

APPENDIX G

Rare Plant Survey

Administrative Draft
Special-Status Plant Report
Hidden Falls Regional Park Project



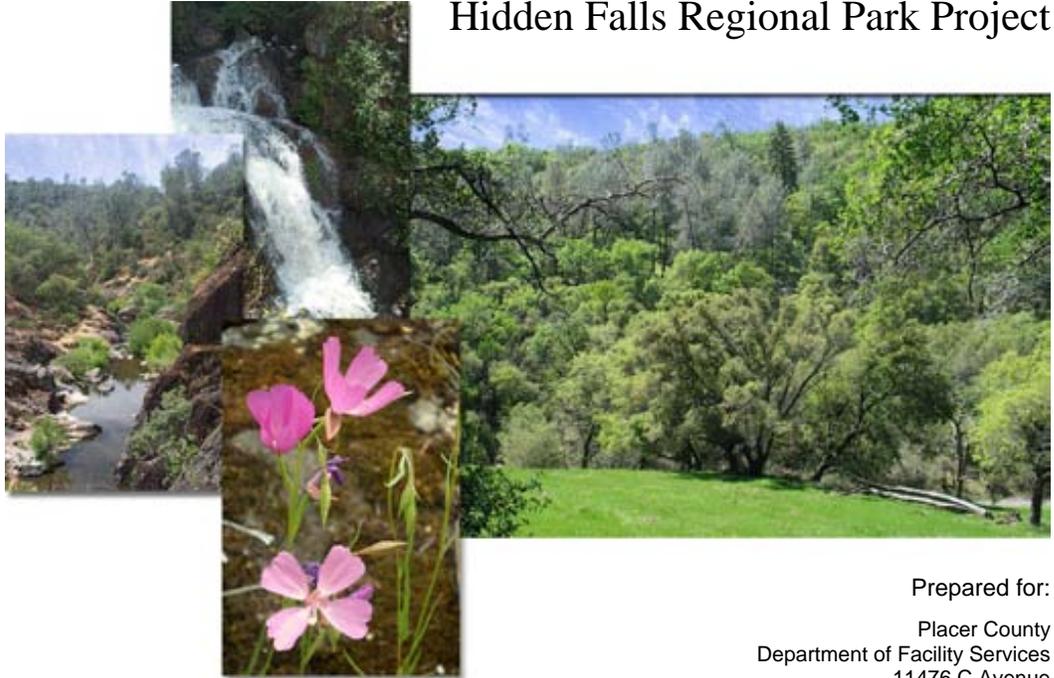
Prepared by:
EDAW
2022 J Street
Sacramento, CA 95814

November 2007

EDAW | AECOM

Administrative Draft
Special-Status Plant Report

Hidden Falls Regional Park Project



Prepared for:

Placer County
Department of Facility Services
11476 C Avenue
Auburn, CA 95603

Contact

Andy Fisher
(530) 889-6814

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95814

Contact:

Petra Unger
Senior Botanist
916/414-5800

November 2007

EDAW | AECOM

TABLE OF CONTENTS

Section	Page
INTRODUCTION	1
STUDY AREA DESCRIPTION	1
METHODS	1
Prefield Investigation.....	1
Field Surveys	4
RESULTS	5
Prefield Investigation Results	5
Field Survey Results.....	6
Plant Communities.....	9
Results by Species	11
REFERENCES	12

TABLE

1	Special-Status Plants With Potential to Occur in the Hidden Falls Regional Park Study Area.....	9
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EXHIBITS

1	Vicinity Map	2
2	Study Area Boundary.....	3
3	Plant Communities and Locations of Special-Status Plant Occurrences in the Study Area	7

APPENDICES

A	Plant Species Observed in the Study Area
B	California Department of Fish and Game California Natural Diversity Data Forms
C	Representative Photographs

ACRONYMS AND ABBREVIATIONS

CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
DFG	California Department of Fish and Game'
EIR	Environmental Impact Report
GIS	Geographic Information System
NPPA	Native Plant Protection Act
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

INTRODUCTION

This report describes the methods and results of a focused botanical survey for special-status plant species in the 961-acre Spears Ranch portion of the proposed Hidden Falls Regional Park Project (proposed project) in unincorporated Placer County between North Auburn and the City of Lincoln (Exhibit 1). The proposed project would expand upon the existing 221-acre site (Didion Ranch) to provide facilities for passive recreation (i.e., hiking, biking, horseback riding, etc.) in the entire 1,182-acre property. The surveys covered the entire 961-acre Spears Ranch, hereafter referred to as the study area (Exhibit 2).

The purpose of the special-status plant surveys was to identify occurrences of special-status plants that could be disturbed as a result of proposed project activities including creation of a trail system connecting with existing trails in the neighboring regional park property, and associated miscellaneous passive recreation facilities, increased vehicle access and parking, creation of interpretative, educational, and maintenance facilities and infrastructure, and fish, wildlife, and habitat restoration. The special status survey, in conjunction with a wetland delineation report, was conducted as part of the background environmental documentation for preparation of an Environmental Impact Report (EIR) presently in preparation for the proposed park expansion.

