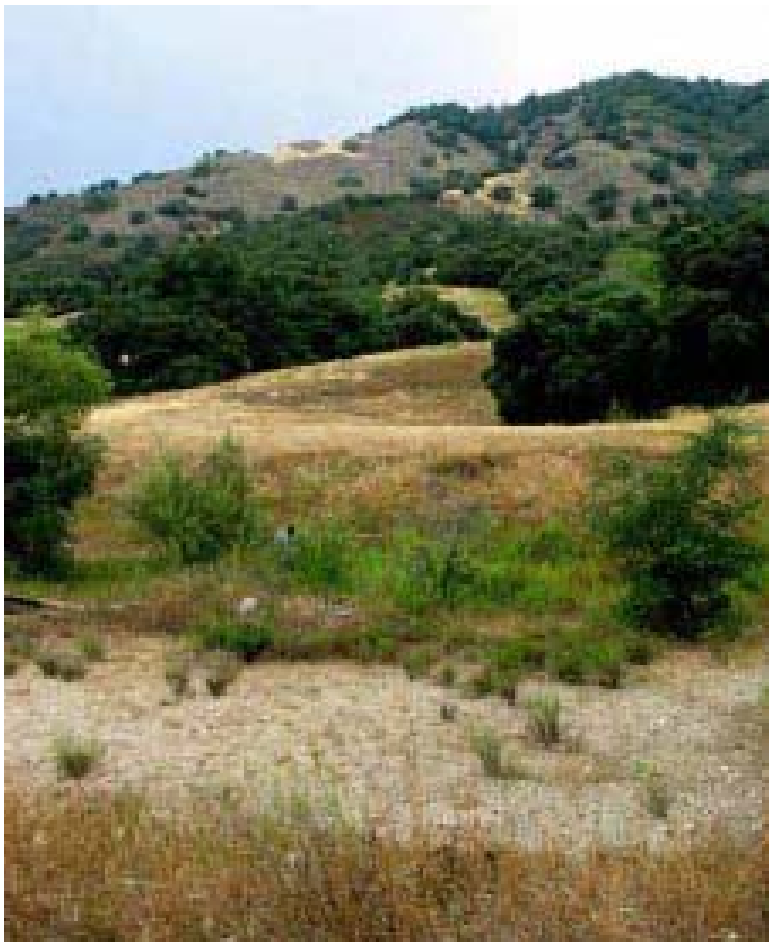
SANTA YSABLE OPEN SPACE PRESERVE

RESOURCE MANAGEMENT PLAN

May 2, 2006



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INTRODUCTION

In 1999, The Nature Conservancy (TNC) purchased the Santa Ysabel Open Space Preserve (SYOSP) from the Edwards family in order to allow the State of California Wildlife Conservation Board (WCB) additional time to coordinate the State's acquisition of the property. Subsequently, the State acquired the land with $11 million in State WCB and Federal Transportation Act (TEA) funding to assist the San Dieguito River Valley Land Conservancy meet its goal to complete the proposed Coast to Crest Trail -- a planned trail in the County of San Diego Trails Master Plan and the State of California Recreational Trails Plan. In the fall of 2001, the deed to the SYOSP was transferred to the County. The County Department of Parks and Recreation (DPR) is responsible for management and monitoring of the property under the conditions of the grant agreements.

The conditions of the grant agreements include the preparation of an assessment of the biological and cultural resources in the SYOSP and a Resource Management Plan (RMP). TNC financed and directed the following baseline surveys:

Rare Plant and Vegetation Surveys 2002 and 2003
Ecological Outreach Services
Post-Cedar Fire Ecosystem and Rare Plan Impact Survey 2004
Ecological Outreach Services
Baseline Biodiversity Survey for the Santa Ysabel Open Space Preserve
United States Geological Survey
Stephens' Kangaroo Rat Survey and Management Recommendations
Conservation Biology Institute
Santa Ysabel East Cultural Resources Report
Susan Hector Consulting, LLC

The above surveys confirmed that SYOSP is rich in biological and cultural resources. The RMP utilized the data in the above-mentioned reports to determine which areas are appropriate for passive recreational uses while protecting and managing the sensitive biological and cultural resources within the SYOSP.

The SYOSP will be included in the East County Multiple Species Conservation Program (ECMSCP). Upon completion of the ECMSCP, this RMP will be revised per the specifications of the ECMSCP agreement.

Location

The SYOSP is located in San Diego County near the unincorporated communities of Santa Ysabel and Julian, approximately 40 miles northeast of downtown San Diego (Figures 1 and 2). The SYOSP is comprised of two areas, (1) SYOSP East is approximately 3,800 acres and is located east of State Route (SR) 79 and north of SR 78 and (2) SYOSP West is approximately 1,512 acres and is located west of SR 79 and north of SR 78.

Two major drainage systems have their headwaters within or immediately adjacent to the SYOSP. Santa Ysabel Creek, a tributary to the San Dieguito River, flows westward along the northern boundary of the east property and bisects the west property. The headwaters of the San Dieguito River extend to the immediate east and north of the preserve on the western slopes of Volcan Mountain and it serves as the primary drainage for the SYOSP. The east property also contains the headwaters of the San Diego River, which flows south west into the Pacific Ocean.

Background

Prior to purchase by TNC, the property was used as open ranch land. Since the purchase, much of the cattle grazing has been managed by installation and maintenance of fencing. However, cattle still can be found on the preserve.

Fires have been recorded on SYOSP East in 1940, 1947 and 1963 (California Department of Forestry and Fire Protection, Fire Perimeter Data, 2002). Fires occurred on SYOSP West in 1929, 1938, 1956, and 1981. Two large-scale wildfires occurred during the preparation of the biological and cultural studies. In August 2002, the 63,000-acre Pines Fire burned much of the neighboring Volcan Mountain ridge system. In October 2003, the Cedar Fire burned over 270,000 acres in San Diego County including approximately one-third of SYOSP East (from Inaja Memorial Park northeast towards Farmer Road in Julian). Figure 3 depicts the fire perimeters for fires in ten year increments. However, there has been at least one fire in the SYOSP East since these figures were created. Therefore, fires that have occurred since August 2005 are not shown.

Intent of Plan

This plan is intended to guide the DPR in the adaptive management of the SYOSP. Implementation of the management and monitoring described herein is subject to funding availability. This is a draft adaptive management plan that will be revised. The first revision is expected after the adoption of the East County Multiple Species Conservation Plan (ECMSCP). This plan will be revised to conform to the management and monitoring requirements of the ECMSCP.

BIOLOGICAL RESOURCES

Flora

Ecological Outreach Services prepared the Rare Plant and Vegetation Surveys (2002 and 2003) as well as the Post-Cedar Fire Ecosystem and Rare Plant Impact Survey (2004). See Appendices A and B. In Appendix 5 of the report, Ecological Outreach Services summarized the data using the modified Holland Code prepared by Tom Oberbauer. Casey Lydon, County Biologist, summarized the data using the modified Holland code (Table 1). The remainder of the document uses the modified vegetation classification found in Table 1.

Vegetation Communities

SYOSP contains a rich mosaic of plant communities. The distribution of plant communities is affected by many past and present factors including but not limited to agricultural uses, cattle grazing, wildfire, and human activities such as road building and tree removal. Soils consist of sandy loams over decomposed gabbro or weathered granodiorite parent material and the hillsides feature outcrops of granite and granodiorite.

SYOSP East is a transitional zone between montane elements and the Mesa Grande foothills. The most predominant vegetation communities on SYOSP East are coast live oak (*Quercus agrifolia*) woodland, Engelmann oak (*Quercus engelmannii*) woodland, montane riparian forest, non-native grassland, and chaparral. See Table 1 for a complete list of vegetation communities found in SYSOP East. Coast live oak woodland is restricted to the lower slopes and valley area while the black oak (*Quercus kelloggii*) and canyon live oak (*Quercus chrysolepis*) occur higher on the slopes and ridge tops. Ridges are often rimmed with chaparral transitioning to big cone Douglas fir (*Pseudotsuga macrocarpa*) and Coulter pine (*Pinus coulteri*) stands near the ridegtops. The southeastern portion of SYOSP East (Kanaka Flat) is dominated by non-native and native grasslands interdispersed with small wetlands.

Conifers form relatively small, isolated stands (generally less than a few acres) or are scattered and intergraded within the oak woodland or grassland communities. Many of the oak and sycamore trees are estimated to be over 200 years old. Old-growth species include sycamore (*Platanus racemosa*), coast live oak and old-growth Engelmann oak.

The most common vegetation communities in SYOSP West are coast live oak woodland, Englemann oak woodland/savanna, chaparral, coastal sage scrub and non-native grassland. No conifers occur in SYOSP West. See Table 1 for a complete list of vegetation communities found in SYOSP West.

