



GOLDEN BEAR BIOSTUDIES

BIOTIC ASSESSMENT

WETLANDS AND SPECIAL STATUS SPECIES SURVEY OF THE TAYLOR MOUNTAIN REGIONAL PARK IN SONOMA COUNTY

Prepared for Sonoma County Regional Parks Department
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1 SUMMARY

Plant communities at the proposed Mt. Taylor Regional Park were primarily composed of non-native annual grassland, oak woodlands, wet meadows, and seep areas. The site did not have any rare or endangered species. Although it has wetland constraints (wet meadow, seeps and creek) there were no vernal pools or serpentine soils or other inherently rare habitats. It is recommended that one of the proposed trails be removed from the plan to avoid impacts to deer in the oak woodland and another be realigned to avoid wetlands (Figure 1). Also, consideration should be given to planting oak trees to screen the radio tower located on the property.

2 INTRODUCTION

2.1 BACKGROUND

This report presents the findings of a vegetation and wildlife surveys for special status species and sensitive natural communities at the proposed Mt. Taylor Regional Park. The former Nunes ranch property along with the adjacent Bath-Watt property were acquired by the Sonoma County Agricultural Preservation and Open Space District in 1999. These two parcels form the initial acquisition phase of the Taylor Mountain Regional Park. The two properties comprise 166.45 acres.

Elevation at the site ranges between 300 and 700+ feet above sea level (Figure 1). The vegetation of the site is largely open grassland and oak woodlands. In general the site consisted of non-native annual grassland, and native oak trees including Live Oaks (*Quercus agrifolia*). Two seeps and a large wet meadow were noted that happen to fall in the path of a proposed trail.

The property has been leased out for grazing in the past. The Sonoma County Regional Parks Department may consider continuation of grazing licenses on the property until public access facilities, parking, the seasonal creek crossing, trails, fencing, signs, and fire breaks are developed.

2.2 SCOPE

The scope of this report is limited to determining if the project will affect special status plant species and sensitive habitats (i.e. wetlands, riparian, etc.). Please refer to endnotes¹ for regulatory definitions.

2.3 REGULATORY CONTEXT

A number of State, Federal agencies, and local laws and ordinances, including U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (DFG), the U.S. Army Corps of Engineers (USACE), and Sonoma County have regulatory authority over special status species and sensitive habitats. Please refer to the endnotes¹¹ for further discussion of regulatory aspects.

2.4 LITERATURE REVIEW

Existing literature was reviewed for information regarding the project area (Waaland, 1989; Patterson et al, 1994; CH2M Hill et al, 1995). The Electronic Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik, 1994) was queried for a list of all plant species reported from the *Santa Rosa USGS 15-minute quadrangle* and surroundings (Table 1). Most of the plants on this list are primarily associated with vernal pools or specialized volcanic or serpentine soils. Vernal pools are typically found in the Huichica and Wright loams that are limited to the Santa Rosa Plains, and not found in upland mountainous areas such as Mt. Taylor. The substrate of Mt. Taylor is mostly basic igneous and andesitic basalt rock (Miller, 1972), not the rhyolitic or serpentine substrates typically found with the restricted ranges of the various rare *Ceanothus* or *Arctostaphylos* species that primarily occur in the northeastern portion of the County (Skinner and Pavlik, 1994).

3 METHODS

Field surveys were conducted in a manner to identify any rare or endangered species that may be present or locate wetlands (CDFG, 1984). The survey was conducted at the proper time of year when rare or endangered species that could occur in vernal pools would be both "evident" and "identifiable." The site was surveyed on May 29th and June 8th, 2000. These surveys were scheduled (1) to coincide with known flowering periods, and/or (2) during periods of phenological development that are necessary to identify the plant species of concern. Federal and State listed endangered species such as Sebastopol meadowfoam (*Limnanthes vinculans*), Burke's goldfields (*Lasthenia burkei*) and Sonoma sunshine (*Blennosperma bakeri*) were identifiable in several locations in the Santa Rosa Plains at the time of the survey. The survey was floristic in nature and not based on the occurrence of habitat or other physical features. The survey was conducted using systematic field techniques in all habitats of the site to ensure a reasonably thorough coverage of potential impact areas. A meandering pattern was walked through each habitat to ensure that all areas were viewed. All plants at the site were identified to the level necessary to ascertain whether they were "special status species."

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Table 1. Special Status Plant Species with the Potential to Occur in Habitats known from the Project Vicinity.