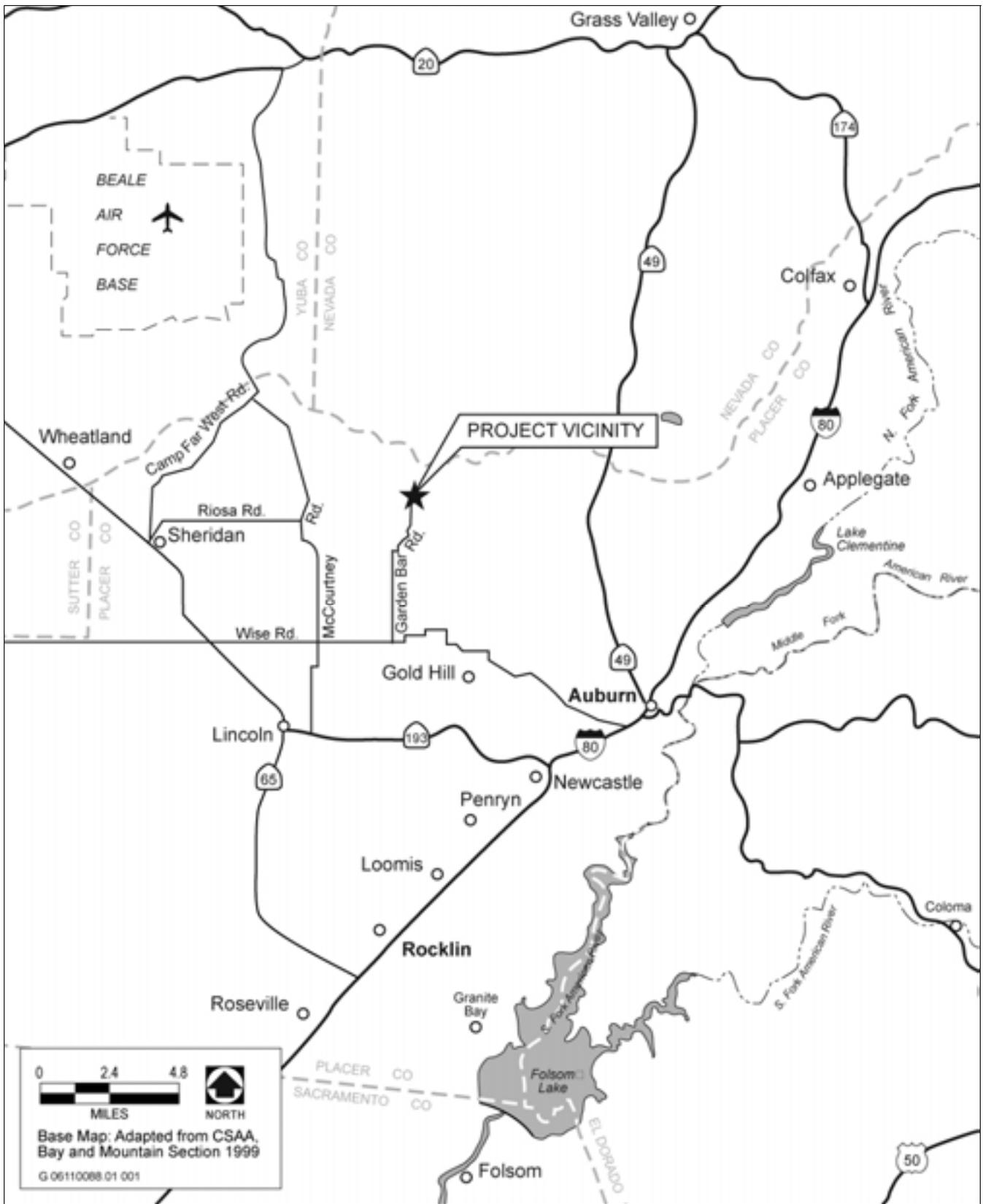
STUDY AREA DESCRIPTION

The majority of the Spears Ranch portion of Hidden Falls Regional Park consists of gently rolling to steep hills covered by a patchwork of annual grassland and oak woodlands. The areas of upland oak woodland can be divided into three types of woodland based on the dominant oak species. These three communities are interior live oak woodland, blue oak woodland, and black oak woodland. Foothill pine (*Pinus sabiniana*) occurs throughout the property in all woodland types. Other vegetation communities identified include valley foothill riparian woodland and freshwater marsh along Coon Creek and intermittent drainages flowing from the north and the south into Coon Creek.

METHODS

PREFIELD INVESTIGATION

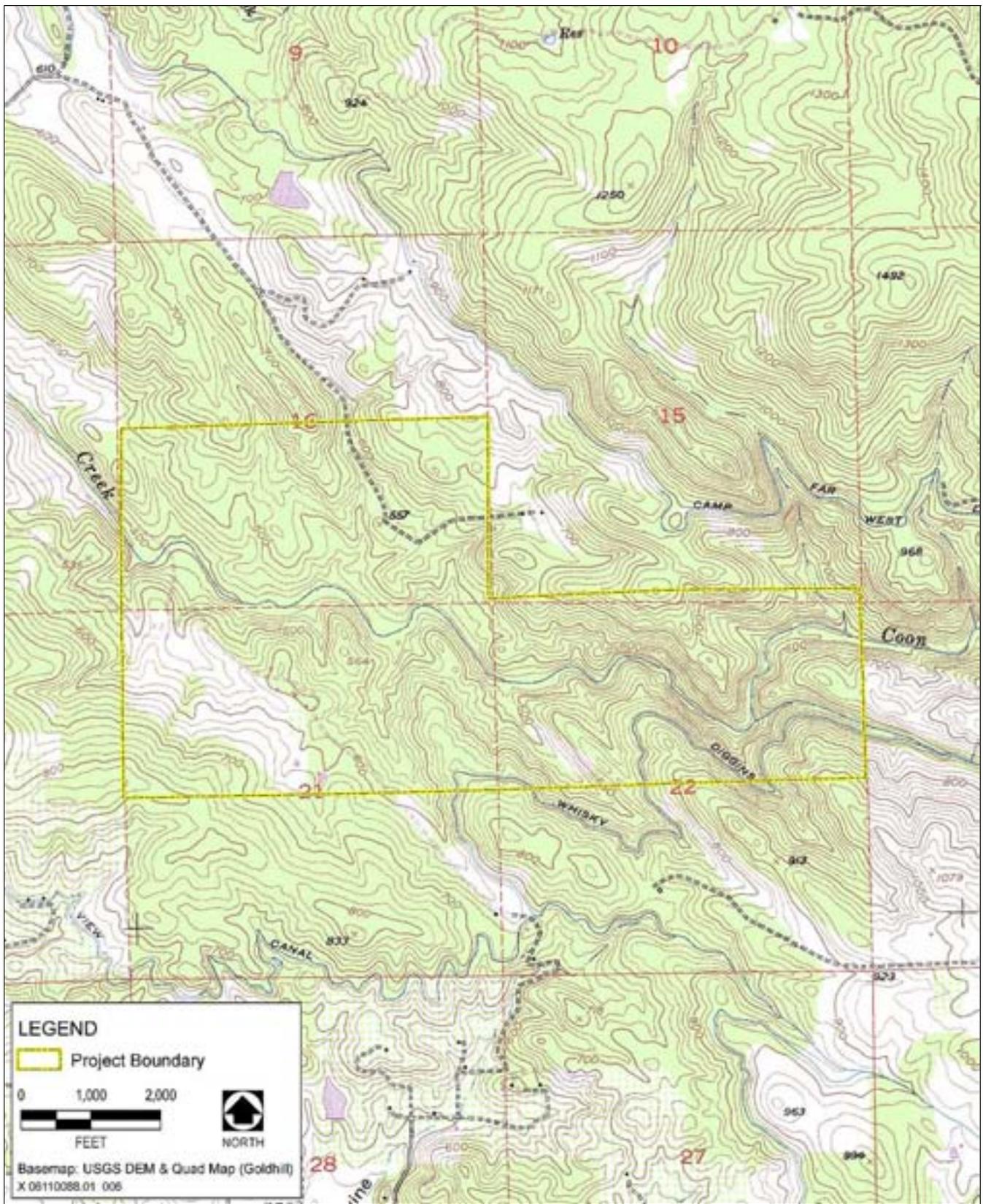
A list of special-status plant species with potential to occur in the study area was compiled by performing database searches of the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2006) and California Department of Fish and Game's (DFG) California Natural Diversity Database (CNDDB 2006). The Gold Hill, Rocklin, Pilot Hill, Auburn, Lake Combie, Wolf, Lincoln, Roseville, and Camp Far West U.S. Geological Survey (USGS) 7.5 minute quadrangles were included in the database record searches.