Table 1: Vegetation Communities in SYOSP

HOLLAND CLASSIFICATION CODE*	VEGETATION COMMUNITY	SYOSP EAST	SYOSP WEST
32500	Diegan Coastal Sage Scrub	X	X
37200	Chemise Chaparral	X	X
37510	Mixed Montane Chaparral	X	X
37900	Scrub Oak Chaparral	X	X
42100	Native Grassland	X	X
42200	Non-Native Grassland	X	X
45100	Montane Meadow	X	X
45400	Freshwater Seep	X	X
61310	Southern Coast Live Oak Riparian Forest	X	X
61500	Montane Riparian Forest	X	X
71160	Coast Live Oak Woodland	X	X
71180	Engelmann Oak Woodland	X	X
77000	Mixed Oak Woodland	X	X
81310	Coast Live Oak Forest	X	X
81340	Black Oak Forest	X	
84000	Lower Montane Coniferous Forest	X	X
84140	Coulter Pine Forest	X	
84150	Bigcone Douglas Fir	X	
84500	Mixed Oak/Coniferous/Bigcone/Coulter	X	

* Holland's codes as revised by T. Oberbauer February 1996

Though the Cedar Fire burned approximately 1/3 of the SYOSP, all vegetation communities identified prior to the fire are assumed to return to their pre-fire conditions.

Sensitive Plant Species

San Diego County is rich in biodiversity. Many native, endemic species live in the SYOSP. The sensitive plant survey identified and mapped the location of eighteen sensitive plant species (See Table 2 and Figure 4). These plants are California Species of Concern (CSC), California Endangered (CE), Federal Species of Concern (FSC), Federally Endangered (FE), listed by the California Native Plant Society, and/or are tracked by the Natural Diversity Database (NDDB).

The codes listed in Table 2 were derived from the California Department of Fish and Game, Natural Diversity Database. July 2005. Special Vascular Plants,

Bryophytes, and Lichens List. Quarterly Publication. Please see Appendix C for an explanation of the codes.

Fauna

USGS was hired to perform baseline biodiversity surveys for the SYOSP. The surveys included detection of aquatic species, herpetofauna, ants, avifauna, bats, and small, medium and large mammals (Appendix D). A variety of techniques were utilized to detect presence and, when possible, relative abundance, for each taxonomic group. The biodiversity survey included focused surveys for the Arroyo toad (*Bufo californicus*) and the California spotted owl (*Strix occidentalis*). Below is a summary of the information from USGS's report. In addition to the baseline biodiversity survey, Dr. Wayne Spencer conducted focused surveys for the Stephens' kangaroo rat (*Dipodomys stephensi*). Also included in the below discussion is a summary of Dr. Wayne Spencer's survey for Stephens' kangaroo rat (Appendix E).

The sensitive species codes listed in each of the tables for the different fauna categories were determined using the Special Animals List from the California Department of Fish and Game (July 2005). Please see Appendix F for an explanation of the codes.

AQUATICS

Visual encounter, hand capture, dip netting, and aural detection were used to survey for aquatic organisms in the SYOSP. Aquatic surveys were conducted during a period of below average rainfall for the mountains of San Diego. As a result of the below average rainfall in this area, surface water and the durations of surface flow of lotic habitats were at a minimum within the SYOSP. The majority of wetland habitats within the SYOSP are not permanent. Perennial wetland habitats included Spring 1, Spring 2, and Cattle Pond 3 (including the marshy habitat of the input drainage). Seasonal habitats included Santa Ysabel Creek segments 1-7. Temporary habitats included Cattle Pond 1, Cattle Pond 2, the unnamed tributary to Santa Ysabel Creek, and the headwaters of the San Diego River (Figure 5). Aquatic species may be more diverse, common, and widespread during wetter years.

In order to organize the data, the SYOSP East and West were further separated into specific areas. SYOSP East was separated into Santa Ysabel Creek (which was further divided into reaches 2-7), San Diego River, Cattle Pond 1, Spring 1, and Spring 2. SYOSP West was separated into Santa Ysabel Creek, Cattle Pond 2, Cattle Pond 3, Input Drainage to Cattle Pond 3, and Unnamed Tributary to Santa Ysabel Creek. A summary of species found on the preserve can be found in Table 3. A summary of what was found in each area can be found in Appendix D.

<u>Reptiles and Amphibians</u>

The presence of egg masses, tadpoles, and /or metamorphic individuals indicate that breeding populations of anurans occur onsite. On SYOSP East, larvae of the Pacific treefrog (*Hyla regilla*) and the California treefrog (*Hyla cadaverina*) were observed, confirming the presence of breeding populations. On SYOSP west, larvae of the Pacific treefrog, western toad (*Buffo boras*), and the federally endangered arroyo toad were observed, confirming the presence of breeding populations. No arroyo toads were found on SYOSP East. However, there is a potential for them to occur in patches along Santa Ysabel creek. Also, arroyo toads are known to migrate and could move through SYOSP East, even though no resident populations occur. An incidental observation of a bullfrog (*Rana catesbeiana*) was found on SYOSP West.

The coast range newt (*Taricha torosa*) is known to occur in some tributaries of the San Diego River, but was undetected on SYOSP. The California red-legged frog (*Rana aurora draytonii*) historical habitat range includes the SYOSP. However, the California red-legged frog requires a permanent water source and no suitable habitat was found in the SYOSP (except Cattle Pond 3). It is expected that if a population exists outside the preserve, the California red-legged frog could pass through the SYOSP during dispersal. The western pond turtle (*Emys marmorata*) also requires longer duration pooled water than was found within the SYOSP. However, if habitat is created, the SYOSP could sustain a population of western pond turtle. The red-sided gartersnake (*Thamnohis sirtalis*) could occur in the marshy habitat where willows dominate such as the input drainage to Cattle Pond 3 or along the Santa Ysabel Creek but it was undetected on the SYOSP. There are historic records for this species in the San Dieguito River, but no recent documentation could be found.

Mollusks

The collection of fingernail clams (*Cyclocalyx ssp*.) in Santa Ysabel Creek is the first record of fingernail clams from San Diego County. These specimens were sent to Dr. Taehwan Lee, a Sphaaeriinae expert at the University of Michigan, to be reviewed for species identification.

Fish

Mosquitofish (*Gambusia affinis*) and rainbow trout (*Onocohynchus mykiss*) were detected in the SYOSP. Both species are from stock. The California Department of Fish and Game (CDFG) began stocking Santa Ysabel Creek in 1950 and was last stocked in 1974. During this time period it was stocked for 23 of these 24 years. The mosquito fish was the only fish species detected on SYOSP West. All age classes were observed, confirming that an established population of mosquitofish exists.

HERPTEOFAUNA

The pitfall trap arrays at SYOSP were surveyed for a total of 46 days across 12 sample periods from April 2002 though July 2003. Figure 6 shows the location of each array. A total of 580 herpetofauna captures were recorded representing 24 species, 23 of which are native and one of which is introduced. These species

include 5 amphibians [including the bullfrog (*Rana catesbeiana*), a non-native species], 8 lizards, and 11 snakes (See Table 4). Of the 24 species, six are CDFG Species of Special Concern: the large-blotched ensatina (*Ensatina klauberi*), western spadefoot toad (*Spea hammondii*), western skink (*Eumeces skiltonianus*), coast horned lizard (*Phrynosoma coronatum*), western patch-nosed snake (*Salvadora hexalepis*), and two-striped garter snake (*Thamnophis hammondii*).

ANTS

Ants were sampled in association with the herpetofauna and small mammal sampling locations (Figure 6). Five pitfall traps filled with antifreeze were installed at each herpetofauna array. In three sampling periods, July 2002, November 2002, and February 2003, USGS captured 2,017 individual ants, representing four subfamilies and 43 species (See Table 5). All ants detected were native to the area. The most abundant species, determined by total number of individuals capture, were *Formica francourei* (559), *Pheidole hyatti* (454), and *Dorymyrmex bicolor* (434). However, the number of individuals for both *D bicolor* and *P. hyatti* were biased by one unusually large sample of each species at array 2. The most widespread species, determined by the highest percent array occurrence, were P. hyatti (75%), *Liometopum occidentale* (54%), *F. moki* (54%), and *Tapimona sessile* (50%).

The pitfall trap design was geared toward the collection of epigeic (aboveground foreaging) ants, therefore, this technique may have under-sampled hypogeic (belowground foraging) and arboreal ants. However, evaluation of pitfall traps as a sampling method for ground-dwelling ants found that most epigeic ants are well represented, especially in open habitats.