Species	Legal Status	CNPS List	Habitat	Blooming Period
<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i> <i>montana</i> "Sonoma manzanita"		1B	Chaparral, Lower coniferous forest / sometimes serpentinite	January-March
<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> "Rincon manzanita"		1B	Chaparral (rhyolitic)	February-April
<i>Blennosperma bakeri</i> "Sonoma sunshine"	CE\FE	1B	Valley and foothill grassland (mesic), Vernal pools	March-April
<i>Ceanothus confusus</i> "Rincon Ridge ceanothus"	\SOC	1B	Closed-cone coniferous forest, Chaparral, Cismontane woodland / volcanic or serpentinite	February-April
<i>Ceanothus divergens</i> "Calistoga ceanothus"	\SOC	1B	Chaparral (serpentinite or volcanic, rocky)	February-March
<i>Downingia pusilla</i> "dwarf downingia"		2	Valley and foothill grassland (mesic), Vernal pools	March-May
<i>Fritillaria liliacea</i> "fragrant fritillary"	\SOC	1B	Coastal prairie, Coastal scrub, Valley and foothill grassland / often serpentinite	February-April
<i>Hemizonia congesta</i> ssp. <i>leucocephala</i> "Hayfield tarplant"		3	Coastal scrub, Valley and foothill grassland	April-October

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Table 1. Special Status Plant Species with the Potential to Occur in Habitats known from the Project Vicinity (continued).

Species	Legal Status	CNPS List	Habitat	Blooming Period
<i>Lasthenia burkei</i> "Burke's goldfields"	CE\FE	1B	Meadows (mesic), Vernal pools	April-June
<i>Limnanthes vinculans</i> "Sebastopol meadowfoam"	CE\FE	1B	Meadows, Valley and foothill grassland, Vernal pools / vernally mesic	April-May
<i>Monardella villosa</i> ssp. <i>globosa</i> "robust monardella"		1B	Chaparral (openings), Cismontane woodland	June-July
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> "Baker's navarretia"		1B	Cismontane woodland, Lower montane coniferous forest, Meadows (mesic), Valley and foothill grassland, Vernal pools	May-July
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i> "many-flowered navarretia"	CE\FE	1B	Vernal pools (volcanic ash flow)	May-June
<i>Pogogyne douglasii</i> ssp. <i>parviflora</i> "Douglas's pogogyne"		3'	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows, Marshes and Swamps, Valley and foothill grassland, Vernal pools / mesic	May-July
<i>Trifolium amoenum</i> "showy Indian clover"	\PE	1B	Coastal bluff scrub, Valley and foothill grassland (sometimes serpentinite)	April-June

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Endnotes for Table 1.

Federal Status Definitions

Endangered (FE)

Any species which is in danger of extinction throughout all or a significant portion of its range.

Threatened (FT)

Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Candidate

Taxa for which the Service currently has sufficient information on biological vulnerability and threats on hand to support the issuance of a proposed rule to list, but issuance of the proposed rule is precluded. Only those species for which there is enough information to support a listing proposal will be called "candidates." These were formerly known as "Category 1 Candidate Species." The Service will no longer maintain a list of species formerly known as "Category 2 Candidates." These are species for which the Service does not have enough scientific information to support a listing proposal. Both Category 2 and Category 3 no longer exist. The former Category 3 was a mix of non-candidate species, either thought to be extinct (3A), taxonomically invalid (3B), or too widespread to be considered at risk (3C).

Species of Concern (C1)

Former Category 1 Candidate, now considered a "Species of Concern." Taxa which should be given consideration during planning for projects.

Species of Concern (C2)

Former Category 2 Candidate, now considered a "Species of Concern." Taxa which should be given consideration during planning for projects.

Proposed

Taxa for which a general notice has been published in a local newspaper and a proposed rule for listing has been published in the Federal Register.

State Status Definitions

Endangered (CE)

A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

Threatened (CT)

A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. (Chapter 1.5 of the California Fish and Game Code.)

Rare

A species, subspecies or variety is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens.

Candidate

A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.

Species of Special Concern

Native species or subspecies that have become vulnerable to extinction because of declining population levels, limited ranges, or rarity. The goal is to prevent these animals from becoming endangered by addressing the issues of concern early enough to secure long term viability for these species. Bird Species of Special Concern appear in Remsen, 1978.

CP = CDFG "fully protected" species (Sec. 4700, Chapt. 8; Sec. 5050, Chapt. 2; Div 6, Chapt. 1, Sec 5515)

California Native Plant Society Rare and Endangered Plant Lists

List 1A. Presumed Extinct in California

List 1B. Rare or Endangered in California and Elsewhere

List 2. Rare and Endangered in California, More Common Elsewhere

List 3. Species For Which More Information is Needed.