Source: EDAW 2006

Vicinity Map

Exhibit 1



Source: EDAW 2006

Study Area Boundary

Exhibit 2

In order to evaluate the study area's potential to support special-status plant species, aerial photographs of the study area were reviewed to identify areas supporting potentially suitable habitat for special-status plant species. A survey package, including photographs of each target species and their preferred habitats, was prepared prior to the surveys to familiarize field botanists with the characteristics and blooming periods of target plant species. Plant communities present in the study area were mapped from aerial photograph interpretation and were ground truthed during preliminary field surveys. The plant community polygons were later digitized onto a Geographic Information System (GIS) overlay and used to create a map exhibit showing the location and extent of each plant community present in the study area. Plant community classification is based on the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986).

FIELD SURVEYS

EDAW botanists Mark Bibbo and Sarah Bennett conducted focused special-status plant surveys on May 10, 25, 30, and 31. The protocol for the special-status plant surveys followed DFG's "*Guidelines for Assessing the Effects of Proposed Development on Rare, Threatened, and Endangered Plants and Plant Communities*" (DFG 2000) and U.S. Fish and Wildlife Service (USFWS) *Guidelines for conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), which involve using systematic field techniques in all habitats in the study area to ensure thorough coverage of potential impact areas. The botanists covered the entire Spears ranch property with special attention given to the habitats present in the study area with greater potential for containing occurrences of the target plant species. A reference population of Brandegee's clarkia present at Lake Clementine on the North Fork of the American River to the south of the study area was visited prior to the surveys on May 10th to confirm that the species was flowering and to familiarize the surveyors with the distinguishing characteristics and habitat requirements of this species and to observe typical associated species. All plants encountered during the surveys were identified to the highest taxonomic level necessary for a rare plant determination. Nomenclature used follows the Jepson Manual Higher Plants of California (Hickman 1993).

The locations of all special-status plants encountered were mapped by hand as either points or polygons onto aerial photographs of the study area (scale 1" = 400'). In addition, GIS coordinates were recorded for each location while in the field. These location points and polygons were later digitized onto a GIS overlay to produce a map of the distribution and extent of special-status plant populations in the study area. Locations that were mapped separately from one another were distinguished based on spatial distribution, as well as differences in common associated species and habitat type. Notes on habitat, topography, aspect, phenology, and associated species of the special-status plant species identified were recorded on California Native Species Field Survey Forms to be submitted to the CNDDDB upon completion of the final survey report. Representative photographs of the special-status plant species encountered in the study area were taken.

RESULTS

PREFIELD INVESTIGATION RESULTS

Special-status plants are defined as plants that are legally protected or that are otherwise considered sensitive by federal, state or local resource conservation agencies and organizations. Special-status plants are species, subspecies or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- ▶ Officially listed by the state of 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 California Environmental Quality Act (CEQA) Guidelines;
- ▶ Taxa designated as a special-status, sensitive or declining species by other state or federal agencies or non-governmental organizations; and
- ▶ Taxa considered by the CNPS to be “rare, threatened or endangered in California” (Lists 1B and 2).

The CNPS Inventory includes five lists for categorizing plant species of concern, which are summarized below. The plants listed on CNPS lists 1A, 1B, and 2 meet the definitions of Section 1901, Chapter 10 of the Native Plant Protection Act (NPPA) or Sections 2062 and 2067 (California Endangered Species Act [CESA]) of the California Department of Fish and Game Code and may qualify for state listing. Therefore, they are considered rare plants pursuant to Section 15380 of CEQA. DFG recommends and local government agencies may require that they be fully considered during preparation of environmental documents pursuant to CEQA. Some of the plants constituting CNPS Lists 3 and 4 meet the definitions of Section 1901, Chapter 10 or Sections 2062 and 2067 of the DFG Code and are eligible for state listing. DFG recommends, and local governments may require, that CNPS List 3 and List 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA (DFG 2000). The CNPS lists are categorized as follows:

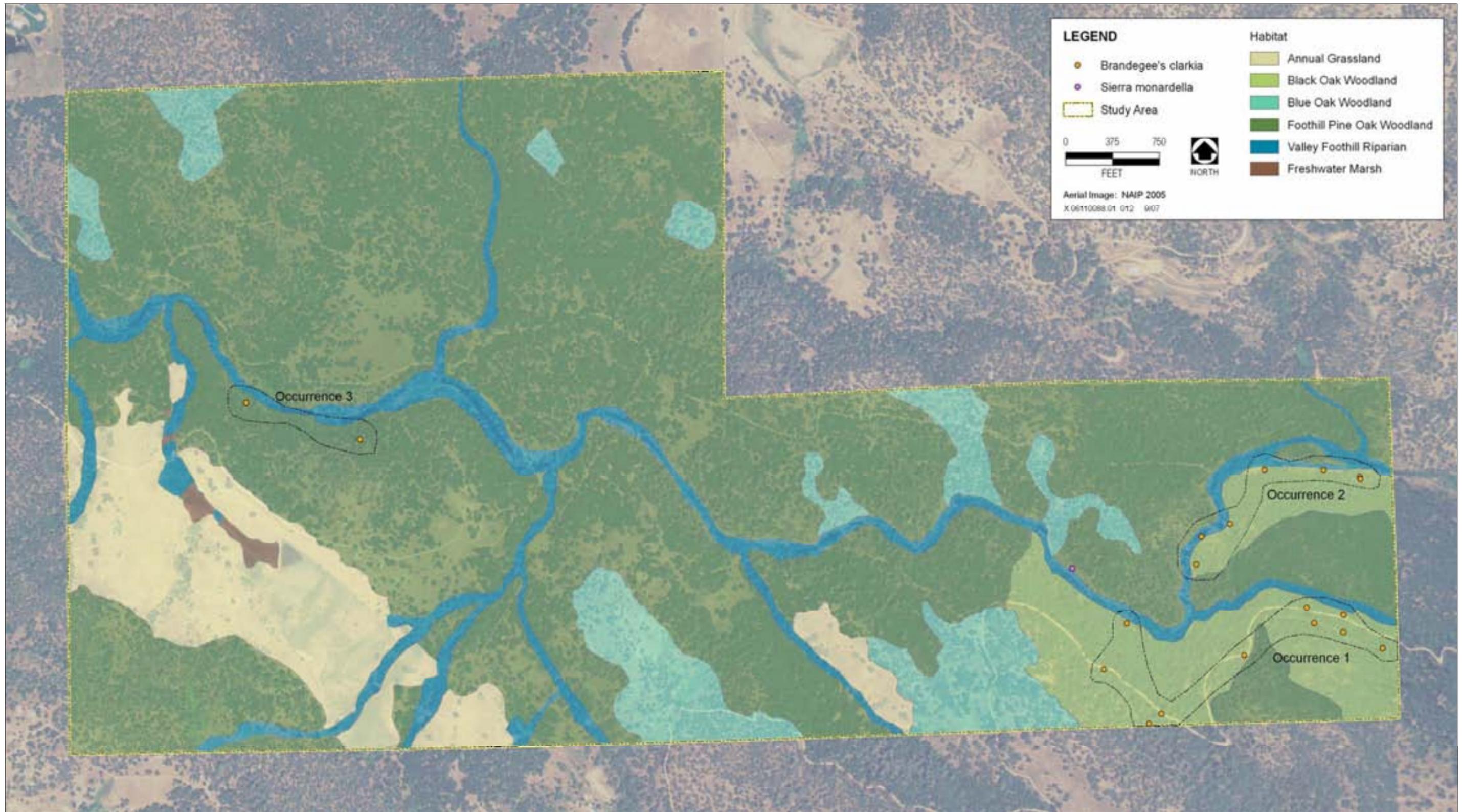
- ▶ List 1A - plants presumed extinct in California;
- ▶ List 1B - plants rare, threatened, or endangered in California and elsewhere;
- ▶ List 2 - plants rare, threatened, or endangered in California but more common elsewhere;
- ▶ List 3 - plants about which we need more information - a review list; and
- ▶ List 4 - plants of limited distribution - a watch list.

Searches of the CNPS and CNDDDB databases identified 19 special-status plant species as occurring in the vicinity of the study area. Seventeen of these species were identified as having no potential to occur in the study area due to narrow substrate requirements or geographical distributions and were therefore excluded from further analysis. Stebbin's morning glory (*Calystegia stebbinsii*), Pine Hill ceanothus (*Ceanothus roderickii*), El Dorado bedstraw (*Galium californicum* ssp. *sierrae*), Red Hills soap root (*Chlorogalum grandiflorum*), and El Dorado County mule ears (*Wyethia reticulata*) are restricted to gabbro soils in El Dorado and Nevada counties. Jepson's onion (*Allium jepsonii*) and big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) are found on serpentine soils, which do not occur in the study area. Dwarf Downingia (*Downingia pusilla*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*), legenere, (*Legenere limosa*), and pincushion navarretia (*Navarretia myersii* spp. *myersii*) occur in vernal pool habitats, which don't occur in the study area. Hispid bird's-beak (*Cordylanthus mollis* ssp. *hispidus*) in Placer County occurs in damp alkaline meadows at about 150 feet elevation. These conditions are not present in the study area. Butte county fritillary (*Fritillaria eastwoodiae*) primarily occurs in the northern foothills of the Sierra and Cascade ranges. The southernmost known occurrences are found north of the study area in Yuba County where they are occur at higher elevations in Ponderosa Pine forest.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*) and oval-leaved viburnum (*Viburnum ellipticum*) are the two special-status plant species identified during the pre-field investigation as having potential to occur in the study area. These two species were targeted during on-site surveys. In addition, Sierra monardella (*Monardella candicans*), a CNPS List 4 plant that had not been previously observed in the area, was observed during field surveys. Table 1 summarizes the regulatory status, habitat, and blooming period of Brandegee's clarkia, Sierra Monardella, and oval-leaved viburnum. Habitat and elevation range information for these species was obtained from the CNPS Electronic Inventory (2006) and *The Jepson Manual Higher Plants of California* (Hickman 1993).

FIELD SURVEY RESULTS

Plant communities mapped in the study area are described below and a comprehensive plant species list of all taxa observed is included in Appendix A. Two special-status plant species Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*), a CNPS List 1b plant, and Sierra monardella (*Monardella candicans*), a CNPS List 4 plant, were documented within the study area during field surveys. A total of twenty populations of Brandegee's clarkia and one population of Sierra monardella were recorded and mapped (Exhibit 3). The CNDDDB and CNPS consider plants located within 0.25 mile of each other as single occurrences. CNDDDB data forms for special-status plant occurrences are provided in Appendix B and are cross-referenced to the special-status plant locations shown in



Source: EDAW 2007

Plant Communities and Locations of Special-Status Plant Occurrences in the Study Area

Exhibit 3

Table 1 Special-Status Plants With Potential to Occur in the Hidden Falls Regional Park Study Area					
Species	Status 1			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Plants					
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	—	—	1B	Chaparral, cismontane woodland; often in road cuts; 700 to 3,000 feet elevation; blooms May to July	Known to occur: This species was identified in the study area during the focused botanical surveys.
Sierra monardella <i>Monardella candicans</i>	—	—	4	Sandy or gravelly soils in chaparral, cismontane woodland, and lower montane coniferous forest; 450 to 2,700 feet elevation; blooms April to July	Known to occur: This species was identified in the study area during the focused botanical surveys.
Oval-leaved viburnum <i>Viburnum ellipticum</i>	—	—	2	Chaparral, cismontane woodland or lower montane coniferous forest; 600 to 4,000 feet elevation; blooms May to June	Could occur: the majority of the survey area is below the elevation range of this species where it occurs in the central foothills, but associated species and potential habitat do occur on the site; not found during focused special-status plant surveys.
1	Legal Status Definitions			California Native Plant Society (CNPS) Listing Categories:	
U.S. Fish and Wildlife Service (USFWS):				1B Plants rare, threatened, or endangered in California and elsewhere	
T Federal Threatened				2 Plants rare, threatened, or endangered in California but more common elsewhere	
E Federal Endangered				3 Plants for which more information is needed – a review list	
California Department of Fish and Game (DFG):				4 Plants of limited distribution – a watch list	
R Rare					
T Threatened					
E Endangered					
Sources: CNDDDB 2006, CNPS 2006, Hickman 1993					

Exhibit 3. Representative photographs of Brandegee's clarkia and the habitat in which it was encountered are provided in Appendix C. A description of the special-status plant species encountered, including their habitat and distribution in the study area, is provided below.