AVIFAUNA

USGS preformed diurnal point count surveys and nocturnal driving surveys to detect avifauna living in SYOSP. See Figure 7 for the location of the point count and driving surveys surveys. During the point count surveys, 92 species were detected (See Appendix D). A total of twenty-three species or subspecies listed as rare, threatened, endangered, of special concern, or fully protected by the state and/or federal wildlife agencies were recorded in the SYOSP (Table 6). Sensitive species that may be present but were not detected include the osprey (*Pandion haliaetus*), sharp-shinned hawk (*Accipiter striatus*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), peregrine falcon (*Falco peregrinus*), prairie falcon (*Falco mexicanus*,), loggerhead shrike (*Lanius ludovicianus*), and gray vireo (V*ireo vicinior*).

Non-native avifauna species include the European starling (Sturnus vulgaris), wild turkey (Meleagris gallopavo), and rock dove (Columba livia). The turkeys and starlings were common observations on the preserve, both during the point counts and incidentally. Starlings have colonized many areas of the preserve, likely moving in from the agricultural areas adjacent to the preserve. Starlings are problematic since they aggressively out-compete native cavity-nesting

avifauna from accessing nest sites. The turkey, which has been introduced into southern California as an important game bird since the 1930s is a weightly consumer of acorns, potentially depriving native fauna of an essential food source. The rock dove was only observed once.

The brown-headed cowbird (Molothrus ater), an invasive native species, was found to be widespread in the SYOSP. Cowbirds are well-documented brood parasites and their presence can have an impact on the reproductive success of songbirds.

The focus species of the nocturnal driving surveys were the California spotted owl (*Strix occidentalis*), the barn owl (*Tyto alba*), the great horned owl (*Bubo virginianus*), and the western screech owl (*Otus kennicottii*). A total of 36 calling stations were established following the USFWS Protocol for Surveying for California spotted owls in Proposed Management Activity Areas and Habitat Conservation Areas (USFWS 1993). However, due to personnel constraints, only the 16 callings stations in the most suitable habitat (high and medium priority) were chosen and surveyed (See Figure 8). Of the 16 calling stations, all but one were located on SYOSP East. The barn owl was the most detected species, followed by the California spotted owl, western screech owl, and great horned owl. In addition, the long-eared owl (*Asio otus*) was detected during the diurnal point count surveys in 2003.

California Spotted Owl

The California spotted owl is of considerable interest in San Diego County as there are only a few, scattered, known populations living in the County. Recently, the USFWS has considered the petition to list the California spotted owl as federally threatened or endangered. The California spotted owl was found at six of the 16 calling stations. One male and one female California spotted owl were detected less than ¼ mile apart during follow-up surveys on June 18 and 25, 2003. The majority of owl detections occurred along Santa Ysabel Creek in the riparian hardwood forest habitat suggesting that Santa Ysabel Creek is an important drainage for California spotted owls and other owl species on the preserve. Based on the location of the pair, the California spotted owl activity center was determined to lie at the junction of Santa Ysabel Creek and a small, side drainage on the eastern property of the preserve (Figure 9).

In addition, SYOSP is within the range of several other owl species that went undetected by this survey: the northern pygmy owl (*Glaucidium gnoma*), northern saw-whet owl (*Aegolius acadicus*), and burrowing owl (*Athene cuicularia*).

BATS

Acoustic, visual, and mist-net capture techniques were used to observe and detect bats. See Figure 9. These techniques were used in concert during two types of surveys: foraging and roosting bat surveys. Occasionally, foraging bats

were detected during roost surveys and bats exiting roosts were detected during foraging bat surveys.

Foraging bat surveys were conducted on 8 nights at eight of the nine survey sites using a combination of Anabat, the unaided ear, visual, and mist-net techniques. A total of 15 of the 23 bat species known to occur in San Diego County were detected, including 10 state and/or federally sensitive species. Table 7 lists the bat species found, locations, and frequency detected.

Big brown bats (*Eptesicus fuscus*) and Mexican free-tailed bats (*Tadarida brasilienis*) were detected at all eight foraging survey sites on the preserve. Western yellow bats (*Lasiurus xanthinus*) and long-eared Mytosis (*Mytois evotis*) were each detected at only one foraging site. Bat species that were detected foraging on the preserve that are noteworthy because of their sensitivity status include the Townsend's big-eared bat (*Corynorhinus townsendii*) and the coastal form of the pallid bat (*Antrozous pallidus*).

The number of bat species detected on SYOSP East and SYOSP West were similar. It is suspected that the foraging bat community is fairly constant across the entire preserve with few exceptions. For instance, western pipistrelles (*Pipistrellus hesperus*) are largely dependent on rock crevices for roosting and they are thought to forage only within a few kilometers of their roosting sites. The exposed rock habitat in the SYOSP is primarily found in SYOSP West and in the western end of SYOSP East (western pipistrelles were detected foraging only in these areas).

No bat roosts were documented on SYOSP during the survey. One roost located on the corner store in the town of Santa Ysabel was surveyed twice. This store is known to have supported Mexican free-tailed and pallid bats for a number of years. Though the owner of the store has made modifications to prevent roosting, roosting still occurs at this site. Other roosting sites are expected to occur adjacent to the SYOSP. This is evidenced by observations of multiple numbers of bats foraging early in the evening.

SMALL MAMMALS

Twelve small mammal species (Table 8) were captured using an extensive pitfall trapping system comprised of 24 arrays (Figure 6). These arrays were also used for the herpetofauna trapping. The Botta's pocket gopher (*Thomomys bottae*) and the California vole (*Microtus californicus*) were the most wide spread species, captured at 23 and 22 arrays respectively.

In addition to the pitfall traps, surveys were also conducted to determine the presence of wood rat (*Neotoma ssp.*) nests near each array. A visual search for wood rat nests was performed around each array to an approximate radius of 25 meters from the center of the pitfall trap. Woodrat nest locations were recorded with a GPS receiver. Only one desert woodrat (Neotoma lepida) was captured in

a pitfall trap. However, there were woodrat nests detected at nine of the 24 arrays.

Camera surveys detected the kangaroo rat (*Dipodomys ssp.*) at two camera sites, 3 and 4 on SYOSP West (Figure 10). It was determined that the kangaroo rat at camera site 3 was the Dulzura kangaroo rat (*Dipodomys simulans*). Dr. Wayne Spencer later confirmed that the other observation was the same species.

Dr. Wayne Spencer, CBI, conducted focused surveys for the Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) in three locations, two in the SYOSP East and one in SYOSP west. See Figure 11. The results of the survey concluded that Areas A & B were suitable habitat for the SKR, but there were no individuals or sign of individuals found in the area. After field review, Area C was determined to be of high quality habitat, but was too high in elevation to support SKR.

SYOSP is within the range maps of several other rodent species, not detected in the surveys: broad-footed mole (*Scapanus latimanus*), Dulzura pocket mouse (*Chaetodipus californicus*), brush mouse (*Peromycus boylii*), and the southern grasshopper mouse (*Onychomys torridus*).

MEDIUM AND LARGE MAMMALS

Two sampling techniques were used to document the distribution and relative abundance of native medium and large mammals in the SYOSP: baited scent station surveys and remotely triggered camera stations. Ten transects (baited scent stations) and nine camera stations were established in the SYOSP (Figure 10). The target species included all native large to mid-sized carnivores and mule deer. Non-target species include humans, cattle, horses, domestic dogs, and opossums.

Scent stations detected nine total species and camera stations detected 11 total species (target and non-target). See Table 9. Coyote (*Canis latrans*) and striped skunks (*Mephitis mephitis*) were detected at all 10 transects, bobcats (*Felis rufus*) were detected on nine transects, gray foxes (*Urocyon cinereoargenteus*) and domestic dogs (*Canis familiaris*) on eight transects. Bobcats and mule deer (Odocoileus hemionus) were detected at all nine camera stations; gray foxes were detected at five stations; coyotes and mountain lions (*Felis concolor*) at four.

Subsequent to the completion of the Biodiversity Survey, tracks of an adult black bear, *Ursus americanus*, were found on the preserve, near Farmer's Road. This was the first indication of a black bear utilizing the SYOSP. The black bear was not seen on the SYOSP and its presence was only indicated by tracks. It is believed the black bear was passing through the area and is not resident. Therefore, no management recommendations will be made at this time. If additional, frequent black bear sightings occur, this RMP will be amended to include black bear management recommendations.

SYOSP is within the range of several other sensitive mammal species that went undetected: the kit fox (*Vulpes macrotis*), American bedger (Taxidea taxus), long-tailed weasel (*Mstela frenata*), black-tailed jackrabbit (*Lepus californicus*), and ringtail (*Bassariscus astutus*). An incidental sighting of a long-tailed weasel occurred on the eastern edge of SYOSP East.

In order for wildlife to travel between SYOSP East and West, large mammals need to transverse State Route 79. Currently, SR 79 is a two-lane highway running north south. There are no known wildlife crossings over this highway. The California Department of Transportation is responsible for SR 79.

