
E-3: Line 407 East Plant Report

Special Status and Listed Plant Report
PG&E Line 407 East Natural Gas Transmission Pipeline
Sacramento, Placer and Sutter Counties, California

August 2006



Prepared for:

TRC
80 Stone Pine Road, Suite 200
Half Moon Bay, CA 94019
Attn: Benjamin Hart

Prepared by:



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PG&E Line 407 East Natural Gas Transmission Pipeline
Sacramento, Placer and Sutter Counties, California

Introduction

As requested by TRC, Gallaway Consulting Inc. performed rare plant surveys and a floristic inventory within the PG&E Line 407 East Natural Gas Transmission Pipeline (Project) study area. Surveys were conducted on May 5, and 12, and July 21, 24 and 26, 2006 to determine the presence of special-status botanical resources and to establish whether or not these resources would be impacted by the proposed project.

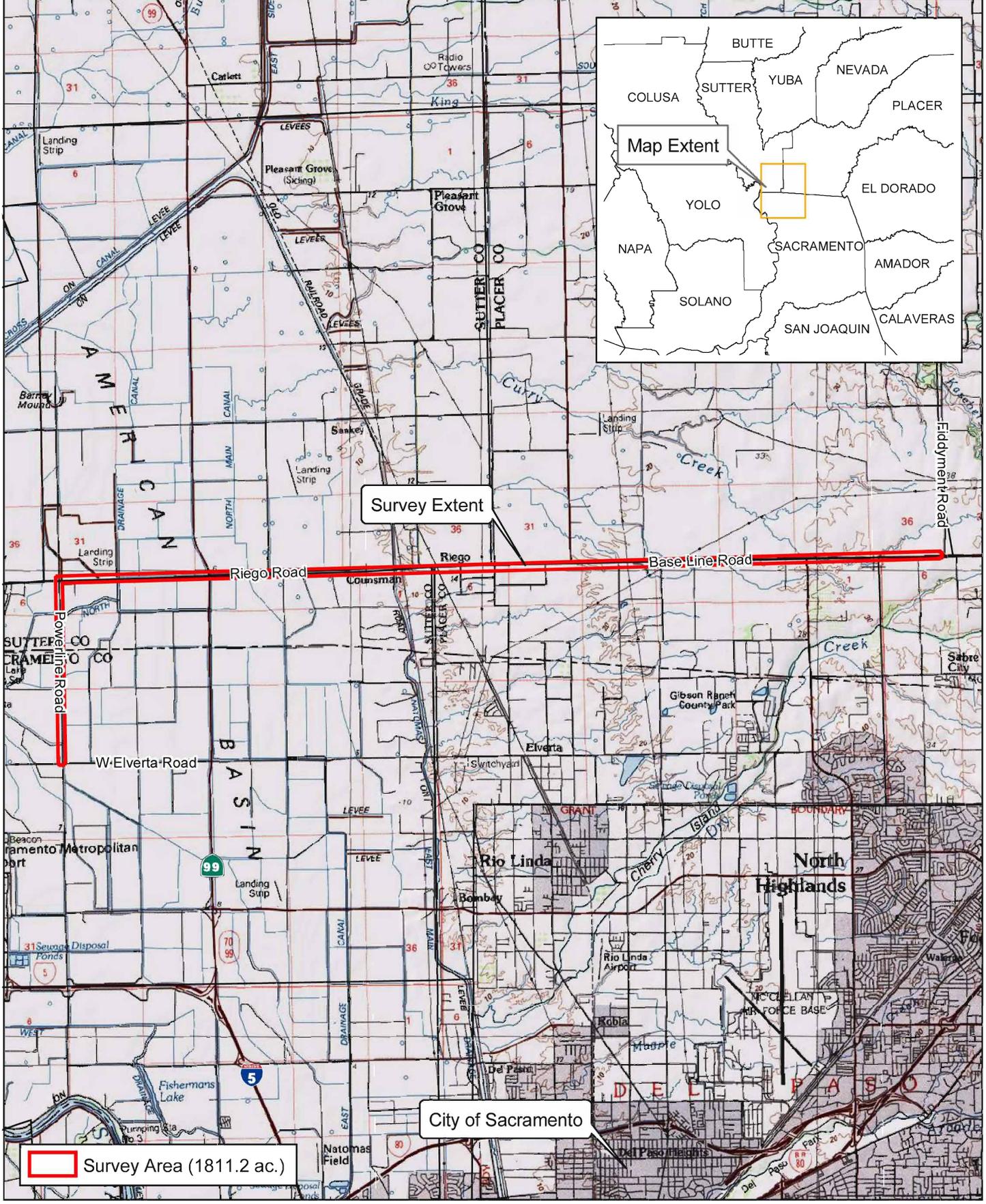
Project Description

The survey area for the Project encompasses an approximately 1811.2-acre corridor of rural, urban, and developed land in portions of Verona, Rio Linda, Roseville, Citrus Heights, Taylor Monument, and Pleasant Grove USGS 7.5' quadrangles. Urban, commercial, and agricultural structures, as well as agricultural fields and open space, occupy the extent of the survey area. The survey area is located just