PLANT COMMUNITIES

BLUE OAK WOODLAND

Blue oak woodland occurs on moderate slopes near the tops of ridges in the study area. This oak woodland type is typically more savannah-like and is characterized by more evenly spaced and larger individual blue oaks. Interior live oak and foothill pine may also be present. The shrub layer is typically absent and the understory is

characterized by a dense cover of non-native grasses and forbs, such as bromes (*Bromus diandrus* and *B. hordeaceus*), wild oat (*Avena fatua*), foxtail barley (*Hordeum murinum* ssp. *murinum*), medusahead (*Taeniatherum caput-medusae*), cut-leaved geranium (*Geranium dissectum*), and Italian thistle (*Carduus pycnocephalus*).

BLACK OAK WOODLAND

Black oak woodland is found on steep north-facing slopes in the southeast portion of the property. This woodland type is characterized by a dense canopy that is at least 50 percent relative cover of black oak (*Quercus kelloggii*) with interior live oak and blue oak also present. Scattered ponderosa pine (*Pinus ponderosa*) is also present as an emergent tree. The shrub layer is usually dense and is characterized by species such as toyon (*Heteromeles arbutifolia*), hoary coffeeberry (*Rhamnus tomentella*), and poison oak. The herb layer is usually sparse and contains mix of native and non-native grasses and forbs. Native grasses and forbs found in the understory of the black oak woodland include blue wild rye (*Elymus glaucus*), woodland brome (*Bromus laevipes*), California melicgrass (*Melica californica*), yarrow (*Achillea millefolium*), and twining Brodiaea (*Dichelostemma volubile*). The populations of Brandegee's clarkia were primarily located in this oak woodland type.

ANNUAL GRASSLAND

Annual grassland occurs in a few large grazed clearings. Annual grassland is an herbaceous plant community characterized by dense cover of nonnative annual grasses with numerous species of nonnative annual forbs, as well as some native wildflowers. Typical grass species include bromes, wild oat, foxtail barley, medusahead, and Italian ryegrass (*Lolium multiflorum*). Common nonnative forbs observed include cut-leaved geranium, filaree (*Erodium botrys*), blessed milk thistle (*Silybum marianum*), lesser hawkbit (*Leontodon taraxacoides*), and rose clover (*Trifolium hirtum*). Native wildflowers such as rusty popcorn flower (*Plagiobothrys nothofulvus*), Ithuriel's spear (*Triteleia laxa*), harvest brodiaea (*Brodiaea elegans*), blow-wives (*Achyraea mollis*), caterpillar phacelia (*Phacelia cicutaria*), and native clovers (*Trifolium* spp.) are also present.

VALLEY FOOTHILL RIPARIAN WOODLAND

Valley foothill riparian woodland occurs along the banks of Coon creek, Deadman creek, and the intermittent drainages that have surface water for the majority of the year. These deciduous woodlands are dominated in the tree canopy by Fremont cottonwood (*Populus fremontii*), valley oak (*Quercus lobata*) and white alder (*Alnus rhombifolia*). Shining willow (*Salix lucida* var. *lasiandra*), red willow (*Salix laevigata*), and Oregon ash (*Fraxinus latifolia*) may also occur in the tree layer. Shrubs and lianas, such as California grape (*Vitis californica*), arroyo willow (*Salix lasiolepis*), and Himalayan blackberry (*Rubus discolor*) form a dense understory layer, along with wetland herbaceous species such as torrent sedge (*Carex nudata*), mugwort (*Artemisia douglasiana*), and horsetail (*Equisetum arvense*) occurring along the water's edges.

FRESHWATER MARSH

Freshwater marsh occurs in saturated soils on the fringes of the stock ponds and in spots along the intermittent drainages in the study area. The vegetation is characterized by obligate wetland herbaceous species such as spikerushes (*Eleocharis acicularis* and *Eleocharis macrostachya*), rushes (*Juncus effusus* and *Juncus bufonius*), cattails (*Typha angustifolia*) and smartweed (*Polygonum lapathifolium*). Often this vegetation is surrounded by woody riparian shrubs such as arroyo willow, Himalayan blackberry and western dogwood (*Cornus sericea*).

RESULTS BY SPECIES

BRANDEGEE'S CLARKIA (*CLARKIA BILOBA* SSP. *BRANDEGEEAE*)

Brandegee's clarkia, a member of the evening primrose family, is a CNPS List 1B plant. It was previously listed as a USFWS Species of Concern, however as of May 2006, the USFWS no longer maintains lists of Species of Concern. Brandegee's clarkia is found in the central Sierra Nevada foothills between 804 and 2,904 feet above mean sea level in chaparral and woodland habitats, often on road-cuts. It is an annual herb with rose-pink flowers that blooms from May to July. The feature that distinguishes this subspecies from the other two subspecies of *Clarkia biloba* is the length of the notch at the tip of the petal. In Brandegee's clarkia, the notch is less than 1/5 of the petal length.

Brandegee's clarkia was encountered during this special-status plant surveys throughout the study area on steep north-facing slopes in openings in the black oak woodlands. Populations of Brandegee's clarkia were abundantly distributed throughout the southeastern corner of the property. Information of these occurrences was summarized in three CNDDDB records included in Appendix B of this report. Brandegee's clarkia was most typically found on steep north facing slopes in the shade and openings of black oak and foothill pine-oak woodland where common associated species included hedgehog dogtail (*Cynosorus echinatus*), field hedge parsley (*Torilis arvensis*), poison oak (*Toxicodendron diversilobum*), blue wild rye (*Elymus glaucus*), and white globe lily (*Calochortus albus*). Many of the populations are found on the roadcuts along Whiskey Diggins canal and the associated road. Due to the abundance of the Brandegee's clarkia population on the property as well as the fact that they occur on areas of previous disturbance, proposed project activities associated with the expansion of recreation facilities are unlikely to have an overall adverse affect on the viability of this species in the study area.

SIERRA MONARDELLA

Sierra monardella (*Monardella candicans*), a member of the mint family, is a CNPS list 4 plant. It is a small, annual plant with half inch heads of white flowers that bloom from April to July. Sierra monardella grows on sandy or gravelly soils in oak woodland, chaparral, and ponderosa pine forest throughout the Sierra Nevada foothills.