CULTURAL RESOURCES

San Diego County is characterized by a rich and varied historical past. Cultural resources, which reflect this history, consist of archaeological remains, historic buildings, artifacts, photographs, oral histories, Native American memories and public documents. This Resources Management Plan (RMP) identifies the known cultural resources within SYOSP and describes areas of potential resources. Cultural Resources can be categorized as precontact archaeology, postcontact, and American ranch resources.

Precontact

The Kumeyaay (Diegueño, Ipai, Tipai) Indians originally inhabited SYOSP. Their territory included San Diego County, Imperial County, and ranged 60 miles into northern Baja California. Descendants of these original Kumeyaay Indians are part of the Santa Ysabel Band of Diegueño Indians. The Santa Ysabel Band reservation is adjacent to the preserve, which is part of their traditional tribal territory. The Kumeyaay lived in this area for over 12,000 years. By utilizing resources from the mountains to the Pacific Coast, they had a successful and complex economic structure. Because the environment is rich and varied, the Kumeyaay remained hunter-gatherers until the time of contact with Europeans.

Postcontact

California Indians suffered greatly under the Spanish and Californio political structures (Carrico 1980). The Catholic Church owned and administered the lands in the early 1800s, which would become Santa Ysabel Rancho (Moyer 1969). The land was used to graze large numbers of cattle and sheep in the summer. An adobe chapel was built on the land in 1818. Around 1822 the property contained several houses, a granary, a cemetery and a large number of Indian converts.

During this period, Mexico decided it no longer needed oversight by Spain. In 1821, after a ten-year struggle, Mexican revolutionary forces defeated Spain and won their independence. To encourage settlement of frontier lands including California, the Mexican government implemented significant changes in land use and property ownership policies. By 1834, secularization was instituted

throughout California. Part of this change was to take control of all missions and mission lands. Santa Ysabel became part of the large land holdings of the Mexican government.

Many of the people who lived in San Diego at the time of secularization realized that this was the time to obtain land in payment for years of service to Spain. In 1844 José Joaquín Ortega and his son-in-law, Edward F. Stokes applied for and received a land grant, which they called Santa Ysabel Rancho, which totaled 17,719 acres. Stokes and Ortega also were granted the land grant for Santa María Rancho, currently known as Ramona.

The new owners of Santa Ysabel Rancho stocked it with cattle and sheep. José Juaquín Ortega was born in 1801 and came to San Diego in 1821 (LeMenanger 1889). He served as administrator of the San Diego mission among other positions in the small pueblo of San Diego. In 1858 Ortega was a County Supervisor for two one-year terms. Stokes was an Englishman who served as a mate on whaling ships that sailed between the South Pacific and San Diego during the 1830s and 1840s. Stokes married Ortega's oldest daughter, Maria del Refugio de Jesus Ortega (Refugio) at San Diego Mission in June 1840. Ortega and Stokes formed a business partnership centered on the two ranchos.

Stokes and Refugio lived in a rancho on Santa Ysabel. In 1846 Stokes assisted the American Army of the West as they came to California to oust the Mexicans and Californios. He died shortly after this leaving Refugio with three sons.

In 1850, California became the 31st state to join the Union. Californio owners of the ranchos were required to confirm their ownership of the land. This was a very lengthy and involved process. Santa Ysabel was confirmed as land owned by Ortega (and Stokes) in 1858. In the 1860s Santa Ysabel Rancho was divided between Refugio, her brother and her mother. Following a series of legal challenges, the ownership was finally confirmed to Ortega and Stokes in 1872.

Following entry into the United States, the State of California passed laws, which legalized the hunt for Indians. Government officials in Washington D.C. soon recognized that the only way to protect Native Americans was to develop reservations and to place Indian tribes under the care of the federal government through the ratification of treaties.

The Treaty of Santa Ysabel was a broadly written document intended to include the northern Kumeyaay people of the United States. In 1852,eighteen treaties were signed between the U.S. Indian Commission and California Indian tribes including clan leaders from many Kumeyaay bands. In fact, the Santa Ysabel Indians negotiated the final treaty and presented it to the US Senate for approval.

However, the majority of Californians opposed these treaties because they feared the loss of land for farming, mining, or other commercial pursuits. The California legislature recommended that the United States Senate not approve

the California treaties and on July 8, 1852 the U. S. Senate voted not to ratify any of these executed treaties. Despite this setback, the Santa Ysabel reservation was established in 1875.

American Ranching

The next official recording of ownership seems to be in 1900. Various people owned Rancho Santa Ysabel including the Martin-Bloom Co. who owned 12,561.16 acres in 1910 (Plat Map). Various people had ownership following that, including George Sawday. The property was then sold to The Nature Conservancy (TNC) and turned over to the County of San Diego in 2001.

Previous Cultural Resource Assessments at SYOSP

In 2003, as part of the Section 106 assessment for the National Register of Historic Places (NRHP), Susan Hector conducted a limited cultural resource survey in the western half of Santa Ysabel East (Hector 2003). The firestorm of 2003 impacted approximately 2/3 of the 3,800 acres of the SYOSP. Far Western Corp conducted a follow-up survey of sections of the eastern half of the Santa Ysabel East (Leach-Palm 2004). Santa Ysabel West has never been surveyed for cultural resources, although County Park Rangers have discovered many milling features.

As a result of the two surveys 26 archeological sites are known. Two of these sites (CA-SDI-16,597 and 16,462) are large precontact village sites. One (CA-SDI-16,462) of these is a major Late Prehistoric village site and most likely the "Indian Rancheria" shown on the 1869 plat map of the land grant. The other large village site is also the location of some historic features from the American Ranching period. Thirteen of these sites were evaluated for the National Register of Historic Places (NRHP) and found to be eligible. The remaining thirteen sites have not been evaluated for either the NRHP or the California Register of Historic Resources (CRHR).

CULTURAL RESOURCE SIGNIFICANCE

The number of precontact Kumeyaay sites, along with two large village sites, from two limited surveys, indicates that the SYOSP is an area of high precontact occupation cultural resources. It is essential to continue the cultural resource surveys and to identify all pre and postcontact sites. Several roads, which have not been evaluated for the NRHP, go through the SYOSP. Based on the history of the area, Santa Ysabel was used for 170 years for ranching, and yet very few resources are identified from the historic ranching period. In addition, Santa Ysabel Creek flows through the property and the headwaters of the San Diego River are located on the property. Both need to be evaluated for significance in conjunction with the American Ranching Period.

A major historic and stagecoach road also passed through SYOSP. The only road from San Diego east to Yuma, AZ passed through SYOSP and also represented the first Transcontinental Mail Route. People coming from the east

and heading to San Diego traveled over the same road. All of these events need further evaluation.

Table 10: Cultural Resources located on SYOSP

SITE NUMBER (SDI)	SITE TYPE	PRE/POST CONTACT
1029	Bedrock milling	Precontact
16451	Small camp with milling	Precontact
16452	Small camp with milling	Precontact
16453	Small camp with milling	Precontact
16454	Small camp with milling	Precontact
16455	Small camp with milling	Precontact
16456	Small camp with milling	Precontact
16457	Small camp with milling	Precontact
16458	Small camp with milling	Precontact
16459	Small camp with milling	Precontact
16460	Small camp with milling	Precontact
16461	Small camp with milling	Precontact
16462	Ethnographic Village	Pre and Post contact
16463	Small camp with milling	Precontact
16464	Small camp with milling	Precontact
16465	Small camp with milling	Precontact
16466	Small camp with milling	Precontact
16957	Village site/historic ranch	Pre and Post Contact
16964	Small camp with milling	Precontact
16958	Small camp with milling	Precontact
16959	Small camp with milling	Precontact
16960	Small camp with milling	Precontact
16961	Small camp with milling	Precontact
16962	Small camp with milling	Precontact
16963	Small camp with milling	Precontact
16964	Small camp with milling	Precontact

MANAGEMENT GOALS AND OBJECTIVES

It is the goal of the DPR to promote natural and cultural resource management strategies that ensure environmental preservation, quality of life, and economic development. Enhancing the quality of life for San Diego County residents requires a balance between the responsibility to preserve biological and cultural resources with our obligation to meet the residents varying recreational needs. The DPR has completed the following adaptive management plan for the SYOSP to ensure there is a balance between the preservation of the resources with our obligation to open the SYOSP to the public.

Users

Only passive recreational uses will be permitted within the SYOSP. Users will be limited to hikers, bikers, and equestrians. All users will be required to stay on designated trails and shall not deface or destroy trail markers, monuments, fences, trees, or other preserve facilities. Per County Code of Regulatory Ordinance Sec 41.111, 41.112, 41.113, all wildlife, plant, historical artifacts, and geologic features are protected and are not to be damaged or removed. Any person who violates any provision of Sections 41.111, 41.112, 41.113 is guilty of a misdemeanor as provided in Sections 11.116, 11.117, and 11.118 of this Code, punishable by fines ranging from $1,000 to $50,000 and imprisonment up to one year, depending on the dollar value of the damage done. The speed limit on the trails is 10 m.p.h. Bicyclists must yield right-of-way to other users. All children are required to wear helmets while riding bicycles in the SYOSP. No person shall ride, drive, lead, or keep a bicycle or horse, except in areas specifically designated for such use. No bicycle, horse, or other animal shall be hitched to any tree, shrub, or structure in a manner that may cause damage to preserve property.

