State of California
The Resources Agency
Department of Fish and Wildlife

# Negative Declaration

for the

# San Antonio Valley Ecological Reserve
# Draft Land Management Plan

February 2015

San Antonio Valley Ecological Reserve

Draft Land Management Plan

# *I. INTRODUCTION*

## A. Purpose of Acquisition

The purposes for acquisition of this property were to protect sensitive plant and animal species, maintain valuable habitat linkages between adjacent public and private lands and to provide research, educational and limited recreational opportunities for the public.

## B. Acquisition History

The 2,899-acre San Antonio Valley Ecological Reserve (SAVER) (formerly a portion of the Hurner Ranch) was identified as a first priority acquisition in the Mount Hamilton Conceptual Area Protection Plan written by the California Department of Fish and Wildlife (CDFW) in 2001. The property was initially purchased and held by The Nature Conservancy until acquisition authority was approved by the Wildlife Conservation Board (WCB) in May 2007, and conveyed to the State on August 21 of that year. Funding sources from the California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Fund (Proposition 40) were used to purchase the property.

In November 2012, the 383-acre Expansion 1 was approved by WCB and acquisition was funded by the same (Proposition 40) source. Deed was transferred to CDFW in June 2013. Expansion brought the total acreage of SAVER to 3,282 acres.

## C. Purpose of this Management Plan

The purpose of this Management Plan is to:

1) Guide management of habitats, species, and programs described herein to achieve CDFW's mission to protect and enhance wildlife values, and provide public recreation opportunities where appropriate and feasible.
2) Serve as a descriptive inventory of fish, wildlife and native plant habitats which occur on or use this property.
3) Outline appropriate public uses of these resources.
4) Provide an overview of the property's operation and maintenance, and personnel requirements to implement management goals.
5) Serve as a budget planning aid for annual regional budget preparation.
6) Provide a description of potential and actual environmental impacts and subsequent mitigation which may occur during management.
7) Provide environmental documentation to comply with state and federal statutes and regulations.

Management will focus on maintaining viable populations of sensitive species and their habitats and on the restoration and enhancement of natural communities within an ecosystem based framework. Emphasis will be placed on the protection of vernal pool and

wetland areas, maintenance, restoration or enhancement of native grassland, encouragement of continued oak regeneration and the control of noxious species. Integrated management may include controlled grazing, burning or chemical weed control if appropriate.

Public use opportunities will be evaluated and phased as appropriate use levels are determined through baseline habitat and species information surveys. Cattle grazing was historically intense on the property. Although there is currently no grazing lease in place, fencing is inadequate to keep cattle from some of the surrounding properties out. Securing the perimeter fencing will provide an excellent opportunity to record positive or negative changes in the floral and faunal communities found on SAVER due to the change in vegetation management. Initially, the primary use of SAVER will be oriented toward directed research. This will allow the property to be utilized for academic purposes while providing baseline information which can be used by CDFW to make informed management decisions. After research has provided information on habitat trends, plant productivity, ecological processes, species composition and diversity, wildlife managers will be able to phase in uses including hunting, fishing, outdoor education and restoration projects. SAVER will be managed as an unstaffed land, and there is not currently funding available in CDFW budgets to provide services including public access supervision, so initial use will be limited to pre-arranged, scheduled activities.

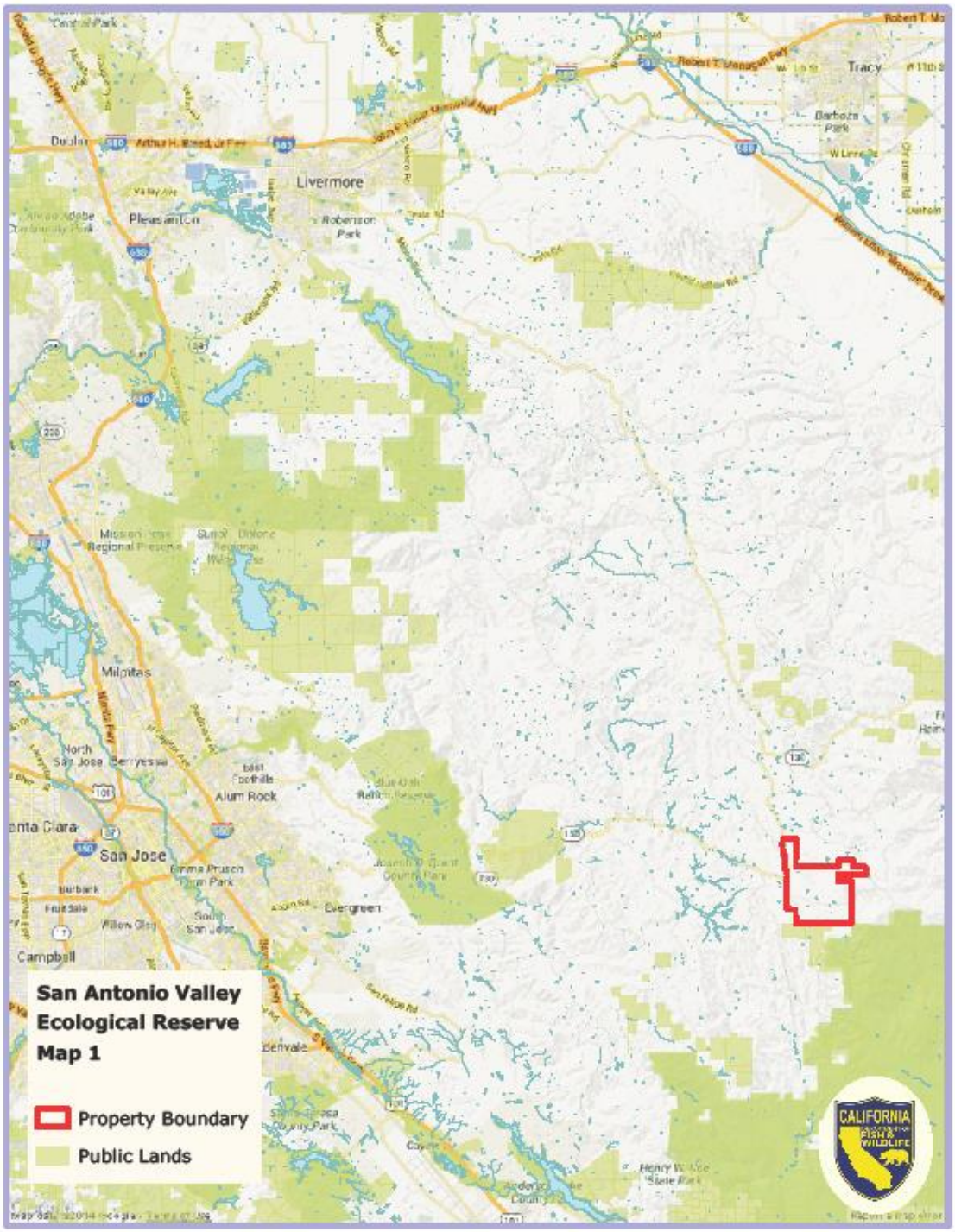
## *II. PROPERTY DESCRIPTION*

### A. Geographic Setting

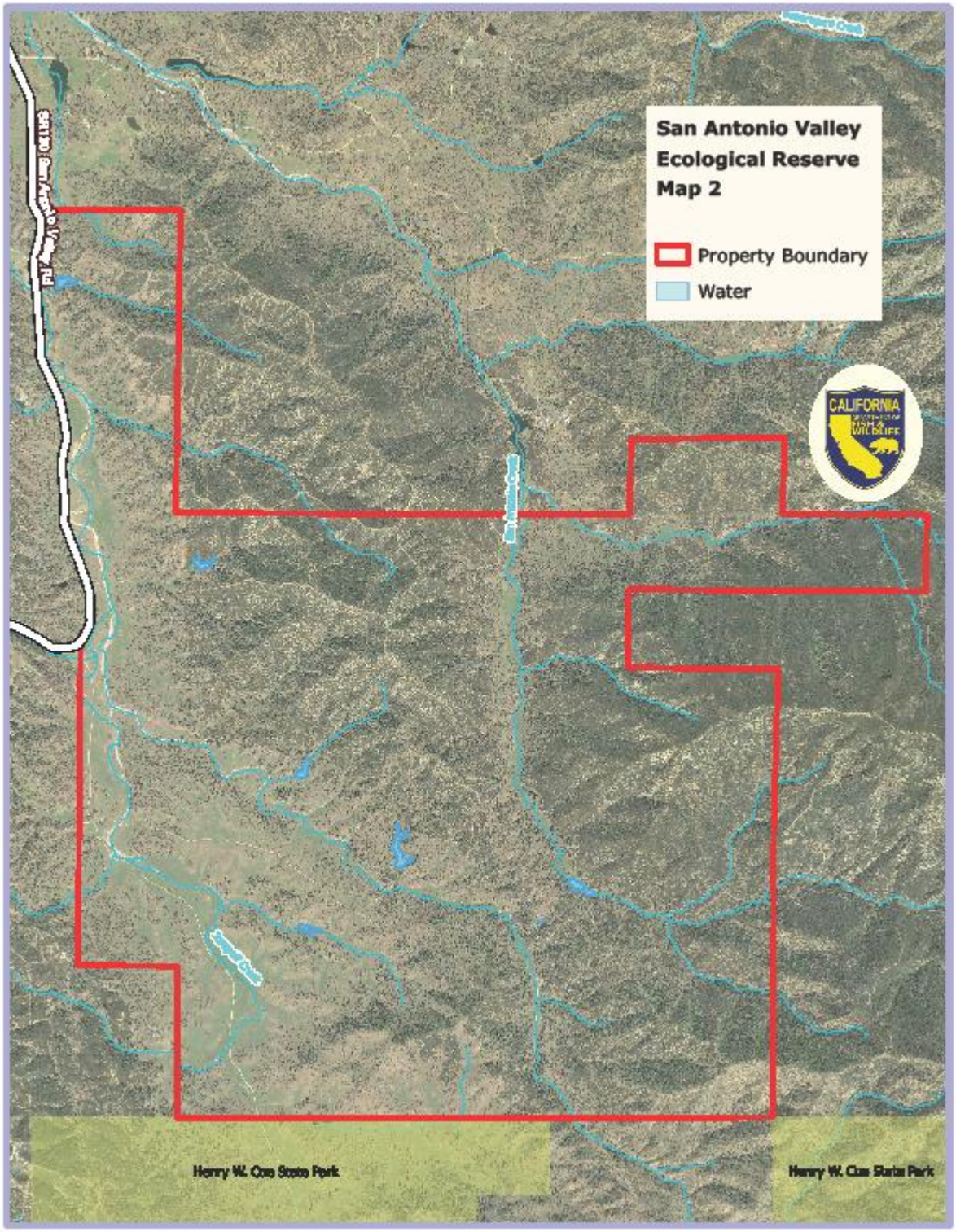
SAVER is located approximately 30 miles east of San Jose and 33 miles south of Livermore in eastern Santa Clara County. It lies within the Hamilton Range segment of the Diablo Range, one of California's interior coastal ranges. It constitutes a portion of the upper headwaters of the south-north oriented San Antonio Valley. Elevation ranges from 2,079 to 2,995 feet on the property.

Access is currently limited to the northwest side of SAVER from a gate next to State Route 130, otherwise known as San Antonio Road. The access gate can be reached from San Jose by taking Alum Rock Road to Mount Hamilton Road which turns into San Antonio Road after the summit. It can also be accessed from Livermore by driving south on Mines Road until it turns to San Antonio Road. Access from the East is via Del Puerto Canyon Road which starts at Interstate 5 near Patterson and meets San Antonio Road approximately 4.5 miles north of SAVER. (See Map 1).

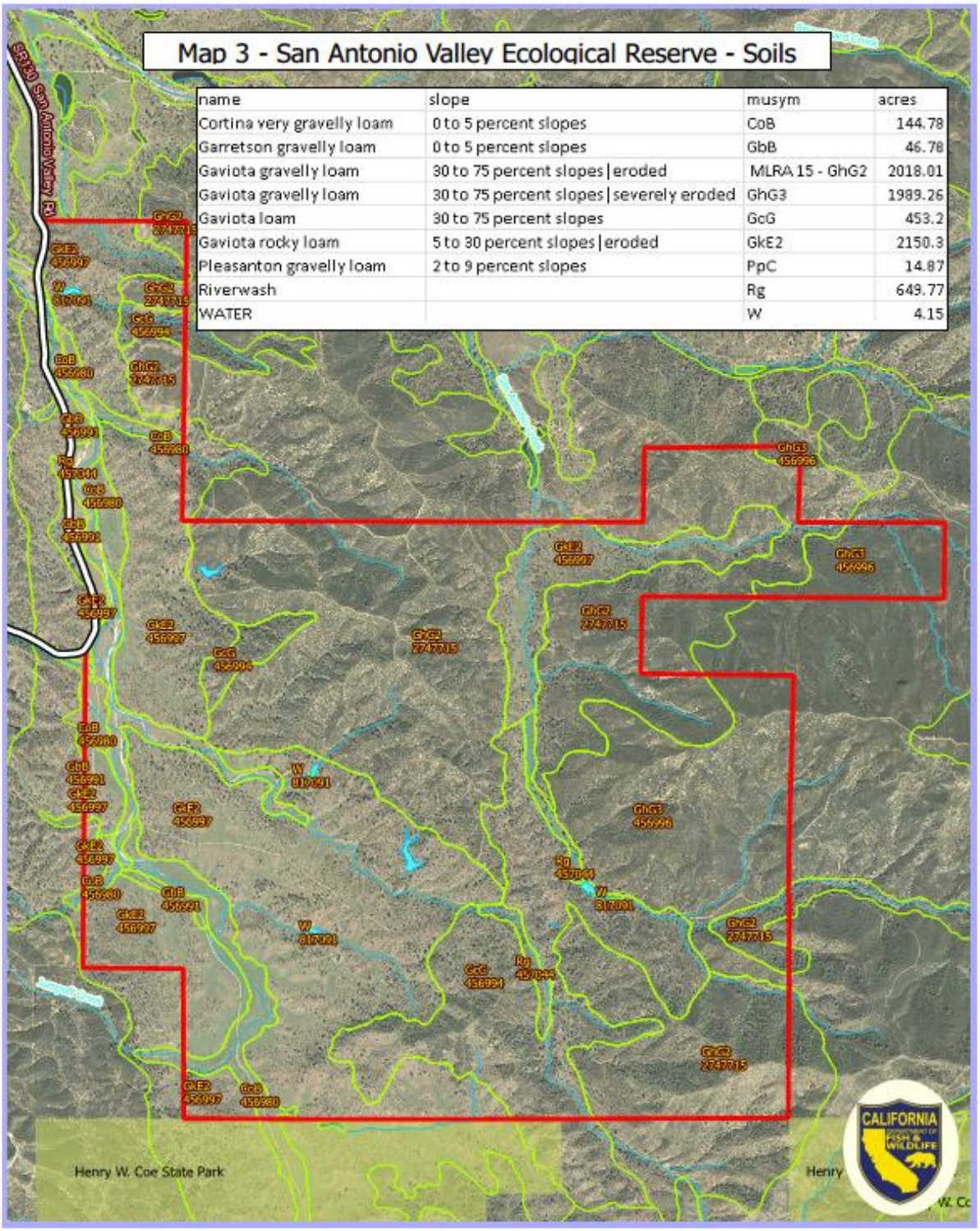
**MAP 1**


Livermore
Pleasanton
Tracy
Milpitas
San Jose
Alum Rock
Evergreen
Campbell
San Antonio Valley
Ecological Reserve
Map 1
Property Boundary
Public Lands
CALIFORNIA
FISH & WILDLIFE

**MAP 2**


San Antonio Valley
Ecological Reserve
Map 2
Property Boundary
Water
CALIFORNIA
DEPARTMENT OF FISH & WILDLIFE
Henry W. Coe State Park
Henry W. Coe State Park

**MAP 3**


Map 3 - San Antonio Valley Ecological Reserve - Soils
name | slope | musym | acres
Cortina very gravelly loam | 0 to 5 percent slopes | CoB | 144.78
Garretson gravelly loam | 0 to 5 percent slopes | GbB | 46.78
Gaviota gravelly loam | 30 to 75 percent slopes | eroded | MLRA 15 - GhG2 | 2018.01
Gaviota gravelly loam | 30 to 75 percent slopes | severely eroded | GhG3 | 1989.26
Gaviota loam | 30 to 75 percent slopes | GcG | 453.2
Gaviota rocky loam | 5 to 30 percent slopes | eroded | GkE2 | 2150.3
Pleasanton gravelly loam | 2 to 9 percent slopes | PpC | 14.87
Riverwash | Rg | 649.77
WATER | W | 4.15
Henry W. Coe State Park
CALIFORNIA

## B. Property Boundaries and Adjacent Land Use

SAVER boundaries are shown in Map 2 and lie entirely within the Mt. Stakes USGS 7.5 minute Quadrangle. Historic use of the property was cattle grazing. Primary use of the private lands found to the west, north, east and a portion in the south is also cattle ranching. Approximately 2/3 of the southern boundary fronts the northern edge of Henry Coe State Park. The park is primarily used for public recreation, environmental interpretation, and habitat protection.

## C. Geology, Soils, Climate and Hydrology

The San Antonio Valley is formed along the the Greenville Fault which runs in a south/north direction from Mount Hamilton to Mount Diablo. The riverine portions of SAVER are composed of alluvial sand and gravel. Low lying hills are primarily Franciscan Formation predominantly made up of dark gray shale with interbedded sandstone and a few outcrops of varicolored bedded chert. This is characteristic of eugeosynclinal marine clastic sedimentary rocks. The majority of the eastern portion of SAVER is generally steeper. It is also comprised of Franciscan formation but predominantly of undifferentiated sandstone with shale and some chert inclusions. A very small portion of the extreme northeast corner of the property is comprised of landslide rubble (Diblee 2006).

Soils on SAVER are depicted in Map 3 and Appendix A. They are primarily composed of gravelly or rocky loams although some Gaviota Loam does occur in the south central area. A more thorough assessment of the soils may be found in Bainbridge's 2006 summary (Appendix A).

Climatic records in the vicinity of SAVER are either sporadic or of limited comparative value due to significant elevation differences in the area. For example, long-term environmental data was captured from nearby Mount Hamilton, less than 13 miles away, but the elevation ranges from 1,100 to 2,000 feet higher than SAVER, and weather has a significant coastal influence due to it's more immediate proximity to San Francisco Bay. The best available precipitation data comes from the Santa Clara County Water District's Shanti Ashrama Station immediately west of SAVER. A gap exists for the period extending from 1953 to 1964 but from 1913 to 1952 rainfall averaged 20.1 inches and from 1964 to 2009 average precipitation was 21.2 inches. At the Western Regional Climate Center's (WRCC) Gerber Ranch Station which is approximately 4 miles north of SAVER two periods of data were summarized; 1960 to 1977 and 1971 to 2000. For the period 1960 to 1977 average total precipitation was 17.67 inches. For the period 1971 to 2000 it was 15.94 inches. No temperature data is available from either Gerber or Shanti-Ashrama Stations. Temperature data comes from the WRCC's Del Puerto Canyon Station which is approximately 1,000 feet lower in elevation. Data only exists for the months of March, July, August and December. Mean monthly averages for the period 1959 to 1977 were 53.4, 76.3, 67.7 and 46.0 respectively. Temperature extremes over the period were 102 on July 26 and August 31, 1976 and 20 degrees on December 09, 1975.

All major streams on SAVER are ephemeral. Jump-Off Creek drains the northwest, southwest and a majority of the southeast quarters of SAVER, before it's confluence with San Antonio Creek approximately 4.7 miles north located on private property. San Antonio Creek drains the northeast third of the property, running approximately 24 river miles north

before emptying into Lake Del Valle. There are a total of five reservoirs greater than one acre and two stock ponds less than an acre on the property. One reservoir is located in the San Antonio Creek watershed and the others are located within tributaries of Jump-Off Creek. A preliminary assessment indicates that at least two stock ponds and two active springs also exist on the property. One of the stock ponds no longer holds water due to a rodent hole in the dam structure. The other stock pond is fed by one of the two known springs on SAVER. In addition, a natural catchment exists in the watershed located in the extreme northeast portion of the property.

## D. Cultural Features

The San Antonio Valley appears to have been a transitional area between the native Ohlone cultures from the San Francisco-Monterey region and the Yokut of the San Joaquin River watershed. The Ohlone are speculated to have arrived in the Bay Area around 500 A.D. when they displaced Hokan speaking populations already in the Region (http://www.nativewiki.org/Ohlone). Exact territorial boundaries of the Ohlone are unknown for a variety of reasons. One reason is the early fragmentation of the culture during initial settlement by Europeans. Another reason information is lacking is that the Hamilton range appears to have only been seasonally or sporadically inhabited. The Ohlone had permanent villages but conducted regular seasonal movements within a fairly small defined area. One village named Junas is thought to have existed in either the Hospital Creek drainage or within the San Antonio Valley (www.comanchelodge.com/nations/ohlone-tribe.html). Hollowed out bowls occur in native rocks found in various locations within SAVER and were likely used for grinding acorns.

Juan Batista De Anza traveled through the Hamilton Range and along the west side of SAVER on his return trip to Monterey in 1776 after exploring the areas which are now San Francisco, Martinez, Antioch and the southwestern edge of the Delta. The trail follows the west side of Jump-Off Creek due south crossing through Henry Coe State Park and private land.

SAVER is outside any known Spanish Land Grants. In Santa Clara County, Rancho Los Huecos encompassed Mount Hamilton and Isabel Valley to the west (Rambo 1968). Ranchos Del Puerto and Orestimba were east of SAVER in Stanislaus County. (http://www.e-referencedesk.com/resources/counties/california/stanislaus.html)

Mining for magnesite occurred at the Western Mine on Red Mountain approximately 5 miles north of SAVER between 1905 and 1945.

SAVER was a portion of the San Antonio Valley Ranch owned by Hurner since the turn of the last century. Primary use of the land was cattle ranching. Existing cultural features include fences, approximately 4.25 miles of unpaved roads and 3 abandoned cattle feeders in various states of disrepair.

## *III. HABITAT AND SPECIES DESCRIPTION*

### A. Vegetation Communities, Habitats and Plant Species

Over 300 species of plants were identified at SAVER by Bainbridge in her "Preliminary Assessment" of 2006 (Appendix A and formatted in Table 1). That report is the primary source for the following vegetation information. Plants were grouped in nine allliances for purposes of her analysis.

Classification was per Sawyer-Keeler Wolf (1995) except for several provisional Associations which were observed that did not fit into that system. These plant groupings fell generally within "40.000.00 Grass & Herb Dominated Communities" including Native and Non-Native Grasslands and Vernal Pool categories. At this point, Bainbridge's "Provisional" assemblages and Sawyer-Keeler Wolf diverge. See (Appendix B).

The major habitats found on the property include Annual Grasslands, Chamise Chaparral, Blue Oak Woodland, Valley Oak Woodland, Blue Oak-Foothill Pine, Desert Scrub and Vernal Pool. Although there are perennial grasses on SAVER, they are primarily minor components of the previous listed vegetation communities. There are also isolated individual stands of pure Foothill Pine, California Juniper, California Bay and California Rose, which make up less than one percent of the land cover at SAVER. Artificial lacustrine habitats occur at five reservoirs which are greater than one acre in size and two small ponds which are less than one acre. They also make up less than one percent of SAVER's land area.

Some of the key elements of the various Annual Grasslands Alliances are seaside barley (*Hordeum marinum*), soft chess brome (*Bromus hordeaceous*), sticky calycadenia (*Calycadenia multiglandulosa*) and pitgland tarweed (*Holocarpha virgata*).

Chamise Chaparral is comprised largely of chamise (*Adenostema faciculatum*), wedgeleaf ceanothus (*Ceanothus cuneatus*), scrub oak (*Quercus berberidifolia*) and birch leaf mountain mahogany (*Cercocarpus betuloides*).

Major constituents of Blue Oak Woodland are blue oak (*Quercus douglasii*), wedgeleaf ceanothus, grass, golden bush (*Ericameria linearifolia*) and varying amounts of foothill pine (*Pinus sabiniana*).

Valley Oak Woodland includes valley oak (*Quercus lobata*) with an understory of seaside barley, shepherd's purse (*Capsella bursa-pastoris*), dog fennel (*Anthemis cotula*), and soft chess brome.

A small amount of Desert Scrub occurs on SAVER. It is dominated by Wright's buckwheat (*Eriogonum wrightii*) in association with blue oak or various annual and perennial herbaceous plants including Fitch's spikeweed (*Hemizonia fitchii*), brome fescue (*Vulpia bromoides*), purple clarkia (*Clarkia purpurea*) and numerous others.

Vernal pools occur in the larger valleys and tributaries to San Antonio and Jump-Off Creeks. Species representative of these habitats include Howell's quillwort (*Isoetes howelli*), chaff weed (*Anagalis minima*), Sacramento mint (*Pogogyne zizyphoroides*), California water starwort (*Callitriche marginata*), and awl leafed lilea (*Lilea scilloides*), among others.