List 4. Plants of Limited Distribution- A Watch List

4 RESULTS

4.1 VEGETATION TYPES AND BIOLOGICAL FEATURES

The vegetation of the study area is well represented with native species in the Oak woodland and wetland communities, although weedy species and pasture grasses were also abundant. A list of the flora observed at the site is included in Appendix A. Where possible, the vegetation has been classified according to the California Natural Diversity DataBase's Descriptions of the Terrestrial Natural Communities of California (Holland, R. F, 1986). The Natural Diversity DataBase (NDDDB) is a computerized inventory of the locations of populations of rare and threatened plants, animals and natural communities in California. These "elements of natural diversity" are monitored by NDDDB to assure that California's rich biological heritage is adequately represented in their inventory.

4.1.1 NON-NATIVE GRASSLAND (42200)

Distribution: This community was approximately 80.55 acres in extent (Figure 1). It occurs from the lowest to the highest elevations of the site (Figure 1). It is very common statewide, where it occurs in valleys and foothills of most of California, except for the north coastal and desert regions. It usually occurs below 3,000 feet, but reaching 4,000 feet in the Tehachapi Mountains and interior San Diego County. It intergrades with Coastal Prairie (41000) along the central coast.

Description: The vegetation forms a dense to sparse cover of annual grasses with flowering culms 0.2-0.5 (1.0) m high. It is often associated with numerous species of showy-flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. The dominant species comprising the vegetation of this plant community at the site included perennial ryegrass (*Lolium perenne*), spring vetch (*Vicia sativa*), tarweeds (*Madia* sp., *Hemizonia* sp.), hare barley (*Hordeum leporinum*), rip-gut brome (*Bromus diandrus*), morning glory (*Convolvulus arvensis*) and many other non-native weedy species, as well as a relatively few native species (See Appendix A). The species mix is typical of pastureland grazed from many years.

Site Factors: On fine-textured, usually clay soils, moist or even waterlogged during the winter rainy season and very dry during the summer and fall. Oak Woodland (71100) is often adjacent on moister, better-drained soils.

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Wildlife: Animal life in grasslands is rich; where soils are protected with fair vegetative cover, a diverse microbial life exists which serves the important function of humus formation, and burrowing and surface animals such as mice, moles, shrews, gophers, earth worms and a host of others, provide an essential food resource to snakes, mammals of wider habitat range, and to raptorial birds (hawks, kestrels, kites, shrikes, and owls). Many other birds are associated with grasslands, such as House Finch, Meadowlark, Quail, Brewer's Blackbird and Sparrows. Refer to Appendix B for a detailed wildlife report.

4.1.2 COAST LIVE OAK WOODLAND (71160)

Distribution: This plant community covers approximately 81 acres at the site. The largest stand is in the north-central portion of the site, covering slopes on both sides of the creek up to the western divide (Figure 1). Another large stand occurs on the east facing slopes along the eastern portion of the site. Smaller stands occur in the southern area. Statewide, this community is found in the outer South Coast Ranges, and coastal slopes of Transverse and Peninsular ranges, usually below 4,000 feet (1220 m). It intergrades with Blue Oak Woodland (71120) in the inner South Coast Ranges and with Englemann Oak Woodland (71180) in the interior southern California.

Description: The most dominant tree is coast live oak (*Quercus agrifolia*), which is evergreen and reaches 10-25 m in height. Other trees include California black oak (*Q. kelloggii*), Oregon oak (*Q. garryana*), California buckeye (*Aesculus californica*) and California bay (*Umbellularia californica*). In the lower banks of the creek area, big-leaf maple (*Acer macrophyllum*) is also present. The shrub layer is poorly developed, but includes poison oak (*Toxicodendron diversilobum*), California rose (*Rosa californica*), gooseberry (*Ribes* spp.) and California blackberry (*Rubus ursinus*). The herb component is continuous and dominated by mostly native species; including California brome (*Bromus carinatus*) and California melic (*Melica californica*). Moister areas near the creek include California shield fern (*Polystichum californicum*), snowberry (*Symphoricarpos rivularis*) hawthorne (*Crataegus douglasii*) and *Prunus* sp.

Site Factors: Typically on north-facing slopes and shaded ravines in the southern California and more exposed sites in the north. Intergrades with Coastal Scrub (32000) and Upper Sonoran Mixed Chaparral (37100) on drier sites and with Coast Live Oak Forest (81310) or Mixed Evergreen Forest (81100) on moister sites.

Wildlife: The combination of trees and grassland openings provides good hunting habitat for birds of prey, which can nest and perch in trees and feed on rodents in open grassland areas. Most animals are those with wide latitude: i.e., they occur in chaparral as well. The Western fence lizard, scrub jay, red-tailed hawk, kestrel, California valley quail and black-tail deer are especially abundant in this community, which is rich in grasses, insects, rodents, acorns and other readily available food.