Access and Trails

The portions of the existing network of ranch roads will be used as the basis for the SYOSP trail system. Minor improvements may be conducted to reduce erosion or enhance public safety. Due to limited staffing resources, SYOSP will initially be open on Saturday and Sundays from 8:00 a.m. to one hour before sunset. Eventually, the DPR will open SYOSP East daily, 8:00 a.m. to one hour before sunset. Street parking is available on Farmer Road until a staging area can be funded and constructed. Additionally, users can access SYOSP East from SR 79. No trail staging area will be available on SR 79, only parking available is adjacent to the road.

Access to SYOSP West will be restricted until surveys for cultural resources can be completed. At this time, there is no funding for such surveys. Upon completion of the cultural resources surveys and once appropriate management decisions and actions have been completed, SYOSP West will be open daily, 8:00 a.m. to sunset.

Access to all trails shall be restricted seasonally, during times of increased fire danger and excess precipitation. The determination to close trail(s) will be made by the supervising park ranger or assigned designee.

A portion of the Coast to Crest trail, a regional trail being planned by the San Dieguito River Park, will run through the SYOSP. This portion of the trail running through SYOSP East will be approximately 8 miles long. See Figures 12 and 13. The ultimate goal of the San Dieguito River Park is to create a multi-use trail system for hikers, bicyclists and horseback riders that will extend approximately 55 miles from the ocean at Del Mar to the San Dieguito River's source on Volcan Mountain. In addition, two loop trails will be open to the public, one on the western portion of SYOSP East, the West Vista Loop Trail (approximately 4.5 miles long), and one on the eastern portion of SYOSP East, the Kanaka Flat Trail (approximately 7 miles long).

Access to the closed trails will be controlled using signage and fencing, where needed.

Natural Disaster Response

In the event of a natural disaster such as fire or flood, the ranger and volunteer patrol shall evacuate the trail. The ranger shall contact the district coordinate with the local agency in charge of responding to the emergency and, if possible, assist where necessary.

Outreach and Education

Based on funding availability, the County ranger should install information kiosks at trailheads that provide educational material regarding 1) prevalence of wildlife species on the preserve, 2) interpretive signs including the benefits of certain species to the natural ecosystem, 3) the importance of not disturbing or molesting or removing any plant, animal, or cultural resource, 4) the history of Rancho Santa Ysabel, including Native American information, and 5) maps of official trails including a GPS grid of the preserve to help expedite emergency services. The ranger should provide educational pamphlets including similar information as that on the kiosks. Pamphlets should be made available at local stores and ranger stations and on the County of San Diego Internet Site, www.sdparks.org. In addition, the DPR should provide interpretive opportunities through rangers, other staff members, and volunteers.

Signage

As funding becomes available, signage will be installed at the SYOSP entrance(s) as well as along the trail alignment. These signs will alert park users of SYOSP Rules and Regulations. Specific language on signage needed to protect sensitive resources may also be installed in areas.

In addition, interpretative signs will be installed along the official trails throughout the preserve, upon funding allocation.

Park Patrol

Prior to opening of SYOSP, all existing unofficial trails should be marked with a sign advising users to stay on designated trails. A park ranger and/or volunteer patrol shall patrol the trail weekly during Monday through Friday and daily during times of high use (ex.: Saturday and Sunday). Volunteer patrols can be conducted by various groups including but not limited to Park Patrol and the San Dieguito Open Space River Park Joint Powers Authority (JPA).

During their patrol, they shall monitor the condition of the trail, clean up trash, and check for off-trail use. If off-trail use is occurring in an area identified as having sensitive resources (as identified above), the ranger shall work with the County Historian and/or County Biologist to assess the potential damage to the resource and develop an action plan to prohibit further damage and/or restore the resource integrity.

Trash Removal

No trash receptacles will be placed at SYOSP. Users of SYOSP shall practice pack-in, pack-out trash policies. No littering is allowed in the SYOSP. However, the ranger will be responsible for patrolling the trails and picking up any trash left by irresponsible users.

Illegal Dumping

If materials are illegally dumped at SYOSP, the ranger will be responsible for the cleaning up and proper disposal of the materials. If the materials are too heavy for the ranger to dispose of and the materials are adjacent to County roads, the County Department of Public Works Julian Road Station should be notified. The staff at the Roads station may be available to assist the ranger in the clean up and disposal of the dumped materials.

If the materials are thought to be of a toxic nature, County Environmental Health will be contacted and a removal/cleanup plan will be prepared.

Lighting

Lighting in the SYOSP will be prohibited.

Fence Maintenance

The County ranger will monitor all fences within the SYOSP on an ongoing basis. The ranger will be responsible for maintenance of the fences and gates within the preserve.

Manure Management

Equestrian users are required to use Weed Free Feed, for 3 days, prior to entering the preserve. This will be enforced on the honor system.

Trail Restrictions

In order to protect the cultural and biological resources in the SYOSP, the following are prohibited inside the SYOSP:

- Off-road vehicles
- Domestic animals, except horses and assistant dogs
- Smoking
- Campfires
- Firearms
- Air guns
- Archery devices
- Slingshots
- Fireworks
- Explosive devices
- Screens for sifting soils
- Littering
- Dumping
- Open flames
- Paintball activities

Forest Health Plan

As funding becomes available, the County shall implement a Forest Health Plan. Many plants and animals in San Diego County depend on fire as an integral part of their lifecycle. Others require open landscapes to thrive. In addition, maintaining a healthy forest minimizes the risk of forest mortality and catastrophic fires. Therefore, it is imperative to maintain a healthy ecosystem in all of San Diego's preserves.

SYOSP shall be managed at the landscape scale to create and maintain healthy forest conditions and to prevent and/or minimize future catastrophic forest mortality due to drought and insects while preserving the biological and cultural resources on the SYOSP. Implementation of the Forest Health Plan should include monitoring and research of fuel reduction treatments and their immediate and long term impacts on vegetation communities, species, and wildfire.

Oak Forest

For purposes of decision, vegetation communities dominated by California black oak, canyon live oak (tree form), coast live oak and Engleman oak, are collectively referred to as oak forests.

Goals for oak forest ecosystems include establishing and maintaining:
A diversity of structural and seral conditions in landscapes in proportions that are ecologically sustainable at the watershed scale; sufficient regeneration and recruitment of young hardwood trees overtime to replace mortality of older trees; and sufficient quality and quantity of hardwood ecosystems to provide important habitat elements for wildlife and native plant species. This relies on a set of forest-wide standards and guidelines for managing oak forest ecosystems in concert with the above goals.

Expectation in the preserve as it relates to natural and prescription fire is that stands in defense zones are fairly open and dominated primarily by larger, fire tolerant trees. Surface and ladder fuel conditions are such that crown fire ignition is highly unlikely. The openness and discontinuity of crown fuels, both horizontally and vertically, result in very low probability of sustained crown fire. Site specific fuels treatment prescriptions are designed to modify fire intensity and spread in treated areas. Managers will consider topographic position; slope steepness; predominant wind direction; and the amount and arrangement of surface, ladder, and crown fuels in developing fuels treatment prescriptions for each treatment area. Fuels treatments are intended to reduce surface, ladder, and crown fuels. Crown fuels will be modified to reduce the potential for spread of crown fire where susceptible.

Mixed Conifer Forested Areas

Fuel Management Objectives:

Stands have a structure and composition similar to those that existed in the pre-suppression era (1900-1930) that in uneven aged or all aged and has an irregular size structure. Large diameter trees are well distributed in stands. Fuel loading and spatial arrangement of fuels will be modified to minimize the potential for large crown fires on the landscape. Fires in this vegetation type are for the most part of low intensity with occasional passive torching, creating small-scale openings that provide for regeneration for shade intolerant species. Snags and coarse woody debris are present at near-historical levels for wildland habitat diversity.

Desired Condition:

- Fire return intervals of approximately 40-60 years are desired in the forest type, which requires fire for regeneration. At maturity, stands should be fairly open (40%-60% canopy closure) with trees reaching 20 inches in diameter at breast height.

- Forest stands with understory species ratios that are similar to the current overstory composition. The emphasis is on arresting encroachment of shade-tolerant white-fire and incense cedar and providing opportunities for pine and black oak regeneration.