## B. Animal Species

Representative native species either observed or presumed to be present during at least a portion of the year include California mule deer (*Odocoileus hemionus*), mountain lion (*Felix concolor*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), gray fox (*Urocyon cineroargentinus*), black-tailed jackrabbit (*Lepus californicus*), striped skunk (*Mephitis mephitis*), long-tailed weasel (*Mustela frenata*), raccoon (*Procyon lotor*), California ground squirrel (*Otospermophilus beecheyi*), Ord's kangaroo rat (*Dipodomyus ordii*), several bat species, Trowbridge and ornate shrews (*Sorex* spp.), Townsend moles (*Scapanus townsendii*), red tailed hawk (*Buteo jamaicensis*), Cooper's hawk (*Accipeter cooperii*), white crowned sparrow (*Zonotrichia leucophrys*), California towhee (*Pipilo crissalis*), garter snake (*Thamnophis* spp.), western rattlesnake (*Crotalus viridus*), gopher snake (*Pituophis melanoleucus*), common king snake (*Lampropeltis getulus*), western fence lizard (*Sceloporus occidentalis*), alligator lizard (*Gherronotus* spp.), western toad (*Bufo boreas*), western spadefoot (*Scaphiopus hammondii*), slender salamander (*Batrachoceps* spp.) and California newt (*Taricha tarosa*). Other significant native wildlife which occur on the property include tule elk (*Cervus elaphus*) which were re-introduced into their historical habitat in the 1970s.

Feral pigs (*Sus scropha*) have been observed on the property and wild turkeys (*Meleagris gallopavo*) are uncommon but regular.

A more complete list of observed and expected animal species is included in Appendix C and formatted within this document as Table 2.

## C. Special-Status Species

Special-status species are those that are either State or Federally listed as threatened or endangered, candidates for such listing, California Species of Special Concern, or have California Native Plant Society designation. A complete inventory of the flora and fauna of SAVER has not yet been conducted, but is planned as a part of an educational component of this Management Plan. Focused surveys will be conducted by qualified biologists before development or other activities on the property to insure that potential habitats for special-status animal species are not impacted. CDFW personnel with expertise regarding special-status species have been consulted, and their comments included within the text of this Management Plan. The following special-status species may occur on the property (conservation status is indicated in parentheses).

- Plants

The conservation status shown following the scientific name is assigned by CDFW's California Natural Diversity Data Base (CNDDB) and is based on the ranking system explained at:
http://www.natuReserve.org/publications/ConsStatusAssess_StatusFactors.pdf

Bainbridge's surveys found six special-status plants including serpentine leptosiphon (*Leptosiphon ambiguus* G3/S3.2 4.2), Santa Clara thorn mint (*Acanthomintha lanceolata* G3/S3.2 4.2), chaparral harebell (*Campanula exigua* G2/S2.2 1B.2), hospital creek larkspur (*Delphinium californicum* subsp. *Interius* G3T3/S3 1B.2), spring lessingia (*Lessingia tenuis*

G3/S3.3 4.3) and Michaels's rein orchid (*Piperia michaelii* G3/S/3.2 4.2) (Appendix D). Documentation of these occurrences, including maps, were submitted to the CNDDB.

None of those plants appeared in the CNDDB's Rare Find 3 CNPS Query for the Mt. Stakes quadrangle. Results of the query included Mt. Hamilton coreopsis (*Coreopsis hamiltonii* G2/S2.2 1B.2), Brandegee's eriastrum (*Eriastrum brandegeeae* G3/S3.2 1B.2), Tracy's eriastrum (*Eriastrum tracyi* G1Q/S1.1 1B.2), Mt. Diablo phacelia (*Phacelia phacelioides* G1/S1.2 1B.2), and hooked popcorn-flower (*Plagiobothrys uncinatus* G2/S2.2 1B.2).

None of these plants have yet been reported in surveys from SAVER. These facts suggest that the Hamilton Range's folded and lifted topography have resulted in a diversity of botanical communities and also attests to the rarity of these plants. The absence of these species also supports Bainbridge's contention that the late timing of her surveys (begun in May) may have affected detection of earlier maturing plants.

## Table 1 – Plants of San Antonio Valley Ecological Reserve

| | |
|---|---|
| **FERNS AND FERN ALLIES** | |
| **ISOETACEAE – QUILLWORT FAMILY** | |
| *Isoetes howellii* | quillwort |
| **MARSILEACEAE – MARSILEA FAMILY** | |
| *Marsilea vestita subsp. Vestita* | pepperwort |
| **PTERIDACEAE – BRAKE FAMILY** | |
| *Adiantum jordanii* | California maidenhair fern |
| *Cheilanthes intertexta* | lip fern |
| *Pellaea andromedifolia* | coffee fern |
| *Pellaea mucronata var. mucronata* | bird's foot fern |
| *Pentagramma triangularis subsp. Triangularis* | goldenback fern |
| **SELAGINELLACEAE – SPIKE MOSS FAMILY** | |
| *Selaginella bigelovii* | spike moss |
| **GYMNOSPERMS** | |
| **CUPRESSACEAE – CYPRESS FAMILY** | |
| *Juniperus californica* | California juniper |
| **PINACEAE – PINE FAMILY** | |
| *Pinus sabiniana* | foothill pine |
| **DICOTS** | |

| | |
|---|---|
| **AMARANTHACEAE – AMARANTH FAMILY** | |
| *Amaranthus albus* | tumbleweed |
| *Amaranthus blitoides* | pigweed |
| **ANACARDIACEAE – SUMAC FAMILY** | |
| *Toxicodendron diversilobum* | poison oak |
| **APIACEAE – CARROT FAMILY** | |
| *Apiastrum angustifolium* | apiastrum |
| *Bowlesia incana* | bowlesia |
| *Daucus pusillus* | daucus |
| *Lomatium caruifolium* | lomatium |
| *Lomatium dasycarpum subsp. Dasycarpum* | lomatium |
| *Lomatium nudicaule* | lomatium |
| *Lomatium utriculatum* | lomatium |
| *Perideridia californica* | yampah |
| *Perideridia kelloggii* | yampah |
| *Sanicula bipinnata* | poison sanicle |
| *Saniculabipinnatifida* | purple sanicle |
| *Sanicula crassicaulis* | sanicle |
| *Sanicula tuberose* | sanicle |
| *Torilis nodosa* | torilis |
| *Yabea microcarpa* | yabea |
| **ASCLEPIADACEAE – MILKWEED FAMILY** | |
| *Asclepias fascicularis* | narrowleaf milkweed |
| **ASTERACEAE – SUNFLOWER FAMILY** | |
| *Achillea millefolium* | yarrow milfoil |
| *Achyrachaena mollis* | blowwives |
| *Agoseris grandiflora* | agoseris |
| *Agoseris heterophylla* | agoseris |
| *Agoseris retrorsa* | agoseris |

| | |
|---|---|
| *Anthemis cotula* | mayweed stinkweed;  dog fennel |
| *Artemisia californica* | California sagebrush |
| *Artemisia douglasiana* | mugwort |
| *Aster chilensis* | aster |
| *Baccharis douglasii* | marsh baccharis |
| *Baccharis pilularis* | chaparral broom coyote brush |
| *Brickellia californica* | bricklebush |
| *Calycadenia multiglandulosa* | calycadenia |
| *Carduus pycnocephalus* | Italian thistle |
| *Centaurea melitensis* | tocalote |
| *Centaurea solstitialis* | yellow star thistle |
| *Chaenactis glabriuscula var. heterocarpha* | yellow pincushion |
| *Chamomilla suaveolens* | Pineapple weed |
| *Cirsium cymosum* | peregrine thistle |
| *Cirsium occidentale var. venustum* | venus thistle |
| *Crepis vesicaria subsp. Taraxacifolia* | Beaked hawksbeard |
| *Ericameria linearifolia* | interior goldenbush |
| *Eriophyllum confertiflorum var. confertifolium* | golden yarrow |
| *Filago californica* | herba impia |
| *Filago gallica* | herba impia |
| *Gnaphalium californicum* | California cudweed |
| *Gnaphalium palustre* | cudweed; everlasting |
| *Helianthus californicus* | sunflower |
| *Hemizonia (Centromadia) fitchii* | tarplant; tarweed |
| *Hemizonia (Deinandra) kelloggii* | tarplant; tarweed |
| *Hesperevax sparsiflora var. sparsiflora* | erect dwarf cudweed |
| *Heterotheca grandiflora* | golden aster; telegraph weed |
| *Heterotheca oregona var. scaberrima* | golden aster; telegraph weed |
| *Holocarpha virgata subsp. Virgata* | holocarpha |

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|---|---|
| *Holozonia filipes* | holozonia |
| *Hypochaeris glabra* | smooth cat's ear |
| *Hypochaeris radicata* | rough cat's ear |
| *Lagophylla ramosissima subsp. Congesta* | branched lagophilia |
| *Lagophylla ramosissima subsp. ramosissima* | common hareleaf |
| *Lasthenia californica (gracilis)* | goldfields |
| *Lasthenia delblis* | goldfields |
| *Lasthenia glaberrima* | goldfields |
| *Layia platyglossa* | tidy tips |
| *Corethrogyne filaginifolia var. filaginifolia* | California aster |
| *Lessingia tenuis* | spring lessingia |
| *Madia elegans* | common madia |
| *Madia exigua* | threadstem madia |
| *Madia gracilis* | slender tarweed |
| *Malacothrix clevlandii* | Cleveland’s dandelion |
| *Malacothrix floccifera* | wooly dandelioon |
| *Micropus californicus var. californicus* | slender cottonwood |
| *Microseris acuminate* | microseris |
| *Microseris douglasii subsp. Douglasii* | microseris |
| *Microseris douglasii subsp. Tenellus* | microseris |
| *Pentachaeta exilis subsp. Exilis* | meager pygmydaisy |
| *Psilocarphus tenellus var. tenellus* | Slender wooly heads |
| *Rafinesquia californica* | California chicory |
| *Rigiopappus leptocladus* | rigiopappus |
| *Senecio (Packera) breweri* | groundsel; ragwort; butterweed |
| *Senecio vulgaris* | groundsel; ragwort; butterweed |
| *Stephanomeria elata* | stephanomeria |
| *Stylocline gnaphaloides* | everlasting nest straw |
| *Taraxacum officinale* | taraxacum |

| | |
|---|---|
| *Uropappus lindleyi* | silver puffs |
| *Wyethia helenioides* | gray mule ears |
| *Xanthium strumarium* | cocklebur |
| **BORAGINACEAE – BORAGE FAMILY** | |
| *Amsinckia menziesii var. intermedia* | common fiddleneck |
| *Amsinckia menziesii var. menziesii* | menzies fiddleneck |
| *Cryptantha clevelandii* | Cleveland's cryptantha |
| *Cryptantha flaccida* | weakstem cryptantha |
| *Cryptantha micromeres* | minute flowered cryptantha |
| *Cryptantha microstachys* | popcorn flower |
| *Cryptantha torreyana* | Torrey's cryptantha |
| *Cynoglossum grande* | western houndstongue |
| *Pectocarya pusilla* | little combseed |
| *Plagiobothrys bracteatus* | bracted popcorn flower |
| *Plagiobothrys canescens* | grey popcorn flower |
| *Plagiobothrys fulvus* | fulvous popcorn flower |
| *Plagiobothrys nothofulvus* | rusty popcorn flower |
| *Plagiobothrys tenellus* | Pacific popcorn flower |
| **BRASSICACEAE – MUSTARD FAMILY** | |
| *Athysanus pusillus* | athysanus |
| *Barbarea orthoceras* | barbarea |
| *Brassica nigra* | black mustard |
| *Capsella bursa pastoris* | shepherd's purse |
| *Cardamine oligosperma* | bittercress |
| *Draba verna* | whitlow grass |
| *Erysimum capitatum subsp. Capitatum* | Western wallflower |
| *Guillenia lasiophylla* | California mustard |
| *Lepidium nitidum* | peppergrass |
| *Lepidium strictum* | prostrate peppergrass |

| | |
|---|---|
| *Rorippa nostrum* | aquaticum |
| *Streptanthus glandulosus subsp. glandulosus* | jewelflower |
| *Thysanocarpus curvipes* | lacepod fringepod |
| *Thysanocarpus radians* | lacepod fringepod |
| *Tropidocarpum gracile* | tropdidicarpum |
| **CALLITRICHACEAE – WATER STARWORT FAMILY** | |
| *Callitriche marginata* | California water starwort |
| **CAMPANULACEAE – BELLFLOWER FAMILY** | |
| *Campanula exigua* | chaparral hairbell |
| *Githopsis diffusa subsp. Robusta* | bluecup |
| *Githopsis specularioides* | bluecup |
| *Heterocodon rariflorum* | heterocodon |
| *Triodonis biflora* | Venus' looking glass |
| **CAPRIFOLIACEAE – HONEYSUCKLE FAMILY** | |
| *Lonicera subspicata var. denudata* | honeysuckle |
| *Sambucus mexicana* | blue elderberry |
| **CARYOPHYLLACEAE – PINK FAMILY** | |
| *Cerastium glomeratum* | sticky chickweed |
| *Hernaria hirsute* | hairy rupturewort |
| *Minuartia douglasii* | Douglas's sandwort |
| *Sagina apetala* | annual pearlwort |
| *Silene gallica* | common catchfly |
| *Spergularia rubra* | red sandspurry |
| *Stellaria media* | common chickweed |
| *Stellaria nitens* | shining chickweed |
| **CHENOPODIACEAE – GOOSEFOOT FAMILY** | |
| *Chenopodium berlandieri* | pit seed goosefoot |
| *Chenopodium californicum* | pigweed |
| *Chenopodium vulvaria* | pigweed |

| | |
|---|---|
| **CONVOLVULACEAE – MORNING GLORY FAMILY** | |
| *Calystegia arvensis* | bindweed |
| **CRASSULACEAE – STONECROP FAMILY** | |
| *Crassula aquatica* | pygmyweed |
| *Crassula connata* | sand pygmyweed |
| *Crassula tillaea* | moss pygmyweed |
| *Dudleya cymosa subsp. paniculata* | Diablo Range dudleya |
| *Parvisedum pentandrum* | Central California stonecrop |
| **CUCURBITACEAE – GOURD FAMILY** | |
| *Marah fabaceus* | California manroot |
| **CUSCUTACEAE – DODDER FAMILY** | |
| *Cuscuta californica var. californica* | dodder |
| **DATISCACEAE – DATISCA FAMILY** | |
| *Datisca glomerata* | Durango root |
| **ERICACEAE – HEATH FAMILY** | |
| *Arctostaphylos × campbelliae Eastw. (pro sp.) [glauca × tomentosa]* | not in The Jepson Manual; known only from Mount Hamilton Range |
| *Arctostaphylos glauca* | manzanita |
| **EUPHORBIACEAE – SPURGE FAMILY** | |
| *Eremocarpus setigerus* | turkey mullein |
| **FABACEAE – PEA FAMILY** | |
| *Astragalus gambelianus* | dwarf loco weed |
| *Hoita macrostachya* | California hemp |
| *Lotus humistratus* | Bird’s foot lotus |
| *Lotus micranthus* | hill lotus |
| *Lotus purshianus var. purshianus* | spanish lotus |
| *Lotus wrangelianus* | chilean lotus |
| *Lupinus bicolor* | miniature lupine |
| *Lupinus formosus var. formosus* | lupine |
| *Lupinus microcarpus var. microcarpus* | chick lupine |

| | |
|---|---|
| *Medicago polymorpha* | bur clover |
| *Medicago praecox* | Mediterranean medick |
| *Trifolium albopurpureum var. dichotomum* | clover |
| *Trifolium albopurpureum var. olivaceum* | clover |
| *Trifolium barbigerum var. barbigerum* | clover |
| *Trifolium ciliolatum* | clover |
| *Trifolium depauperatum var. depauperatum* | clover |
| *Trifolium dubium* | little hop clover |
| *Trifolium gracilentum* | clover |
| *Trifolium microcephalum* | clover |
| *Trifolium microdon* | clover |
| *Trifolium obtusiflorum* | clover |
| *Trifolium oliganthum* | clover |
| *Trifolium subterranean* | subterranean clover |
| *Trifolium variegatum* | clover |
| *Trifolium willdenowii* | clover |
| **FAGACEAE – OAK FAMILY** | |
| *Quercus berberidifolia* | scrub oak |
| *Quercus douglasii* | blue oak |
| *Quercus lobata* | valley oak |
| **GARRYACEAE – SILK TASSEL FAMILY** | |
| *Garrya congdonii* | Congdon's silk tassel |
| **GENTIANACEAE – GENTIAN FAMILY** | |
| *Centaurium davyi* | Davy's centaury |
| **GERANIACEAE – GERANIUM FAMILY** | |
| *Erodium botrys* | Broad leaf filaree |
| *Erodium brachycarpum* | White stemmed filaree |
| *Geranium dissectum* | cransbill |
| **GROSSULARIACEAE – GOOSEBERRY FAMILY** | |

| | |
|---|---|
| *Ribes californicum Hook. & Arn. var. californicum* | hillside currant |
| *Ribes malvaceum Sm. var. malvaceum* | chaparral current |
| *Ribes quercetorum E. Greene* | oak gooseberry |
| *Ribes menziesii* | canyon gooseberry |
| **HIPPOCASTINACEAE – BUCKEYE FAMILY** | |
| *Aesculus californica* | California buckeye |
| **HYDROPHYLLACEAE – WATERLEAF FAMILY** | |
| *Eriodictyon californicum* | yerba santa |
| *Nemophila pedunculata* | meadow nemophilia |
| *Phacelia distans* | common phacelia |
| *Phacelia divaricata* | divaricate phalcelia |
| *Phacelia imbricata subsp. imbricata* | imbricate phacelia |
| *Phacelia tanacetifolia* | tansy leafed phacelia |
| *Phacelia breweri* | Brewer's phacelia |
| *Phacelia rattanii* | Rattan's phacelia |
| **LAMIACEAE – MINT FAMILY** | |
| *Acanthomintha lanceolata* | Santa Clara thornmint |
| *Monardella villosa subsp. Villosa* | coyote mint |
| *Pogogyne serpylloides* | thymeleaf mesamint |
| *Pogogyne zizyphoroides* | Sacramento mesamint |
| *Salvia columbariae* | chia |
| *Scutellaria siphocampyloides* | skullcap |
| *Scutellaria tuberose* | skullcap |
| *Stachys albens* | hedge nettle |
| *Trichostema lanceolatum* | wooly bluecurls |
| **LAURACEAE – LAUREL FAMILY** | |
| *Umbellularia californica* | California bay |
| **LIMNANTHACEAE – MEADOWFOAM FAMILY** | |
| *Limnanthes douglasii subsp. Douglasii* | meadowfoam |

| | |
|---|---|
| **LINACEAE – FLAX FAMILY** | |
| *Hesperolinon micranthum* | dwarf flax |
| **LOASACEAE – LOASA FAMILY** | |
| *Mentzelia lindleyi* | blazingstar |
| **LYTHRACEAE – LOOSESTRIFE FAMILY** | |
| *Lythrum hyssopifolia* | hyssop loosestrife |
| **MALVACEAE – MALLOW FAMILY** | |
| *Malacothamnus fremontii* | Fremont's bush mallow |
| **ONAGRACEAE – WILLOWHERB FAMILY** | |
| *Camissonia contorta* | contorted sun cup |
| *Camissonia graciliflora* | hill sun cup |
| *Camissonia intermedia* | intermediate sun cup |
| *Camissonia micrantha* | miniature sun cup |
| *Clarkia affinis* | chaparral clarkia |
| *Clarkia gracilis subsp. gracilis* | slender clarkia |
| *Clarkia modesta* | Waltham Creek clarkia |
| *Clarkia purpurea subsp. quadrivulnera* | purple clarkia |
| *Clarkia rhomboidea* | diamond clarkia |
| *Clarkia unguiculata* | elegant clarkia |
| *Epilobium brachycarpum* | annual fireweed |
| *Epilobium canum subsp. canum* | California fuchsia |
| *Epilobium densiflorum* | dense flower spike primrose |
| *Epilobium foliosum* | California willowherb |
| *Epilobium pygmaeum* | smooth spike primrose |
| *Epilobium torreyi* | Torrey's willowherb |
| **OROBANCHACEAE – BROOMRAPE FAMILY** | |
| *Orobanche fasciculate* | clustered broomrape |
| **PAPAVERACEAE – POPPY FAMILY** | |
| *Dicentra chrysantha* | ear drops |

| | |
|---|---|
| *Eschscholzia caespitosa* | foothill poppy |
| *Eschscholzia californica* | California poppy |
| *Platystemmon californicus* | cream cups |
| **PLANTAGINACEAE – PLANTAIN FAMILY** | |
| *Plantago elongata* | coastal plantain |
| *Plantago erecta* | California plantain |
| *Plantago lanceolata* | narrow leaved plantain |
| **POLYGANACEAE – SMARTWEED FAMILY** | |
| *Chorizanthe clevlandii* | Cleveland's spineflower |
| *Chorizanthe membranacea* | pink spineflower |
| *Chorizanthe uniaristata* | one awn spineflower |
| *Eriogonum gracile* | slender buckwheat |
| *Eriogonum inerme* | unarmed buckwheat |
| *Eriogonum luteolum var. luteolum* | golden buckwheat |
| *Eriogonum nudum var. auriculatum* | nude buckwheat |
| *Eriogonum roseum* | wand buckwheat |
| *Eriogonum wrightii var. trachygonum* | White's buckwheat |
| *Pterostegia drymarioides* | fairy mist |
| *Rumex salicifolius var. denticulatus* | California dock |
| **POLEMONIACEAE – PHLOX FAMILY** | |
| *Allophyllum gilioides subsp. gilioides* | dense false gilia |
| *Eriastrum abramsii* | Abram's eriastrum |
| *Gilia acheilleafolia subsp. multicaulis* | California gilia |
| *Gilia clivorum* | many stemmed gilia |
| *Linanthus ambiguus* | serpentine linathus |
| *Linanthus bicolor* | bicolor linathus |
| *Linanthus ciliatus* | whisker brush linathus |
| *Linanthus dichotomus* | evening snow |
| *Navarretia intertexta subsp. intertexta* | interwoven navarretia |

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|---|---|
| *Navarretia mellita* | honeyscented pincushionplant |
| *Navarretia pubescens* | downey pincushionplant |
| *Navarretia tagetina* | marigold navarretia |
| *Phlox gracilis* | beggars gilia |
| **PORTULACACEAE – PURSLANE FAMILY** | |
| *Calandrinia ciliate* | red maids |
| *Claytonia parviflora var. parviflora* | miner's lettuce |
| *Lewisia rediviva* | bitter root |
| *Montia Fontana* | water chickweed |
| **PRIMULACEAE – PRIMROSE FAMILY** | |
| *Anagallis arvensis* | pimpernel |
| *Centunculus minimus* | chaffweed |
| *Dodecatheon hendersonii* | mosquito bills |
| **RANUNCULACEAE – BUTTERCUP FAMILY** | |
| *Clematis lasiantha* | pipestems |
| *Delphinium californicum subsp. Interius* | Hospital Canyon larkspur |
| *Delphinium hesperium subsp. Hesperium* | western larkspur |
| *Delphinium parryi* | larkspur |
| *Delphinium patens subsp. Patens* | spreading larkspur |
| *Delphinium variegatum* | royal larkspur |
| *Myosurus minimus* | mouse tail |
| *Ranunculus aquatilis var. capillaceus* | buttercup |
| *Ranunculus californicus* | buttercup |
| *Ranunculus hebecarpus* | buttercup |
| *Thalictrum fendleri var. polycarpum* | meadow rue |
| **RHAMNANCEAE – BUCKTHORN FAMILY** | |
| *Ceanothus cuneatus var. cuneatus* | buck brush |
| *Rhamnus ilicifolia* | spiny redberry |
| **ROSACEAE – ROSE FAMILY** | |

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|---|---|
| *Adenostoma fasciculatum* | chamise |
| *Aphanes occidentalis* | lady's mantle |
| *Cercocarpus betuloides var. betuloides* | birch leaf mountain mahogany |
| *Heteromeles arbutifolia* | Christmas berry; toyon |
| *Potentilla glandulosa subsp. Glandulosa* | cinquefoil |
| *Prunus ilicifolia* | Holly-leaved cherry |
| *Rosa californica* | California rose |
| **RUBIACEAE – MADDER FAMILY** | |
| *Galium andrewsii subsp. gatense* | serpentine bedstraw |
| *Galium aparine* | goose grass |
| *Galium murale* | tiny bedstraw |
| *Galium parisiense* | wall bedstraw |
| *Galium porrigens var. porrigens* | climbing bedstraw |
| *Sherardia arvensis* | field madder |
| **SALICACEAE – WILLOW FAMILY** | |
| *Salix laevigata* | red willow |
| **SAXIFRAGACEAE – SAXIFRAGE FAMILY** | |
| *Lithophragma parvifolium var. parvifolium* | woodland star |
| *Saxifraga californica* | saxifrage |
| **SCROPHULARIACEAE – FIGWORT FAMILY** | |
| *Antirrhinum multiflorum* | snapdragon |
| *Antirrhinum vexillo-calyculatum subsp. vexillo-calyculatum* | wiry snapdragon |
| *Castilleja attenuate* | valley tassels |
| *Castilleja densiflora subsp. Densiflora* | owl's clover |
| *Castilleja exserta subsp. Exserta* | purple owl's clover |
| *Castilleja foliolosa* | woolly paintbrush |
| *Collinsia heterophylla* | Chinese houses |
| *Collinsia sparsiflora var. collina* | hillside collinsia |

