or guiding responses to natural disasters. The process begins with the recognition of a problem requiring correction. The problem is either not anticipated or was a result of previous management actions and requires amendments to the management plan to prevent reoccurrence.

Adaptive management utilizes teams of land managers, stakeholders, and local experts to collaboratively explore alternative management actions that will solve the problem and meet stated management goals. After brainstorming, the team analyzes the pros and cons of each alternative and estimates the length of time and cost that implementation will need to solve the problem. Analysis is based on the professional experience of the individual team members and the monitoring records maintained by the land manager. Hopefully, the Community Services Department will never need to use adaptive management, but should it be necessary the procedures will be

in place for the Department to investigate the problem, explore alternative solutions, and decide on a course of action.

5.2 TRIGGERING EVENTS

We anticipate that most problems will be resolved without using the adaptive management process. Problems with unauthorized use or illegal activities within or adjacent to the Preserve and Park will be reported by park visitors, volunteers, park rangers, or neighbors to the local police department or County sheriff and will be resolved through the legal system.

The trigger for use of adaptive management is an event that cannot be solved by calling the police or sheriff. Examples of events that will trigger adaptive management are: the discovery of a new pest or disease (i.e., the plant pathogen *Phytophthora ramorum*, which causes sudden oak death syndrome) and natural disasters such as a fire, flood, landslide, and extreme drought.

5.3 APPROVAL PROCESS FOR REMEDIAL ACTIONS

After the adaptive management team has given their recommendation to the Community Services Department, the Department will, as necessary, inform the County Parks Commission, Planning Commission, and County Board of Supervisors of the plan to correct the problem and will request their consent to proceed with the recommended management action(s).

These County commissions and boards may require the Community Services Department and the adaptive management team to explore other options, and to provide additional information. The Community Services Department, with the help of the adaptive management team, will perform any additional analysis and provide any additional information to the commissioners and supervisors as requested. The Community Services Department will make the adaptive management recommendations available to the public via the County website and will incorporate, in writing, the adaptive management amendment to the Long-Term Open Space Management Plan.

6.0 RECOMMENDED MEETINGS, MONITORING, AND REPORTING

This section of the management plan contains recommendations for public meetings, monitoring, and reporting. The key to successful management of any natural preserve is a well-designed monitoring program (Noss, O'Connell, and Murphy 1997). Monitoring programs should seek to track and identify changes in the condition of the Preserve and assess the degree to which management objectives have been achieved with respect to a set of desired future conditions. A good monitoring plan should also detect change and uncover sound alternatives for adaptive management. In order to ensure the success of this management plan, it is vital that the Community Services District, adjacent residents, stakeholders, and local government have a clear understanding of their respective roles and responsibilities under this management plan.

6.1 ANNUAL MONITORING/SURVEYS

Invasive Exotic Plant Monitoring Surveys

We recommend that individual(s) with experience and knowledge identifying invasive exotic plants perform field surveys in the spring (April) and fall (September) on the Preserve and Park property. The person(s) performing the surveys could be volunteers and/or Community Services Department staff. The persons performing the surveys will need off-trail access to the entire property. The purpose of the surveys is to identify: 1) the locations of new (previously unknown) invasive plant populations, 2) identify any new species of invasive plants, and 3) identify changes in the extent of previously mapped stands of invasive plants. The information collected from this survey effort should be used to prioritize weed removal/management actions as described in Section 4.4 of this management plan.

Habitat Restoration Monitoring

We recommend that monitoring of ongoing habitat restoration areas be performed in the spring (April) and fall (September) for a period of 5 years after new plants are installed. The percent cover of native vegetation, broad-leaved weeds, bare ground, and mulch should be noted. This information should be used to decide if additional plants need to be installed, if weed removal/management needs to occur, and if erosion control measures need to be implemented. The purpose of these surveys is to determine if the habitat restoration areas have been fully restored. Fully restored habitat should have tree, shrub, and herb native vegetation cover that is roughly the same (within 15%) as that found in undisturbed areas of the Preserve and Park property containing similar habitat to that which is being restored. The habitat restoration goal should be "to create self-sustaining native habitat that provides essential elements for wildlife." It was apparent during the performance of field surveys for this management plan that the Preserve's three ongoing habitat restoration areas are well cared for by volunteers. We recommend that the person(s) tending to the habitat restoration area perform the annual monitoring and provide the monitoring results to the Community Services Department until the sites are considered to be fully restored.

Annual Spring Breeding Bird Surveys

Members of the San Marcos Foothills Coalition (SMFC) have been performing annual breeding bird surveys on the Preserve property since 1997. The SMFC surveys have been performed by volunteers led by Mark Holmgren, the former curator of the vertebrate collection at the University of California at Santa Barbara. Breeding bird surveys were also performed in 2004-2005 by Envicom biologists for the Preserve at San Marcos Development project's Environmental Impact Report and by Watershed Environmental biologist Paul Collins in 2006. Collectively, there is a tremendous amount of bird survey data for the Preserve property. These surveys have revealed that there is high variability in both the number and species of birds that nest on the Preserve and Park property from year to year. The 1918 Federal Migratory Bird Treaty Act affords protection to approximately 1,000 species of birds (Federal Register 2010), the California Fish and Game Code Sections 3511, 4700, 5050, and 5515 fully protects 37 species of birds, and Section 3503.5 of the California Fish and Game Code protects raptor nests (California Department of Fish and Wildlife 2013).