- Landscape patterns that are resilient to large crown fires. Forest thickening and fuel continuity problems must be addressed at a landscape scale to avoid large stand-replacing fires. Understory fires (or thinning) should occur in each forest stand at twenty to forty year intervals. Some overstory kill during these events (2% to 4% of the stand) is desirable to create small openings for pine and oak regeneration. Under existing conditions, heavy fuels create a high potential for forest fires that kill a much larger fraction of the overstroy.

- A continuous and well-distributed supply of large trees. Large trees are both highly characteristic of pre-suppression forests and vital to many wildlife species. They have declined in number over the last fifty years and are threatened further by stand thickening and crown fire risk.

- Reduce and maintain montane conifer forest tree densities and fuel loadings to early fire suppression era (1930s) densities commensurate with site quality.

- Decrease the density of shade tolerant species (e.g. dog hair cedar).

- Increase the amount of larger diameter trees defined as greater than 24” of fire tolerant, shad intolerant tree species.

- The elements of forest structure which are important to meeting the desired conditions are:
  - All aged or irregular size structure.
  - Old growth trees retained as long as possible.
  - Controlled stocking levels.
  - A mixed species composition where it historically occurs.
  - Healthy and vigorous trees.
  - Near natural appearance.
  - Snag retention in secondary forested buffer.

- Maintain 70% or better crown cover in spotted owl nesting sites and 50% or better in crown cover in roosting or foraging areas for spotted owl. Otherwise maintain historical crown cover per California Vegetation Type Map Survey and other historical data sets.

- Soil protection is maintained with a minimum of 60% ground cover. Ground cover includes litter, rocks greater than ¼" and plants. There is a diversity of herbaceous plants comprised of forbs, annual grasses, perennial grasses, and desired shrub species. Desired shrub species comprised no more than 10%.

Community Buffer Program: There are two community buffer areas near SYOSP East, on the southeast rim and on the southwest rim. Community buffers and mortality removal projects near residence and within evacuation corridors are of the highest priority and will be continually assessed. Considerable work will need to be done to accomplish, but success hinges on treating the areas that structures actually occupy. In severe mortality areas, reforestation may be needed as a first step, while thinning and the reintroduction of fire are planned as the final steps in restoring forest to a pre-suppression fire regime in healthier portions of the forest areas.

Chaparral, which found in the understory of mixed conifer forest in San Diego County, will be treated both in high hazard areas near communities/residents and as a strategic tool to limit wildfire spread in other areas of the forest park or preserve land. Indirect community protection concepts are important in these management options, the primary function of fuel break and prescribed fire burns are to minimize wildfire patch size in or out of the facility. A flexible vegetation management will provide direct buffers, but also for substantial interior forest areas treatments to limit wildfire duration and patch size, improve timber stand resiliency to fire, insects, and disease, or to improve wildlife habitat.

Management Actions:
Full and partial closures will be considered as a tool for reducing fire occurrence during periods of extreme fire danger.

Suppression and prevention patrols will be increased in forest mortality areas during the fire season, which often lasts from May through January and, , is a year round season during drought periods.

DPR staff will become involved in community affairs and fire prevention education in adjacent communities.

Vegetation Condition Class:
Condition class descriptions: Condition classes are a function of the degree of departure from historical fire regimes resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. One or more of the following activities may have caused this departure: fire exclusion, timber harvesting, grazing, introduction and establishment of exotic plant species, insects and disease (introduction or native), or other past management activities.

Table 11: Vegetation Condition Class

Condition Class	***Attributes***	***Example of Management Options***
CC1	• Fire regimes are within or near an historical range. • The risk of losing key ecosystem components is low. • Fire frequencies have departed from historical frequencies by no more than one return interval. • Vegetation attributes (species composition and structure) are intact and functioning within an historical range.	Where appropriate, these areas can be maintained within the historical fire regime by treatments such as fire use.
CC2	• Fire regimes have been moderately altered from their historical range. • The risk of losing key ecosystem components has increased to moderate. • Fire frequencies have departed (either increased or decreased) from historical frequencies by more than one return interval. This results in moderate changes to one or more of the following: fire size, frequency, intensity, severity, or landscape patterns. • Vegetation attributes have been moderately altered from their historical range.	Where appropriate, these areas may need moderate levels of restoration treatments, such as fire use and hand or mechanical treatments, to be restored to the historical fire regime.
CC3	• Fire regimes have been significantly	Where appropriate, these

	altered from their historical range. • The risk of losing key ecosystem components is high. • Fire frequencies have departed from historical frequencies by multiple return intervals. This results in dramatic changes to one or more of the following: fire size, frequency, intensity, severity, or landscape patterns. • Vegetation attributes have been significantly altered from there historical range.	areas may need high levels of restoration treatments, such as hand or mechanical treatments. These treatments may be necessary before fire is used to restore the historical fire regime.

Fire/Fuel Management
Defensible Fuel Profile Zones – Interface/Fuelbreaks

Areas: All areas of interface throughout and around the forest.

Standards:
Four types of buffers around structures will be used in the urban interface to enhance community protection and firefighter and public safety. The buffers are generally applicable to one side of a structure in an interface situation and all sides of a structure in an intermix situation. Buffer width is based primarily on type of vegetation, 80th percentile fire weather, and a multiple of 3x flame lengths, the basis for the fire fighter safety zones.

Table 12: Vegetation Min Width, Max Width Activities/Standards

Vegetation	Min Width	Max Width	Activities/Standards
Grass	30 feet	50 feet	Hand, herbicide, mechanical, Rx fire, and grazing.
Chaparral	45 feet	100 feet	Hand, herbicide, mechanical, Rx fire, grazing.
Chap/Forest	45 feet	100 feet	Mechanical and hand thinning, in addition to removal techniques listed above.
Forest Land	50 feet	200 feet	Mechanical or hand thinning to achieve a maximum crown closure of 40%. Once accomplished, perform understory Rx fire for maintenance; no snags present, and a max of 7-10 tons/fuel per acre (Need secondary buffer in addition to primary)

Secondary Buffer: These are not vegetative removal ones like the primary buffer. This is a manipulation zone where the fuel bed can be modified less frequently than in the primary zone using the same techniques except herbicides. Thinning and pruning of chaparral should also be considered in this zone.			
Chaparral		100 feet	Hand, mechanical, Rx fire, grazing
Chap/Forest		100 feet	Hand, mechanical, Rx fire, grazing
Forest Land		1,500 feet	Snag retention in the secondary Forested Buffer of up to 8/10 acres, fuel loading of 10-20 tons/acre is permissible. Less intensive thinning, less frequent understory burning, and removal of fuel ladders would be the primary activities.
Fuelbreaks: Should be at least 300 feet wide, having no more than 3 tons of fuel per acre. Designed using irregular widths, shapes, and patterns to meet visual quality objectives and wildlife management objectives; and retain patches of mid-and late-successional stage chaparral of at least one acre or larger for each 10 acres of fuelbreak where slopes are less than 60 percent.			
Exemptions: Fuel treatments in coastal sage scrub habitat, except for fire clearance around structures and on fuel breaks.			
Prohibit: Type-conversion of key and occupied California gnatcatcher habitat via fuel management activities (e.g. conversion of coastal sage to annual grasslands).			

Forest restoration:
Forest restoration activities will be conducted in coordination with a County certified biologist and cultural resources specialist to protect sensitive resources.

Mortality Removal – Removal of dead vegetation to reduce fire hazard. This includes in-house and contract removal of trees and shrubs, with treatment of all slash to move forested areas from condition class three towards condition class one. In chaparral areas mortality removal should be planned to reduce the fire hazard from high to low.

Thinning – Removal of living trees from overstocked stands, in most cases trees of 24 inches in diameter or less, with slash treatment to move forested areas from class two to class one. Thinning is required prior to reintroduction of fire in most cases.

Reforestation – Projects are either designed to facilitate natural recovery following disturbance (fire, drought related mortality, insect and disease) or to implement planting projects as needed when natural processes are not likely to achieve desired results.

Buffers – Reduction of vegetation density adjacent to structures with in urban interface. A secondary buffer is an additional strip of vegetation modified to reduce flame heights and radiant heat. A two buffer system is designed to make most structures defendable.

Prescribed Fire – Generally small burns in chaparral to reduce fire hazard near communities or a part of a larger overall landscape mosaic designed to limit wildfire patch size. Prescribed fire is also used to help restore and maintain land in the coniferous forest areas, currently categorized as condition class two or three. Some small burns should be conducted to enhance wildlife browse conditions.

Biological Management and Enhancement

The following management recommendations were derived from the baseline survey reports listed at the beginning of the document. In some cases, the management recommendations for certain species were in direct conflict with those of other species or vegetation communities. Various recommendations were determined to be inconsistent with the goals and objectives of the DPR. Below are a discussion of each management and monitoring goal and a description of how to achieve the goal. All management and monitoring described below is subject to funding availability.

Flora

Goal: Maintain the quality and diversity of native habitat types onsite.