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|---|---|
| *Cordylanthus rigidus subsp. Rigidus* | bird's beak |
| *Keckiella breviflora var. breviflora* | bush penstemon |
| *Limosella acaulis* | mudwort |
| *Linaria canadensis* | toad flax |
| *Mimulus aurantiacus var. aurantiacus* | monkeyflower |
| *Mimulus bolanderi* | monkeyflower |
| *Mimulus cardinalis* | monkeyflower |
| *Mimulus douglasii* | monkeyflower |
| *Mimulus guttatus* | monkeyflower |
| *Mimulus pilosus* | monkeyflower |
| *Penstemon heterophyllus var. heterophyllus* | beardtongue |
| *Scrophularia californica* | figwort |
| *Triphysaria eriantha subsp. Eriantha* | butter and eggs |
| *Veronica catenata* | chain speedwell |
| *Veronica peregrina subsp. Xalapensis* | pursland speedwell |
| *Veronica persica* | Persian speedwell |
| **SOLANACEAE – NIGHTSHADE FAMILY** | |
| *Solanum umbelliferum* | nightshade |
| **URTICACEAE – NETTLE FAMILY** | |
| *Urtica dioica subsp. Holosericea* | stinging nettle |
| *Urticaurens* | Dwarf nettle |
| **VALERIANACEAE – VALERIAN FAMILY** | |
| *Plectritis brachystemon* | short spurred plectritis |
| *Plectritis macrocera* | white plectritis |
| **VERBENACEAE – VERVAIN FAMILY** | |
| *Verbena lasiostachys var. scabrida* | robust vervain |
| **VIOLACEAE – VIOLET FAMILY** | |
| *Viola douglasii* | Douglas violet |
| *Viola purpurea subsp. Quercetorum* | violet |

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|---|---|
| **VISCACEAE – MISTLETOE FAMILY** | |
| *Phoradendron villosum* | oak mistletoe |
| **MONOCOTS** | |
| **CYPERACEAE – SEDGE FAMILY** | |
| *Eleocharis acicularis var. acicularis* | needle spikerush |
| *Eleocharis macrostachya* | creeping spikerush |
| *Scirpus microcarpus* | small fruited bulrush |
| **JUNCACEAE – RUSH FAMILY** | |
| *Juncus bufonius var. occidentalis* | round fruited toad rush |
| *Juncus xiphioides* | iris leaved rush |
| **JUNCAGINACEAE – QUILLWORT FAMILY** | |
| *Lilaea scilloides* | awl leaved lilaea |
| **LILIACEAE – LILY FAMILY** | |
| *Allium amplectens* | narrow leaved onion |
| *Allium lacunosum* | pitted onion |
| *Allium serra* | jeweled onion |
| *Brodiaea elegans subsp. elegans* | harvest brodiaea |
| *Calochortus luteus* | yellow mariposa |
| *Calochortus venustus* | butterfly mariposa |
| *Chlorogalum pomeridianum var. pomeridianum* | soap plant |
| *Dichelostemma capitatum subsp. capitatum* | blue dicks |
| *Dichelostemma congestum* | ookow |
| *Fritillaria affinis* | checker lily |
| *Triteleia hyacinthina* | wild hyacinth |
| *Triteleia laxa* | Ithuriel's spear |
| *Zigadenus fremontii* | Fremont's star lily |
| *Zigadenus venenosus var. venenosus* | death camas |
| **ORCHIDACEAE – ORCHID FAMILY** | |
| *Piperia michaelii* | Michael's piperia |

| **POACEAE – GRASS FAMILY** | |
|---|---|
| *Aira caryophyllea* | silver hairgrass |
| *Avena barbata* | slender oat |
| *Briza minor* | little rattlesnake grass |
| *Bromus arenarius* | Australian chess |
| *Bromus carinatus var. carinatus* | California brome |
| *Bromus diandrus* | ripgut brome |
| *Bromus hordeaceus* | soft chess |
| *Bromus laevipes* | woodland brome |
| *Bromus madritensis subsp. madritensis* | foxtail chess |
| *Bromus madritensis subsp. rubens* | foxtail brome |
| *Bromus tectorum* | cheatgrass |
| *Deschampsia danthonioides* | annual hairgrass |
| *Elymus glaucus subsp. glaucus* | blue wild rye |
| *Elymus multisetus* | big squirreltail grass |
| *Festuca arundinacea* | tall fescue |
| *Gastridium ventricosum* | nit grass |
| *Hordeum brachyantherum subsp. brachyantherum* | meadow barley |
| *Hordeum marinum subsp. gussonianum* | Mediterranean barley |
| *Hordeum murinum subsp. glaucum* | blue foxtail |
| *Hordeum murinum subsp. leporinum* | farmer's foxtail |
| *Koeleria macrantha* | June grass |
| *Lamarckia aurea* | goldentop |
| *Leymus triticoides* | valley wild rye |
| *Lolium multiflorum* | Italian rye grass |
| *Melica californica* | California melic |
| *Melica imperfecta* | coast range melic |
| *Melica torreyana* | Torrey's melic |
| *Nassella cernua* | needle grass |

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|---|---|
| *Nassella lepida* | small flowered stipa |
| *Nassella pulchra* | purple tipa |
| *Phalaris aquatica* | Harding grass |
| *Phalaris paradoxa* | hood canarygrass |
| *Poa annua* | annual bluegrass |
| *Poa bulbosa* | bulbous bluegrass |
| *Poa howellii* | Howell's bluegrass |
| *Poa secunda subsp. secunda* | Pine bluegrass |
| *Polypogon interuptus* | beard grass |
| *Polypogon monspeliensis* | rabbitsfoot grass |
| *Scribneria bolanderi* | Scribner's grass |
| *Vulpia bromoides* | six weeks fescue |
| *Vulpia microstachys var. ciliata* | eastwood fescue |
| *Vulpia microstachys var. pauciflora* | Pacific fescue |
| *Vulpia myuros var. hirsuta* | foxtail fescue |
| *Vulpia myuros var. myuros* | false foxtail fescue |
| **POTAMOGETONACEAE – PONDWEED FAMILY** | |
| *Potamogeton natans* | floating level pondweed |
| **TYPHACEAE – CATTAIL FAMILY** | |
| *Typha angustifolia* | cattail |

- Fish

No species of fish native to California have been found on SAVER. This is probably because the streams on SAVER are ephemeral and because the permanent ponds are artificial and were stocked with warmwater game fish.

- Amphibians

Special-status amphibians possibly occurring on SAVER include California red-legged frog (*Rana aurora draytonii* FT, CSC). Surveys will be conducted to determine their presence at SAVER. If management is undertaken to benefit this species, pond draining will likely be necessary in order to eradicate non-native fish species and bullfrogs which prey on larvae, eggs, young and adults.

- Reptiles

Incidental sitings have been made of western pond turtles (*Actinemys marmorata* CSC), San Joaquin coachwhip (*Masticophis flagellum ruddocki* CSC) and California horned lizard (*Phrynosoma coronatum frontale* CSC). Rubber boa (*Charina bottae* CT) are also possible.

- Birds

The following special-status species of birds have been observed or are expected on SAVER including Vaux's swift *(Chaetura vauxi* CSC), olive-sided flycatcher (*Contopus borealis* CSC), burrowing owl (*Athene cunicularia* FSC, CSC), loggerhead shrike (*Lanius ludovicianus* FSC, CSC), grasshopper sparrow (*Ammodramus savannarum* CSC), black-chinned sparrow (*Spizella atrogularis* FSC), tri-colored blackbird (*Agelaius tricolor* FSC, CSC) and Lawrence's goldfinch (*Carduelis lawrencei* FSC).

- Mammal's

Bats are the only special-status mammals which likely occur on SAVER. Expected bats include western red bat (*Lasiurus blossevillii* CSC), Townsend's big-eared bat (*Corynorhinus townsendii* CSC), pallid bat (*Antrozous palludis* CSC), western mastiff bat (*Eumops perotis* CSC) and long-eared myotis (*Myotis evotus* CSC).

CE - California Endangered
CSC - California Species of Concern
CT - California Threatened
FE - Federal Endangered
FSC - Federal Species of Concern
FT - Federal Threatened

## Table 2. Fish and Wildlife Species of San Antonio Valley Ecological Reserve

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Fish | | | |
| **CENTRARCHIDAE** | | | |
| Largemouth bass | *Micropterus salmoides* | I5[1] | O |
| Bluegill | *Lepomis macrochirus* | I4[2] | O |
| Green sunfish | *Lepomis cyanellus* | I5 | P |
| Redear sunfish | *Lepomis microlophus* | I4 | P |
| **POECILIIDAE** | | | |
| Western mosquitofish | *Gambusia affinis* | I5 | O |
| Amphibians | | | |
| **AMBYSTOMATIDAE** | | | |
| California tiger salamander | *Ambystoma californiense* | ST, FT | P |

[1] I4 Widespread and stable. The species is widely distributed, but seems to have reached the limits of its range. Presumably it is integrated into local ecosystems.

[2] I5 Widespread and expanding. The species is still expanding its range to all suitable habitats in the state. (Moyle and Davis 2000)

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| **SALAMANDRIDAE** | | | |
| California newt | *Taricha torosa* | | P |
| **PLETHODONTIDAE** | | | |
| Ensatina | *Ensatina eschscholtzi* | | P |
| California slender salamander | *Batrachoseps attenuatus* | | P |
| **PELOBATIDAE** | | | |
| Western spadefoot | *Scaphiopus hammondi* | CSC, FSC | P |
| **BUFONIDAE** | | | |
| Western toad | *Bufo boreas* | | O |
| **HYLIDAE** | | | |
| Pacific tree frog | *Hyla regilla* | | O |
| **RANIDAE** | | | |
| California red-legged frog | *Rana draytonii* | CSC, FT | P |
| Bullfrog | *Rana catesbeiana* | | O |
| Reptiles | | | |
| **EMBYDIDAE** | | | |
| Western pond turtle | *Actinemys marmorata* | CSC, FS | O |
| **IGUANIDAE** | | | |
| Western fence lizard | *Sceloporus occidentalis* | | O |
| Sagebrush lizard | *Sceloporus graciosus* | | P |
| California horned lizard | *Phrynosoma coronatum frontale* | CSC, FS | O |
| Side-blotched lizard | *Uta stansburiana* | | O |
| **SCINCIDAE** | | | |
| Western skink | *Eumeces skiltonianus* | | P |
| Gilbert's skink | *Eumeces gilberti* | | P |
| **TEIDAE** | | | |
| Western whiptail | *Cnemodophorus tigris* | | O |
| **ANGUIDAE** | | | |
| Southern alligator lizard | *Gerrhonotus multicarinatus* | | E |
| **COLUBRIDAE** | | | |
| Rubber boa | *Charina bottae* | ST | P |
| Gopher snake | *Pituophis melanoleucus* | | O |
| King snake | *Lampropeltis getulus* | | O |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Garter snake | *Thamnophis sirtalis* | | O |
| Ringneck snake | *Diadophis punctatus* | | P |
| Glossy snake | *Arizona elegans* | | P |
| Sharp-tailed snake | *Contia tenuis* | | P |
| Western black-headed snake | *Tantilla planiceps* | | P |
| Night snake | *Hypsiglena torquata* | | P |
| **VIPERIDAE** | | | |
| Western rattlesnake | *Crotalus viridis* | | E |
| Birds | | | |
| **PODICIPEDIDAE** | | | |
| Pied-billed grebe | *Podilymbus podiceps* | | E |
| Eared grebe | *Podiceps nigricollis* | | E |
| **PHALACROCORACIDAE** | | | |
| Double-crested cormorant | *Phalcrocorax auritus* | | P |
| **ANATIDAE** | | | |
| Mallard | *Anas platyrynchos* | | O |
| Gadwall | *Anas strepera* | | O |
| Pintail | *Anas acuta* | | P |
| American widgeon | *Anas americana* | | E |
| Northern shoveler | *Anas clypeata* | | E |
| Blue-winged teal | *Anas discors* | | P |
| Cinnamon teal | *Anas cyanoptera* | | E |
| Green-winged teal | *Anas crecca* | | E |
| Wood duck | *Aix sponsa* | | O |
| Ring-necked duck | *Aythya collaris* | | O |
| Lesser scaup | *Aythya affinis* | | P |
| Common goldeneye | *Bucephala clangual* | | P |
| Bufflehead | *Bucephala albeola* | | O |
| Common merganser | *Mergus merganser* | | P |
| Hooded merganser | *Lophodytes culcullatus* | | P |
| Ruddy duck | *Oxyura jamaicensis* | | E |
| Canada goose | *Anser Canadensis* | | O |
| **CATHARTIDAE** | | | |
| Turkey vulture | *Cathartes aura* | | O |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| **ACCIPITRIDAE** | | | |
| Ferruginous hawk | *Buteo regalis* | FS | O |
| Rough-legged hawk | *Buteo lagopus* | FS | P |
| White-tailed kite | *Elanus leucurus* | CFP, FS | O |
| Northern harrier | *Circus cyaneus* | CSC | O |
| Sharp-shinned hawk | *Accipiter striatus* | | O |
| Cooper's hawk | *Accipiter cooperi* | | O |
| Red-tailed hawk | *Buteo jamaicensis* | | O |
| Golden eagle | *Aquila chrysaetos* | CFP | O |
| Bald eagle | *Haliaeetus leucocephalus* | | O |
| **PANDIONIDAE** | | | |
| Osprey | *Pandion haliaetus* | | O |
| **FALCONIDAE** | | | |
| American kestrel | *Falco sparverius* | | O |
| **PHASIANIDAE** | | | |
| California quail | *Calipepla californica* | | O |
| Wild turkey | *Meleagris gallopavo* | | O |
| **ARDEIDAE** | | | |
| American bittern | *Botaurus lentiginosus* | | P |
| Great blue heron | *Ardea herodias* | | E |
| Great egret | *Ardea alba* | | E |
| Green heron | *Butorides striatus* | | E |
| Black-crowned night heron | *Nycticorax nyctirox* | | P |
| **RALLIDAE** | | | |
| American coot | *Fulicla americana* | | E |
| **CHARADRIIDAE** | | | |
| Killdeer | *Charadrius vociferous* | | O |
| **SCOLOPACIDAE** | | | |
| Greater yellowlegs | *Tringa melanoleuca* | | O |
| **COLUMBIDAE** | | | |
| Mourning dove | *Zenaida macroura* | | O |
| Band-tailed pigeon | *Columba fasciata* | | E |
| Rock dove | *Columba livia* | | P |
| **CUCULIDAE** | | | |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Greater roadrunner | *Geococcyx californianus* | | O |
| **TYTONIDAE** | | | |
| Common barn owl | *Tyto alba* | | O |
| **STRIGIDAE** | | | |
| Western screech owl | *Otus kennicottii* | | O |
| Great-horned owl | *Bubo virginianus* | | O |
| Northern pygmy owl | *Glauscidium gnoma* | | O |
| Northern saw-whet owl | *Aegolius acadicus* | | P |
| Burrowing owl | *Athene cunicularia* | CSC, FP | P |
| Long-eared owl | *Asio otus* | | |
| **CAPRIMULGIDAE** | | | |
| Common poorwill | *Phalaenoptilus nuttallii* | | O |
| **APODIDAE** | | | |
| White-throated swift | *Aeronautes saxatalis* | | O |
| **TROCHILIDAE** | | | |
| Anna's hummingbird | *Calypte anna* | | O |
| Rufous hummingbird | *Selasphorus rufus* | | P |
| Black-chinned hummingbird | *Archilochus alexandi* | | P |
| Costa's hummingbird | *Calypte costae* | | P |
| **ALCEDINIDAE** | | | |
| Belted kingfisher | *Ceryle alcyon* | | O |
| **PICIDAE** | | | |
| Acorn woodpecker | *Melanerpes formicivorus* | | O |
| Lewis's woodpecker | *Melanerpes lewis* | | O |
| Red-breasted sapsucker | *Sphyrapicus rubber* | | O |
| Nuttall's woodpecker | *Picoides nuttalli* | | O |
| Downy woodpecker | *Picoides pubescens* | | O |
| Hairy woodpecker | *Picoides vollosus* | | O |
| Northern flicker | *Colaptes auratus* | | O |
| **TYRANNIDAE** | | | |
| Western kingbird | *Tyrranus verticalis* | | O |
| Olive-sided flycatcher | *Contopus borealis* | CSC | E |
| Western wood peewee | *Contopus sordidulus* | | E |
| Pacific slope flycatcher | *Empidonax difficilis* | | E |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Black phoebe | *Sayornis nigricans* | | O |
| Say's phoebe | *Sayornis saya* | | O |
| Ash-throated flycatcher | *Myiarchus cinerascens* | | O |
| **ALAUDIDAE** | | | |
| Horned lark | *Eremophila alpestris* | | E |
| **HIRUNDINIDAE** | | | |
| Violet-green swallow | *Tachycineta thalassina* | | E |
| Northern rough-winged swallow | *Tachycineta bicolor* | | P |
| Tree swallow | *Stegidopteryx serripenis* | | O |
| Cliff swallow | *Hirundo pyrrhonota* | | E |
| Barn swallow | *Hirundo rustica* | | P |
| Purple martin | *Progne subis* | CSC | P |
| **CORVIDAE** | | | |
| Stellar's jay | *Cyanocitta stelleri* | | E |
| Scrub jay | *Aphelocoma coerulescens* | | O |
| Common raven | *Corvus corax* | | O |
| American crow | *Corvus brachyrhynchos* | | O |
| Yellow-billed magpie | *Pica nuttalli* | | O |
| **PARIDAE** | | | |
| Chestnut-backed chickadee | *Parus rufescens* | | E |
| Plain titmouse | *Parus inornatus* | | O |
| Bushtit | *Psaltriparus minimus* | | O |
| **SITTIDAE** | | | |
| Red-breasted nuthatch | *Sitta Canadensis* | | P |
| White-breasted nuthatch | *Sitta carolinensis* | | O |
| **CERTHIIDAE** | | | |
| Brown creeper | *Certhia familiaris* | | E |
| **TROGLODYTIDAE** | | | |
| House wren | *Troglodytes aedon* | | E |
| Bewick's wren | *Thryomanes bewickii* | | O |
| Winter wren | *Troglodytes troglodytes* | | P |
| Rock wren | *Salpinctes obsoletus* | | P |
| Canyon wren | *Catherpes mexicanus* | | P |
| Marsh wren | *Cistothorus palustris* | | P |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| **TIMALIIDAE** | | | |
| Wrentit | *Chamaea fasciata* | | E |
| **REGULIDAE** | | | |
| Golden-crowned kinglet | *Regulus satrapa* | | P |
| Ruby-crowned kinglet | *Regulus calendula* | | O |
| **SYLVIIDAE** | | | |
| Blue-gray gnatcatcher | *Polioptila caerulea* | | O |
| **TURDIDAE** | | | |
| Townsend's solitaire | *Myadestes townsendii* | | E |
| Swainson's thrush | *Catharus ustulatus* | | E |
| Hermit thrush | *Catharus guttata* | | O |
| Varied thrush | *Ixoreus naevius* | | O |
| American robin | *Turdus migratorius* | | O |
| Western bluebird | *Sialia mexicana* | | O |
| Mountain bluebird | *Sialia currucoides* | | P |
| **MIMIDAE** | | | |
| Northern mockingbird | *Mimus polyglottos* | | E |
| California thrasher | *Toxostoma redivivum* | | O |
| **BOMBYCILLIDAE** | | | |
| Cedar waxwing | *Bombycilla cedrorum* | | E |
| **PTILOGONATIDAE** | | | |
| Phainopepla | *Phainopepla nitens* | | E |
| **LANIIDAE** | | | |
| Loggerhead shrike | *Lanius ludovicianus* | CSC, FS | E |
| **STURNIDAE** | | | |
| European starling | *Sturnus vulgaris* | | O |
| **VIREONIDAE** | | | |
| Hutton's vireo | *Vireo huttoni* | | O |
| Warbling vireo | *Vireo gilvus* | | E |
| Cassin's vireo | *Vireo cassinii* | | E |
| Blue-headed vireo | *Vireo solitarius* | | P |
| **THRAUPIDAE** | | | |
| Western tanager | *Piranga ludoviciana* | | E |
| Black-headed grosbeak | *Pheuticus melanocephalus* | | E |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Lazuli bunting | *Passerina amoena* | | E |
| **PARULIDAE** | | | |
| Orange-crowned warbler | *Vermivora celata* | | E |
| Nashville warbler | *Vermivora ruficapilla* | | E |
| Yellow-rumped warbler | *Dendroica coronata* | | O |
| Yellow warbler | *Dendroica petechia* | CSC | E |
| Black-throated gray warbler | *Dendroica nigrescens* | | E |
| Hermit warbler | *Dendroica occidentalis* | | P |
| Townsend's warbler | *Dendroica townsendii* | | E |
| Wilson's warbler | *Wilsonia pusilla* | | E |
| Common yellowthroat | *Geothlypis trichas* | | P |
| **EMBERIZIDAE** | | | |
| Spotted towhee | *Pipilo erythrophthalmus* | | O |
| California towhee | *Pipilo crissallis* | | O |
| Rufous-crowned sparrow | *Aimophila ruficeps* | | E |
| Savannah sparrow | *Passerculus sandwichensis* | | E |
| Grasshopper sparrow | *Ammodramus savannarum* | CSC | E |
| Vesper sparrow | *Pooecetes gramineus* | | P |
| Lark sparrow | *Chondestes grammacus* | | O |
| Sage sparrow | *Amphispiza belli* | | O |
| Black-chinned sparrow | *Spizella atrogularis* | | P |
| Chipping sparrow | *Spizella passerine* | | O |
| Fox sparrow | *Passerella iliaca* | | O |
| Song sparrow | *Melospiza melodia* | | E |
| Lincoln's sparrow | *Melospiza lincolnii* | | P |
| Golden-crowned sparrow | *Zonotrichia atricapilla* | | O |
| White-crowned sparrow | *Zonotricia leucophrys* | | O |
| Dark-eyed junco | *Junco hyemalis* | | O |
| **ICTERIDAE** | | | |
| Red-winged blackbird | *Agelaius phoeniceus* | | O |
| Tricolored blackbird | *Agelaius tricolor* | CSC, FS | O |
| Brewer's blackbird | *Euphagus cyanocephalus* | | O |
| Western meadowlark | *Sturnella neglecta* | | O |
| Brown-headed cowbird | *Molothrus ater* | | E |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Bullock's oriole | *Icterus bullockii* | | O |
| **FRINGILLIDAE** | | | |
| Purple finch | *Carpodacus purpureus* | | E |
| House finch | *Carpodacus mexicanus* | | O |
| Red crossbill | *Loxia curvirostra* | | P |
| Pine siskin | *Carduelis pinus* | | P |
| Lawrence's goldfinch | *Carduelis lawrencei* | | O |
| Lesser goldfinch | *Carduelis psaltria* | | O |
| American goldfinch | *Carduelis tristis* | | E |
| Evening grosbeak | *Hesperiphona vespertina* | | P |
| **PASSERIDAE** | | | |
| House sparrow | *Passer domesticus* | | P |
| Mammals | | | |
| **DIDELPHIDAE** | | | |
| Virginia opossum | *Didelphus marsupialis* | | P |
| **SORICIDAE** | | | |
| Ornate shrew | *Sorex ornatus* | | E |
| Trowbridge shrew | *Sorex trowbridgii* | | P |
| **TALPIDAE** | | | |
| Broad-footed mole | *Scapanus latimanus* | | E |
| **VERSPERTILIONIDAE** | | | |
| Yuma myotis | *Myotis yumanensis* | FS | E |
| Long-eared myotis | *Myotis evotis* | FS | O |
| Fringed myotis | *Myotis thysanodes* | FS | P |
| Long-legged myotis | *Myotis volans* | | P |
| California myotis | *Myotis californicus* | | E |
| Big brown bat | *Eptesicus fuscus* | | E |
| Red bat | *Lasiurus borealis* | | E |
| Hoary bat | *Lasiuris cinereus* | | E |
| Townsend's big-eared bat | *Corynorhinus townsendii* | CSC, FS | E |
| Pallid bat | *Antrozous pallidus* | CSC, FS | O |
| Western pipistrelle | *Pipistrellus Hesperus* | | E |
| **MOLOSSIDAE** | | | |
| Brazilian free-tailed bat | *Tadarida brasiliensis* | | E |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Western mastiff bat | *Eumops perotis* | CSC, FS | P |
| **LEPORIDAE** | | | |
| Black-tailed hare | *Lepus californicus* | | O |
| Audubon cottontail | *Sylvilagus audubonii* | | O |
| Brush rabbit | *Sylvilagus bachmani* | | O |
| **SCIURIDAE** | | | |
| California ground squirrel | *Spermophilus beecheyi* | | O |
| Western gray squirrel | *Sciurus griseus* | | P |
| Red fox squirrel | *Sciurus niger* | | O |
| **GEOMYIDAE** | | | |
| Botta's pocket gopher | *Thomomys bottae* | | E |
| **HETEROMYIDAE** | | | |
| California pocket mouse | *Perognathus californicus* | | E |
| Narrow-faced kangaroo rat | *Dipodomys venustus* | | P |
| Heerman's kangaroo rat | *Dipodomys heermanni* | | O |
| **CRICETIDAE** | | | |
| Western harvest mouse | *Reithrodontomys megalotis* | | E |
| California mouse | *Peromyscus californicus* | | E |
| Deer mouse | *Peromyscus maniculatus* | | O |
| Piñon mouse | *Peromyscus truei* | | E |
| Dusky-footed woodrat | *Neotoma fuscipes* | | E |
| Desert woodrat | *Neotoma lepida* | | P |
| California vole | *Microtus californicus* | | O |
| **MURIDAE** | | | |
| House mouse | *Mus musculus* | | E |
| **CANIDAE** | | | |
| Coyote | *Canis latrans* | | O |
| Gray fox | *Urocyon cinereoargenteus* | | O |
| **PROCYONIDAE** | | | |
| Ringtail | *Bassariscus astutus* | CFP | P |
| Raccoon | *Procyon lotor* | | E |
| **MUSTELIDAE** | | | |
| Long-tailed weasel | *Mustela frenata* | | E |
| Badger | *Taxidea taxus* | | O |

| Common Name | Scientific Name | Status | Occurrence |
|---|---|---|---|
| Spotted skunk | *Spilogale putorius* | | P |
| Striped skunk | *Mephitis mephitis* | | O |
| **FELIDAE** | | | |
| Mountain lion | *Felis concolor* | | O |
| Bobcat | *Lynx rufus* | | O |
| **SUIDAE** | | | |
| Feral pig | *Sus scrofa* | | O |
| **CERVIDAE** | | | |
| Black-tailed deer | *Odocoileus hemionus columbianus* | | O |
| Tule elk | *Cervus elaphus* | | O |

| **Key to status codes:** | **Key to occurrence codes:** |
|---|---|
| FT = Federally listed as Threatened | O = Has been observed on SAVER |
| FS = Federal Sensitive Species (BLM or Forest Service) | E = Expected to occur on SAVER |
| CSC = California Species of Special Concern | P = Possibility of occurring on SAVER |
| CFP = California Fully Protected Species | |
| ST = State Threatened | |

# *IV. MANAGEMENT GOALS AND ENVIRONMENTAL IMPACTS*

## A. Definitions of Terms Used in This Plan

1. **Element:** An element refers to any biological unit, public use activitiy, or facility maintenance program as defined below for which goals have been prepared and presented within this plan.