Sierra monardella was not identified in the pre-field investigation as a potential target special status plant species for the survey because no records currently exist in the CNDDDB for the species. A single population of the species was located in the study area (Exhibit 3). Sierra monardella was found in the opening of Foothill Pine-Oak woodland on the north side of Coon creek. The surrounding plant community is moderately dense annual grassland on a low gradient southwest facing terrace above the creek. Associated species included species typical of the annual grassland and surrounding woodlands such as bromes (*Bromus* spp.), lupines (*Lupinus* sp.), smooth cat's ears (*Hypochaeris glabra*), four spot (*Clarkia purpurea*), Ithuriel's spear (*Triteleia laxa*), needleleaf navarretia (*Navarretia intertexta*), and brodiaea (*Brodiaea elegans*).

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APPENDIX A

Plant Species Observed in the Study Area

APPENDIX A

PLANT SPECIES OBSERVED IN THE STUDY AREA

Table 1 Plant Species Observed in the Study Area	
<i>Scientific Name</i>	Common Name
<i>Adiantum jordanii</i>	California maidenhair fern
<i>Aesculus californica</i>	California buckeye
<i>Agoseris heterophylla</i>	annual agoseris
<i>Ailanthus altissima</i>	tree-of-heaven
<i>Alisma plantago-aquatica</i>	American waterplantain
<i>Allium amplexans</i>	narrow leaved onion
<i>Allium peninsulare</i>	Mexicali onion
<i>Alnus rhombifolia</i>	white alder
<i>Ambrosia psilostachya</i>	western ragweed
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	fiddleneck
<i>Anaphalis margaritacea</i>	pearly everlasting
<i>Anthemis cotula</i>	dog-fennel
<i>Anthriscus caucalis</i>	Bur-chervil
<i>Aphanes occidentalis</i>	western lady's mantle
<i>Aristolochia californica</i>	California pipevine
<i>Artemisia douglasiana</i>	mugwort
<i>Asclepias cordifolia</i>	purple milkweed
<i>Asclepias eriocarpa</i>	Indian milkweed
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolia</i>	mulefat
<i>Bidens frondosa</i>	beggar ticks
<i>Brachypodium distachyon</i>	false brome
<i>Brickellia californica</i>	brickelbush
<i>Briza maxima</i>	rattlesnake grass
<i>Briza minor</i>	little quaking grass
<i>Bromus diandrus</i>	ripgut brome
<i>Bromus hordeaceus</i>	soft chess
<i>Bromus japonicus</i>	Japanese brome
<i>Bromus laevipes</i>	woodland brome
<i>Bromus madritensis</i> var. <i>madritensis</i>	red brome
<i>Bromus madritensis</i> var. <i>rubens</i>	foxtail chess

**Table 1
Plant Species Observed in the Study Area**

<i>Scientific Name</i>	Common Name
<i>Calandrinia ciliata</i>	red maids
<i>Calochortus albus</i>	white globelily
<i>Calochortus luteus</i>	yellow mariposa lily
<i>Calystegia occidentalis</i>	western morning-glory
<i>Cardamine oligosperma</i>	Idaho bittercress
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Carex barbarae</i>	valley sedge
<i>Carex nudata</i>	torrent sedge
<i>Carex praegracilis</i>	slender sedge
<i>Castilleja attenuata</i>	valley tassels
<i>Centaurea solstitialis</i>	yellow star-thistle
<i>Centaureium muehlenbergii</i>	Muhlenberg's centaury
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Cerastium glomeratum</i>	mouse-ear chickweed
<i>Cercis occidentalis</i>	redbud
<i>Chondrilla juncea</i>	skeleton weed
<i>Cichorium intybus</i>	chicory
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	four-spot
<i>Claytonia parviflora</i>	streambank springbeauty
<i>Claytonia perfoliata</i>	miner's lettuce
<i>Clematis lasianthus</i>	virgins bower
<i>Conium maculatum</i>	poison hemlock
<i>Cornus glabrata</i>	brown dogwood
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cynosurus echinatus</i>	hedgehog dogtail
<i>Daucus pusillus</i>	rattlesnake weed
<i>Dichelostemma capitatum</i>	blue dicks
<i>Eleocharis acicularis</i>	needle spikerush
<i>Eleocharis macrostachya</i>	creeping spikerush
<i>Elymus glaucus</i>	blue wild rye
<i>Ericameria arborescens</i>	goldenfleece
<i>Erigeron foliosus</i> var. <i>hartwegii</i>	Hartweg's fleabane
<i>Erigeron philadelphicus</i>	Philadelphia fleabane

**Table 1
Plant Species Observed in the Study Area**

<i>Scientific Name</i>	Common Name
<i>Eriophyllum lanatum</i>	woolly sunflower
<i>Erodium botrys</i>	braodleaf filaree
<i>Eryngium vaseyi</i>	coyote thistle
<i>Eschscholzia caespitosa</i>	foothill poppy
<i>Eschscholzia californica</i>	California poppy
<i>Euphorbia spathulata</i>	warty spurge
<i>Euthamia occidentalis</i>	western goldenrod
<i>Festuca arundinacea</i>	reed fescue
<i>Ficus carica</i>	fig
<i>Filago gallica</i>	filago
<i>Galium aparine</i>	bedstraw
<i>Galium murale</i>	yellow wall bedstraw
<i>Galium porrigens</i>	climbing bedstraw
<i>Gastridium ventricosum</i>	nitgrass
<i>Geranium dissectum</i>	cut-leaved geranium
<i>Geranium molle</i>	dove's foot geranium
<i>Gilia capitata</i>	blue head gilia
<i>Githopsis specularioides</i>	common blue-cup
<i>Glyceria declinata</i>	waxy mannagrass
<i>Gnaphalium luteo-album</i>	everlasting-album
<i>Grindelia hirsutula</i>	hairy gumweed
<i>Helenium puberulum</i>	sneezeweed
<i>Heteromeles arbutifolia</i>	toyon
<i>Hoita macrostachya</i>	leather root
<i>Hypericum perforatum</i>	St. Johnswort
<i>Hypochaeris glabra</i>	smooth cat's ear
<i>Iris pseudacorus</i>	paleyellow iris
<i>Juncus bufonius</i>	common toad rush
<i>Juncus effusus</i>	common rush
<i>Keckiella brevifolia</i>	gaping keckielia
<i>Lactuca serriola</i>	prickly lettuce
<i>Lemna minor</i>	duckweed
<i>Lepidium nitidum</i>	common peppergrass
<i>Linanthus bicolor</i>	bicolor linanthus