west of the City of Roseville and north of Sacramento (**Figure 1**). Topography is flat to gently undulate with Project elevation ranging from 15 to 125 feet above sea level. The portion of the Survey area east of the Natomas East Main Drainage is largely comprised of gently sloping grasslands with low-density residential and commercial development and was the focus of the study. The Survey area west of the Natomas East Main Drainage is almost entirely active, irrigated agricultural land used for rice production.

Existing Conditions

Topography within the survey area is flat to gently undulate with elevation ranging from 15-125 feet above sea level. Urban, commercial, and agricultural structures, as well as agricultural fields and open space, occupy the extent of the study area. The following soils series' and complexes occur within the study area:

- Alamo-Fiddymment Complex on 0-5percent slopes
- Capay Clay on 0-2percent slopes
- Clear Lake Clay on 0-2percent slopes
- Cometa Loam on 0-2percent slopes
- Cometa Sandy Loam on 1-5percent slopes
- Cometa-Fiddymment Complex on 1-5percent slopes
- Cometa-Ramona Sandy Loam on 1-5percent slopes
- Fiddymment Loam on 1-8percent slopes
- Galt Clay on 0-2percent slopes



Survey Area (1811.2 ac.)

USGS 7.5' Quad.
Map Date: July 5, 2006.

0 1 2 Miles

GALLAWAY CONSULTING, INC.

Figure 1.