2. **Biological Element:** These elements consist of species, habitats or communities for which specific management goals have been developed within the plan.

3. **Public Use Elements:** Public use elements are any recreational, scientific, or other use activity appropriate to and compatible with the purposes for which this property was acquired.

4. **Facility Maintenance Element:** This is a general purpose element describing the maintenance and administrative program which helps maintain orderly and beneficial management of the area.

5. **Biological Goal:** A biological goal is the statement of intended long-range results of management based upon the feasibility of maintaining, enhancing or restoring species populations and/or habitat.

6. **Public Use Goal:** A public use goal is the statement of the desired type and level of public use compatible with the biological element goals previously specified within the plan.

7. **Tasks:** Tasks are the individual projects or work elements which implement the goal and are useful in planning operation and maintenance budgets.

## B. Biological Elements: Goals and Tasks

Wildlife habitat improvements will focus on enhancement of sensitive species or habitats and game species. Management activities may include hunting progams, protection of vernal pools and valley oak woodlands, controlled burning, periodic drainage of stock ponds and/or reservoirs, control of noxious weeds and prescription grazing. Habitat improvement projects and wildlife population monitoring will be done utilizing available CDFW staff, volunteers or contracts with educational institutions and private organizations.

*1. Biological Element: Vernal Pool Habitat*

Vernal pools are distributed within grasslands throughout three main areas of SAVER. Principle concentrations occur within the Jump-Off Creek bottomlands on the west with secondary pockets occurring adjacent to the unnamed tributary to Jump-Off Creek in the south-central section. Vernal Pools are also present in the eastern portion of SAVER in parts of the San Antonio Creek watershed. Cattle grazing historically played a significant role in shaping the vegetative communities within these areas and may be partially responsible for the impressive spring floristic displays. Marty (2005) showed that removal of grazing had negative impacts on plant and aquatic invertebrate biodiversity as well as hydrology of vernal pools in eastern Sacramento County. It may be determined that grazing is a necessary component in maintaining vernal pools and “wildflower fields”. However, until fencing is replaced or repaired to exclude neighboring cattle, questions as to grazing’s positive or negative effects will not be effectively addressed.

**Goal:** Maintain or rehabilitate as necessary vernal pools and wildflower fields within SAVER.

**Tasks:**

- Map vernal pool habitat as part of developing a vegetation map.
- Prior to surveys and studies, employ perimeter fencing to exclude cattle from SAVER.
- Conduct monitoring to assess changes in plant species composition, diversity, richness, and productivity within vernal pools before and after cattle are removed.
- Survey vernal pools for potential status vertebrate, invertebrate and plant species.
- Assess the affects of tule elk grazing on vernal pool species.

- Develop a vegetation management plan in consultation with experts in range, fire and special-status species management to maintain vernal pool health.

**Potential Impacts from the Vernal Pool Tasks and Mitigations for Those Impacts**:

1. If grazing is used as a vegetation management tool and is not controlled effectively, it could damage sensitive areas. To avoid these impacts, regular monitoring, selective fencing and other livestock management techniques (such as placement of salt blocks or water troughs) will be implemented to control the timing, duration and intensity of grazing. Results of monitoring will be periodically analyzed and grazing plans will be altered as needed.

2. Livestock can impede access by public users of SAVER. However, cattle are generally docile and timid and under the proposed management scheme the majority of public use will be escorted by CDFW staff or their representatives.

3. Livestock and their fencing affect wildlife movements. In addition, proposed fence maintenance, repair and construction includes structures and features designed specifically to allow or enhance safe wildlife movement. Interior livestock fencing will be removed where possible.

*2. Biological Element: Native Grass and Forb Alliances*

Numerous native grass and herbaceous plant alliances occur throughout SAVER and provide significant forage and aesthetic values. Because of their diversity, differing phenological periods, and overlapping site utilization, management of these plant associations may be complicated. Management aimed at benefiting one group at a given site may have potentially negative affects on another in the same location. For this reason, and to avoid exotic species invasions, soil disturbing activities such as farming should be avoided. Indeed, Bainbridge stated that SAVER's diversity may in part be attributable to the lack of significant historic soil disturbing activities there.

**Goal:** Maintain native grass and forb alliances for their diversity and aesthetic value.

**Tasks:**

- Conduct further plant assessment including mapping to determine presence and distribution of native grasses and forbs.
- Measure forage plant productivity on an ongoing basis to establish trends.
- Research the appropriateness, likely effects and Best Management Practices of fire and grazing as tools for maintenance of these communities.
- If deemed appropriate, develop a grazing management plan and lease in partnership with a local U.C. Extension advisor, Resource Conservation District, or other party.
- If deemed appropriate, develop a fire management plan in partnership with the California Department of Forestry and Fire Protection (Cal Fire) and the Bay Area Air Quality Management District.
- Conduct or review research comparing and contrasting the affects of native ungulate grazing versus cattle.

- Maintain or reconfigure fencing to control or exclude grazing within grassland communities.

*3. Biological Element: Valley Oak Woodland Habitat*

Valley Oak Woodland occurs primarily within proximity of 200 meters of the Jump-Off and San Antonio Creek watercourses and small groves. Although total acreage of this plant community is only approximately 60 acres, it is nevertheless significant from both an ecological as well as an aesthetic perspective. Valley Oak Woodlands on SAVER have also been grazed for 100 years or more. As a result, assessment is necessary to detemine whether oak recruitment is replacing mortality.

Livestock can both reduce and enhance reproduction of oaks. They may browse young plants causing stunting, a loss of vigor, and eventual mortality. Conversely, livestock can remove thatch which gophers and other rodents require for cover. Gophers have been shown to have significant impact on oak regeneration by girdling young trees when thatch is heavy around them.

**Goal:** Encourage natural valley oak regeneration.

**Tasks:**

- Map valley oak woodland habitat as part of developing a vegetation map for SAVER.
- Utilize exclusion cages and monitoring techniques around individual oak trees or groves to determine the affects of grazing and browsing by cattle and native ungulates on valley oak regeneration, productivity and vegetation composition in this habitat type.
- Remove and exclude cattle from SAVER and monitor oak response. Re-employ grazing as a management technique as seen fit.
- Assess the role of rodents (particularly California ground squirrels) in dispersal of or predation upon acorns.
- Consult professionals with expertise in oak recruitment to assess the current status of valley and blue oak age distribution on SAVER and develop plans if necessary to enhance seedling production and survival.

*4. Biological Element: Blue Oak Woodland Habitat*

There are approximately 800 acres of Blue Oak Woodland on SAVER. It is widespread in the western and central portion giving way to chapparal in the east. It is essential seasonal foraging and breeding habitat for a wide range of animals and also performs the function of building and stabilizing soils (Dahlgren et al. 2003). Although diverse age classes of blue oaks occur at SAVER significant herbivore pruning is evident on younger trees. Excessive pruning from browsing at early stages can stunt development and may lead to increased mortality (Swiecki et al. 1993, Phillips et al. 2007). It is unknown if current oak recruitment rates will replace mortality on SAVER.

**Goal:** Encourage natural blue oak regeneration.

**Tasks:**

- Map blue oak woodland habitat as part of developing a vegetation map for SAVER.
- Investigate factors affecting blue oak recruitment on SAVER.
- Implement measures to encourage natural blue oak regeneration by seasonal or permanent exclusion of cattle and native ungulates.
- If necessary to enhance broader age class distribution, supplement natural blue oak regeneration by artificial planting.

*5. Biological Element: Riparian and Wetland Habitat*

The riparian habitat is fairly degraded because of the long history of relatively unmanaged grazing within SAVER, in addition to incisement of creek systems.

Riparian habitat is not present in the traditional sense of cottonwood/willow, alder or sycamore on SAVER. The few willows which are present are associated with stock ponds and reservoirs or occur as isolated individuals in portions of San Antonio Creek and it's tributaries. Streams are ephemeral and riparian vegetation is primarily of a scrubby nature. Because of the long history of grazing within the region, locating intact remnants of representative native riparian scrub communities may prove challenging.

**Goal:** Restore or maintain riparian vegetation along Jump-Off and San Antonio creeks using native trees, shrubs, forbs or grasses.

**Tasks:**

- Map riparian areas and include within SAVER vegetation map.
- Conduct assessment of any ungrazed riparian areas within the San Antonio Valley or nearby watersheds to determine appropriate shrub/forb/grass/tree communities found along shallow gravelly soils adjacent to ephemeral streams at similar elevations.
- Propagate and plant native vegetation such as California rose, Mexican elderberry etc. on banks as appropriate.
- Conduct pre-construction surveys for sensitive plant or animal species within restoration project sites prior to planting and employ appropriate avoidance measures if special-status species are found.
- Remove or exclude cattle from restoration sites to ensure successful planting.
- Monitor results of native vegetation plantings and modify Reserve vegetation map as needed.

Additional water developments may or may not be necessary or beneficial to improve conditions for wildlife at SAVER. Preliminary reconaissance has identified nine water sources. Distribution of water is such that a significant majority of the property is within one-half of a mile of free standing water.

**Goal:** Locate, restore and develop springs where available to provide reliable, safe water for wildlife.

**Tasks:**

- Conduct site surveys to locate naturally flowing, perennial water sources.

- Assess the need for and best distribution of new water developments throughout SAVER.
- Determine presence to greatest extent possible of sensitive plant or animal species and avoid.
- Design and develop water catchments to retain water, reduce evaporation, and provide safe access to wildlife.

**Potential Impacts from developing water sources and mitigation measures:**

If done improperly, development of water sources could have adverse affects on water tables, entrap and drown wildlife, change soil moisture characteristics and disturb soil, increasing the likelihood of infestation by invasive plants. Water developments can attract cattle and feral pigs resulting in significant plant and soil disturbance.

**Avoidance and Mitigation Measures:**

1. Pumping of groundwater to fill tanks or ponds will not occur.
2. Any tanks which may be installed or restored will provide escape ramps for ingress and egress of wildlife.
3. Soil moisture changes are unlikely because projects will take place on already existing sites and any tanks which might be used will be of limited size allowing overflow to return to its original watershed.
4. Soil disturbance is unlikely or minimal because restoration will occur within the footprint of already existing water developments. Any disturbed soil will be replanted with natives and monitored for invasive weeds.
5. Refurbished springs will be fenced to exclude cattle and pigs if needed but will allow wildlife access.
6. Existing sensitive and rare plant location maps will be consulted before development or restoration of water sources occurs.

*6. Biological Element: Special-Status Species*

A number of species of special-status spend all or a portion of their lives at SAVER. These species will be managed to maintain or enhance their populations within the context of the overall health of their habitat. Special-status amphibians may utilize vernal pools and stock ponds. Bats are likely throughout many of the habitat components of SAVER. Special-status plants have been discovered within scrub, chaparral, woodland and barren vegetative communities.

<u>Special-Status Plant Species</u>
A single dedicated special-status plant survey was conducted on this property in 2006. It was conducted relatively late in the blooming season and may have missed species that are evident earlier in the year. Also, populations of the special-status plant species identified in this survey (Appendix A) can fluctuate dramatically from year to year.

**Goal:** Identify and protect special-status plant populations

**Tasks:**

- Conduct additional surveys to develop a more comprehensive understanding of rare plant populations on SAVER.
- Determine whether it is appropriate to construct cattle exclosures or conduct other management actions to protect sensitive plant species.
- Any active management options will be conducted in compliance with relevant state and federal environmental regulations.
- If active management is implemented, monitor the target population prior to and following the implementation in order to determine the effects of these actions on the target populations and associated plant community.

Special-Status Aquatic Species

Several reservoirs of various sizes were built by the previous landowner to support their livestock management operation. In addition, non-native fish and amphibian species were introduced for recreational sport. The species ntroduced for this purpose are not conducive to native amphibian survival.

**Goal:** Improve conditions for native amphibians.

**Tasks:**

- Conduct amphibian surveys to determine presence or absence of native species in ponds and vernal pools.
- Consult with species specialists to determine best timing and methodology to improve native amphibian habitat, reduce non-native predators and assess likelihood for success.
- If possible, after determining bodies of water least likely to become re-infested, drain ponds by pumping or breaching dams and drying seasonally to eradicate non-native fish and amphibians to favor native amphibians.

**Potential Impacts from Special-Status Species Tasks and Avoidance and Mitigation Measures:**

De-watering of existing reservoirs in an attempt to eradicate non-native bullfrogs could negatively affect native reptiles or amphibians if conducted during breeding season or during egg or tadpole development.

1. Conduct bullfrog or fish eradiction at time least likely to negatively impact native amphibians and reptiles.
2. Relocate or provide alternative water sources for western pond turtles or native amphibian species which may be temporarily displaced by drainage operations.
3. Provide alternative drinking water sources for other wildlife during drainage operations, particularly if undertaken during summer and fall.

**Goal:** Maintain vernal pools to provide habitat for native invertebrates, sensitive and unique plants and amphibians.

**Tasks:**

- Conduct surveys and map vernal pools to determine presence of native status invertebrates and amphibians.

Other Special-Status Animals

Several bat species of special concern may use SAVER. A focused bat survey has not been completed.

**Goal:** Maintain and improve suitable habitat for resident and migrant bat species.

**Tasks:**

- Conduct surveys to determine presence, timing and habitat use patterns of native bat species found on SAVER.
- Work with youth groups to build and install bat boxes or other habitat creation or restoration.

Avoidance and minimization methods

- If special-status bats are found that will be disturbed by work or other activities, those activities will be postponed or conducted elsewhere until bats have completed nesting or hibernation.

*7. Biological Element: Wildlife Populations*

SAVER has significant wildlife values. Based on lists developed for neighboring Henry Coe State Park, it likely provides for 11 species of amphibians, 27 species of reptiles and over 305 bird species. Approximately 35 species of mammals have been observed or are likely at SAVER. Because it lies between Henry Coe State Park and largely undeveloped private lands, SAVER provides a significant linkage for widely dispersing wildlife species. It is used extensively for foraging throughout the year by deer and tule elk, numerous coveys of quail and other game species that are distributed throughout SAVER.

**Goal:** Maintain habitat corridors for widely dispersing species.

**Tasks:**

- Identify corridors used by wildlife crossing into and out of SAVER.
- Conduct fence surveys and replace or repair as needed using specifications noted for deer and elk in the Wildlife Techniques Manual and other guidelines.
- Construct fence crossing structures for deer and elk compatability.

**Goal:** Maintain and improve forage, water and shelter for game and other species.

**Tasks:**

- Provide brush piles as needed for quail, rabbits and other species in locations lacking adequate cover.
- If appropriate, install game guzzlers and improve access to springs for wildlife in locations lacking consistent, reliable water.
- Construct, install, maintain, and monitor wood duck and bluebird nest boxes in conjunction with youth outreach activities. Remove boxes that are non-productive.

- Develop a vegetation management plan to provide diverse age structures within all plant communities and to favor native perennial grasses over non-native annual grasses.

**Goal:** Minimize human disturbance to wildlife.

**Tasks:**

- Provide public access only through scheduled activities.
- Schedule public activities to avoid breeding seasons.
- Conduct public activities in areas with least impacts on sensitive habitats and species.
- Coordinate with CDFW Wildlife Officers, State Parks Rangers, County Sherrifs and others to address trespass, poaching, harrassment, vandalism and other concerns.

**Opportunities and Constraints Associated with Biological Elements:**
The goals of the biological elements are constrained by a range of natural and human induced factors. Effective management of the Reserve requires that these factors be identified and considered. This plan recognizes that SAVER exists within the context of conflicting values and needs that are important to the neighbors of SAVER, the users of SAVER, and the people of California in general. Factors that affect the ability of CDFW to attain the Biological Element goals include:

Ability to maintain and rehabilitate the biological resources described above will be constrained in part by the degree to which cattle grazing can be excluded or effectively controlled to provide the benefit of thatch and non-native grass seed removal while minimizing negative impacts to native species' reproduction and survival. In addition, the extent that elk grazing replaces cattle grazing could be significant. If significant negative vegetation changes are observed as a result of cattle removal and exclusion (resulting in increased Residual Dry Matter) or longer elk residency (replacing or possibly exceeding cattle grazing's impact) the development of a vegetation management program could become critical.

The original extent of perennial bunch grasses within the Hamilton/Diablo Ranges is unknown but is speculated to have been sporadic within this portion of eastern Santa Clara County (Bainbridge, personal communication). Therefore, developing appropriate criteria for assessing successful restoration is problematic. Maintenance of existing native grass and forb alliances at current levels while allowing prevailing environmental conditions such as rain, drought, soil, fire and temperatures to dictate the direction of expansion or contraction of stands is prudent.

Development of a program to encourage oak regeneration could reverse the apparent lack of oak sapling recruitment and provide hands-on conservation education opportunities for schools and other public groups.

In order for all of these opportunities to be realized, active monitoring and adaptive management of related and interacting factors will be necessary. Monitoring and management will be constrained by a lack of staff, equipment, materials, funding, the area's remoteness, legal, political or social factors.

## C. Public Use Elements: Goals and Tasks

*1. Public Use Element: Environmental Research, Education and Interpretation Program*

SAVER is physically close to the major cities of the San Francisco Bay Area. However, due to the winding, narrow nature of the roadways leading to SAVER, travel time from the nearest major town is one to one and one half hour. Because of practical remoteness, unique natural features, lack of significant infrastructure, permanent staff or funding for management, SAVER will primarily be used for research, education and interpretation by special arrangement.

Since it has been in private ownership and has had relatively low human impact, particularly with respect to soil tillage, SAVER is an excellent opportunity to study nearly baseline 20th century habitat conditions. "Nearly baseline" means that it is recognized that certain non-native plants and animals (e.g. softchess brome, bullfrogs) are present and may even be dominant in places but relative to many other reserves and parklands in the Bay area, SAVER is in a more pristine condition.

One of the management goals for SAVER is to allow the property to serve as a study area for college or professional level research which may be applied to adaptive management on-site. The tasks described for the Biological Elements will provide some, but certainly not all, of the direction for research and educational studies. These opportunities may be arranged for students and classes from local colleges and universities and interpretive services may be provided for various grade level schools in partnership with organizations like, but not limited to, the California Native Plant Society, Rocky Mountain Elk Foundation, California Deer Association, and the Audubon Society.

**Goal:** Provide public opportunity for research, education and interpretation at SAVER utilizing the skills and knowledge of local conservation groups and educational institutions.

**Tasks:**

- Conduct applied surveys listed in the Biological Elements section above utilizing qualified biologists, higher education students and appropriate conservation organizations to provide scientifically valid information which can serve as the basis for sound management decisions.
- Provide study areas for independent researchers giving due consideration for habitat and species protection measures, other public use programs, safety and area security.
- Collaborate with conservation groups and educational institutions to conduct wildflower and birdwatching tours for school groups and the general public.

**Opportunities and Constraints:** Scientific information will serve as the basis for good management decisions at SAVER. CDFW can improve its management of SAVER by conducting its own research and monitoring at SAVER and by developing partnerships with other state agencies and academic institutions.

SAVER has potential to serve as a field study site for academic institutions within the nearby area. CDFW will consider research that is compatible with the biological goals and other

public use goals of this Plan, whether or not the proposed research project has direct bearing on management at SAVER. CDFW recognizes that research projects may have impacts on biological and public use elements of SAVER, as well as on the potential to conduct future research. The potential impacts of research projects will be specific to each project, so CDFW will evaluate the compatibility of proposed research projects based on the following criteria:

- Potential for research results to improve management of SAVER or other CDFW lands.
- Potential conflicts with other public uses or neighboring properties.
- Potential conflicts between the research and biological goals stated in this Plan.
- Potential for the research to interfere with or preclude future research at SAVER.
- Potential contribution of the research to science and society as a whole.

*2. Public Use Element: Hunting and Fishing Program*

Hunting and/or fishing opportunities will be provided, if appropriate. Because of its relatively small size, the primary focus of hunting and fishing will be to provide opportunities for individuals new to these types of activities. However, limited general elk hunting may occur if tag(s) are made available by the Fish and Game Commission within the herd management unit and it is deemed appropriate by the area manager. Because of the access and CDFW staffing and resource limitations previously described, these programs will be undertaken on a limited, controlled basis. An apprentice fishing program may also be allowed assuming that perpetuating the artificial fishery does not negatively impact Special-Status Species.

**Goal:** Provide hunting and fishing opportunities for adult and apprentice sportsmen utilizing volunteers with various organizations.

**Tasks:**

- Monitor game species on SAVER and determine appropriate levels of harvest or hunting pressure to maintain population viability.
- Work with hunting organizations to establish a volunteer base, schedule hunt events and determine roles and responsibilities.
- Develop a supplemental novice hunter education program specific to each type of hunt which includes information on wildlife biology, policy and conservation, hunter safety, ethics and techniques.

**Opportunities and Constraints:**
Implementation of an apprentice hunting and fishing program will allow CDFW to collaborate with conservation organizations to have a direct, positive impact in the recruitment of safe, knowledgeable, conscientious members to the sporting community. The principle constraints will be:

*Environmental factors*

- Compatibility of public uses with biological goals depends on the type and intensity of use and the number of users.

*Legal, political or social factors*

- Different public uses have the potential to conflict with one another, especially if overall use of SAVER increases in the future. However, because legal access of SAVER is controlled and scheduled by CDFW staff, the likelihood of this conflict arising is reduced significantly.

*Financial factors*

- As stated in the biological elements section, limited funding for staff and operations is a major constraint on management for public use. This plan proposes a higher level of public use management which will only be met with an increase in funding for staffing and materials for SAVER.

## D. Facility Maintenance Element: Goals and Tasks

The property is primarily in an undeveloped condition. Physical structures known to currently exist on SAVER are limited to fences and gates, approximately four and a half miles of road with only a few culvert crossings, approximately four miles of firebreaks, three cattle feeders, two cement cattle troughs and seven earthen dams with reservoirs. Any of the following maintenance activities with potential impact to native status species should be preceded with pre-project inspections to determine appropriate avoidance measures.

**Goal:** Improve and maintain the integrity of the property boundary.

**Tasks:**

- Replace and/or repair perimeter fencing.
- Remove fallen trees, branches and limbs from fences and repair.
- Post boundary signs at a minimum spacing of three per mile, more where bends and visual barriers dictate.
- Conduct regular inspection and replacement of signs.
- Develop an entrance sign identifying the property ownership, name and status to be located at the main entrance to SAVER.
- Develop a limited number of signs (one or two) to be installed at the entrance which provides area rules, contact information and relevant interpretive information.

**Goal:** Assess and address the adequacy or necessity of internal and external fencing with respect to wildlife movement, oak seedling regeneration and protection from or control of cattle grazing.

**Tasks:**

- Consider removal or reconfiguration of interior fencing as needed to address the above concerns.
- Maintain any remaining fence in a safe, secure, structurally sound condition using specifications prescribed to provide passage for elk and deer.
- Build any new or replacement fence with smooth top and bottom wires to facilitate safe elk and deer passage.
- Install elk passthroughs in key locations.

**Goal:** Maintain roadways in good condition.
**Tasks:**

- Grade roadways annually or as needed to provide safe, operable access.
- Inspect, assess, repair, replace or install culvert crossings as needed to prevent or repair erosion of roadways and streams.
- Repair, re-contour and revegetate wash outs up or down slope from roadways.
- Control invasive species along roads as feasible under the direction of a Certified Pesticide Applicator working under the authority of a Pesticide Use Recommendation (Form 880) issued by CDFW's Pesticide Use Coordinator.