4.1.3 FRESHWATER SEEP (45400) / WET MEADOW

A wet boggy area of seeps and wet meadow occurs at the headwaters of the creek, and a smaller seep area occurs in the north-central portion of the site (Figure 1). The water table is high here from winter through early summer. There are approximately 2.4 acres of seep vegetation and 2.5 acres of wet meadow. Combined, these communities comprise 4.9 acres of wetlands onsite (excluding the creek). These wetland communities represent constraints to activities because of regulation under Section 404 of the Clean Water Act and their qualification as sensitive natural communities under CEQA.

Distribution: Scattered throughout most regions of California, probably most common in grassland habitats, uncommon in the deserts.

Description: Mostly perennial herbs, especially sedges and grasses, usually forming complete cover, often low-growing but sometimes taller, growing throughout the year in areas with mild winters. The seep had species with strong affinities for wetlands with prolonged saturation near the surface: rush (*Juncus effusus*), monkeyflower (*Mimulus guttatus*) and watercress (*Rorippa nasturtium-aquaticum*) were common. The wet meadow vegetation was comprised of species more tolerant of fluctuating water tables near the surface: Ithuriel's spear (*Brodiaea laxa*), white brodiaea (*Tritelia hyacinthina*), brown-headed rush (*Juncus paniculatus*), pennyroyal (*Mentha pulegium*), clustered field sedge (*Carex praegracilis*) and dense sedge (*Carex densa*).

Site Factors: Permanently or prolonged seasonally moist or wet soil around freshwater seeps, often associated with grasslands or meadows.

Wildlife. Pacific tree frog and other amphibians (toads, salamanders) can use any ponded areas for breeding. Minute organisms such as copepods and ostracods can be abundant. Their survival is managed by a life cycle that includes summer dormancy as eggs within drought-resistant cysts. As pools fill in winter, the cysts begin to "come to life". Other insects survive by reaching air-borne maturity as the ponded areas dry. Refer to Appendix B for a detailed wildlife report.

4.1.4 CREEK

A seasonal stream flows through the middle of the largest oak woodland stand. It is probably an unnamed tributary of Matanzas Creek. It apparently enters an underground culvert for some distance at its lower reaches at the edge of Santa Rosa urban area. Presumably it connects via culverts and storm drains with Matanzas Creek.

4.2 SPECIAL STATUS SPECIES

No sensitive species were observed during field surveys. The lack of vernal pools and serpentine soils eliminates the possible occurrence of many potentially occurring species (Table 1). Please refer to Appendix B for a discussion of sensitive animal species.

4.3 SENSITIVE PLANT COMMUNITIES AND HABITATS

Seasonal wetlands are considered sensitive because they are regulated wetlands under Section 404 of the Clean Water Act. Trails crossing these areas would be subject to permits if there were fill placed in wetlands.

5 POTENTIAL IMPACTS AND RECOMMENDED MITIGATION

5.1 SIGNIFICANCE CRITERIA

The determination of significance of impacts to biological resources involves an evaluation of the context in which the impact may occur and the intensity and extent of the impact's effect. The significance of potential impacts is assessed at a site-specific scale and in the larger regional context.

The project's effect on biological resources would be considered significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. serpentine habitats, wetlands, riparian habitats).
- Adverse impacts to special status species
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. wetlands).
- Interference with migratory routes.

5.2 IMPACTS AND RECOMMENDED MITIGATION

5.2.1 IMPACT: TRAIL ALIGNMENT PASSES THROUGH SEEP/WET MEADOW AREA

The alignment of the trail downslope of the radio tower in the south-central portion of the site is presently shown to be traversing through a seep / wet meadow area (Figure 1). Although the area has been extensively degraded by cattle grazing impacts (trampled, partially denuded vegetation, punched-up soil from hooves, impaired water quality from cattle waste), it has relatively high biological values because it is a source of water for the creek and provides for the needs of wildlife for long periods of the year. Wetlands are considered sensitive natural communities because they are regulated under Section 404 of the Clean Water Act and have become increasingly rare due to development and other activities. Any fill in this wetland needed to raise the bed elevation for the construction of the trail would require a permit from the USACE. Therefore, the trail should be realigned to avoid the wetland and contribute to its recovery.

5.2.1.1 Mitigation Measure

Relocate the trail in the south-central portion of the site to an upslope (easterly) location to avoid wetlands.

5.2.2 THE TRAIL PASSING THROUGH THE INTERIOR OF THE OAK WOODLAND MAY DISTURB MOVEMENTS OF DEER

The trail passing through the interior of the largest oak woodland stand excessively fragments the available cover for deer during day use of the park. This stand of oak woodland has trails around the perimeter. Hikers, horse riders and bikers on these perimeter trails will cause deer in the area to seek cover in the interior of this stand. The addition of an interior trail will bisect this de facto sanctuary and may cause deer to leave the park entirely during day use hours. Assuming habitats around the park are already fully occupied by other deer, an increase caused by the exodus of resident deer in the park would have negative effects on the larger herd in the area and increase the use of limited resources outside the park.