The Community Services Department, as the property owner and manager of the Preserve and Park property, is obligated to ensure that breeding birds protected by these federal and state laws are not disturbed by the public or by management activities performed by the Department or volunteers working on behalf of the

Department. In order to do this, the Department must perform annual surveys to identify where protected bird species are nesting and then evaluate whether visitors using the trails and other facilities and management actions have the potential to disrupt nesting activity. We recommend that volunteers from the SMFC or the Santa Barbara Audubon Society continue to perform annual breeding bird surveys and to provide survey results to the Department in a timely manner. If a protected bird nest is discovered in close proximity to a trail or other park/preserve facility, or if management actions are proposed within or adjacent to a protected nest (within 300 ft.), the Department may need to temporarily close the area to the public or postpone the management activity until bird-nesting activity has been completed and the juvenile birds have fledged. This situation would probably be a rare event, but is one that the Department should be prepared to handle. Should this situation occur, we recommend that the Department contact the USFWS office in Ventura and the California Department of Fish and Game office in Santa Barbara to inform these agencies of the actions being taken by the Department to ensure the protection of breeding birds.

Annual Audubon Christmas Bird Count

The Christmas Bird Count is an annual event organized by the National Audubon Society in partnership with Bird Studies Canada, the North American Breeding Bird Survey, and the Cornell Laboratory of Ornithology (Audubon 2013). The bird count occurs between December 14 and January 5 each year at thousands of locations in the United States and Canada. The count is performed within a 15-mi. radius count circle that covers 176.7 sq. miles. Local Audubon chapters select the count circle location and organize the citizen scientist volunteers that go out into the field to identify and count birds within the count circle. The count occurs over a 24-hour period within the three-week-long survey window. The local Audubon chapters decide the day they will perform the count in their respective communities and they send the census data to the national Audubon headquarters. The survey data is published annually by the national Audubon Society and is used to assess the health of bird populations and guide conservation actions.

In Santa Barbara, the Christmas Bird Count's count circle is centered at the intersection of Highway 154 San Marcos Pass and Foothill Road. It extends northward into the upper Santa Ynez River Valley, eastward to Montecito, southward into the Pacific Ocean, and westward to Ellwood Canyon (Audubon Society Santa Barbara Chapter 2013). The Santa Barbara count circle encompasses all of the San Marcos Preserve and Park property and participants perform bird surveys on the Preserve and Park property each year as part of the Christmas Bird Count. The local bird count is divided up into small groups, each lead by a group leader and with a predetermined territory within the count circle. The Christmas Bird Count survey data collected from Preserve and Park property could provide valuable information that could be used to help manage the property. We recommend that the Community Services Department coordinate with the local Audubon chapter to obtain bird survey data collected during the Christmas Bird Count on the Preserve and Park property.

6.2 ANNUAL MEETING

We recommend that the Community Services Department hold an annual San Marcos Preserve Stakeholder meeting. The meeting should be held at the future park or another County Park facility in close proximity to the Preserve property. The meeting should include the following elements:

Introduction

Management Activities/Accomplishments Progress Report

Planned Management Activities for the Coming Year

Volunteer Appreciation/Service Awards

Public Comments

6.3 ANNUAL REPORTING

We recommend that the Community Services Department prepare an Annual Status Report for the San Marcos Foothills Preserve and Park property. The report should include the following:

- Facility Improvements (description, date(s), status, labor hours, material expenses)
- Volunteer Projects (description, date(s), status, labor hours, material expenses)
- Management Actions (description, date(s), status, labor hours, material expenses)
- Educational Use (Institution(s), date(s), number of students, teachers, chaperones)
- Research Projects (Institution(s), dates, subject, status, results)
- Incident Report (type, responding agency(s), status, remedial actions)

6.4 PERIODIC MONITORING AND REPORTING

Visitor Use Survey

We recommend that the Community Services Department conduct a survey of visitor use every 5 years, both for overall Preserve use and specifically for trail use. The survey should be performed during the peak visitor season (spring) and should include a weekend (Saturday or Sunday) and a weekday. The purpose of the survey is to get an idea of the number of visitors using the Preserve and Park so that the Department can evaluate whether the existing facilities (restrooms, parking, picnic facilities, and trail network) can handle public demand.

The surveys should take into consideration the unofficial but heavily used access points into the property, such as Cocopah Dr. and Cieneguitas Rd.; early- and late-evening use as a local neighborhood destination; and the fact that perhaps 50% of hikers/dog owners who park at the west entrance use the currently vacant Terrace development area.

Vegetation Mapping

We recommend that the Community Services Department map the vegetation types on the Preserve and Park property every 5 years. The vegetation mapping will provide valuable information about changes in the species composition and distribution of habitat types present on the Preserve and Parks property. The habitat types on the Preserve and Park property are dynamic and subject to change in response to management actions, lack of management actions, climate change, or other stochastic events. The only way to quantify the change in the

habitat/vegetation types is to perform vegetation surveys, map the vegetation types, and perform a comparative analysis of change over time. We recommend that the Community Services Department hire qualified biologists to perform the vegetation surveys and mapping or that they allow an academic institution such as the University of California at Santa Barbara to perform the vegetation surveys and mapping as part of a graduate research project. A summary of the vegetation mapping results and comparative analysis should be provided to the Community Services Department and made available to the public.

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