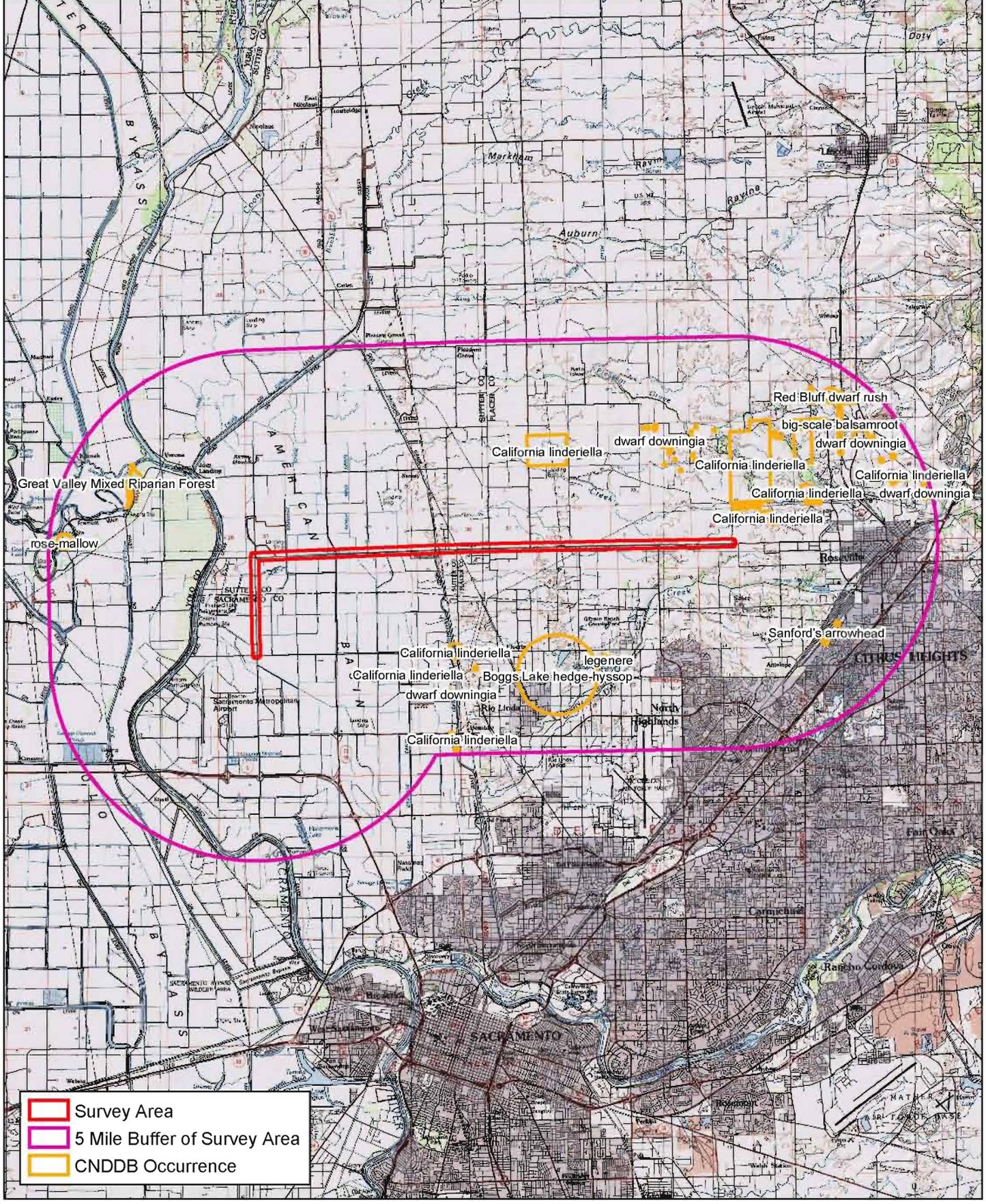
- Jacktone Clay on 0-2percent slopes
- Marcum Clay Loam on 0-1percent slopes
- Ramona Sandy Loam on 2-9percent slopes
- San Joaquin Sandy Loam on 0-5percent slopes
- San Joaquin Silt Loam on 0-1 slopes
- San Joaquin –Xerarents on 0-1 percent slopes
- San Joaquin-Arents-Durochrepts Comple on 0-1percent slopes
- San Joaquin-Cometa Sandy Loam on 1-5 percent slopes
- San Joaquin-Durixeralfs Complex on 0-1 percent slopes
- San Joaquin-Galt Complex on 0-1 percent slopes
- Xerarents-San Joaquin Complex on 0-1 percent slopes
- Xerofluvents, frequently flooded
- Xerofluvents, hardpan substrate

The average annual temperature for the study area ranges from 49-70°F, with the hottest temperatures occurring in July and August. The average annual rainfall for the area is 0.07 inches, with the wettest months receiving up to 0.14 inches of rain (The Weather Underground, Inc. 2006).

Study Methods

Prior to conducting the onsite survey, we created a list of potentially occurring special-status plant species occurring within the study area by accessing all pertinent databases, and contacting appropriate state and federal agencies. Topographic maps and aerial photos of the site were reviewed and areas of potential impact noted. We then reviewed and edited the lists taking into account existing conditions present within the study area. The California Natural Diversity Database (CNDDDB), California Native Plant Society (CNPS) and U.S. Fish and Wildlife Service (USFWS) species lists are presented in **Appendix A**. A 5-mile radius CNDDDB search identified several documented special-status plant species occurrences in the surrounding area (**Figure 2**). The CNDDDB provides natural history and location information on rare, threatened, endangered, and special-status species and natural communities within California. The CNDDDB only documents known occurrences and is used as a preliminary tool, in addition to the USFWS species lists, to determine potential species occurrences within the study area. Surveys were conducted for all the plant species included on these lists because they each had varying degrees of potential to occur within the study area. For the purposes of this survey, special-status species are those that fall into one of the following categories:

- Designated as rare, threatened, or endangered by state or federal governments (ESA, 50 CFR 17.12 for listed plants and various notices in the Federal Register, California Endangered Species Act (CESA), 14 CCR 670.5);



- ▭ Survey Area
- 5 Mile Buffer of Survey Area
- ▭ CNDDB Occurrence



CNDDB Occurrence provided by CDFG (Feb. 7, 2006).
 CNDDB occurrences include plants only.
 Map Date: July 27, 2006.

0 1 2 4 Miles



Figure 2.