**Goal:** Manage fuel loads to retain safe, ecologically sound and diverse habitat conditions.

**Tasks:**

- Work with Cal Fire to develop a fire plan which addresses both emergency and prescribed fire issues.
- Assess existing fire breaks and determine whether they should be allowed to revegetate or be re-cleared.
- Consult experts with knowledge of native grassland, oak woodland and chapparal ecology to determine if fire management is an appropriate tool for grassland restoration and oak seedling germination. If so, employ recommended best management practices for implementation.

**Goal:** Maintain reservoir dams in safe, structurally viable condition.

**Tasks:**

- Assess dam condition on an ongoing basis to determine repair or maintence needs.
- If repair, maintenance or removal operations are warranted, conduct them at a time of year and using practices best suited to encourage native amphibian recovery.

**Goal:** Maximize benefits associated with being in close proximity to other open space preserves.

**Task:**

- Initiate and participate in communication, information sharing, and as appropriate, cooperative projects with nearby public land managers, which currently include State Parks, the University of California and Santa Clara County.

## *V. CLIMATE CHANGE STRATEGIES*

Because it lies within the rain shadow of 4,000-foot Mt. Hamilton, SAVER already receives less precipitation than nearby areas with differing orientation to the mountain. If less precipitation is delivered to the region as a whole, the rain shadow effect could be exacerbated. Increased frequency and severity of drought could affect prevailing plant communities potentially causing conversion from blue and valley oak woodland/chaparral to predominantly desert scrub, which already exists on SAVER to a lesser degree. Such a transition would certainly have consequences for wildlife using the area.

The consequences of decreased precipitation cannot be known in their entirety but could be presumed to include:

- Less available free water with resulting reduction in wildlife's ability to thermo regulate and assimilate forage (water aids digestion, particularly in herbivores).

- Reduced hydroperiod in existing ponds which may prevent breeding success of some amphibian species including bullfrog and reduce or eliminate numerous fish populations and the western pond turtle population from the Reserve.

- Reduction in overhead canopy with associated reduction in vertical habitat structure, biomass, insect fauna, plant forage and a loss of thermoregulatory benefits from shade. Increased evaporation from water bodies may result from a loss of canopy cover as conditions become more arid.

- Changes in plant species composition with unknown but likely negative impacts on forage quality and quantity.

- Increased likelihood, frequency, intensity and scale of fires would likely affect prevailing plant composition and increase opportunities for non-native plant invasion.

**Strategies to Address These Potential Challenges Could Include:**

- Maintain, and repair existing reservoirs to prevent loss of water due to catastrophic events.

- Fence springs to exclude feral pigs but allow native wildlife to access them.

- Plant drought tolerant native trees in proximity to water bodies if necessary to replace dead trees in order to reduce evaporation.

- Locate fuel breaks strategically to prevent or discourage uncontrolled spread of wild fires which may occur more frequently as a result of reduced fuel moisture.

- Control non-native plant invasions as soon as possible after detection in order to provide natives the greatest degree of competitive advantage.

- Monitor wildlife and plants to assess impacts of changing environmental conditions and adjust management activities where possible to benefit species under greatest threat from climate related changes.

## *VI. REFERENCES*


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## California Environmental Quality Act (CEQA) Checklist

| | |
|---|---|
| 1. | **Project title:**<br>San Antonio Valley Ecological Reserve Land Management Plan |
| 2. | **Lead agency name and address:**<br>California Department of Fish and Wildlife, Bay Delta Region<br>7329 Silverado Trail<br>Napa, California 94558 |
| 3. | **Contact person and phone number:**<br>Conrad Jones, Senior Environmental Scientist Supervisor (707) 944-5544 |
| 4. | **Project location:**<br>The San Antonio Valley Ecological Reserve (SAVER) is located approximately 30 miles east of the City of San Jose and 13 miles east of the peak of Mount Hamilton in Santa Clara County, California. It is approximately the same distance south of the City of Livermore, California which is in Alameda County.<br>It lies within Township 7 S, Range 5E of the Mt. Stakes USGS 7.5 minute topographic quadrangle within all or parts of Sections 9,16,17,18,19,20,21. |
| 5. | **Project sponsor's name and address:**<br>California Department of Fish and Wildlife, Bay Delta Region<br>7329 Silverado Trail<br>Napa, California 94558 |
| 6. | **General plan designation(s):**<br>Unclassified<br>Agricultural Cropland and Grazing (A-cg)<br>Natural Resource Protection Open Space (NO)<br>Interim Mineral Resource (IMR) |
| 7. | **Zoning:**<br>Santa Clara County Parcels: Unclassified, Limited agriculture |
| 8. | **Description of project:**<br>*(Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)*<br>This project is a draft Land Management Plan (LMP) for the SAVER, an area owned by the State of California Department of Fish and Wildlife. The purpose of Ecological Reserve is to protect, maintain, enhance or restore wildlife habitat, and to provide compatible wildlife-related recreational uses. California Code of Regulations, Title 14 § 630, Guides Management of Ecological Reserves.<br>The LMP is an ecosystem-based adaptive management plan that describes the dynamic ecological conditions and managerial goals of SAVER. Written for a wide range of audiences with varying degrees of expertise in ecosystem level and adaptive management techniques, the LMP is a living document. As area managers gather more information and data, they will update the LMP and management goals will be refined and adapted. The LMP consists of 6 chapters and several appendices: |

| | |
|---|---|
| | I. Introduction<br>II. Property Description<br>III. Habitats and Species<br>IV. Management Goals<br>V. Operations and Maintenance<br>VI. References<br><br>The LMP contains a description of the SAVER and its environment as well as an evaluation of compatible wildlife-related public uses.<br><br>This Initial Study considers the whole of the project, and as such, this project and Negative Declaration include the following components:<br><br>• The ongoing operation of the SAVER, including the public uses incorporated in this LMP;<br>• Maintenance activities (e.g., habitat management and agriculture) to sustain the biological communities that provide habitat for wildlife and fisheries resources;<br>• Installation of minor improvements, such as signs and trails that do not involve substantial physical disruption of the Ecological Reserve;<br>• Restoration and enhancement of grasslands and riparian areas;<br>• Maintenance of the SAVER improvements;<br>• Monitoring and educational activities as well as scientific research;<br>• Ongoing coordination with public agencies and private interests consistent with the goals of this LMP;<br>• Dissemination of public information regarding the SAVER that may include hardcopy and online data as well as other media;<br>• Update to SAVER regulations; and<br>• Enforcement of duly adopted laws and regulations.<br><br>This LMP serves as a general policy guide for the management of the SAVER. It does not specifically authorize or make a precommitment to any substantive physical changes to the Ecological Reserve. Because potential physical changes to the SAVER would be a part of subsequent projects that have yet to be conceived, designed, or funded, it is not possible to reasonably evaluate the impacts of any such projects. Any such subsequent projects will be subject to CEQA review and will be considered in light of the contents of the LMP and this Initial Study. If a subsequent project is not included within the scope of this LMP (i.e., specific goals and tasks), it will require appropriate analysis and documentation pursuant to CEQA when it is conceived and proposed for approval. |
| 9. | **Surrounding land uses and setting:**<br>(*briefly describe the project's surroundings)*<br><br>The SAVER is bounded to the north, east and west by cattle ranches. It is bounded by Henry Coe State Park to the south. Access to the SAVER is from San Antonio Road. Please also see the draft SAVER LMP Chapters II (Property Description) and III (Habitat and Species Descriptions). |
| 10. | **Other public agencies whose approval is required:**<br>*(e.g., permits, financing approval, or participation agreement)*<br><br>None. |

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving none that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

| | | | | | |
|---|---|---|---|---|---|
| | Aesthetics | | Agriculture Resources | | Air Quality |
| | Biological Resources | | Cultural Resources | | Geology /Soils |
| | Hazards & Hazardous Materials | | Hydrology / Water Quality | | Land Use / Planning |
| | Green House Gas Emissions | | Transportation/Traffic | | Population / Housing |
| | Mineral Resources | | Noise | | |
| | Public Services | | Recreation | X | None |
| | Utilities / Service Systems | | Mandatory Findings of Significance | | |

DETERMINATION ON THE BASIS OF INITIAL EVALUATION:

| | |
|---|---|
| **X** | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. |
| | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. |
| | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. |
| | I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. |

| | |
|---|---|
| Signature | Date |

Evaluation of Environmental Impacts:

| **I. AESTHETICS —**<br>**Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Have a substantial adverse effect on a scenic vista? | | | | X |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | X |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | | | | X |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | | X |

**DISCUSSION:**

**a), b), c) d) No Impact.**

The proposed LMP's goals are based upon ecosystem integrity and include optimizing native vegetation, preserving existing agricultural practices and cultural resources, and the protection of natural visual resources. SAVER is not within a state scenic highway, and the proposed LMP does not involve the construction of any new buildings or outdoor lighting. Therefore LMP adoption would not adversely affect scenic vistas, damage scenic resources or create adverse lighting that affects day or nighttime views in the area.

| **II. AGRICULTURE RESOURCES —**<br>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland.<br>**Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | X | |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X |
| c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | | | | X |

**DISCUSSION:**

**a) Less Than Significant Impact**

The SAVER is located in extreme eastern Santa Clara County and is classified under the Farmland Mapping and Mapping Program as grazing or other land. It is zoned as Ranchland in the May 2008 Santa Clara General Plan. Available water and shallow, gravelly soils have historically limited agriculture in this region and this project does not intend to introduce farming. The parcels that make up the SAVER were in agricultural production (grazing) prior to CDFW's ownership and grazing may be continued if consistent with the vegetation component of the LMP.

**b), c) No Impact**

CDFW's mission is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for the public's use and enjoyment. LMP tasks do

not include the establishment of any facilities, structures, or land uses that would economically or physically preclude returning the land to grazing in the future, if such a public policy decision were made. LMP implementation could maintain a mix of natural communities and grazing lands on the property. Infrastructure, such as existing roads and drainage, is necessary for management and maintenance of agricultural lands as well as for natural communities.

| **III. AIR QUALITY —**<br>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.<br>**Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | X |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | | X |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | | | X |
| d) Expose sensitive receptors to substantial pollutant concentrations? | | | | X |
| e) Create objectionable odors affecting a substantial number of people? | | | | X |

**DISCUSSION:**

**a), b), c), d), e) No Impact.**

The SAVER is located within the Basin regulated by the Bay Area Air Quality Management District (BAAQMD), which is comprised of nine counties including Santa Clara. It is responsible for local implementation of state and federal air quality standards within the SAVER region.

The SAVER LMP proposed goals and tasks will not conflict or obstruct implementation of the District's air quality plans nor contribute significantly to any air quality violations. LMP implementation will not construct any stationary sources of criteria pollutants, nor add to mobile sources, therefore, will not contribute to increasing local levels of green house gas (GhG) emissions. Implementation of the goals and tasks of the LMP will most likely reduce GHG through habitat preservation, restoration and subsequent carbon sequestration. Although some proposed LMP management tasks could involve the limited and short-term use of construction equipment (e.g., continued operations and maintenance, restoration or enhancement activities) and controlled burns to emulate a natural fire regime these would be short-term impacts and would not cause a considerable cumulative net increase of air pollutants. None of the proposed LMP's management tasks would create objectionable odors or substantial pollutant concentrations.

| **IV. BIOLOGICAL RESOURCES —**<br>**Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | | | | X |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service? | | | | X |

| | | | | |
|---|---|---|---|---|
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | X |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | | X |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | X |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | X |

**DISCUSSION:**

**a), b), c), d) e), f) No Impact.**

The SAVER is located in the San Antonio Creek watershed. No activities are intended which would alter conditions as they currently exist. The SAVER provides potential habitat for 22 special-status and priority wildlife and plant species identified in the LMP. For more information, please see the draft SAVER LMP Chapter III Habitat and Species Descriptions.

The SAVER LMP is designed around an adaptive management concept. Baseline data collection, monitoring of key ecosystem functions (or indicators), completing focused research to obtain a better understanding, and staging implementation based on information gained are all central to the LMP's adaptive management process. Its tasks and goals were developed in coordination with the California Wildlife Action Plan (CDFW 2005, 2007), the Riparian and Oak Woodland Bird Conservation Plans (Riparian Habitat Joint Venture (2004) and California Partners In Flight 2002). Such measures and coordination helps ensure that all actions comply with federal and state Endangered Species Acts (ESA and CESA) and other applicable regulations, local policies or ordinances aimed at the protection of special-status species and wildlife.

The LMP's goals and tasks provide guidance to CDFW management of the Ecological Reserve for the benefit of the habitats and species found on the sites. Wetland and riparian habitat resources are especially valued for wildlife and special plant habitat and the LMP proposes no actions that will remove, fill or disrupt the hydrological conditions that maintain these resources. The LMP's restoration or enhancement activities will improve habitat connectivity and movement corridors for native species and improve wildlife nursery sites. Additionally, any of these activities would conform to regulatory requirements such as CDFW regulations, U.S. Fish and Wildlife Service (USFWS) regulations, State Water Quality Control Board (SWQCB) regulations, Section 404 of the Clean Water Act (CWA), and any applicable plans or ordinances protecting biological resources.

| **V. CULTURAL RESOURCES — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5? | | | | X |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5? | | | | X |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | X | |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | | | X | |

**DISCUSSION:**

**a), b), No Impact.**

**c), d) Less than Significant Impact**

Cultural resources may have the potential to exist on the SAVER. Prior to any significant ground disturbing activities, a site specific archaeological survey will be performed. If any pottntial resources are uncovered or discovered, all work will cease until the proper groups are identified and the site cleared.

| **VI. GEOLOGY AND SOILS** -- **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | X |
| ii) Strong seismic ground shaking? | | | | X |
| iii) Seismic-related ground failure, including liquefaction? | | | | X |
| iv) Landslides? | | | | X |
| b) Result in substantial soil erosion or the loss of topsoil? | | | | X |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | | | X |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | X |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | | | | X |

**DISCUSSION:**

**a), b), c), d), e) No Impact.**

The Alquist-Priolo Earthquake Fault Zoning Map does not analyze faults within the Mount Stakes USGS 7.5 Minute Quadrangle where the project area resides. No soil disturbing activities are anticipated beyond maintenance of existing roadways. There are no mineral resources of statewide significance within the plan area (Santa Clara County General Plan 1995-2010).

| **VII. HAZARDS AND HAZARDOUS MATERIALS —** **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | | | X |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | | X |

| | | | | |
|---|---|---|---|---|
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | | X |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | | | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | X |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | X |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | X | |

**Discussion:**

**a), b), c), d), e), f), g) No Impact, none of the conditions apply.**

**h) Less than significant.**

The project area is rural agricultural land which lies within the jurisdiction of the Santa Clara Administrative Unit of California Department of Forestry and Fire Protection. Should accidental or controlled burning take place it will be done so under the authority or permission of this agency as well as the Bay Area Air Quality Resources Control Board if appropriate.

| **VIII. HYDROLOGY AND WATER QUALITY — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? | | | | X |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | X |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | | | X |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | | | X |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | | X |
| f) Otherwise substantially degrade water quality? | | | | X |

| | | | | |
|---|---|---|---|---|
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | X |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | | | X |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | X |
| j) Inundation by seiche, tsunami, or mudflow? | | | | X |

**Discussion:**

**a), b), c), d), e), f), g), h), j) No Impact.**

San Antonio and Jump-Off Creeks are seasonal in nature, remaining dry for half or more of the year depending on rain patterns. They are tributary to Arroyo Bayo then Arroyo Valle Creeks which feed Del Valle Reservoir, part of the Alameda Creek watershed. When Jump-Off and San Antonio creeks flow the Ecological Reserve road is closed and all traffic is on foot. Because the Ecological Reserve is only open when staff are present, the public is exposed to no hazards at times when the creeks flow. No construction activities take place beyond routine road maintenance and that does not occur when creeks are flowing.

| **IX. LAND USE — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Physically divide an established community? | | | | X |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | | X |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | | X |

**DISCUSSION:**

**a), b), c) No Impact.**

The draft SAVER LMP would not require any physical changes to an established community, nor would implementation of any activity following LMP adoption physically divide an established community. The LMP has been developed in conformance with land management plans (e.g., general plans) for adjacent areas. The LMP goals provide for natural resource protection and preservation and require that any projects implemented following adoption of the proposed LMP conform to any habitat conservation plans and natural community conservation plans that may be applicable at that time. The LMP also outlines resource coordination opportunities between agencies and interested parties to facilitate communication and information sharing so that no conflicts will arise in the future. Based upon these provisions no impacts to land use will occur.

| **X. MINERAL RESOURCES — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | X |

| | | | | |
|---|---|---|---|---|
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | X |

**DISCUSSION:**

**a), b), No Impact.**

The SAVER is located approximately 4.4 air miles from the Red Hill Magnesite mine which retired in 1945. No other mineral resources have been identified within the Santa Clara County General Plan. Mineral extraction on the Ecological Reserve is prohibited, as it conflicts with CDFW's current mission to manage for ecological values and wildlife-related public uses.

The LMP serves as a general policy guide for SAVER management. It does not specifically authorize or make a precommitment to any substantive physical changes to the Wildlife Area. With the exception of ongoing restoration and enhancement, and operations and maintenance activities, any substantive physical changes that are not currently approved will require subsequent authorizations. Thus, no SAVER LMP tasks establish facilities, structures, or land uses that would physically or economically preclude mineral extraction in the future, if such a public policy decision were made and any potential mineral resource impacts are less than significant.

| **XI. NOISE — Would the project result in:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | | X |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | | X |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |

**DISCUSSION:**

**a), b), c), d) e), f), No Impact.**

Vehicle, equipment and/or firearms noise will be confined principally to the area of the SAVER and will dissipate significantly by the time it reaches the boundary of the Ecological Reserve. Any of these sources of noise is expected to be minimal even during times of greatest activity. The SAVER is located in an area of low-density rural residential and agricultural use. Henry Coe State Park adjoins the southern boundary of the Ecological Reserve and is essentially wilderness except for Service Vehicles and landowner with easements to pass. Although some proposed LMP management tasks could involve the intermittent use of construction equipment (e.g., restoration, enhancement or maintenance activities) thus temporarily increasing ambient noise, these activities would not result in a substantial increase in ambient noise levels above those generated by the Ecological Reserve's existing management practices or public uses. Since any increase in ambient noise will be temporary, and due to the isolated nature of the area, people in the vicinity will not be exposed to excessive noise levels or significantly impacted.

| XII. POPULATION AND HOUSING — Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | | X |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | X |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | X |

**DISCUSSION:**

**a), b), c). No Impact.**

The proposed LMP does not involve any change in housing nor would it induce growth through new infrastructure or by removing of any barriers to growth. Management goal and task implementation may require additional staff hours, but this would not induce population growth that would require additional housing.

| XIII. PUBLIC SERVICES — Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: | | | | |
| Fire protection? | | | X | |
| Police protection? | | | | X |
| Schools? | | | | X |
| Parks? | | | | X |
| Other public facilities? | | | | X |

**DISCUSSION:**

**a) Less Than Significant Impact.**

Adoption of the proposed LMP would not require substantial changes to existing levels of public service. Implementation of public use, facilities, and fire management goals could require a minimal increase in staff hours per year by the fire department, and CDFW staff, but these potential minimal increases do not create the need for new or altered facilities.

| XIV. RECREATION — Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | | X |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | X | |

**DISCUSSION:**

**b) Less Than Significant Impact.**

The SAVER's overall recreation goal is to provide a variety of public uses to the extent that such uses do not have significant adverse impacts on biological resources. Public access will be limited to scheduled events when DFW staff are on site. Suitable recreational activities for the SAVER are those that are either wildlife dependent or related and have low to moderate potential to negatively affect wildlife or conflict with other uses. Proposed SAVER LMP adoption and implementation does not expand the Ecological Reserve or change existing levels of wildlife-dependent recreational use. The existing use restrictions, coupled with the remoteness of the location and its limited access ensure the number of recreational users will not exceed the carrying capacity of its natural resources or degrade existing natural features or recreational facilities.

| **XV. TRANSPORTATION/TRAFFIC — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | | | X |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | | X |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | X |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | X |
| e) Result in inadequate emergency access? | | | | X |
| f) Result in inadequate parking capacity? | | | | X |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) | | | | X |

**DISCUSSION:**

**a), b), c), d), e), f), g) No Impact.**

There are no predicted increases in SAVER use levels (including automotive or air traffic levels) following LMP adoption. No design changes are proposed for current road access, nor are any changes anticipated with traffic patterns; therefore, no traffic hazards are anticipated. Since changes to current traffic levels or patterns are not anticipated, no changes to emergency access or parking would result from plan adoption, and the plan would not interfere with alternative transportation.

| **XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | | X |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | X |
| c) Require or result in the construction of new storm water drainage | | | | X |

| | | | | |
|---|---|---|---|---|
| facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | X |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | X |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | | X |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | | | X |

**DISCUSSION:**

**a), b), c), d), e), f), g) No Impact.**

Anticipated levels of use at the SAVER will remain extremely low following LMP adoption. The LMP does not include a proposal for additional storm drain, water supply, wastewater treatment, or solid waste disposal facilities. Proposed LMP adoption and goal and task implementation would not require the construction of new residences or service-related facilities; and therefore, would not generate a new demand or change existing capacities for storm water, water supply wastewater treatment, or solid waste disposal.

| **XVII. GREENHOUSE GAS EMISSIONS – Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation Incorporation** | **Less Than Significant Impact** | **No Impact** |
|---|---|---|---|---|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | | X |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | | | | X |

**DISCUSSION a), b) No Impact**

The SAVER is located in the Bay Area Air Quality Management District (BAAQMD), which is comprised of nine counties including Santa Clara. The District is responsible for local implementation of state and federal air quality standards within the SAVER region.

The SAVER LMP proposed goals and tasks will not conflict or obstruct implementation of the Districts air quality plans nor contribute significantly to any air quality violations. LMP implementation will not construct any stationary sources of criteria pollutants, nor add to mobile sources, therefore, will not contribute to increasing local levels of green house gas (GHG) emissions. Implementation of the goals and tasks of the LMP will most likely reduce GHG through habitat preservation, restoration and subsequent carbon sequestration. Although some proposed LMP management tasks could involve the use of construction equipment (e.g., continued operations and maintenance, restoration or enhancement activities) thus temporarily increasing equipment emissions, these would be short-term impacts and would not cause a considerable cumulative net increase of air pollutants. There are no predicted increases in SAVER use levels (including automotive, boat or air traffic levels) following LMP adoption. No design changes are proposed for current road access, nor are any changes anticipated with traffic patterns. Hence, it is not expected to have a substantial increase in overall vehicle miles traveled by administrative personnel or the public. The SAVER LMP management tasks do not utilize additional surface or groundwater resources and integrates many of the actions outlined in an internal policy referenced as "DFW Going Green – Reducing Our Carbon Footprint". Overall, the SAVER LMP does not conflict with the Department's overall undertaking of reducing GHG emissions as part of its compliance within the Natural Resources Agency's adherence to Assembly Bill 32 and Senate Bill 97.

| XVIII. MANDATORY FINDINGS OF SIGNIFICANCE — Would the project: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | | X |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | | | | X |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | | X |

**DISCUSSION:**

**a) No Impact.**

LMP goal and task implementation would help Reserve and enhance the natural resources of the SAVER. The LMP goals and tasks are designed to have a net benefit to these resources. Additionally, no large scale projects are anticipated which could threaten entire populations or communities.

**b) No Impact.**

LMP adoption and goal and task implementation would not require any substantial infrastructure improvements or new construction, and any implementation activities conducted would follow all applicable regulatory requirements. In addition, the proposed goals and tasks are designed to provide a net benefit to environmental conditions. Therefore, although there is a potential for some temporary and less than significant impacts to the environment as described above, none of these impacts are cumulatively considerable.

**c) No Impact.**

CDFW's mission is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for the public's use and enjoyment. The proposed project is an LMP that serves as a general policy guide for the management of the SAVER. It does not specifically authorize or make a precommitment to any substantive physical changes to the Ecological Reserve. With no substantive physical changes proposed, LMP implementation will comply with all applicable laws and regulations. As a result, LMP goal and task implementation would not have any direct or indirect environmental effects which would cause substantial adverse effects on human beings.