5.2.2.1 Mitigation Measure

Remove this trail from the plan.

5.3 OTHER RECOMMENDATIONS

- Native oaks should be planted around the radio tower in order to provide a visual screen.
- Care should be given to the construction of the trail crossing at the creek. The use of a culvert or footing for a bridge could require the need for a permit from CDFG and/or USACE.
- Where the trail crosses any seeps or wet meadows, puncheons (raised wooden walkways) should be used instead of increasing the bed elevation using fill.

ENDNOTES

ⁱ DEFINITION OF SPECIAL STATUS PLANTS

"Special Status Plants" is a broad term used to refer to all the plant taxa inventoried by the Department of Fish and Game's Natural Diversity Data Base (NDDDB), regardless of their legal or protection status. Special Plant taxa are species, subspecies, or varieties that fall into one or more of the following categories:

- Officially listed by California or the Federal Government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the CEQA Guidelines;
- A Bureau of Land Management, U.S. Fish and Wildlife Service, or U.S. Forest Service Sensitive Species;
- Taxa listed in the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California;
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California; and
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, vernal pools, etc.).

DEFINITION OF SENSITIVE PLANT COMMUNITIES

Sensitive plant communities are those which are considered rare or have some regulatory aspect. All wetlands are considered sensitive because they are subject to federal regulation under Section 404 of the Clean Water Act. Blue-line streams are subject to additional regulation under Sections 1601-06 of the State Fish and Game Code. Rare plant communities are either of highly limited distribution or subject to threat. These communities may or may not contain rare or endangered species. The Department of Fish and Game's Natural Diversity DataBase's has incorporated a ranking system developed by the Nature Conservancy for vegetation types in California. The rankings assign rarity to communities according to their degree of vulnerability and imperilment. The ranking allows identification of plant communities that are most imperiled and, therefore, most in need of conservation attention.

ii FURTHER DISCUSSION OF THE REGULATORY CONTEXT

U.S. Fish and Wildlife Service (USFWS)

The USFWS has jurisdiction over species that are formally listed as threatened or endangered under the Federal Endangered Species Act (FESA). The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species. The Act outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species, and contains exceptions and exemptions.

California Department of Fish and Game (DFG)

It is state policy to conserve, protect, restore and enhance any endangered or threatened species and its habitat. DFG has jurisdiction over species that are formally listed as threatened or endangered under the California Endangered Species Act (CESA). The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the state. In addition to CESA, the California Native Plant Protection Act (NPPA) provides protection to endangered and rare plant species. DFG also maintains an informal list of species of special concern to be considered during CEQA review.

California Native Plant Society (CNPS)

CNPS is a non-profit group dedicated to preserving the state's native flora. It has developed lists of plants of special concern in California (Skinner and Pavlik, 1994): List 1A - Presumed Extinct in California, List 1B - Rare or Endangered in California and Elsewhere, List 2 - Rare and Endangered in California, More Common Elsewhere, List 3 - Species For Which More Information is Needed, List 4 - Plants of Limited Distribution (A Watch List). Impacts to CNPS List 1B and 2 plants are considered significant under CEQA.

U. S. Army Corps of Engineers (USACE)

Section 404 of the Clean Water Act requires approval prior to discharging dredged or fill material into the waters of the United States. Waters of the United States includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. "Wetlands" are areas characterized by growth of wetland vegetation (bulrush, cattails, rushes, sedges and willows) where the soil is saturated during a portion of the growing season or the surface is flooded during some part of most years. Wetlands generally include swamps, marshes, bogs and similar areas.

Regional Water Quality Control Board (RWQCB)

Under Section 401 of the Clean Water Act, projects that apply for a Corps permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit, must obtain water quality certification from the RWQCB that the project will uphold state water quality standards.

6 REFERENCES

California Department of Fish and Game (CDFG). 1984. Guidelines for assessing effects of proposed developments on rare and endangered plants and plant communities.

CH2M Hill, M. E. Waaland and L. Stromberg. 1995. Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan: Phase I Final Report. Prepared for the Santa Rosa Plain Vernal Pool Task Force, City of Santa Rosa/County of Sonoma.

Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Non-game Heritage Program, California Department of Fish and Game, Sacramento.

Miller, V. C. 1972. Soil Survey of Sonoma County, California. U. S. Department of Agriculture, Soil Conservation Service, Santa Rosa. 188 pp.

Patterson, C. A., B. Guggolz and M. E. Waaland. 1994. Seasonal Wetland Baseline Report for the Santa Rosa Plain, Sonoma County. Prepared for Cal. Dept. of Fish and Game, Yountville, with partial funding from U. S. Fish and Wildlife Service.