- Designated as Species of Concern and/or Special Concern by state or federal governments;
- Proposed for rare, threatened, or endangered designation by state and federal governments;
- Included on the CNPS List as 1A, 1B, and 2 (Skinner and Pavlik, 2001);
- Plants that meet the definitions of rare or endangered species under the California Environment Quality Act (CEQA) (State CEQA Guidelines, Section 15380).

On April 10, 11, and 27, May 23, and July 21, 24 and 28, 2006, a pedestrian survey of the site was undertaken. All accessible portions of the survey area were examined using transects and spot-checks of high quality habitat. Inaccessible property with the potential to support target species are identified in **Table 1**. Shirley Innecken and Elena Alfieri, botanists, conducted botanical surveys during the appropriate flowering window of the target species (See **Appendix B** for Botanist Qualifications). Surveys were floristic in nature and conducted in accordance with the USFWS Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (January 2000) (**Appendix C**). Federal and state listed species identification was confirmed by monitoring a known reference population for each target species (**Table 2**). The entire project site was traversed using parallel transects spaced no more than 15 feet apart. Transects were stratified according to plant community types and all suitable habitat was closely inspected (See **Appendix D** for a list of all plant species observed during surveys). A Trimble GeoXT was on hand to record special-status plant species occurrences.

Table 1. Inaccessible Property with Potential for Target Species.

Property Identification	Property Owner	Target Species with Potential of Occurrence
APN 023-150-023-000, 9777 Baseline Road, Elverta, 95626	Williard Lee and Kathleen M. Harless	<i>Hibiscus lasiocarpus</i> , <i>Sagittaria sanfordii</i> , <i>Downingia pusilla</i>

Table 2. Locations of Reference Populations for Species with Potential to Occur in the Study Area Based on USFWS and CNDDDB Species Lists

Species	Location of Reference Population
Plants	
<i>Astragalus tener</i> var. <i>ferrisiae</i>	On the south side of Evans-Reimer Road, about 1 mile east of Pennington Road, Gray Lodge Waterfowl Management Area
<i>Atriplex cordulata</i>	Gray Lodge Wildlife Area, 2 miles southeast of the headquarters building. Just south of Rutherford Road, west of Levee Road
<i>Atriplex depressa</i>	Delevan National Wildlife Refuge. One mile east of Excelsior Road in Cell 12 of the Refuge
<i>Atriplex joaquiniana</i>	About 3 miles southeast of woodland, north of Willow Slough, north and south of Road 25 and west of road 103
<i>Balsamorhiza marcolepis</i> var. <i>macrolepis</i>	On the south side of Evans-Reimer Road, about 1 mile east of Pennington Road, Gray Lodge Waterfowl Management Area
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	City of Woodland site, near junction of Road 103 and Road 25
<i>Cordylanthus palmatus</i>	City of Woodland site, near junction of Road 103 and Road 25
<i>Downingia pusilla</i>	About 8 miles southeast of Corning, North Fork Hall Creek
<i>Gratiola heterosepala</i>	Archgate Reservoir, just west of the Shasta-Lassen county border, south of Pittville, west of Pittville Road
<i>Hibiscus lasiocarpus</i>	Upper Butte Sink Wildlife Area - Howard Slough
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Along Powerline Road corridor between Fruitland Road and South Honcut Creek, west of Loma Rica
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Palermo, southeast of Daly Road
<i>Legenere limosa</i>	Stillwater Plains Mitigation Bank, Palermo
<i>Lepidium latipes</i> var. <i>heckardii</i>	West of Sacramento Northern Railroad
<i>Navarretia myersii</i> ssp. <i>myersii</i>	2 miles east of Sacramento-Amador Countyline, Howard Ranch
<i>Orcuttia viscida</i>	Grant Line Road about 2.9 miles north of Hwy 16
<i>Sagittaria sandfordii</i>	Along and between Beacon Creek and Elder Creek, east of Power Inn Road, Elk Grove

Results

Plant species determined to have the potential to occur within the study area are discussed in **Table 3**.