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## *VII. APPENDICES*

### Appendix A

# Preliminary Assessment of the Flora and Vegetation of the South Valley Ranch, Santa Clara County, California

Submitted to: The Nature Conservancy
201 Mission Street, 4th Floor, San Francisco, CA 94105-1832

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Draft version: January 2007

I. South Valley Ranch—Background[3]

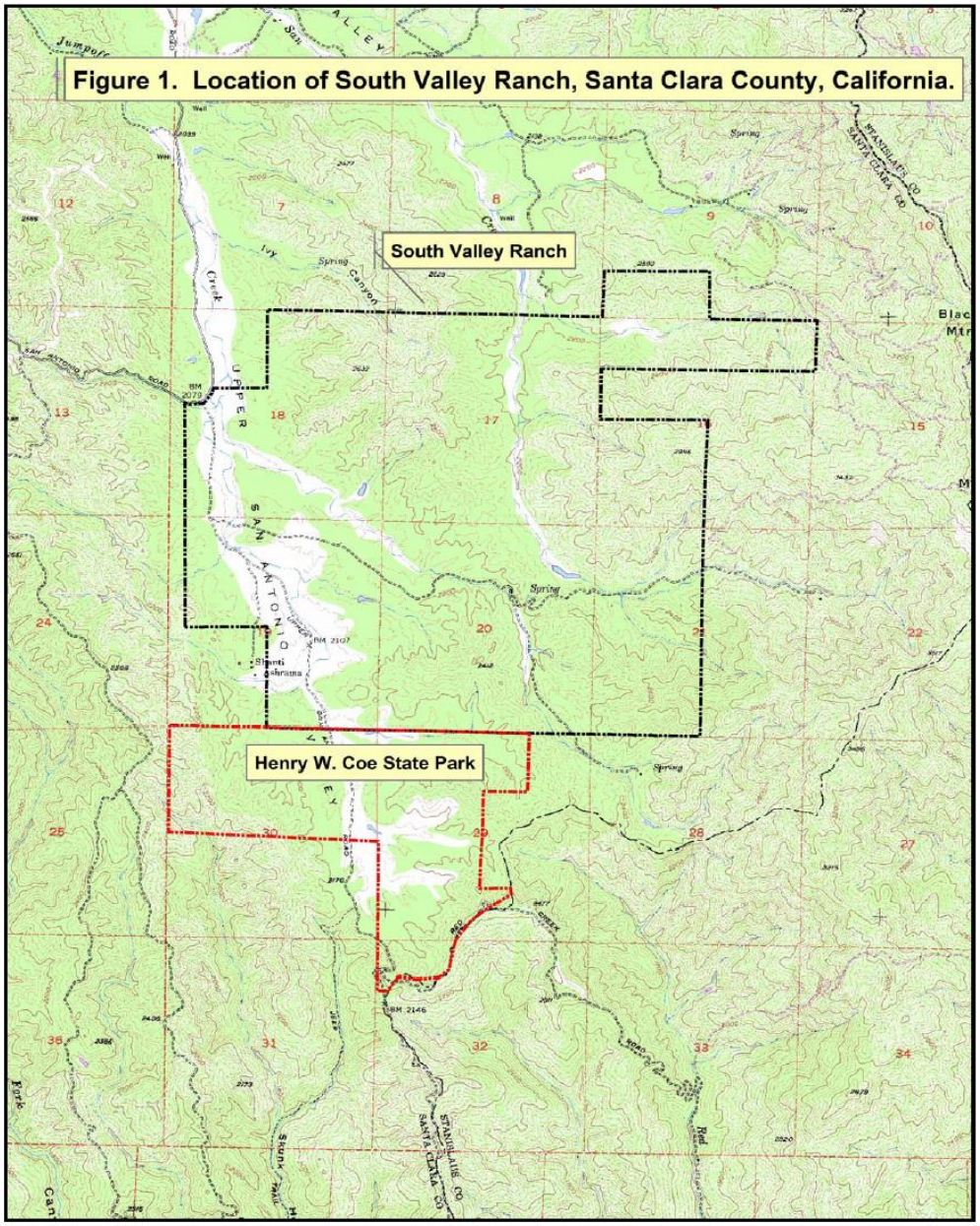
**I-A. Introduction.** South Valley Ranch (Figure I-1) is located east of Mount Lick, in the Hamilton Range (Santa Clara County). The Ranch is 2,899 acres in the Upper San Antonio Valley, immediately west of Mount Stakes. It was the southern end of the 9,000 acre Bar 71 Ranch. In the summer of 2006, The Nature Conservancy purchased the property from the Hurner family, who had owned it since 1897. The Conservancy named the Reserve SOUTH VALLEY RANCH alluding to its' location in the San Antonio Valley. Blue oak woodlands with conspicuous age structure, grassland and herbaceous vegetation, vernal pools and pond turtles were some of the features that warranted the high conservation priority for the San Antonio Valley.

**I-B. Topography and Hydrology.** Elevation at the Ranch ranges between 2,079 and 2,995 feet (634 and 913 meters). The two highest peaks on the Ranch are 2,633 and 2,995 feet elevation. The Ranch includes portions of two valleys: the Upper San Antonio Valley and the upper portion of the San Antonio Creek headwaters. The Upper San Antonio Valley is in the Jump-Off Creek drainage, which is a tributary to San Antonio Creek several miles downstream from the South Valley Ranch. San Antonio Creek is a tributary to Del Valle Creek, which drained into the Livermore Valley before construction of the Del Valle Reservoir. Both creeks drain at the northern edge of the property. The headwaters of Ivy Canyon, which is a small tributary to Jump-Off Creek, is in the Ranch. Elevation in the main valley (Upper San Antonio Valley) ranges between 2,075 and 2,120 feet. Elevation of the other valley (San Antonio Creek) ranges between 2,150 and 2,240 feet.

**I-C. Climate.** The climate at South Valley Ranch is characteristic of the interior Coast Range, at least in terms of precipitation. The Gerber Ranch Climate Station is located north of the South Valley Ranch in the San Antonio Valley, at 2,140 feet elevation. The long-term (1960-1977) average annual precipitation at the Gerber Station is 15.94 inches, and the average annual snowfall is 0.9 inches (Western Regional Climate Center 2006). The Mount Hamilton Climate Station, on the western portion of the Hamilton Range, is higher (4,210 feet), and wetter. The long-term (1948-2005) average annual precipitation 23.57 inches and snowfall is 16.8 inches (Western Regional Climate Center 2006). The Del Puerto Road Camp Station, on the eastern slope of the Hamilton Range and northeast of South Valley Ranch, is similar to the Gerber Ranch Climate Station, although lower (1,130 feet elevation) and drier. The long-term (1971-2000) average annual precipitation is 12.24 inches and snowfall 0.8 inches (Western Regional Climate Center 2006).

The 2005-2006 growing season was considerably wetter than average. 2005-2006 climate data is not available for the Gerber Ranch or Del Puerto Road Camp Climate Stations. Precipitation at the Mount Hamilton Climate Station between September 2005 and May 2006 was 32.68 inches, 138% of the long-term average. The majority of the precipitation (95%) occurred between December 2005 and April 2006. Snowfall at that station for the 2005-2006 winter was 30.40 inches (181% of average) of which 26.5 inches fell in December 2005.

[3] The Department currently refers to this property as the San Antonio Valley Ecological Reserve. Previous nomenclature left for purposes of the report drafted prior for TNC.




Late spring and early summer temperatures in 2006 were higher than the long-term average. Average monthly temperature (May-July 2006) at the Mount Hamilton Climate Station was approximately 3.7-5.1 degrees Fahrenheit higher than the long-term average. The monthly average maximum temperature for the same time was 2 to 3.7 degrees higher and the monthly average minimum temperature was 5.4-6.5 degrees higher than the long-term average.

## I-D. Geology and Soil.

**Upland and Hills.** The following geologic information is from Wentworth et al. (1999). The South Valley Ranch occurs on the Eastern Belt of the Franciscan Complex. Parent materials of the uplands and hills of South Valley Ranch are a melange of the Eastern Franciscan Belt. The parent material of the low rolling uplands in the southwest portion and the northeastern portion of the Ranch is a matrix of metagraywacke (metamorphosed sandstone) with outcroppings of blueschist. The low hills in the middle of the Ranch, separating Jump-Off and San Antonio Creeks, include both Lower and Middle Units of the Burnt Hills terrane. These Units of the Burnt Hills terrane are comprised of Upper Cretaceous fine to coarse-grained sandstone and mudstone (Wentworth 1997). The floor of the Upper San Antonio Valley is mapped as “undiv. unmapped Quaternary deposits including colluvium between surficial deposits and hillside materials and mapped colluvium” and “coarse-grained Holocene alluvium” (Wentworth 1997). Quaternary deposits of similar size occur in sparingly in the San Antonio, Santa Isabel, Smith and San Felipe Creeks watersheds.

Soils of the upland and hill areas of the South Valley Ranch are mapped as the Gaviota series (Figure I-2), including rocky loam, loam gravelly loam and severely eroded gravelly loam variants (USDA 2005). The Gaviota series consists of very shallow or shallow (6 to 20 inches to hard rock), well drained, moderately acid to neutral soils that formed in material weathered from hard sandstone or meta-sandstone. Clay content is 10 to 18 percent. Rock fragment content is less than 25 percent. Sand content is more than 40 percent of the fine earth fraction. Coarse and very coarse sand content is less than 20 percent.

**Alluvial Terraces and Channels**. The alluvial terraces and streambeds are comprised of Quaternary Alluvium, which is poorly or unconsolidated sand, gravel, and some silt or clay. The low terraces of the Upper San Antonio Valley, that support showy spring wildflower displays and vernal pools, are mapped as younger (Holocene), “unconsolidated, moderately sorted sand, gravel, and some silt and clay”. The minor channels and terraces of the other creeks and creek forks are mainly undivided Quaternary alluvium, but may include some poorly consolidated, alluvium of the upper Pleistocene.

Soil in the low terraces and streambeds of the Upper San Antonio Valley is mapped as Rivergravels, Cortina Very Gravelly Loam and Garretson Gravelly Loam (USDA 2005). The soil mapped in the San Antonio Creek is mapped as Rivergravels. Garretson gravelly loam is deep, well drained, slightly acid to neutral soil in the floodplains. Its origin is medium texture alluvium from mainly sedimentary rocks.

Cortina very gravelly loam is very deep, somewhat excessively drained, moderately acid to slightly alkaline soils, on alluvial fans and floodplains. These soils formed in gravelly and cobblely alluvium from old terraces of mixed crock sources.

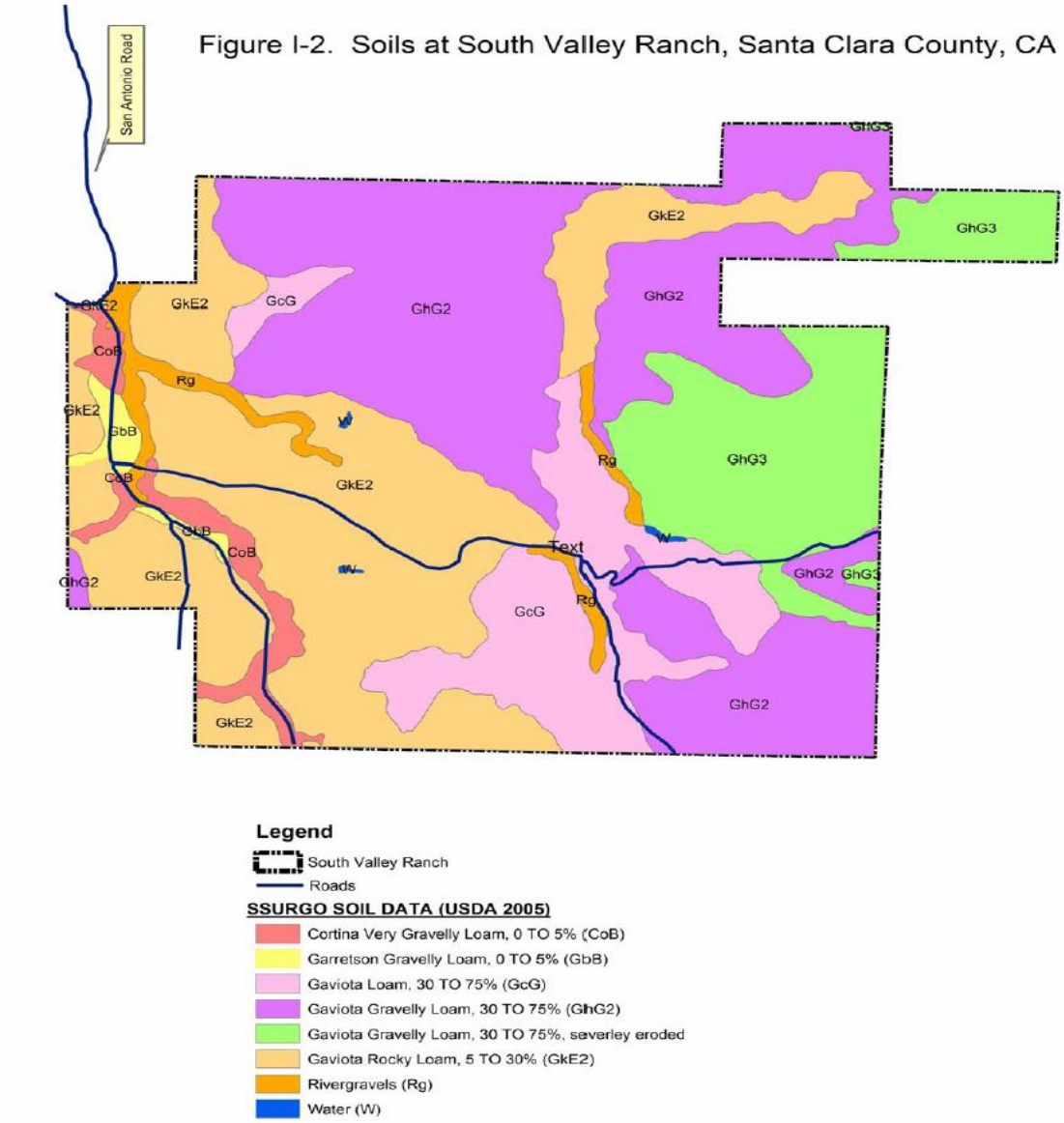



Figure I-2. Soils at South Valley Ranch, Santa Clara County, CA

**I-E. Land Use, Modifications and Disturbance.**

The primary use of the South Valley Ranch was cattle grazing, especially in the winter and spring. Grazing appears to be moderate. The ranch is apparently divided into three large pastures. No structures other than fences, gates, dirt roads, and stock ponds occur on the Ranch at this time. The Ranch was also used for some deer, wild turkey and feral pig hunting.

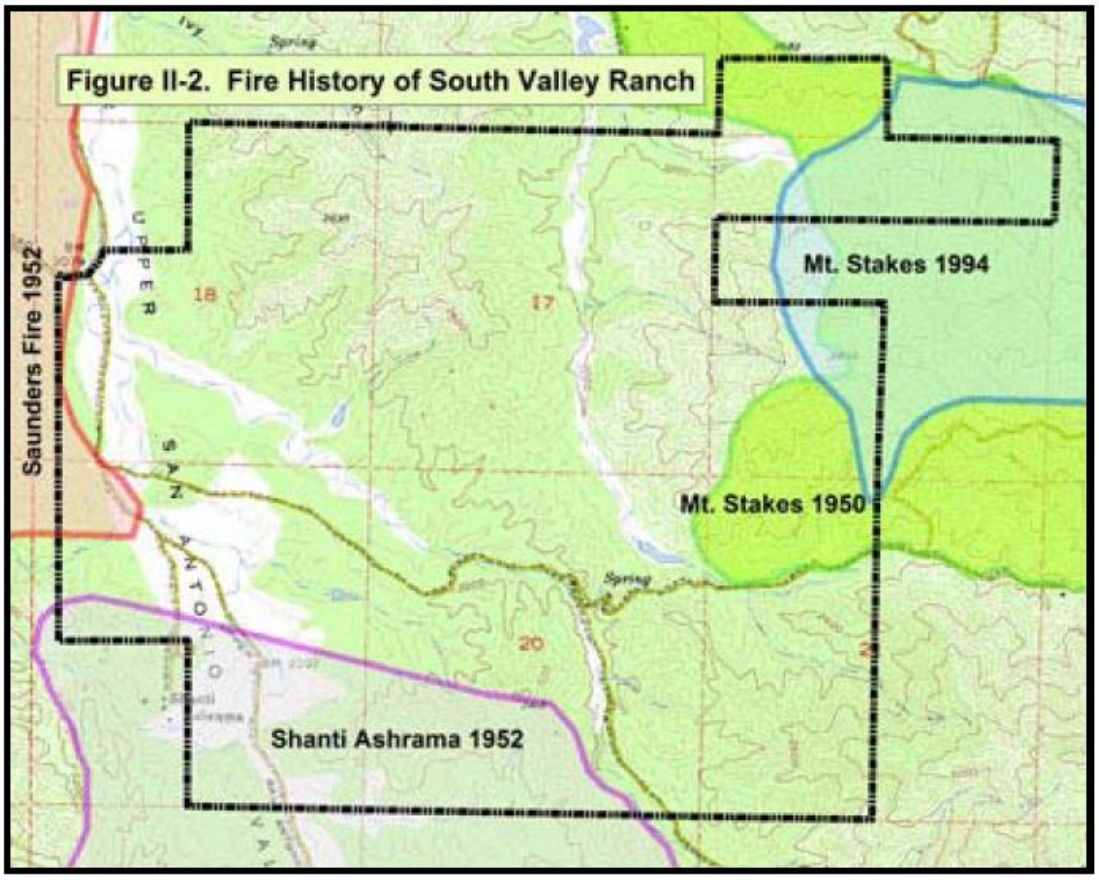
In 1978, a former county game warden, Henry Coletto, introduced twenty-five tule elk to the Hamilton Range (Rogers 2006). The herd on the east side of the Hamilton Range is now approximately 300 animals. Of these, 75-100 regularly graze in the Valley. Apparently, tule elk from the Santa Clara Valley used the Hamilton Range as winter range.

Feral pigs were observed once during the surveys and activity is evident but uncommon especially adjacent to small ponds and occasionally in the uplands. The pigs may be overturning shallow rocks in the chaparral areas to access tubers (perhaps Lomatium or Sanicula) or some other food.

Four fires have overlapped with South Valley Ranch boundaries since 1950 (Figure I-3, FRAPP 2006). The 1,488 acre Mount Stakes fire of September 1950 overlaps on the eastern edge of the Ranch. Almost the same area burned again as part of the October 1995, 1,540 acre Mount Stakes prescribed burn. The October 1952, 7,219 acre Saunders fire overlaps the Ranch on the western side. Most extensively, the 5,458 acre Shanti Ahsrama fire of August 1952 overlaps the Ranch on the south edge. Fuels breaks are common on the ridges of South Valley Ranch. In 2006, a wildfire occurred to the east of South Valley Ranch. Although the fire did not reach South Valley Ranch, California Department of Fire and Forestry Protection doubled width of the main road on the Ranch by using heavy equipment to blade the east side of the road.

**I-F. History of Botanical Collection.**

Botanical collecting started in the Hamilton Range as early as 1861 by William Brewer as part of the U.S. Geological Survey and by E.L. Greene in 1893. However, the earliest accessions from the San Antonio Valley are in 1903 by the American Botanists, A.D.E. Elmer (Sharsmith 1945). In the 1930's, J.T. Howell, Herbert Mason and Lois Chambers collected in the San Antonio Valley, but the most extensive collecting in the Valley was by Helen Sharsmith, as part of her flora of the Hamilton Range Flora (Sharsmith 1945). Annetta Carter and Carl Sharsmith often accompanied Helen and she collected into the early 1960s. The Mount Boardman 15 minute quadrangle was not included in the Vegetation Type Map survey of the 1930s. Most recently, the plants and vegetation of the San Antonio Valley has been appreciated mostly by roadside observations due to access limitations. The Santa Clara Chapter of the California Native Plant Society visits the adjacent Santa Isabella Valley almost annually, but not the San Antonio Valley (Don Mayall, CNPS, pers. com. 2006).




## II. South Valley Ranch—Floristic Inventory

**IIA. Methods and Phenology:** Records for Santa Clara County in the Consortia database and the Flora of the Hamilton Range were used to determine potential plant taxa and potential new records for the county or ecoregion. The floristic survey occurred simultaneously with the rare plant and vegetation surveys in the eleven field days between May 1 and August 30, 2006. Most (96%) of the taxa observed were vouchered and will be deposited at the Jepson Herbarium (JEPS).

Despite ample precipitation in winter and spring of 2006, the starting time of the project was suboptimal for a thorough floristic survey. Above average temperatures in April and May resulted in an early phenology for many species. Many annual species were past anthesis and several had already dispersed their seed. For some species (e.g., *Clarkia purpurea*), high mortality at the seedling stage was observed and perceived to be unusually high. Additional taxa may have been missed because of these conditions. Additional surveys and surveys in better condition will locate additional taxa.

**IIB. Results.** Nomenclature and taxonomy follows Hickman (1993). Based on the collections and observations made during this study, the known vascular flora of the South Valley

Ranch consists of 399 species and non-specific taxa within 254 genera and 71 families; 61 taxa (8%) are non-native. Appendix A is a list of these taxa sorted by family. None of the native species located represent range extensions, although a few are new records for the county.

Helen Sharsmith documented 761 taxa, in 331 genera and 86 families. Taxonomy has changed since then, and numerical comparisons are not entirely valid. However, if so, the South Valley Ranch supports more than half the taxa known in the Hamilton Range (including non-native), about 77% of the genera and 83% of the plant families.

The three largest (taxonomically richest) families for the Hamilton Range, Poaceae, Fabaceae and Asteraceae (Sharsmith 1945), are also the largest at South Valley Ranch. They comprise almost a third of the flora at the Ranch with Fabaceae at 25 taxa, Poaceae at 44 taxa and Asteraceae at 66 taxa. Other large families include Scrophulariaceae (24), Apiaceae (15), Brassicaceae (15) and Onagraceae (16). The largest genus is *Trifolium* (13 taxa), followed by *Bromus* (8 taxa), then *Clarkia*, *Epilobium*, *Eriogonum*, *Mimulus*, and *Phacelia* (6 taxa each).

Many more plant taxa likely occur at the site. Early and late season annual taxa were most likely missed; especially taxa on open or sparsely vegetation sites that may have senesced early (see also Special Status Plants). In addition, the northeastern and southeastern portions of the Ranch were not surveyed early and adequately.

## PLANTS OF SOUTH VALLEY RANCH

Nomenclature follows Hickman (1993).

**FERNS AND FERN ALLIES**

**ISOETACEAE-QUILLWORT FAMILY**
Isoetes howellii-quillwort

**MARSILEACEAE-MARSILEA FAMILY**
Marsilea vestita subsp. vestita

**PTERIDACEAE-BRAKE FAMILY**
Adiantum jordanii-California maiden-hair
Cheilanthes intertexta
Pellaea andromedifolia-coffee fern
Pellaea mucronata var. mucronata-bird's-foot fern
Pentagramma triangularis subsp. triangularis-goldenback fern

**SELAGINELLACEAE-SPIKE MOSS FAMILY**
Selaginella bigelovii-spike moss

**GYMNOSPERMS**

**CUPRESSACEAE-CYPRESS FAMILY**
Juniperus californica--California juniper

**PINACEAE-PINE FAMILY**
Pinus sabiniana--foothill pine

**DICOTS**

**AMARANTHACEAE--AMARANTH FAMILY**
Amaranthus albus--tumbleweed
Amaranthus blitoides--pigweed

**ANACARDIACEAE -- SUMAC FAMILY**
Toxicodendron diversilobum--poison oak, poison ivy

**APIACEAE -- CARROT FAMILY**
Apiastrum angustifolium--apiastrum
Bowlesia incana--bowlesia
Daucus pusillus--daucus
Lomatium caruifolium--lomatium
Lomatium dasycarpum subsp. dasycarpum--lomatium
Lomatium nudicaule--lomatium
Lomatium utriculatum--lomatium
Perideridia californica--yampah
Perideridia kelloggii--yampah
Sanicula bipinnata—poison sanicle
Saniculabipinnatifida—purplesanicle
Sanicula crassicaulis--sanicle
Sanicula tuberosa--sanicle
Torilis nodosa--torilis
Yabea microcarpa--yabea

**ASCLEPIADACEAE -- MILKWEED FAMILY**
Asclepias fascicularis--narrow-leaf milkweed

**ASTERACEAE -- SUNFLOWER FAMILY**
Achillea millefolium--yarrow, milfoil
Achyrachaena mollis--blow-wives
Agoseris grandiflora--agoseris
Agoseris heterophylla--agoseris
Agoseris retrorsa--agoseris
Anthemis cotula-mayweed, stinkweed, dog-fennel
Artemisia californica--California sagebrush
Artemisia douglasiana--mugwort
Aster chilensis--aster
Baccharis douglasii--marsh baccahris
Baccharis pilularis--chaparral broom, coyote brush
Brickellia californica--bricklebush
Calycadenia multiglandulosa--calycadenia
Carduus pycnocephalus--italian thistle
Centaurea melitensis--tocalote
Centaurea solstitialis--yellow star thistle
Chaenactis glabriuscula var. heterocarpha--yellow pincushion
Chamomilla suaveolens
Cirsium cymosum--peregrine thistle
Cirsium occidentale var. venustum--venus thistle
Crepis vesicaria subsp. taraxacifolia
Ericameria linearifolia-interior goldenbush

Eriophyllum confertiflorum var. confertifolium-golden-yarrow
Filago californica-herba impia
Filago gallica-herba impia
Gnaphalium californicum
Gnaphalium palustre-cudweed, everlasting
Helianthus californicus-sunflower
Hemizonia (Centromadia) fitchii--tarplant, tarweed
Hemizonia (Deinandra) kelloggii-tarplant, tarweed
Hesperevax sparsiflora var. sparsiflora
Heterotheca grandiflora-golden aster, telegraph weed
Heterotheca oregona var. scaberrima-golden aster, telegraph weed
Holocarpha virgata subsp. virgata-holocarpha
Holozonia filipes-holozonia
Hypochaeris glabra-smooth cat's-ear
Hypochaeris radicata-rough cat's-ear
Lagophylla ramosissima subsp. congesta
Lagophylla ramosissima subsp. ramosissima
Lasthenia californica (gracilis)-goldfields
Lasthenia delblis-goldfields
Lasthenia glaberrima-goldfields
Layia platyglossa-tidy-tips
Corethrogyne filaginifolia var. filaginifolia --California-aster
Lessingia tenuis--spring lessingia
Madia elegans var.?--common madia
Madia exigua--threadstem madia
Madia gracilis--slender tarweed
Malacothrix clevlandii
Malacothrix floccifera
Micropus californicus var. californicus--slender cottonwood
Microseris acuminata--microseris
Microseris douglasii subsp. douglasii--microseris
Microseris douglasii subsp. tenellus--microseris
Pentachaeta exilis subsp. exilis
Psilocarphus tenellus var. tenellus
Rafinesquia californica--California chicory
Rigiopappus leptocladus--rigiopappus
Senecio (Packera) breweri--groundsel, ragwort, butterweed
Senecio vulgaris-groundsel, ragwort, butterweed
Stephanomeria elata-stephanomeria
Stylocline gnaphaloides--everlasting nest straw
Taraxacum officinale--taraxacum
Uropappus lindleyi--silver puffs
Wyethia helenioides
Xanthium strumarium--cocklebur