A key portion of meeting this objective will be to control the spread of non-native, invasive plant species. The vegetation on SYOSP included several sensitive, native vegetation communities and non-native grasslands. As stated previously, approximately 2,240 acres of the 3,800-acre SYOSP East burned during the Cedar Fire. The Preserve Manager should monitor the recovery of pre-burned habitat quality and diversity. The quality and diversity of on-site habitats, including the spread of invasive plant species, will be tracked as part of a monitoring program described below (to be initiated as funding becomes available). With regard to post-fire recovery, responses will need to consider the immediate need for controlling non-native species, while taking a longer-term view to determine whether habitat quality and diversity returns through the natural succession process.

A County biologist shall use the California Native Plant Society's Vegetation Rapid Assessment Protocol (Appendix I) to monitor the distribution and quality of vegetation communities. This protocol consists of rapid assessment plots where data is gathered on native and non-native plant species composition, vegetation disturbance, soil type and other variables. Sampling sites will be identified using random sampling within stratified vegetation types and enough sites will be sampled within each major vegetation type so as to gain a statistically significant representation of vegetation community distribution and quality within the SYOSP. The only deviation from the protocol would be the use of T. Oberbauer's modified Holland code to classify vegetation instead of Sawyer, Keeler-Wolfe.

Sudden Oak Death Syndrome (SODS) is not currently an issue in the SYOSP. However, there is a possibility that the SYOSP could have SODS problems in the future. The county biologist who monitors the vegetation communities should notify the park resource manager if a SODS issue arises. A plan to manage SODS will be prepared if SODS becomes an issue in the SYOSP.

Goal: Reduce, control , and where feasible eradicate invasive flora known to be detrimental to native species and/or local ecosystems.

INVASIVE PLANT SPECIES

In addition to monitoring the vegetation communities, an invasive plant species control strategy should be implemented (subject to funding availability). Priorities for removal should be based on the invasive species' biology and the immediate need for a specific area. Invasive removal efforts should be timed to minimize dispersal of seeds. Particular attention should be paid to controlling the spread of invasive plant species into vulnerable habitats such as riparian areas.

A variety of potential methods exist to control invasive plant species: hand removal, managed grazing, prescribed burning, disking or grading, solarizing (cover in black plastic or canvas tarps to keep out sunlight), and herbicides. Priority removal should be given to tamarisk (*Tamarix spp.*), tree-of-heaven (*Ailanthus altissima*), and ripgut (*Bromus diandrus*), the most prevalent exotic species on the preserve. A plan shall be developed, as funding becomes available, to set up test plots on SYOSP to control invasive plant species using a variety of methods such as those listed above. This plan should describe the use of cattle grazing throughout the SYOSP. No invasive plant control activities should occur during the reproductive seasons of sensitive animal species known to occur in the habitat where the control method is being undertaken.

If invasive plant species control is conducted in the area of SYOSP purchased with Transportation Enhancement Activities Fund (TEA), the California Department of Transportation (Caltrans) shall be contacted.

Once an Invasive Plant Species Control Plan is complete, trained volunteers may be used to monitor and remove invasive plant species as part of neighborhood, community, school, or other organization's activity programs. It may also be possible to use work crews to assist in invasive plant species control activities. The County biologist will prepare and provide training on methods and timing of removal to volunteer and work crew groups. All volunteer efforts shall be arranged in coordination with the County ranger.

Any person applying herbicides must be trained and licensed in their application and must observe all safety and environmental regulations (e.g., wear protective equipment, follow product label directions). A product such as Aquamaster ® should be used in or near aquatic or wetland areas. Application must not be conducted in windy or rainy weather and should be conducted in a manner that minimizes overspray onto surrounding plants and contamination of downstream waters. Mixing or diluting herbicide chemicals must occur within a designated staging area and no clearing of application equipment or dumping of herbicides is permitted on the SYOSP.

Goal: Maintain diverse populations of sensitive plant species.

The sensitive plant species known to occur on the SYOSP are listed in Table 2. The primary method of protecting sensitive plant species is though management and monitoring of their habitat to maintain quality and diversity. Some plant species in the SYOSP are sensitive and will require monitoring of their population. For these species, plots should be set up and monitored every three years. The survey method for each species will be determined in a Sensitive Species Monitoring Plan (to be developed as funding becomes available). In addition, a County biologist should conduct rare plant surveys every five years, concurrent with the vegetation/habitat surveys.

Collection of native plants will be strictly prohibited unless collectors request and are granted a collection permit by the DPR. Gathering of native plants for Native American ceremonies will require a collection permit.

Fauna

AQUATIC

Goal: Maintain diverse, high quality, aquatic habitat for native aquatic species and restore lower quality habitat.

The sensitive aquatic species known to occur or with the potential to occur on SYOSP are listed in Table 3. Meeting the goal of improving water quality and beneficial uses for Santa Ysabel Creek; cattle ponds 1-3; springs 1 and 2; and the headwaters for the San Diego River will assist the County in meeting this goal. Having good water quality improves the habitat for native species such as the arroyo toad. In addition, because this is close to the headwaters of the San Dieguito and San Diego River watersheds, it is important that water quality in this area is high. Establishing aquatic areas with high habitat value in the SYOSP will result in downstream waters that are of higher water quality.

Access to the aquatic habitat should be restricted. To restrict access, trails should be signed stating that users are to stay on the trail and not impact the sensitive resources in and adjacent to the aquatic areas.

Non-native rainbow trout, mosquito fish, bullfrog, and Rio Grande turkey were also located on the SYOSP. As funding becomes available, action should be taken to control the populations of these species on the SYOSP. These species are known to prey on native flora and fauna indiscriminately. Control techniques include:

- Reduction of permanent water, allow cattle ponds to dry out naturally
- Drain ponds in fall to kill bullfrog tadpoles

- When ponds are full, trap non-natives (crayfish, adult bullfrogs, turkeys)

However, reduction of permanent water sources could potentially impact the spadefoot toad and/or pond turtles (both of which have the potential to occur on the SYOSP). A survey of the ponds for these species should be conducted prior to drainage of the ponds. Surveys for spadefoot toads should be conducted during normal or high rainfall years.

In order to protect and manage the population of Arroyo toads found on SYOSP West and to encourage new populations, a management plan for arroyo toads should be developed. This plan should include conducting protocol surveys on both SYOSP West and East. Plan development is of a high priority, but is subject to funding availability.

HERPETOFAUNA

Goal: Maintain high quality habitat for herpetofauna.

Sensitive herpetofauna found on SYOSP are listed in Table 4. In order to provide habitat for various species, downed wood should be kept onsite. To protect herpetofauna basking in roads or in areas where users may encounter them, signs should be placed on road/trail stating, “Please be aware and respectful of animals on the road. If you encounter an animal, do not disturb, harass, or touch it. Animal collection is prohibited.”

Rattlesnakes are known to inhabit the SYOSP. Signs alerting users to their presence should be posted. Information on their importance to the ecosystem should be included in these signs to protect the species from being harassed or killed by uneducated users. Ranger staff should be trained on first aid for rattlesnake bites. Information on location of nearest hospital or phone service should be posted at all staging areas.

ANTS

Goal: Maintain the diverse native ant population.

All ant species found on the SYOSP were native. In order to reduce the probability of non-native ant introduction, the ranger and/or project manager should monitor the importation of soil or plant materials for trail maintenance or restoration projects. As funding becomes available, County biologists should monitor near paved roads and any buildings within SYOSP, where humans may accidentally introduce Argentine or red imported fire ants, specifically, new and existing water sources and habitat disturbance, new trails, roads, or other infrastructure.

AVIFAUNA

Goal: Maintain diverse and healthy populations of avifauna species.

A list of sensitive avifauna species can be found in Table 6. Like most of the plant and herpetofauna species, avifauna will be protected by management and monitoring of vegetation communities/habitats. Species specific surveys should be conducted for Least Bell's vireo (LBV), the coastal California gnatcatcher (CCG), southwestern willow flycatcher (SWF), and the California spotted owl. USFWS protocols for the LBV, CCG, and SWF shall be used. Surveys for the California spotted owl should be conducted using survey protocol approved by County biologists. During surveys for California spotted owls, surveys for barred owls should also be conducted. Barred owls are known to displace California spotted owls and their distribution and/or presence on SYOSP should be monitored. All protocol and owl surveys should be conducted every 3 years (based on funding availability).

All users of the SYOSP should be restricted from using the riparian area. In addition, if cattle grazing is used as a method for weed reduction, all grazing shall be kept away from riparian areas. To keep users from the riparian area, signs should be erected stating the users are to stay on the trail and out of the riparian area (except on designated trails that run through the riparian area). Cattle should be kept out of restricted areas with reinforced fencing.

Goal: Reduce and eventually eradicate populations on non-native avifauna species.