Skinner, M.W., and B.M. Pavlik, eds. 1994. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society Special Publication No. 1 (Fifth Edition, 1999 Electronic Inventory Update). Sacramento, CA. vi + 338 pp.

Waaland, M. E. 1989. Section A: rare plant ecology. In: R. Thompson (Ed.), Santa Rosa Plains Endangered Plant Protection Program. Report prepared for the Endangered Plant Program, California Department of Fish and Game and the Planning Department, County of Sonoma, Santa Rosa.

Figure 1. Plant Communities and Recommended Mitigation for Mt. Taylor Regional Park in Sonoma County



APPENDIX A

LIST OF FLORA OBSERVED AT THE SITE

Flora of the SCRPD Mt. Taylor Regional Park Site, Santa Rosa

Surveyed on May29 June 8, 2000

FAMILY	SPECIES NAME	COMMON NAME	NATIVE=N INTRODUCED=I
Aceraceae	<i>Acer macrophyllum</i>	big leaf maple	N
Anacardiaceae	<i>Toxicodendron diversilobum</i>	poison oak	N
Apiaceae	<i>Lomatium californicum</i>	California lomatium	N
	<i>Perideridia kelloggii</i>	yampha	N
	<i>Sanicula crassicaulis</i>	Pacific snakeroot	N
	<i>Torilis nodosa</i>	knotted hedge-parsley	I
Aspideaceae	<i>Polystichum californicum</i>	California shield fern	N
Asteraceae	<i>Achellia millefolium</i>	yarrow	N
	<i>Carduus pycnocephalus</i>	Italian thistle	I
	<i>Centaurea solstitialis</i>	star thistle	I
	<i>Lactuca serriola</i>	prickly lettuce	I
	<i>Picris echioides</i>	bristly ox tongue	I
	<i>Silybum marianum</i>	milk thistle	I
	<i>Sonchus oleraceus</i>	sow thistle	I
	<i>Tragopogon porrifolius</i>	salsify	I
Caprifoliaceae	<i>Lonicera hispidula</i>	Honeysuckle	N
	<i>Symphoricarpos mollis</i>	creeping snowberry	N
	<i>Symphoricarpos rivularis (albus)</i>	snowberry	N
Caryophyllaceae	<i>Silene gallica</i>	windmill pink	I
Corylaceae	<i>Corylus cornuta v. californica</i>	hazelnut	N

FAMILY	SPECIES NAME	COMMON NAME	NATIVE=N INTRODUCED=I
Cruciferae	<i>Brassica nigra</i>	wild mustard	I
	<i>Rorippa palustris</i> var. <i>hispida</i>	bog yellow-cress	N
Cyperaceae	<i>Carex densa</i>	dense sedge	N
	<i>Carex praegracilis</i>	clustered field sedge	N
Ericaceae	<i>Arbutus menziesii</i>	madrone	N
Euphorbiaceae	<i>Eremocarpus setigerus</i>	turkey mullen	N
Fabaceae	<i>Lathyrus latifolia</i>	Everlasting pea	I
	<i>Lupinus nanus</i>	Douglas's lupine	N
	<i>Medicago polymorpha</i>	bur-clover	I
	<i>Vicia sativa</i>	spring vetch	I
Fagaceae	<i>Quercus agrifolia</i>	coast live oak	N
	<i>Quercus garryana</i>	Oregon oak	N
	<i>Quercus kelloggii</i>	black oak	N
Geraniaceae	<i>Erodium cicutarium</i>	redstem filaree	I
	<i>Geranium dissectum</i>	wild geranium	I
Hippocastanaceae	<i>Aesculus californica</i>	buckeye	N
Juncaceae	<i>Juncus bufonius</i>	toadrush	N
	<i>Juncus patens</i>	spreading rush	N
	<i>Juncus phaeocephalus</i> v. <i>paniculatus</i>	brown head rush	N
	<i>Juncus tenuis</i>	slender rush	N
Lamiaceae	<i>Mentha pelugium</i>	pennyroyal	I
	<i>Stachys ajugoides</i>	hedge nettle	N
Lauraceae	<i>Umbellularia californica</i>	bay	N