**Table 1
Plant Species Observed in the Study Area**

<i>Scientific Name</i>	Common Name
<i>Linanthus ciliatus</i>	whisker brush
<i>Linum usitatissimum</i>	common flax
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Lonicera hispidula</i>	hairy honeysuckle
<i>Lonicera interrupta</i>	chaparral honeysuckle
<i>Ludwigia peploides</i>	false loosestrife
<i>Lupinus microcarpus</i>	chick lupine
<i>Lupinus nanus</i>	sky lupine
<i>Luzula comosa</i>	wood rush
<i>Madia elegans</i> ssp. <i>vernalis</i>	common tarweed
<i>Madia gracilis</i>	slender tarweed
<i>Medicago polymorpha</i>	bur-clover
<i>Melica californica</i>	California melicgrass
<i>Mentha arvensis</i>	field mint
<i>Micropus californicus</i>	slender cottonweed
<i>Mimulus guttatus</i>	seep monkeyflower
<i>Monardella candicans</i>	Sierra monardella
<i>Monardella villosa</i>	coyote mint
<i>Nassella pulchra</i>	purple needlegrass
<i>Navarretia intertexta</i>	needleleaf navarretia
<i>Navarretia tagetina</i>	marigold navarretia
<i>Nemophila pedunculata</i>	littlefoot nemophila
<i>Odontostomum hartwegii</i>	Hartweg's odontostomum
<i>Panicum capillare</i>	witchgrass
<i>Parentucellia viscosa</i>	yellow glandweed
<i>Pentagramma triangularis</i>	goldenback fern
<i>Perideridia kelloggii</i>	squawroot
<i>Phacelia cicutaria</i>	caterpillar phacelia
<i>Phlox gracilis</i>	slender phlox
<i>Plagiobothrys nothofulvus</i>	popcornflower
<i>Plagiobothrys stipitatus</i> var. <i>micranthus</i>	stalked popcorn flower
<i>Plantago lanceolata</i>	English plantain
<i>Plectritis macrocera</i>	white plectritis
<i>Poa annua</i>	annual blue grass

**Table 1
Plant Species Observed in the Study Area**

<i>Scientific Name</i>	Common Name
<i>Poa pratensis</i>	Kentucky bluegrass
<i>Polygala cornuta</i>	milkwort
<i>Polygonum arenastrum</i>	common knotweed
<i>Polygonum punctatum</i>	water smartweed
<i>Polypodium calirhiza</i>	nested polypody
<i>Populus alba</i>	white poplar
<i>Populus fremontii</i>	Fremont's cottonwood
<i>Prunella vulgaris</i>	common selfheal
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	bracken fern
<i>Quercus douglasii</i>	blue oak
<i>Quercus kelloggii</i>	black oak
<i>Quercus lobata</i>	Valley Oak
<i>Quercus wislizeni</i>	interior live oak
<i>Ranunculus californicus</i>	California buttercup
<i>Rhamnus ilicifolia</i>	redberry
<i>Rhamnus tomentella</i>	hoary coffeeberry
<i>Rorippa nasturtium-aquaticum</i>	watercress
<i>Rubus discolor</i>	Himalayan blackberry
<i>Rumex crispus</i>	curly dock
<i>Rumex pulcher</i>	fiddledock
<i>Salix exigua</i>	sandbar willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
<i>Sanicula bipinnatifida</i>	purple sanicle
<i>Sanicula crassicaulis</i>	Pacific sanicle
<i>Scirpus acutus</i>	hardstem bulrush
<i>Selaginella hansenii</i>	Hansen's spikemoss
<i>Senecio vulgare</i>	old-man-in-the-spring
<i>Sherardia arvensis</i>	field madder
<i>Silene gallica</i>	catchfly
<i>Silybum marianum</i>	blessed milkthistle
<i>Solidago californica</i>	California goldenrod
<i>Stachys albens</i>	White Hedge nettle
<i>Thysanocarpus curvipes</i>	common fringe-pod

**Table 1
Plant Species Observed in the Study Area**

<i>Scientific Name</i>	Common Name
<i>Torilis arvensis</i>	field hedge parsley
<i>Toxicodendron diversilobum</i>	poison oak
<i>Trifolium ciliolatum</i>	foothill clover
<i>Trifolium dubium</i>	shamrock clover
<i>Trifolium hirtum</i>	red clover
<i>Trifolium subterraneum</i>	Subterranean Clover
<i>Trifolium willdenovii</i>	tomcat clover
<i>Triteleia bridgesii</i>	Bridges' Brodiaea
<i>Triteleia laxa</i>	Ithuriel's spear
<i>Triticum aestivum</i>	common wheat
<i>Typha angustifolia</i>	narrow-leaf cattail
<i>Urtica dioica</i>	stinging nettle
<i>Verbascum blattaria</i>	moth mullein
<i>Verbena bonariensis</i>	South American vervain
<i>Vicia sativa</i>	spring vetch
<i>Vinca major</i>	vinca
<i>Vitis californica</i>	California grape
<i>Vulpia bromoides</i>	brome fescue
<i>Vulpia microstachys</i>	small fescue
<i>Vulpia myuros</i>	foxtail fescue
<i>Wyethia angustifolia</i>	narrowleaf mule ears
<i>Xanthium strumarium</i>	cocklebur

APPENDIX B

California Department of Fish and Game
California Natural Diversity Data Forms

Mail to:
 California Natural Diversity Database
 Department of Fish and Game
 1807 13th Street, Suite 202
 Sacramento, CA 95814
 Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 05/31/2007

California Native Species Field Survey Form

Scientific Name: *Clarkia biloba var. brandeegae*

Common Name: Brandegee's clarkia

Species Found? Yes No _____ If not, why? _____
 Total No. Individuals +/- 3000 Subsequent Visit? yes no
 Is this an existing NDDDB occurrence? _____ no unk.
Yes, Occ. #
 Collection? If yes: yes Not yet deposited, likely DAV
Number Museum / Herbarium

Reporter: Mark Bibbo
 Address: 2022 J Street
Sacramento, CA
 E-mail Address: mark.bibbo@edaw.com
 Phone: (916) 414-5800

Plant Information

Phenology: _____% vegetative 100% flowering _____% fruiting

Animal Information

adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____
 breeding wintering burrow site rookery nesting other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Hidden Falls Regional Park, On the Spears Ranch property, close to Coon Creek, about 0.25 mile due north of the large stock pond in the middle of the property.

County: Placer County Landowner / Mgr.: Placer County

Quad Name: Gold Hill Elevation: 430 ft.