Various non-native avifauna species were identified in the SYOSP including wild turkeys, brown-headed cowbird and European starlings. Surveys should be done to determine the distribution of the non-native species and provide management recommendations for each of the species found. In addition, studies to determine if the non-native species are competing with native species should be conducted.

BATS

Goal: Maintain diverse and healthy populations of bat species.

A list of sensitive bat species can be found in Table 7. To maintain the diverse native populations of bat species on the SYOSP, users should be restricted from using the riparian area, except when traveling on approved, open trails. Signs will be posted to keep users out of the area due to its significance as foraging and possibly roosting habitat.

As funding becomes available, bat boxes of various designs and colors will be installed, based on instruction of a bat expert, to allow for roosting habitat within the preserve. In addition, an artificial cave-like structure for obligate, cave roosting bats should also be constructed and installed on the SYOSP. USGS has offered to provide specs for each box type as well as the artificial cave. If possible, the local community should be involved in making and installing the bat

boxes and artificial cave. Local schools and conservation groups should be contacted to determine the possibility for volunteers.

In order to maintain year round foraging for bats using the SYOSP, ponds on the preserve should not be stocked nor should pest control practices be implemented on the ponds. If possible, year round open water should be maintained in the ponds or creek. All live and dead/dying trees provide habitat for bats and should be kept on the SYOSP.

The implementation of a non-native grass control program can provide foraging habitat for bats. Various bats require native grasslands for foraging because these grasses are clumped and leave room for the bat to land and grab the prey species (non-native grasses do not provide this type of habitat as they do not grow in clumps). If controlled burns are used to eliminate non-native grasses, the ranger/project manager should minimize the impact to leave litter as some bats bury themselves in the litter.

SMALL MAMMALS

Goal: Maintain diverse and healthy populations of small mammal species.

A list of sensitive small mammals can be found in Table 8. To maintain diverse and healthy populations of small mammal species found in the SYOSP, small mammal trapping using a variety of methods including pitfall trap arrays and small and large box traps should be conducted. This trapping should follow the methods used for the initial habitat assessment (USGS 2003). Continue to monitor invasive species and the recovery of diversity in restored habitats over time. A County biologist should monitor the use of rodenticides, fertilizers, disking, planting or irrigation in the SYOSP. These uses should be restricted in or near Stephen's kangaroo rat Areas A and B.

Goal: Monitor for Stephens' kangaroo rat (SKR) and protect and maintain the existing habitat for the SKR.

Reconnaissance surveys should be conducted for SKR in Areas A and B every three years or in years where rainfall is above normal. If SKR are detected, trapping surveys should be conducted to verify species and collect genetics samples.

To protect and maintain the existing SKR habitat, continue cattle grazing at moderate stocking densities should be used in Areas A and B. Fences should be erected exclude cattle form riparian areas and oak woodlands. All cattle grazing activities should be described in a cattle grazing plan (see vegetation goals above). Though cattle grazing could be used, horse grazing should be prohibited

because horses tend to compact soils and collapse SKR burrows with their sharper hooves. In addition, horses could consume, and therefore reduce, the population of forb species used as food sources by SKR.

For areas where cattle grazing would be prohibited, the County shall create a prescribed burn plan (see Forest Health Plan section below) to manage vegetation cover in SKR Areas A and B. This plan shall include a vegetation monitoring plan to increase habitat value for SKR. A County fire ecologist should be consulted to determine the optimal timing for prescribed burns in order to favor annual forb versus grass recruitment after the burn.

The County ranger and biologist should monitor relative abundance of annual forbs versus grasses, especially in Areas A and B. Management for SKR habitat should strive to maintain sparse cover of annual forbs and grasses and prevent invasions by exotic grasses such as ripgut brome.

MEDIUM AND LARGE MAMMALS

Goal: Maintain diverse and healthy populations of medium and large mammal species.

No sensitive medium and large mammal species were found on SYOSP. To maintain diverse and healthy populations of medium and large mammal species, access to SYOSP will be limited to between 8:00 am and sunset. Allowing large and medium size predators to move throughout the SYOSP without user interaction during times of increased hunting/foraging. As mentioned above, cattle grazing (if used) will be limited to specific areas, to be determined in the grazing plan.

As funding becomes available, the County should install and maintain long-term camera stations to monitor for wildlife use, especially for mountain lions. In addition, the County should conduct species-specific surveys to determine presence of badgers and radio or GPS telemetry surveys to provide information on movement of populations.

If SR 79 is improved by the California Department of Transportation, the DPR should suggest the installation of wildlife crossings as part of the project design. These crossings would assist the facilitation of wildlife across SR 79.

Cultural Resource Management Recommendations

STEWARDSHIP

DPR is charged with preserving, managing, and interpreting the archaeological and historic resources at Santa Ysabel for the benefit of San Diego County residents. The DPR will strive to meet the highest standards for preservation, access, interpretation and research established for sites of exceptional significance within the resources available. As part of the planning process, the

following objectives were established to guide the goals and implementation at the SYOSP Resources Management Plan.

Preservation – The DPR will preserve and maintain the cultural resources balancing the need for public access with the need to preserve cultural and natural resources.

Access –The DPR will employ a wide range of methods and technologies to make the Santa Ysabel cultural resources more accessible to the public and make it more important to the various communities that the site serves.

Education –The DPR will inform the public about the cultural resources as a site of national significance and the accomplishments of the Kumeyaay Indians, Spanish, Californios, and American ranchers who lived and worked at these resources. The DPR will also communicate the importance of preserving the cultural resources and will work to foster respect for the Native American cultures that built some of these resources, and for the spiritual nature of the site for many Native Americans.

Research – The DPR will foster research at SYOSP in order to discover and disseminate knowledge about the cultures that have lived in this location,

SURVEYS

Goal: Identify, record, and assess significance of all cultural resources within SYOSP.

A qualified specialist should survey the remaining areas of Santa Ysabel East and all of Santa Ysabel West for cultural resources. The survey should include:

- A complete recordation of the resources in compliance with the California Office of Historic Preservation guidelines.
- An assessment of each site found for eligibility as a Historical Landmark for the County of San Diego and/or CRHR/NRHP.
- An evaluation of SYOSP for significance as a Cultural Landscape.
- Conduct and record oral histories of the descendants of recent owners to better establish the American Ranching period history of SYOSP

PRESERVATION

Goal: Preserve and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations.

The cultural resources in the western half of Santa Ysabel East, which have already been evaluated for the NRHP, will be managed in perpetuity according to the MOA and Action Plan (see Appendix). No ground disturbing activities are allowed on or in any cultural resource site in SYOSP until the impacts have been assessed and mitigation measures established. Any person conducting research of any kind within SYOSP shall obtain a Right of Entry Permit, which outlines the precautions to be taken to preserve and protect cultural resources. A program to educate the public regarding the importance of preservation of the significant cultural resources should be developed.

Goal: Identify, eliminate, and/or reduce/mitigate impacts to the cultural resources from natural or human-caused events.

Signs shall be stationed at all trailheads that notify users that sensitive cultural resources cannot be damaged. Signs shall be posted throughout SYOSP that indicate that removal of any archaeological material is prohibited by law.

When people are identified who are suspected of vandalism to cultural resources the appropriate law enforcement authorities shall be notified.

Natural impacts to cultural resources (fire, erosion, floods, etc) shall be identified and impacts prevented or mitigated.

All trails and roads in SYOSP shall avoid impacts to any cultural resources

Safeguards against incompatible land and resource uses shall be identified to protect all cultural resources.

CONSULTATION

Goal: Conduct frequent consultation with the Santa Ysabel Tribe in order to identify appropriate management of precontact and ethnographic cultural resources.

Traditional uses by the Santa Ysabel and Mesa Grande tribes shall be encouraged. All activities by Native Americans in SYOSP shall be conducted with a Right of Entry Permit specifically designed for SYOSP. Obtaining Right of Entry Permits will be the responsibility of the tribes. The County Resource manager will be responsible for issuing the permits.

The tribes shall be encourage to participate in evaluation, recordation, protection and preservation of cultural resources

The Tribe shall be the conduit of information about SYOSP to other Native American entities

RESEARCH OPPORTUNITIES

Butterfly / insect inventory, including Quino checkerspot butterfly (*Euphydryas editha quino*) protocol surveys.

Aquatic invertebrates inventory

Granite night lizard (Xantusia henshawi) surveys

Water quality surveys

Effect of fuel reduction, fire management, and reforestation on native vegetation communities, species, and forest health

Non-native species surveys including management recommendations

Discover knowledge about the cultures that have lived in this location

Survey of the remaining areas of Santa Ysabel East and all of Santa Ysabel West for cultural resources

An assessment of each site found for eligibility as a Historical Landmark for the County of San Diego and/or CRHR/NRHP

An evaluation of SYOSP for significance as a Cultural Landscape

Recording of oral histories of the descendants of recent owners to better establish the American Ranching period history of SYOSP

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