FAMILY	SPECIES NAME	COMMON NAME	NATIVE=N INTRODUCED=I
Liliaceae	Chlorogalum pomeridianum	soap plant	N
	Disporum hookeri	Fairy Bells	N
	Triteleia hyacinthina	white brodiaea	N
	Tritelia laxa (Brodiaea laxa)	Itherial's spear	N
Lythraceae	Lythrum hyssopifolia	hyssop loosestrife	I
Orchidaceae	Spiranthes sp.	orchid	N
Papaveraceae	Eschscholzia californica	California poppy	N
Plantaginaceae	Plantago lanceolata	English plantain	I
Poaceae	Avena barbata	slender wild oat	I
	Briza minor	small quaking grass	I
	Bromus carinatus	California brome	N
	Bromus diandrus	rip-gut brome	I
	Bromus hordeaceus (B. mollis)	soft chess	I
	Cynodon dactylon	bermuda grass	I
	Cynosurus echinatus	dogtail grass	I
	Danthonia californica	California oatgrass	N
	Elymus glaucus	blue wild rye	N
	Hordeum marinum spp. gussoneanum (H. genicul	mediterranean barley	I
	Hordeum marinum ssp. leporinum (H. leporinum)	hare barley	I
	Leymus triticoides	creeping wildrye	N
	Lolium perenne	perennial rye grass	I
	Melica californica	California Melic	N
	Nassella pulchra	Purple Needlegrass	N
	Phalaris aquatica (Phalaris tuberosa var. stenopter	Harding grass	I
	Phalaris paradoxa		I
	Taeniatherum asperum	Medusa head	I

FAMILY	SPECIES NAME	COMMON NAME	NATIVE=N INTRODUCED=I
Polygonaceae			
	Rumex acetosella	sheep sorrel	I
	Rumex pulcher	fiddle dock	I
Polypodiaceae			
	Adiantum capillus veneris	common maidenhair	N
Rosaceae			
	Crataegus douglasii	native hawthorn	N
	Heteromeles arbutifolia	toyon	N
	Prunus sp.	native plum	I
	Rosa californica	wild rose	N
	Rubus procerus	Himalaya berry	I
	Rubus ursinus	California Blackberry	N
Rubiaceae			
	Galium divaricatum	bedstraw	I
Scrophulariaceae			
	Mimulus guttatus	seepspring monkeyflower	N
	Parentucellia viscosa	parentucella	I
	Veronica perigrina	speedwell	N

APPENDIX B

WILDLIFE REPORT

APPENDIX B

WILDLIFE REPORT

BIOTIC ASSESSMENT, TAYLOR MOUNTAIN REGIONAL PARK

Wildlife Report

By Michael H. Fawcett, Ph.D., Ecologist

METHODS

A wildlife survey of the Taylor Mountain property was conducted on 21 September 2000 between the hours of 8:30 AM and 1:00 PM on a cool, overcast day with light, intermittent rain. The survey was conducted on foot, and was focussed on special-status wildlife species potentially associated with the wetland features present on the property (seeps, wet meadows, seasonal streams), as well as with upland habitats (annual grasslands, oak woodlands). Special-status animal species that could potentially occur in habitats available on the property are listed in Table 1. Most of the species listed below are either birds or bats; neither group was adequately surveyed. A thorough study would require surveys conducted during different seasons, during wet weather, and during night hours. Similarly, aquatic animals were not adequately surveyed because most of the available habitat was dry at the time of the survey. Although the absence or near-absence of perennial pools of water in the seasonal streams on the property eliminate the possibility of use by special-status fish species, some of the amphibians and reptiles in the table below (e.g., northern red-legged frog, foothill yellow-legged frog, northwestern pond turtle), could occur on the property during winter and spring, then migrate downstream or estivate during the dry season. Numerous special-status fish species occur in the Laguna de Santa Rosa watershed downstream from the property, but are not listed here.

Table 1. Special status animal species potentially occurring in or near the project vicinity

Common Name	Scientific Name	Management Status*
<u>Amphibians</u>		
Foothill yellow-legged frog	<i>Rana boylei</i>	SSC
Northern red-legged frog	<i>Rana aurora aurora</i>	SSC
California tiger salamander	<i>Ambystoma tigrinum californiense</i>	FSC, SSC
<u>Reptiles</u>		
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	SSC

Birds

Cooper's hawk	<i>Accipiter cooperi</i>	SSC
White-tailed kite	<i>Elanus caeruleus</i>	SFP
Northern goshawk	<i>Accipiter gentilis</i>	SSC, FSC
Northern harrier	<i>Circus cyaneus</i>	SSC
Sharp-shinned hawk	<i>Accipiter striatus</i>	SSC
Ferruginous hawk	<i>Buteo regalis</i>	SSC, FSC
Prairie falcon	<i>Falco mexicanus</i>	SSC
Golden eagle	<i>Aquila chrysaetos</i>	SSC
Burrowing owl	<i>Athene cunicularia</i>	SSC, FSC
Short-eared owl	<i>Asio flammeus</i>	SSC
Purple martin	<i>Progne subis</i>	SSC
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC, FSC