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S W Source of Coordinates (GPS, topo. map & type): GPS

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S W GPS Make & Model Thales Mobile Mapper

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy 1 m meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 38.9707°
-121.204° *Refers to Occurrence #2 on map*

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Steep north facing slope in the shade of Black oak-Interior Live Oak-Foothill Pine woodland. Growing with *Cynosorus echinatus*, *Torilis arvensis*, *Toxicodendron diversilobum*, *Elymus glaucus*, and *Calochortus albus*.

Other rare taxa seen at THIS site on THIS date:
 (separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: Grazing, recreation (hiking/equestrian trails)

Visible disturbances:

Threats: Grazing, non-native invasive weeds.

Comments: This occurrence consists of numerous clumps of hundreds of individuals in a similar position on the slope stretching for about a quarter mile on either side of the GPS point.

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): Jepson
 Compared with specimen housed at: DAV
 Compared with photo / drawing in: Cal Photos
 By another person (name): _____
 Other: _____

Photographs: (check one or more)

Slide	Print	Digital
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Plant / animal	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>	<input checked="" type="checkbox"/>

May we obtain duplicates at our expense? yes no

Mail to:
 California Natural Diversity Database
 Department of Fish and Game
 1807 13th Street, Suite 202
 Sacramento, CA 95814

Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work (mmdd/yyyy): 05/24/2007

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Clarkia biloba* var. *brandeegae*

Common Name: Brandegee's clarkia

Species Found? Yes No If not, why? _____
 Total No. Individuals +/- 5,000 Subsequent Visit? yes no
 Is this an existing NDDDB occurrence? no unk.
 Yes, Occ. # _____
 Collection? If yes: yes Not yet deposited, likely DAV
 Number _____ Museum / Herbarium _____

Reporter: Mark Bibbo
 Address: 2022 J Street
 Sacramento, CA
 E-mail Address: mark.bibbo@edaw.com
 Phone: (916) 414-5800

Plant Information

Phenology: _____% vegetative 100% flowering _____% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
 breeding wintering burrow site rookery nesting other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Hidden Falls Regional Park, On the Spears Ranch property, in the southeastern portion of the property, along Whiskey Diggins canal.

County: Placer County Landowner / Mgr.: Placer County
 Quad Name: Gold Hill Elevation: 707 ft.

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): GPS
 T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model Thales Mobile Mapper

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy 1 m _____ meters/feet
 Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)

Coordinates: 38.9657°
 -121.175° Refers to Occurrence No. 1 on map.

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Steep north facing slope in the shade and openings of Black oak-Interior Live Oak-Foothill Pine woodland. Growing with *Heteromeles arbutifolia*, *Aesculus californica*, *Cynosorus echinatus*, *Torilis arvensis*, *Allium peninsulare* and *Pentagramma triangularis*.

Other rare taxa seen at THIS site on THIS date:
 (separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor

Immediate AND surrounding land use: Grazing, recreation (hiking/equestrian trails)

Visible disturbances:

Threats: Grazing, non-native invasive weeds.

Comments: This occurrence consists of numerous clumps of hundreds of individuals on the road cuts along the irrigation canal and the road that follows it, as well as on the north facing slopes on either side of the road cuts. These sub-populations of *Clarkia* occur all along the road in this southeastern portion of the property.

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): Jepson
 Compared with specimen housed at: DAV
 Compared with photo / drawing in: Cal Photos
 By another person (name): _____
 Other: _____

Photographs: (check one or more)

Slide Print Digital
 Plant / animal
 Habitat
 Diagnostic feature

May we obtain duplicates at our expense? yes no

Mail to:
 California Natural Diversity Database
 Department of Fish and Game
 1807 13th Street, Suite 202
 Sacramento, CA 95814
 Fax: (916) 324-0475 email: CNDDDB@dfg.ca.gov

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Date of Field Work (mmddlyyy): 05/30/2007

California Native Species Field Survey Form

Scientific Name: *Monardella candicans*

Common Name: Sierra monardella

Species Found? Yes No _____
If not, why?

Total No. Individuals +/- 2,000 Subsequent Visit? yes no
 Is this an existing NDDDB occurrence? _____ no unk.
Yes, Occ. #

Collection? If yes: _____
Number Museum / Herbarium

Reporter: Mark Bibbo
 Address: 2022 J Street
Sacramento, CA
 E-mail Address: mark.bibbo@edaw.com
 Phone: (916) 414-5800

Plant Information

Phenology: _____% vegetative 100% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
<input type="checkbox"/>				
breeding	wintering	burrow site	rookery	nesting
				other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Hidden Falls Regional Park, On the Spears Ranch property, in the southeastern portion of the property, north of Coon Creek.

County: Placer County Landowner / Mgr.: Placer County
 Quad Name: Gold Hill Elevation: 496 ft.
 T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S W
 Source of Coordinates (GPS, topo. map & type): GPS
 GPS Make & Model Thales Mobile Mapper
DATUM: NAD27 NAD83 WGS84 Other _____
 Horizontal Accuracy 1 m _____ meters/feet
 Coordinate System: UTM Zone 10 UTM Zone 11 OR Geographic (Latitude & Longitude)
 Coordinates: 38.9671°
-121.182°

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):
 Southwest facing slope in the opening of a Foothill Pine - Oak woodland on the north side of Coon Creek. The surrounding plant community is a moderately dense annual grassland on a gently sloping terrace above the creek. Growing with Bromus spp., Lupinus sp. (in fruit), Hypochaeris glabra, Clarkia purpurea, Triteleia laxa, Navaretia intertexta, Brodiaea elegans.

Other rare taxa seen at THIS site on THIS date:
 (separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): Excellent Good Fair Poor
 Immediate AND surrounding land use: Grazing, recreation (hiking/equestrian trails)
 Visible disturbances:
 Threats: Grazing, non-native invasive weeds (yellow star thistle)
 Comments: This occurrence consisted of several thousand individuals spread through the roughly five acre opening centered at the GPS point.

Determination: (check one or more, and fill in blanks)

Keyed (cite reference): Jepson
 Compared with specimen housed at: _____
 Compared with photo / drawing in: CalPhoto
 By another person (name): _____
 Other: _____

Photographs: (check one or more)

Plant / animal	<input type="checkbox"/>	Slide	<input type="checkbox"/>	Print	<input type="checkbox"/>	Digital	<input type="checkbox"/>
Habitat	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
Diagnostic feature	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

May we obtain duplicates at our expense? yes no

APPENDIX C

Representative Photographs



Brandegee's Clarkia with characteristic shallowly lobed petals



Open woodland habitat along roadcuts where Brandegee's Clarkia was typically found in the study area

Representative Photographs

Appendix C