**BORAGINACEAE**
Amsinckia menziesii var. intermedia
Amsinckia menziesii var. menziesii
Cryptantha clevelandii

Cryptantha flaccida
Cryptantha micromeres
Cryptantha microstachys
Cryptantha torreyana
Cynoglossum grande
Pectocarya pusilla
Plagiobothrys bracteatus
Plagiobothrys canescens
Plagiobothrys fulvus
Plagiobothrys nothofulvus
Plagiobothrys tenellus

**BRASSICACEAE**
Athysanus pusillus-athysanus
Barbarea orthoceras-barbarea
Brassica nigra
Capsella bursa-pastoris-shepard's purse
Cardamine oligosperma-bitter-cress
Draba verna
Erysimumcapitatumsubsp.capitatum-Westernwallflower
Guillenia lasiophylla
Lepidium nitidum-peppergrass
Lepidium strictum
Rorippa nastrum-aquaticum
Streptanthus glandulosus subsp. glandulosus-jewelflower
Thysanocarpus curvipes-lacepod, fringepod
Thysanocarpus radians-lacepod, fringepod
Tropidocarpum gracile-tropdidicarpum

**CALLITRICHACEAE -- WATER-STARWORT FAMILY**
Callitriche marginata

**CAMPANULACEAE -- BELLFLOWER FAMILY**
Campanula exigua -- chaparral hairbell
Githopsis diffusa subsp. robusta--bluecup
Githopsis specularioides--bluecup
Heterocodon rariflorum -- heterocodon
Triodonis biflora -- venus looking-glass

**CAPRIFOLIACEAE -- HONEYSUCKLE FAMILY**
Lonicera subspicata var. denudata -- honeysuckle
Sambucus mexicana -- blue elderberry

**CARYOPHYLLACEAE**
Cerastium glomeratum
Hernaria hirsuta
Minuartia douglasii
Sagina apetala
Silene gallica
Spergularia rubra
Stellaria media
Stellaria nitens

**CHENOPODIACEAE--GOOSEFOOT FAMILY**
Chenopodium berlandieri
Chenopodium californicum--pigweed
Chenopodium vulvaria--pigweed

**CONVOLVULACEAE--MORNING-GLORY FAMILY**
Calystegia arvensis

**CRASSULACEAE--STONECROP FAMILY**
Crassula aquatica
Crassula connata
Crassula tillaea
Dudleya cymosa subsp. paniculata
Parvisedum pentandrum

**CUCURBITACEAE--GOURD FAMILY**
Marahfabaceus—Californiaman-root

**CUSCUTACEAE--DODDER FAMILY**
Cuscuta californica var. californica--dodder

**DATISCACEAE--DATISCA FAMILY**
Datisca glomerata--Durango root

**ERICACEAE--HEATH FAMILY**
Arctostaphylos × campbelliae Eastw. (pro sp.) [glauca × tomentosa] (not in The Jepson Manual; known only from Mount Hamilton Range)
Arctostaphylos glauca--manzanita

**EUPHORBIACEAE--SPURGE FAMILY**
Eremocarpus setigerus--turkey mullein

**FABACEAE**
Astragalus gambelianus
Hoita macrostachya
Lotus humistratus
Lotus micranthus
Lotus purshianus var. purshianus
Lotus wrangelianus
Lupinus bicolor--minature lupine
Lupinus formosus var. formosus--lupine
Lupinus microcarpus var. microcarpus--chick lupine
Medicago polymorpha
Medicago praecox
Trifolium albopurpureum var. dichotomum--clover
Trifolium albopurpureum var. olivaceum--clover
Trifolium barbigerum var. barbigerum--clover
Trifolium ciliolatum--clover
Trifolium depauperatum var. depauperatum--clover
Trifolium dubium--little hop clover
Trifolium gracilentum--clover
Trifolium microcephalum--clover
Trifolium microdon--clover

Trifolium obtusiflorum--clover
Trifolium oliganthum--clover
Trifolium subterranean
Trifolium variegatum--clover
Trifolium willdenowii--clover

**FAGACEAE--OAK FAMILY**
Quercus berberidifolia--scrub oak
Quercus douglasii--blue oak
Quercus lobata--valley oak

**GARRYACEAE**
Garryacongdonii

**GENTINACEAE**
Centaurium davyi

**GERANIACEAE**
Erodium botrys
Erodium brachycarpum
Geranium dissectum

**GROSSULARIACEAE--GOOSEBERRY FAMILY**
Ribes californicum Hook. & Arn. var. californicum--hillside currant
Ribes malvaceum Sm. var. malvaceum--chaparral current
Ribes quercetorum E. Greene
Ribes menziesii

**HIPPOCASTINACEAE--BUCKEYE FAMILY**
Aesculus californica--California buckeye

**HYDROPHYLLACEAE--WATERLEAF FAMILY**
Eriodictyon californicum--yerba santa
Nemophila pedunculata
Phacelia distans
Phacelia divaricata
Phacelia imbricata subsp. imbricata
Phacelia tanacetifolia
Phacelia breweri
Phacelia rattanii

**LAMINACEAE--MINT FAMILY**
Acanthomintha lanceolata--Santa Clara thornmint
Monardella villosa subsp. villosa--coyote mint
Pogogyne serpylloides
Pogogyne zizyphoroides
Salvia columbariae--chia
Scutellaria siphocampyloides--skullcap
Scutellaria tuberosa--skullcap
Stachys albens--hedge nettle
Trichostema lanceolatum--wooley bluecurls

**LAURACEAE--LAUREL FAMILY**
Umbellularia californica--California bay

**LIMNANTHACEAE--MEADOWFOAM FAMILY**
Limnanthes douglasii subsp. douglasii--meadowfoam

**LINACEAE--FLAX FAMILY**
Hesperolinon micranthum--dwarf flax

**LOASACEAE--LOASA FAMILY**
Mentzelialindleyi—blazingstar

**LYTHERACEAE**
Lythrum hyssopifolia

**MALVACEAE**
Malacothamnus fremontii

**ONAGRACEAE**
Camissonia contorta
Camissonia graciliflora
Camissonia intermedia
Camissonia micrantha
Clarkia affinis
Clarkia gracilis subsp. gracilis
Clarkia modesta
Clarkia purpurea subsp. quadrivulnera
Clarkia rhomboidea
Clarkia unguiculata
Epilobium brachycarpum
Epilobium canum subsp. canum
Epilobium densiflorum
Epilobium foliosum
Epilobium pygmaeum
Epilobium torreyi

**OROBANCHACEAE--BROOM-RAPE FAMILY**
Orobanche fasciculata--clustered broom-rape

**PAPAVERACEAE**
Dicentra chrysantha
Eschscholzia caespitosa
Eschscholzia californica-California poppy
Platystemmon californicus--cream cups

**PLANTAGINACEAE**
Plantago elongata
Plantago erecta
Plantago lanceolata

**POLYGANACEAE**
Chorizanthe clevlandii
Chorizanthe membranacea
Chorizanthe uniaristata
Eriogonum gracile
Eriogonum inerme
Eriogonum luteolum var. luteolum

Eriogonum nudum var. auriculatum
Eriogonum roseum
Eriogonum wrightii var. trachygonum
Pterostegia drymarioides
Rumexsalicifoliusvar.denticulatus

**POLEMONIACEAE**
Allophyllum gilioides subsp. gilioides
Eriastrum abramsii
Gilia acheilleafolia subsp. multicaulis
Gilia clivorum
Linanthus ambiguus
Linanthus bicolor
Linanthus ciliatus
Linanthus dichotomus
Navarretia intertexta subsp. intertexta
Navarretia mellita
Navarretia pubescens
Navarretia tagetina
Phlox gracilis

**PORTULICACEAE--PURSLANE FAMILY**
Calandrinia ciliata--red maids
Claytonia parviflora var. parviflora
Lewisia rediviva--bitter root
Montia fontana--water chickweed

**PRIMULACEAE--PRIMROSE FAMILY**
Anagallis arvensis--pimpernel
Centunculus minimus--chaffweed
Dodecatheon hendersonii--mosquito bills

**RANUNCULACEAE--BUTTERCUP FAMILY**
Clematis lasiantha--pipestems
Delphinium californicum subsp. interius--Hospital Canyon larkspur
Delphinium hesperium subsp. hesperium--weatern larkspur
Delphinium parryi--larkspur
Delphinium patens subsp. patens--spreading larkspur
Delphinium variegatum--royal larkspur
Myosurus minimus--mouse-tail
Ranunculus aquatilis var. capillaceus--buttercup
Ranunculus californicus--buttercup
Ranunculus hebecarpus--buttercup
Thalictrum fendleri var. polycarpum--meadow rue

**RHAMNANCEAE--BUCKTHORN FAMILY**
Ceanothus cuneatus var. cuneatus--buck brush
Rhamnus ilicifolia--spiny redberry

**ROSACEAE--ROSE FAMILY**
Adenostoma fasciculatum--chamise
Aphanes occidentalis

Cercocarpus betuloides var. betuloides--birch-leaf mountain-mahogany
Heteromeles arbutifolia--christmas berry, toyon
Potentilla glandulosa subsp. glandulosa--cinquefoil
Prunusilicifolia--holly-leavedcherry
Rosa californica--California rose

**RUBIACEAE--MADDER FAMILY**
Galium andrewsii subsp. gatense
Galium aparine--goose grass
Galium murale
Galium parisiense--wall bedstraw
Galium porrigens var. porrigens--climbing bedstraw
Sherardia arvensis--field madder

**SALICACEAE--WILLOW FAMILY**
Salix laevigata--red willow

**SAXIFRAGACEAE--SAXIFRAGE FAMILY**
Lithophragma parvifolium var. parvifolium--woodland star
Saxifraga californica--saxifrage

**SCROPHULARIACEAE--FIGWORT FAMILY**
Antirrhinum multiflorum--snapdragon
Antirrhinum vexillo-calyculatum subsp. vexillo-calyculatum--snapdragon
Castilleja attenuata--valley tassles
Castilleja densiflora subsp. densiflora--owl's-clover
Castilleja exserta subsp. exserta--purple owl's-clover
Castilleja foliolosa-woolly paintbrush
Collinsia heterophylla--Chinese houses
Collinsia sparsiflora var. collina
Cordylanthus rigidus subsp. rigidus--bird's-beak
Keckiella breviflora var. breviflora
Limosella acaulis--mudwort
Linaria canadensis
Mimulus aurantiacus var. aurantiacus--monkeyflower
Mimulus bolanderi--monkeyflower
Mimulus cardinalis--monkeyflower
Mimulus douglasii--monkeyflower
Mimulus guttatus--monkeyflower
Mimulus pilosus--monkeyflower
Penstemon heterophyllus var. heterophyllus--beardtongue
Scrophularia californica--figwort
Triphysaria eriantha subsp. eriantha--butter-and-eggs
Veronica catenata--chain speedwell
Veronica peregrina subsp. xalapensis--pursland speedwell
Veronica persica--Persian speedwell

**SOLANACEAE**
Solanum umbelliferum--nightshade

**URTICACEAE--NETTLE FAMILY**
Urtica dioica subsp. holosericea--stinging nettle

Urticaurens—dwarfnettle

**VALARENACEAE--VALERIAN FAMILY**
Plectritis brachystemon
Plectritis macrocera

**VERBENACEAE--VERVAIN FAMILY**
Verbena lasiostachys var. scabrida

**VIOLACEAE**
Viola douglasii--Douglas violet
Viola purpurea subsp. quercetorum--violet

**VISCACEAE--MISTLETOE FAMILY**
Phoradendron villosum--oak mistletoe

**MONOCOTS**

**CYPERACEAE**
Eleocharis acicularis var. acicularis
Eleocharis macrostachya
Scirpus microcarpus

**JUNCACEAE**
Juncus bufonius var. occidentalis
Juncus xiphioides

**JUNGAINACEAE**
Lilaea scilloides

**LILIACEAE**
Allium amplectens
Allium lacunosum
Allium serra
Brodiaea elegans subsp. elegans
Calochortus luteus
Calochortus venustus
Chlorogalum pomeridianum var. pomeridianum
Dichelostemma capitatum subsp. capitatum
Dichelostemma congestum
Fritillaria affinis
Triteleia hyacinthina
Triteleia laxa
Zigadenus fremontii
Zigadenus venenosus var. venenosus

**ORCHIDACEAE**
Piperia michaelii

**POACEAE**
Aira caryophyllea
Avena barbata
Briza minor
Bromus arenarius
Bromus carinatus var. carinatus

Bromus diandrus
Bromus hordeaceus
Bromus laevipes
Bromus madritensis subsp. madritensis
Bromus madritensis subsp. rubens
Bromus tectorum
Deschampsia danthonioides
Elymus glaucus subsp. glaucus
Elymus multisetus
Festuca arundinacea
Gastridium ventricosum
Hordeum brachyantherum subsp. brachyantherum
Hordeum marinum subsp. gussonianum
Hordeum murinum subsp. glaucum
Hordeum murinum subsp. leporinum
Koeleria macrantha
Lamarckia aurea
Leymus triticoides
Lolium multiflorum
Melica californica
Melica imperfecta
Melica torreyana
Nassella cernua
Nassella lepida
Nassella pulchra
Phalaris aquatica
Phalaris paradoxa
Poa annua
Poa bulbosa
Poa howellii
Poa secunda subsp. secunda
Polypogon interuptus
Polypogon monspeliensis
Scribneria bolanderi
Vulpia bromoides
Vulpia microstachys var. ciliata
Vulpia microstachys var. pauciflora
Vulpia myuros var. hirsuta
Vulpia myuros var. myuros

**POTAMOGETONACEAE**
Potamogeton natans

**TYPHACEAE**
Typhaangustifolia

## III. South Valley Ranch—Rare Plant Survey

**III-A. Potential species.** South Valley Ranch is in Santa Clara County near the boundary of Stanislaus County. The majority of the higher elevations of the Hamilton Range and the area ecologically and geographically similar to South Valley Ranch is in these two counties. All special status vascular plant species (Federally- or State-listed and/or CNPS List 1-4 and/or CNDDB S1-S4) occur in the two counties or are suspected to be there (i.e., including all taxa confirmed, uncertain or possibly extirpated per CNPS 2006, Version 7-06c 7-11-06). No special status bryophytes or lichens are known from the two counties. Many of those species are in other ecological subregions in these counties (e.g., Sierra Nevada foothills, Central Valley Santa Cruz Mountains) and are not relevant to the special status species survey at South Valley Ranch. Species that are known from the Hamilton Range and fit the following criteria were target species: not serpentine obligate, occurring at elevations higher than 300 meters, and habitats found at South Valley Ranch.

**III-B. Results.** Six special status vascular species were found at multiple locations at the site (Figure III-1). One of these taxa, *Linanthus* (*Leptosiphon*) *ambiguus*, was so abundant that individuals were not mapped. Field survey forms for each occurrence of the other five taxa are in Appendix III-1. It should be noted that other special status species and other populations of the located special status species might occur at the site. The late initiation, limited survey time, in a single year, and early high temperatures were not optimal for this survey.

Six special status plant taxa that were considered high probability for locating were not found at South Valley Ranch. They are *Plagiobothrys myosotoides*, *Androsace elongata* subsp. *acuta*, *Coreopsis hamiltonii*, *Streptanthus callistus*, *Eriastrum brandegeae*, and *Phacelia phacelioides*. All of these taxa are known from the Arnold Ranch and the Arroyo Bayo area in habitat types found on the South Valley Ranch. Other special status plant taxa in the area occur on serpentine soils and would therefore probably not be found on the South Valley Ranch. In addition, *Plagiobothrys uncinatus* is known from the area between Arroyo Bayo and Isabel Valley. Future surveys should focus on these taxa.

**III-C. Population information for South Valley Ranch.**
***Delphinium californicum* subsp. *interius* (Hospital Canyon larkspur; CNPS List 1B, G3T2?S2?)** was located at six occurrences in the South Valley Ranch. The minimum number of individuals on the site was estimated at 218 with occurrences ranging from 11-100 individuals. All populations were on north or northeastern-facing slopes in *Prunus ilicifolia* or *Quercus berberdifolia* dominated scrub or mixed north slope chaparral with *P. ilicifolia* and/or *Q. berberdifolia* as a component. Associated herbaceous species where most often *Madia gracilis*, *Clarkia modesta*, *Sanicula crassicaulis*, *Collinsia heterophylla*, and *Pentagramma triangularis*. All occurrences were on steep slopes (25 plus degrees) and mapped as Gaviota gravelly loam per USDA (2005). The occurrences usually ranged from near the base of the slope or lower end of the vegetation type to about mid slope but never the upper 1/3 of the slope or ridge top.

Individuals were found in the understory of individual shrubs, often growing through the lower and sometimes higher shrub canopy. Populations sizes are between 50 and 200 individuals of which more than 99% were reproductive. Browsing, probably by deer, was evident on a large portion of the individuals and inflorescences not otherwise protected by shrub canopy.

However, viable fruit was produced in each occurrence. Non-native plants are not an apparent threat. Populations may be limited by the extent of mesic shrub habitat and inter-specific competition. Threats would include any activity that would decrease the extent and quality of mesic shrub habitat. Although Prunus ilicifolia and Quercus berberdifolia do not form persistent seed banks, they both stump sprout after fire, and are unlikely to be eliminated or population sizes significantly reduced by fire.

The range of this subspecies includes three occurrences in the East Bay: one each in western San Joaquin and Merced Counties, several in eastern Santa Clara County, and one in San Benito County. Three CNDDB occurrences and several herbarium collections are known from Santa Clara County but the South Valley Ranch localities are probably new occurrences. A May 26, 1935 collection by H.K. Sharsmith (3206; UC733048) may correspond to population A of *Delphinium californicum* subsp. *interius* on the South Valley Ranch, in Ivy Canyon, as it is near San Antonio Road. The collection location is dry draw adjacent to San Antonio Creek, Inner South Coast Ranges, Mount Hamilton Range, Burnt Hills. The other occurrences are to the north of these occurrences in the Arroyo Bayo and Santa Isabella watersheds and to the east in Del Puerto Canyon. This area in the Hamilton Range might be the largest concentration of known populations to date.

***Acanthomintha lanceolata*** **(Santa Clara thorn-mint; CNPS List 4.2, G3S3.2)** was located at three locations at South Valley Ranch. Two of the locations are on steep slopes of stable creek banks on loose and gravelly soil. The third location is downstream of one of the populations on a flat, frequently flooded creek terrace, in substrate dominated by cobbles. It may be a sink population. Associated species are mostly native annual forbs and non-native annual grasses. Population sizes are 11 to 75 individuals and a total of 108 individuals at all three sites.

In the vicinity of South Valley Ranch, is previously known from several collections to the west in the Santa Isabella Creek drainage and the ridge between the Arroyo Bayo and San Antonio drainages, Del Puerto Canyon, the Orestimba Creek watershed and as far west as Pine Ridge (Santa Clara County).

Historic collections that may represent the localities on South Valley Ranch are the following:
1) Halfway down e slope of mountain near, San Antonio Road, Mount Hamilton; San Antonio Creek, Mt. Hamilton Range, Burnt Hills, C.W. and H.K. Sharsmith, June 2, 1935.
2) Between San Antonio Creek and Arroyo Bayo, Mount Hamilton Range, San Antonio Creek drainage, Annetta Carter, Jun 8 1935.

Acanthomintha lanceolata is known from the Hamilton Range and the inner South Coast Range, from Alameda to Monterey Costa Counties.

Lessingia tenuis (spring lessingia; CNPS List 4.3, G3S3.3) was located at five locations on the ranch. Populations were small ranging from 2 individuals to and estimated 300, with a total of 727 individuals estimated on the site. Populations occupied small areas, usually less than 20 square meters (40 square meters in one case) and where in openings in chaparral. Because the populations are small and the habitat is abundant at the site, other occurrences probably exist on the Ranch. There are no apparent threats to this species at South Valley Ranch. Trampling by livestock or elk and some erosion has occurred at one site but the effects on the population appear minor.

Populations were found in openings of chamise dominated chaparral and chaparrals dominated by Prunus ilicifolia, Quercus berberdifolia or Cercocarpus betuloides. They were located at the base of the slop to near the summit on moderate to steep slopes and at various aspects. Associated vegetation is Madia exigua, Clarkia purpurea, Vulpia spp., Rigiopappus leptocladus, Bromus madratensis and Daucus pusillus. Soil is gravelly loam and mapped as Gaviota gravelly loam.

Lessingia tenuis occurs sporadically in the inner Coast Ranges and the Transverse Ranges from Ventura County north to the Hamilton Range. The San Antonio Valley may be at the northern limit of its range.

Other collections in vicinity:
1) San Antonio Valley. A. D. E. Elmer, May 3, 1903.
2) E end Arnold Ranch near head of Arroyo Bayo, Mt Hamilton Range, C. W. Sharsmith, May 20, 1990.
3) Slopes, San Antonio Creek, Mount Hamilton Range, Burnt Hills, H. K. Sharsmith, May 26 1935.
4) 5 mi E of Bridge over Isabelle Creek on San Antonio Valley Rd., Arroyo Bayo, San Antonio Valley, S. Markos and Peter Morrell, May 28 1996.

Piperia michaelii (Michael's rein orchid; CNPS List 4.2, G3S3.2) was found at two locations on South Valley Ranch. Populations sizes are very small ( 2 and 4 individual respectively) but population sizes may be inherently small for this taxon. The orchid is inconspicuous, the habitat is not very specific and usually in the understory of woody vegetation. There are probably other occurrences of this plant at South Valley Ranch.

Habitat is chaparral or Pinus sabiniana/Quercus douglasii woodland and associated herbaceous species are different between the two populations except for Triteleia laxa. Associates include Pentagramma triangularis, Galium porrigens, Clarkia purpurea, Eriophyllum confertifolium, Lupinus micranthus, Collinsia heterophylla, Sanicula crassicaulis and native perennial grasses Melica californica and Poa secunda. Slopes are gentle to moderate.

Piperia michaelii ranges from the Transverse ranges north through the Coast Ranges to Mount Diablo, Contra Costa County. The South Valley Ranch may be the first record for Santa Clara County. Other disjunct localities include single collections from the North Coast, the foothills of the Cascade Ranges and the foothills of the Sierra Nevada. There is one collection from Del Puerto Canyon.

Campanula exigua (chaparral hairbell; CNPS List 1B.2, G2S2.3) was located at two small subpopulations on the east side of South Valley Ranch. Thirty-seven individuals were located in two small barren areas. There were no apparent threats to these subpopulations, although the population size is small. Campanula exigua is endemic to the inner Coast Ranges from Mount Diablo State Park, Contra Costa County, south to San Benito County.

Habitat at South Valley Ranch is steep, west or north-facing slopes in openings in chaparral or Pinus sabiniana/Quercus douglasii woodland. Associated vegetation in the openings is sparse (ca. 2% cover) with Poa secunda, Viola purpurea, Eriastrum abramsii, Vulpia microstachys, V. bromoides, Bromus madratensis, Epilobium pygmaeum, Rigiopappus

leptocladus, Madia exigua, Clarkia purpurea, Linanthus ambiguous. Both subpopulations are in loose gravelly soil, mapped as the Gaviota series per USDA.

Campanula exigua is known from Del Puerto Canyon, Henry Coe State Park, Mount Day and the orestima Creek drainage.

Collections in the vicinity of South Valley Ranch include:
1) C. W. and H. K. Sharsmith 3207, May 26 1935, Santa Clara San Antonio Creek | | Mt. Hamilton Range, Burnt Hills.
2) C. W. and H. K. Sharsmith 3252, Jun 2 1935, Halfway down e slope of mountain near San Antonio Road.
3) Annetta M. Carter 900, June 8, 1935, Between San Antonio Creek and Arroyo Bayo, San Antonio Creek drainage.