Mammals

American badger	<i>Taxidea taxus</i>	SSC
Little brown Myotis (bat)	<i>Myotis lucifigus</i>	SSC, FSC
Pallid bat	<i>Antrozous pallidus</i>	SSC
Yuma Myotis	<i>Myotis yumanensis</i>	SSC, FSC
Long-eared Myotis	<i>Myotis evotis</i>	FSC
Fringed Myotis	<i>Myotis thysanodes</i>	SSC, FSC
Long-legged Myotis	<i>Myotis volans</i>	FSC

- * SSC = State Species of Special Concern
FSC = Federal Species of Concern (formerly Candidate for listing)
SFP = State Fully Protected

(Sources: CNDDDB State and Federally Listed Endangered and Threatened Animals of California, April 2000; CNDDDB Special Animals, April 2000)

RESULTS

Wildlife Habitat

Most of the property consists of oak woodlands and annual grasslands. Wetland habitat includes freshwater seep/wet meadows and seasonal streams. The seep/wet meadow areas at the time of the survey had some shallow-standing water, but were badly trampled and damaged by cattle, as described in the Impacts and Mitigation section. The main seep/wet meadow areas drain to an unnamed seasonal tributary of Matanzas Creek. The unnamed creek was completely dry at the time of the survey, and also showed significant, ongoing damage caused by cattle grazing: slumped, eroding banks, excessive sediment deposition, near absence of any young, understory riparian vegetation (the present riparian strip is comprised mainly of older oaks, except for isolated spots with some buckeye and poison oak). This creek presently contributes an excessive load of fine sediment to Matanzas Creek, which joins Santa Rosa Creek, a known steelhead and

former coho stream, as well as the type locality for the Endangered California freshwater shrimp (now extinct in Santa Rosa Creek). Matanzas Creek is considered critical habitat for steelhead and coho (a concrete migration barrier at the confluence with Santa Rosa Creek is scheduled for removal).

Two other unnamed seasonal streams originating between the radio tower and the barn near the southeast corner of the property flow in a southwesterly direction to join Colgan Creek, which flows along Kawana Springs Road to Petaluma Hill Road, then enters a highly channelized system that carries it to the Laguna de Santa Rosa near Todd Road. These two unnamed creeks flow through steep-sided ravines, and are thus somewhat protected from, and less disturbed by, cattle grazing on the property. The larger of the two streams has some small perennial pools up to 15 inches deep in a bedrock-channel area just west of one of the designated vista points (actually, the pools are off the property). No fish or amphibians were found in the pools.

Special Status Species

No special-status species were observed in the project area. However, as mentioned earlier, September is not the best time of year to look for aquatic amphibians and turtles. The reservoirs near the northwestern edge of the property may harbor northwestern pond turtles and/or northern red-legged frogs, which could migrate into the project area to forage during the wet season. Foothill yellow-legged frogs are common in local streams, including Santa Rosa Creek, and may move up into smaller tributaries during the wet season. Both Colgan Creek and Santa Rosa Creek are occupied by northwestern pond turtles downstream from the Taylor Mountain property (*personal observation*), and some of those could also migrate upstream onto the property during the wet season.

Although no special-status birds or mammals were observed during the survey, it is highly likely that some of the birds and bats listed above (Table 1) use the property at one time or another during the year. Non-special status wildlife species observed during the survey are shown in Table 2. Although none were seen during the survey, it is likely that Pacific treefrogs, California newts, and other non-listed native amphibians breed in the seeps and seasonal streams during the wet season.

Table 2. Wildlife observed on Taylor Mountain property on 21 September 2000

Common Name	Scientific Name	Remarks
Reptiles		
Western fence lizard	<i>Sceloporus occidentalis</i>	
Alligator lizard	<i>Gerrhonotus</i> sp.	(Cast skin)
Pacific gopher snake	<i>Pituophis melanoleucus catenifer</i>	(Cast skin)

Birds

American crow	<i>Corvus brachyrhynchos</i>
American kestrel	<i>Falco sparverius</i>
Black phoebe	<i>Sayornis nigricans</i>
California towhee	<i>Pipilo crissalis</i>
California quail	<i>Callipepla californica</i>
Common raven	<i>Corvus corax</i>
Mourning dove	<i>Zenaida macroura</i>
Northern flicker	<i>Colaptes auratus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Scrub jay	<i>Aphelocoma coerulescens</i>
Turkey vulture	<i>Cathartes aura</i>
Wild turkey	<i>Meleagris gallopavo</i>
Woodpecker	unidentified

Mammals

Blacktail jackrabbit	<i>Lepus californicus</i>
California vole	<i>Microtus californicus</i>
Gray fox	<i>Urocyon cinereoargenteus</i> (Scat)
Mule deer	<i>Odocoileus hemionus</i>
Western gray squirrel	<i>Sciurus griseus</i>