Table 3. Species with Potential to Occur in the Study Area Based on USFWS and CNDDDB Species Lists

Species		Listing Status ¹	Habitat Association	Blooming Period	Potential to Occur ²
SCIENTIFIC NAME	COMMON NAME				
<i>Astragalus tener</i> var. <i>ferrisiae</i>	Alkali Milk Vetch	CNPS 1B	vernally mesic meadows and seeps, valley and foothill grassland	April-May	No potential of occurring. Was not found during protocol-level surveys.
<i>Atriplex cordulata</i>	Heartscale	CNPS 1B	chenopod scrub/meadows and seeps/valley and foothill grassland/saline or alkaline soils	April-October	No potential of occurring. Was not found during protocol-level surveys.
<i>Atriplex depressa</i>	Brittlescale	CNPS 1B	chenopod scrub/meadows and seeps/valley and foothill grassland/saline or alkaline soils/vernal pools/playas/alkaline soils	May-October	No potential of occurring. Was not found during protocol-level surveys.
<i>Atriplex joaquiniana</i>	San Joaquin Spearscale	CNPS 1B	chenopod scrub/meadows and seeps/valley and foothill grassland/saline or alkaline soils/playas/alkaline clay soils	April-October	No potential of occurring. Was not found during protocol-level surveys.
<i>Balsamorhiza marcolepis</i> var. <i>macrolepis</i>	Big-scale Balsamroot	CNPS 1B	chaparral/cismontane woodland/valley and foothill grassland/sometimes serpentine	March-June	No potential of occurring. Was not found during protocol-level surveys.
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	Hispid Bird's-beak	CNPS 1B	meadows and seeps/playas/valley and foothill grassland/alkaline soils	June-September	No potential of occurring. Was not found during protocol-level surveys.
<i>Cordylanthus palmatus</i>	Palmate-bracted Bird's-beak	FE, SE, CNPS 1B	chenopod scrub/valley and foothill grassland/alkaline soils	May-October	No potential of occurring. Was not found during protocol-level surveys.

Species		Listing Status ¹	Habitat Association	Blooming Period	Potential to Occur ²
<i>Downingia pusilla</i>	Dwarf Downingia	CNPS 2	valley and foothill grassland/vernal pools	March-May	Occurs within the study area.
<i>Gratiola heterosepala</i>	Boggs Lake Hedge-hyssop	SE, CNPS 1B	marshes and swamps/vernal pools/clay	April-August	None, was not found during protocol-level surveys
<i>Hibiscus lasiocarpus</i>	Rose-mallow	CNPS 2	marshes and swamps	June-September	None, was not found during protocol-level surveys
<i>Juncus leiospermus</i> var. <i>ahartii</i>	Ahart's Dwarf Rush	CNPS 1B	valley and foothill grassland	March-May	No potential of occurring. Was not found during protocol-level surveys.
<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Red Bluff Dwarf Rush	CNPS 1B	chaparral/cismontane woodland/valley and foothill grassland/meadows and seeps/vernal pools	March-May	No potential of occurring. Was not found during protocol-level surveys.
<i>Legenere limosa</i>	Legenere	CNPS 1B	vernal pools	April-June	No potential of occurring. Was not found during protocol-level surveys.
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's Pepper-grass	CNPS 1B	valley and foothill grassland (alkaline flats)	March-May	No potential of occurring. Was not found during protocol-level surveys.
<i>Navarretia myersii</i> ssp. <i>myersii</i>	Pincushion Navarretia	CNPS 1B	vernal pools	May	No potential of occurring. Was not found during protocol-level surveys.
<i>Orcuttia viscida</i>	Sacramento Orcutt Grass	FE, SE, CNPS 1B	vernal pools	April-June	No potential of occurring. Was not found during protocol-level surveys.
<i>Sagittaria sandfordii</i>	Sanford's Arrowhead	CNPS 1B	marshes and swamps (assorted shallow freshwater)	May-October	No potential of occurring. Was not found during protocol-level surveys.

¹ Listing Status		
<u>Federal Listing Codes</u> FE Federally endangered	<u>California Native Plant Society's Listing Codes</u> 1B Rare or endangered in California 2 Rare, threatened, or endangered in California, but more common elsewhere.	
<u>California State Listing Codes</u> SE State endangered		
² Potential to Occur determinations were made following habitat assessments and floristic surveys.		