## Appendix B

### CNDDB Vegetation Classification from Bainbridge with additions

**Herbaceous Dominated**
***Several "Provisional" Alliances including***
**Wet Meadow**: Deschampsia dananthoides (Tufted Hairgrass), Hordeum marinum

**Non-Native Grassland** Alliances
No Alliance Assigned; Hordeum mairnum-'Capsella bursa-pastoris
Annual Brome Alliance; Bromus hordeaceous-Eriogonum wrightii

**CA Annual-Perenn. Herb-land Alliances and Associations**
Calycadnia multiglandulosa-Bromus hordeaceous
" "-Escholzia caespitosa
" "-Lasthenia californica
Holocarpha virgata, Bromus hordeaceous- Juncus bugonius Association
Lasthenia californica-Layia platyglossa –Plagiobothyrs nothofulvus Association

**Rocky Barren Sparsely Vegetated Herbaceous Alliances**
Vegetated herbaceous alliances
Heterotheca oregano var scaberrima- Rumex salicifolius
Heterotheca oregano var scaberrima

**Desert Scrub**
*32.041.00 Wright's Buckwheat Dwarf Scrub [*Eriogonum wrightii*] (Keeler-Wolf *et al* 1998)

**Chaparral**
37.100.00 Chaparral with Chamise with or without other codominant shrubs {37200}
37.101.09 Chamise - Scrub Oak [*Adenostoma fasciculatum-Quercus berberidifolia*] (Gordon & White 1994)
37.101.10 Chamise - Wedgeleaf Ceanothus [*Adenostoma fasciculatum-Ceanothus cuneatus*] (Gordon & White 1994)
37.108.00 Chamise - Wedgeleaf Ceanothus Chaparral [*Adenostoma fasciculatum-Ceanothus cuneatus*]
37.108.01 Chamise - Wedgeleaf Ceanothus [*Adenostoma fasciculatum-Ceanothus cuneatus*] (Gordon & White 1994)
37.211.00 Wedgeleaf Ceanothus Chaparral [*Ceanothus cuneatus*] {37810}
37.211.01 Wedgeleaf Ceanothus [*Ceanothus cuneatus*] Stuart *et al*. 1992)

37.407.00 Scrub Oak Chaparral [*Quercus berberidifolia*] {37900}
37.407.02 Scrub Oak [*Quercus berberidifolia*] (Gordon & White 1994)
37.408.00 Scrub Oak - Birchleaf Mountain-mahogany Chaparral [*Quercus berberidifolia-Cercocarpus betuloides*]
37.408.01 Scrub Oak - Birchleaf Mountain-mahogany [*Quercus berberidifolia-Cercocarpus betuloides*] (Gordon & White 1994)
37.409.00 Scrub Oak - Chamise Chaparral [*Quercus berberidifolia-Adenostoma fasciculatum*]

37.610.00 Birchleaf Mountain-mahogany Woodland [*Cercocarpus betuloides* var. *betuloides*] (Keeler-Wolf and Moore 2001)
37.610.01 Birchleaf Mountain-mahogany [*Cercocarpus betuloides* var. *betuloides*] (Keeler-Wolf and Moore 2001)

37.910.00 Holly-leaf Cherry [*Prunus illicifolia*] (Borchert, *et al*. 2000)
37.910.01 Holly-leaf Cherry - Sanicle [*Prunus illicifolia-Sanicula crassicaulis*] (Keeler-Wolf, *et al*. 2001)

## Tree Dominated

70.000.00 BROAD LEAFED UPLAND TREE DOMINATED
71.000.00 Oak Woodlands and Forests
71.020.00 Blue Oak Woodland [*Quercus douglasii*] {71140}
71.020.02 Blue Oak - Foothill Pine / Grass [*Quercus douglasii-Pinus sabinana*/Grass] (Allen *et al*. 1991)
71.020.03 Blue Oak - Foothill Pine / Wedgeleaf Ceanothus - Birchleaf Mountain mahogany [*Quercus douglasii-Pinus sabinana/Ceanothus cuneatus-Cercocarpus betuloides*] (Allen *et a*l. 1991)?
*71.040.00 Valley Oak Forests and Woodlands [*Quercus lobata*] {61430}
*71.040.05 Valley Oak / Grass [*Quercus lobata/*Grass] (Allen *et al*. 1991a)
*71.040.08 Valley Oak Woodland [*Quercus lobata*] {71130}

*74.000.00 California Bay Forests and Woodlands [*Umbellularia californica*]
74.100.00 California Bay Forest and Woodland [*Umbellularia californica*] {81200}
74.100.01 California Bay [*Umbellularia californica*] (Campbell 1980)

80.000.00 CONIFEROUS UPLAND FOREST AND WOODLAND
87.130.00 Foothill Pine Woodland [*Pinus sabiniana*] {71300}
87.130.02 Non-Serpentine Digger Pine Chaparral Woodland {71322}
87.130.03 Digger Pine-Oak Woodland {71410} Does not include Blue Oaks

# Appendix C

## Wildlife Species of San Antonio Valley Ecological Reserve

| Fish | Status | Occurrence |
|---|---|---|
| ***Centrarchidae*** | | |
| Largemouth bass (*Micropterus salmoides*) | **I5** | **O** |
| Bluegill (*Lepomis macrochirus*) | **I4** | **O** |
| Green sunfish (*Lepomis cyanellus*) | **I5** | **P** |
| Redear sunfish (*Lepomis microlophus*) | **I4** | **P** |
| **Poeciliidae** | | |
| Western mosquitofish (*Gambusia afinis*) | **I5** | **O** |

I4 Widespread and stable. The species is widely distributed, but seems to have reached the limits of its range. Presumably it is integrated into local ecosystems.
I5 Widespread and expanding. The species is still expanding its range to all suitable habitats in the state. (Moyle and Davis, 2000)

| Amphibians | | |
|---|---|---|
| ***Ambystomatidae*** | | |
| California tiger salamander (*Ambystoma californiense*) | **ST, FT** | **P** |
| ***Salamandridae*** | | |
| California newt (*Taricha torosa*) | | **P** |
| ***Plethodontidae*** | | |
| Ensatina (*Ensatina eschscholtzi*) | | **P** |
| California slender salamander (*Batrachoseps attenuatus*) | | **P** |
| ***Pelobatidae*** | | |
| Western spadefoot (*Scaphiopus hammondi*) | **CSC, FSC** | **P** |
| ***Bufonidae*** | | |
| Western toad (*Bufo boreas*) | | **O** |
| ***Hylidae*** | | |
| Pacific tree frog (*Hyla regilla*) | | **O** |
| ***Ranidae*** | | |
| California red-legged frog (*Rana draytonii*) | **CSC, FT** | **P** |
| Bullfrog (*Rana catesbeiana*) | | **O** |

## Reptiles

| | | |
|---|---|---|
| ***Emydidae*** | | |
| Western pond turtle (*Actinemys marmorata*) | **CSC, FS** | **O** |
| ***Iguanidae*** | | |
| Western fence lizard (Sceloporus occidentalis) | | **O** |
| Sagebrush lizard (Sceloporus graciosus) | | **P** |
| California horned lizard (Phrynosoma coronatum frontale) | **CSC, FS** | **E** |
| Side-blotched lizard (Uta stansburiana) | | **O** |
| **Scincidae** | | |
| Western skink (*Eumeces skiltonianus*) | | **P** |
| Gilbert's skink (*Eumeces gilberti*) | | **P** |
| ***Teidae*** | | |
| Western whiptail (*Cnemidophorus tigris*) | | **O** |
| ***Anguidae*** | | |
| Southern alligator lizard (*Gerrhonotus multicarinatus*) | | **E** |
| ***Colubridae*** | | |
| Rubber boa (*Charina bottae*) | | **P** |
| Gopher snake (*Pituophis melanoleucus*) | | **O** |
| King snake (*Lampropeltis getulus*) | | **O** |
| Garter snake (*Thamnophis sirtalis*) | | **O** |
| Ringneck snake (*Diadophis punctatus*) | | **E** |
| Glossy snake (*Arizona elegans*) | | **P** |
| Sharp-tailed snake (*Contia tenuis*) | | **P** |
| Western black-headed snake (*Tantilla planiceps*) | | **P** |
| Night snake (*Hypsiglena torquata*) | | **P** |
| ***Viperidae*** | | |
| Western rattlesnake (*Crotalis viridis*) | | **E** |

## Birds

| | | |
|---|---|---|
| ***Podicipedidae*** | | |
| Pied-billed grebe (*Podilymbus podiceps*) | | **E** |
| Eared grebe (*Podiceps nigricollis*) | | **E** |
| ***Phalacrocoracidae*** | | |
| Double-crested cormorant (*Phalcrocorax auritus*) | | **P** |
| ***Anatidae*** | | |
| Mallard (*Anas platyrynchos*) | | **O** |
| Gadwall (*Anas strepera*) | | **O** |
| Pintail (*Anas acuta*) | | **P** |
| American widgeon (*Anas americana*) | | **E** |

| | | |
|---|---|---|
| Northern shoveler (*Anas clypeata*) | | **E** |
| Blue-winged teal (*Anas discors*) | | **P** |
| Cinnamon teal (*Anas cyanoptera*) | | **E** |
| Green-winged teal (*Anas crecca*) | | **E** |
| Wood duck (*Aix sponsa*) | | **O** |
| Ring-necked duck (*Aythya collaris*) | | **O** |
| Lesser scaup (*Aythya affinis*) | | **P** |
| Common goldeneye (*Bucephala clangual*) | | **P** |
| Bufflehead (*Bucephala albeola*) | | **E** |
| Common merganser (*Mergus merganser*) | | **P** |
| Hooded merganser (*Lophodytes culcullatus*) | | **P** |
| Ruddy duck (*Oxyura jamaicensis*) | | **E** |
| Canada goose (*Anser Canadensis*) | | **O** |
| **Cathartidae** | | |
| Turkey vulture (*Cathartes aura*) | | **O** |
| **Accipitridae** | | |
| Ferruginous hawk (*Buteo regalis*) | **FS** | **O** |
| Rough-legged hawk (*Buteo lagopus*) | **FS** | **P** |
| White-tailed kite (*Elanus leucurus*) | **CFP, FS** | **O** |
| Northern harrier (*Circus cyaneus*) | **CSC** | **O** |
| Sharp-shinned hawk (*Accipiter striatus*) | | **O** |
| Cooper's hawk (*Accipiter cooperii*) | | **O** |
| Red-tailed hawk (*Buteo jamaicensis*) | | **O** |
| Golden eagle (*Aquila chrysaetos*) | **CFP** | **O** |
| Bald eagle (*Haliaeetus leucocephalus*) | | **O** |
| **Pandionidae** | | |
| Osprey (*Pandion haliaetus*) | | **O** |
| **Falconidae** | | |
| American kestrel (*Falco sparverius*) | | **O** |
| **Phasianidae** | | |
| California quail (*Calipepla californica*) | | **O** |
| Wild turkey (*Meleagris gallopavo*) | | **O** |
| **Ardeidae** | | |
| American bittern (*Botaurus lentiginosus*) | | **P** |
| Great blue heron (*Ardea herodias*) | | **E** |
| Great egret (*Ardea alba*) | | **E** |
| Green heron (*Butorides striatus*) | | **E** |
| Black-crowned night heron (*Nycticorax nyctirox*) | | **P** |
| **Rallidae** | | |
| American coot (*Fulicla americana*) | | **E** |

| | | |
|---|---|---|
| **Charadriidae** | | |
| Killdeer (*Charadrius vociferous*) | | **O** |
| **Scolopacidae** | | |
| Greater yellowlegs (*Tringa melanoleuca*) | | **E** |
| **Columbidae** | | |
| Mourning dove (*Zenaida macroura*) | | **O** |
| Band-tailed pigeon (*Columba fasciata*) | | **E** |
| Rock dove (*Columba livia*) | | **P** |
| **Cuculidae** | | |
| Greater roadrunner (*Geococcyx californianus*) | | **O** |
| **Tytonidae** | | |
| Common barn-owl | | **O** |
| **Strigidae** | | |
| Western screech owl (*Otus kennicottii*) | | **O** |
| Great horned owl (*Bubo virginianus*) | | **O** |
| Northern pygmy-owl (*Glauscidium gnoma*) | | **O** |
| Northern saw-whet owl (*Aegolius acadicus*) | | **P** |
| Burrowing owl (*Athene cunicularia*) | **CSC, FS** | **P** |
| Long-eared owl (*Asio otus*) | | |
| **Caprimulgidae** | | |
| Common poorwhill | | **O** |
| **Apodidae** | | |
| White-throated swift (*Aeronautes saxatalis*) | | **O** |
| **Trochilidae** | | |
| Anna's hummingbird (*Calypte anna*) | | **O** |
| Rufous hummingbird (*Selasphorus rufus*) | | **P** |
| Black-chinned hummingbird (*Archilochus alexandi*) | | **P** |
| Costa's hummingbird (*Calypte costae*) | | **P** |
| **Alcedinidae** | | |
| Belted kinghfisher (*Ceryle alcyon*) | | **O** |
| **Picidae** | | |
| Acorn woodpecker (*Melanerpes formicivorus*) | | **O** |
| Lewis' woodpecker (*Melanerpes lewis*) | | **O** |
| Red-breasted sapsucker (*Sphyrapicus rubber*) | | **O** |
| Nuttal's woodpecker (*Picoides nuttallii*) | | **O** |
| Downy woodpecker (*Picoides pubescens*) | | **O** |
| Hairy woodpecker (*Picoides vollosus*) | | **O** |
| Northern flicker (*Colaptes auratus*) | | **O** |

| | | |
|---|---|---|
| **Tyrannidae** | | |
| Western kingbird (*Tyrranus veritcalis*) | | **O** |
| Olive-sided flycatcher (*Contopus borealis*) | **CSC** | **E** |
| Western wood-peewee (*Contopus sordidulus*) | | **E** |
| Pacific-slope flycatcher (*Empidonax difficilis*) | | **E** |
| Black phoebe (*Sayornis nigricans*) | | **O** |
| Say's phoebe (*Sayornis saya*) | | **O** |
| Ash-throated flycatcher (*Myiarchus cinerascens*) | | **O** |
| **Alaudidae** | | |
| Horned lark (*Eremophila alpestris*) | | **E** |
| **Hirundinidae** | | |
| Violet-green swallow (*Tachycineta thalassina*) | | **E** |
| Tree swallow (*Tachycineta bicolor*) | | **O** |
| Northern rough-winged swallow (*Stegidopteryx serripenis*) | | **P** |
| Clliff swallow (*Hirundo pyrrhonota*) | | **E** |
| Barn swallow (*Hirundo rustica*) | | **P** |
| Purple martin (*Progne subis*) | **CSC** | **P** |
| **Corvidae** | | |
| Steller's jay (*Cyanocitta stelleri*) | | **E** |
| Scrub jay (*Aphelocoma coerulescens*) | | **O** |
| Common raven (*Corvus corax*) | | **O** |
| American crow (*Corvus brachyrhynchos*) | | **O** |
| Yellow-billed magpie (*Pica nuttalli*) | | **O** |
| **Paridae** | | |
| Chestnut-backed chickadee (*Parus rufescens*) | | **E** |
| Plain titmouse (*Parus inornatus*) | | **O** |
| Bushtit (*Psaltriparus minimus*) | | **O** |
| **Sittidae** | | |
| Red-breasted nuthatch (*Sitta canadensis*) | | **P** |
| White-breasted nuthatch (*Sitta carolinensis*) | | **O** |
| **Certhiidae** | | |
| Brown creeper (*Certhia familiaris*) | | **E** |
| **Troglodytidae** | | |
| House wren (*Troglodytes aedon*) | | **E** |
| Bewick's wren (*Thryomanes bewickii*) | | **O** |
| Winter wren (*Troglodytes troglodytes*) | | **P** |
| Rock wren (*Salpinctes obsoletus*) | | **P** |
| Canyon wren (*Catherpes mexicanus*) | | **P** |
| Marsh wren (*Cistothorus palustris*) | | **P** |
| **Timaliidae** | | |
| Wrentit (*Chamaea fasciata*) | | **E** |

| | | |
|---|---|---|
| **Regulidae** | | |
| Golden-crowned kinglet (*Regulus satrapa*) | | **P** |
| Ruby-crowned kinglet (*Regulus calendula*) | | **O** |
| **Sylviidae** | | |
| Blue-gray gnatcatcher (*Polioptila caerulea*) | | **O** |
| **Turdidae** | | |
| Townsend's solitaire (*Myadestes townsendi*) | | **E** |
| Swainson's thrush (*Catharus ustulatus*) | | **P** |
| Hermit thrush (*Catharus guttata*) | | **O** |
| Varied thrush (*Lxoreus naevius*) | | **P** |
| American robin (*Turdus migratorius*) | | **O** |
| Western bluebird (*Sialia mexicana*) | | **O** |
| Mountain bluebird (*Sialia currucoides*) | | **P** |
| **Mimidae** | | |
| Northern mockingbird (*Mimus polyglottos*) | | **O** |
| California thrasher (*Toxostoma redivium*) | | **O** |
| **Bombycillidae** | | |
| Cedar waxwing (*Bombycilla cedrorum*) | | **E** |
| **Ptilogonatidae** | | |
| Phainopepla (*Phainopepla nitens*) | | **E** |
| **Laniidae** | | |
| Loggerhead shrike (*Lanius ludovicianus*) | **CSC, FS** | **E** |
| **Sturnidae** | | |
| European starling (*Sturnus vulgaris*) | | **O** |
| **Vireonidae** | | |
| Hutton's vireo (*Vireo huttoni*) | | **E** |
| Warbling vireo (*Vireo gilvus*) | | **E** |
| Cassin's vireo (*Vireo cassinii*) | | **E** |
| Blue-headed vireo (*Vireo solitarius*) | | **P** |
| **Thraupidae** | | |
| Western tanager (*Piranga ludoviciana*) | | **E** |
| Black-headed grosbeak (*Pheuticus melanocephalus*) | | **E** |
| Lazuli bunting (*Passerina amoena*) | | **E** |
| **Parulidae** | | |
| Orange-crowned warbler (*Vermivora celata*) | | **E** |
| Nashville warbler (*Vermivora ruficapilla*) | | **E** |
| Yellow-rumped warbler (*Dendroica coronata*) | | **O** |
| Yellow warbler (*Dendroica petechia*) | **CSC** | **E** |
| Black-throated gray warbler (*Dendroica nigrescens*) | | **E** |

| | | |
|---|---|---|
| Hermit warbler (*Dendroica occidentalis*) | | **P** |
| Townsend's warbler (*Dendroica townsendii*) | | **E** |
| Wilson's warbler (*Wilsonia pusilla*) | | **E** |
| Common yellowthroat (*Geothlypis trichas*) | | **P** |
| | | |
| **Emberizidae** | | |
| Rufous-sided towhee (*Pipilo erythrophthalmus*) | | **E** |
| California towhee (*Pipilo crissallis*) | | **O** |
| Rufous-crowned sparrow (*Aimophila ruficeps*) | | **E** |
| Savannah sparrow (*Passerculus sandwichensis*) | | **E** |
| Grasshopper sparrow (*Ammodramus savannarum*) | **CSC** | **E** |
| Vesper sparrow (*Pooecetes gramineus*) | | **P** |
| Lark sparrow (*Chondestes grammacus*) | | **O** |
| Sage sparrow (*Amphispiza belli*) | | **E** |
| Black-chinned sparrow (*Spizella atrogularis*) | | **P** |
| Chipping sparrow (*Spizella passerine*) | | **O** |
| Fox sparrow (*Passerella iliaca*) | | **E** |
| Song sparrow (*Melospiza melodia*) | | **E** |
| Lincoln's sparrow (*Melospiza lincolnii*) | | **P** |
| Golden-crowned sparrow (*Zonotrichia atricapilla*) | | **O** |
| White-crowned sparrow (*Zonotricia leucophrys*) | | **O** |
| Dark-eyed junco (*Junco hyemalis*) | | **O** |
| | | |
| **Icteridae** | | |
| Red-winged blackbird (*Agelaius phoeniceus*) | | **O** |
| Tricolored blackbird (*Agelaius tricolor*) | **CSC, FS** | **O** |
| Brewer's blackbird (*Euphagus cyanocephalus*) | | **O** |
| Western meadowlark (*Sturnella neglecta*) | | **O** |
| Brown-headed cowbird (*Molothrus ater*) | | **E** |
| Bullock's oriole (*Icterus bullockii*) | | **O** |
| | | |
| **Fringillidae** | | |
| Purple finch (*Carpodacus purpureus*) | | **E** |
| House finch (*Carpodacus mexicansu*) | | **O** |
| Red crossbill (*Loxia curvirostra*) | | **P** |
| Pine siskin (*Carduelis pinus*) | | **P** |
| Lawrence's goldfinch (*Carduelis lawrencei*) | | **E** |
| Lesser goldfinch (*Carduelis psaltria*) | | **O** |
| American goldfinch (*Carduelis tristis*) | | **E** |
| Evening grosbeak (*Hesperiphona vespertina*) | | **P** |
| | | |
| **Passeridae** | | |
| House sparrow (*Passer domesticus*) | | **P** |

**Mammals**

| | | |
|---|---|---|
| **Didelphidae** | | |
| Virginia opossum (*Didelphus marsupialis*) | | **P** |
| **Soricidae** | | |

| | | |
|---|---|---|
| Ornate shrew (*Sorex ornatus*) | | **E** |
| Trowbridge shrew (*Sorex trowbridgii*) | | **P** |
| **Talpidae** | | |
| Broad-footed mole (*Scapanus latimanus*) | | **E** |
| **Vespertilionidae** | | |
| Yuma myotis (*Myotis yumanensis*) | **FS** | **E** |
| Long-eared myotis (*Myotis evotis*) | **FS** | **O** |
| Fringed myotis (*Myotis thysanodes*) | **FS** | **P** |
| Long-legged myotis (*Myotis volans*) | | **P** |
| California myotis (*Myotis californicus*) | | **E** |
| Big brown bat (*Eptesicus fuscus*) | | **E** |
| Red bat (*Lasiurus borealis*) | | **E** |
| Hoary bat (*Lasiuris cinereus*) | | **E** |
| Townsend's big-eared bat (*Corynorhinus townsendii*) | **CSC, FS** | **E** |
| Pallid bat (*Antrozous pallidus*) | **CSC, FS** | **O** |
| Western pipistrelle (*Pipistrellus Hesperus*) | | **E** |
| **Molossidae** | | |
| Brazilian free-tailed bat (*Tadarida brasiliensis*) | | **E** |
| Western mastiff bat (*Eumops perotis*) | **CSC, FS** | **P** |
| **Leporidae** | | |
| Black-tailed hare (*Lepus californicus*) | | **O** |
| Audubon cottontail (*Sylvilagus audubonii*) | | **O** |
| Brush rabbit (*Sylvilagus bachmani*) | | **O** |
| **Sciuridae** | | |
| California ground squirrel (*Spermophilus beecheyi*) | | **O** |
| Western gray squirrel (*Sciurus griseus*) | | **P** |
| Red fox squirrel (*Sciurus niger*) | | **O** |
| **Geomyidae** | | |
| Botta's pocket gopher (*Thomomys bottae*) | | **E** |
| **Heteromyidae** | | |
| California pocket mouse (*Perognathus californicus*) | | **E** |
| Narrow-faced kangaroo rat (*Dipodomys venustus*) | | **P** |
| Heerman's kangaroo rat (*Dipodomys heermanni*) | | **O** |
| **Cricetidae** | | |
| Western harvest mouse (*Reithrodontomys megalotis*) | | **E** |
| California mouse (*Peromyscus californicus*) | | **E** |
| Deer mouse (*Peromyscus maniculatus*) | | **O** |
| Pinyon mouse (*Peromyscus trueii*) | | **E** |
| Dusky-footed woodrat (*Neotoma fuscipes*) | | **E** |
| Desert woodrat (*Neotoma lepida*) | | **P** |
| California vole (*Microtus californicus*) | | **O** |

| | | |
|---|---|---|
| **Muridae** | | |
| House mouse (*Mus musculus*) | | **E** |
| **Canidae** | | |
| Coyote (*Canis latrans*) | | **O** |
| Gray fox (*Urocyon cinereoargenteus*) | | **O** |
| **Procyonidae** | | |
| Ringtail (*Bassariscus astutus*) | **CFP** | **P** |
| Raccoon (*Procyon lotor*) | | **E** |
| **Mustelidae** | | |
| Long-tailed weasel (*Mustela frenata*) | | **E** |
| Badger (*Taxidea taxus*) | | **O** |
| Spotted skunk (*Spilogale putorius*) | | **P** |
| Striped skunk (*Mephitis mephitis*) | | **O** |
| **Felidae** | | |
| Mountain lion (*Felis concolor*) | | **O** |
| Bobcat (*Lynx rufus*) | | **O** |
| **Suidae** | | |
| Wild pig (*Sus scrofa*) | | **O** |
| **Cervidae** | | |
| Black-tailed deer (*Odocoileus hemionus columbianus*) | | **O** |
| Tule elk (*Cervus elaphus*) | | **O** |

**Key to status codes:**

FT = Federally listed as Threatened
FS = Federal Sensitive Species (BLM or Forest Service)
CSC = California Species of Special Concern
CFP = California Fully Protected Species
ST = State Threatened

**Key to occurrence codes:**

O = Has been observed on SAVER
E = Expected to occur on SAVER
P = Possibility of occurring on SAVER

# Appendix D

Leptosiphon ambiguus CNPS- List 4.2 state rank S3.2 global G3-
Serpentine Leptosiphon

Acanthomintha lanceolata CNPS-List 4.2 state S3.2 global G3-
Santa Clara thorn-mint

Campanula exigua CNPS-List1B.2 S2 G2 Chaparral Harebell

Delphinium californicum subsp. Interius CNPS-List1B.2 state S2? Global G3t2?
Hospital Creek larkspur

Lessingia tenuis CNPS-List4.3 S3.3 G3 spring lessingia

Piperia michaelii CNPs-List4.2 S3.2 G3 Michael's rein orchid