Habitat Characterization

The survey area includes six habitat characterizations based on the California Department of Fish and Game California Wildlife Habitat Relationship System (CWHR), and an additional category used to describe irrigation canals supporting fresh emergent wetland (**Attachment A**). The CWHR classification system was developed through a multi-agency effort to provide resource managers and scientists with a standardized habitat and wildlife management tool. The CWHR system is commonly used to discuss habitats in terms of wetland delineations, wildlife management plans and biological resource assessments. Habitat characterizations are divided by vegetative assemblage (i.e., tree dominated, shrub dominated, herbaceous dominated) then subdivided by location and unique vegetation. Habitats are first assessed from aerial photographs, then followed by ground truthing. The following habitats occur within the project boundaries:

Annual Grassland. There are approximately 617 acres of annual grassland within the survey boundary. According to Mayer and Laudenslayer (1988), annual grassland is an open vegetative community composed primarily of annual plant species. Wildlife species that utilize annual grassland include the western fence lizard (*Sceloporus occidentalis*), western meadowlark (*Sturnella neglecta*), northern harrier (*Circus cyaneus*), and American kestrel (*Falco sparverius*). Plant species inhabiting the annual grassland within the study area include silver European hairgrass (*Aira caryophyllea*), annual oatgrass (*Avena* sp.), star-thistle (*Centaurea solstitialis*), bindweed (*Convolvulus arvensis*), nit grass (*Gastridium ventricosum*), gumplant (*Grindelia* sp.), Fitch's tarweed (*Hemizonia fitchii*), annual rygrass (*Lolium multiflorum*), Medusae-head grass (*Taeniatherum caput-medusae*) and vinegar weed (*Trichostema lanceolatum*). Much of the grassland has been disked, plowed, and/or graded for various agricultural uses, or has been disturbed as a consequence of urbanization.

Vernal pools occur within annual grasslands, yet support a community distinct from the surrounding grassland community. They provide unique habitats for several endemic California plants and invertebrates, as well as amphibians. Plant species inhabiting vernal pools within the study area include annual hairgrass (*Deschampsia danthanoides*), dwarf downingia (*Downingia pusilla*), dove weed (*Eremocarpus setigerus*), coyote thistle (*Eryngium castrense*), bractless hedge hyssop (*Gratiola ebracteata*), toad rush (*Juncus bufonius*), tidy tips (*Layia* sp.),

white-flowered navarretia (*Navarretia leucocephala*), American pillwort (*Pilularia americana*), stalked popcorn flower (*Plagiobothrys stipitatus* var. *micranthus*), Sacramento Valley pogogyne (*Pogogyne zizyphoroides*) and common knotweed (*Polygonum arenastrum*).

Rice. A majority of the study area, approximately 667 acres, is rice fields. Some of the rice fields are currently fallow, or undergoing a seasonal dehydration period. Although a type of fresh emergent wetland, rice fields are subject to human-induced water regimes and function as an agricultural crop rather than a naturally occurring wetland. However, in the Sacramento Valley they do support many of the same species that naturally occurring fresh emergent wetlands do, including numerous waterfowl, egrets and northern harriers.

Dryland Grain Crops. Dryland grain crops include annual seed producing grasses, cereal rye (*Secale cereale*), oats (*Avena sativa*), and wheat (*Triticum aestivum*). They are usually planted in drilled rows in the fall and then harvested in the spring. They may also be rotated with other irrigated crops after the fall harvest of a previous crop, dry farmed, and then harvested in the late spring. Volunteer native or naturalized herbaceous species may colonize fallowed dryland grain fields. The dryland grain crop fields within the study area had been harvested at the time of the surveys. Many of the fields seemed fallow. In inhabited fields, specific crop species were indistinguishable. Many of the fields were inhabited by non-native annual grasses and forbs.

Irrigated Row and Field Crops. Most irrigated row and field crops are annuals, such as asparagus (*Asparagus officinalis*) and strawberries (*Fragaria ananassa*), and a few are perennials. The annuals are usually planted in the spring and harvested in the summer or fall. They may also be rotated with other irrigated crops after the fall harvest of a previous crop, dry farmed, and then harvested in the late spring. Small plots of strawberries were the only distinguishable irrigated row and field crop at the time of surveys.

Canal/Fresh Emergent Wetland. Irrigation canals associated with rice fields occur throughout the study area. Many of these canals support fresh emergent vegetation along their edges which include species such as cattails (*Typha* sp.), vervain (*Verbena* sp.), yellow nutsedge (*Cyperus esculentus*), tall cyperus (*Cyperus eragrostis*) and floating primrose willow (*Ludwigia peploides*).

Water/Riverine. The riverine classification include rivers, where water flows continually, as well as intermittently flowing creeks. Curry Creek, as well as a small unnamed intermittent channel, flows through portions of the study area. Riverine habitats tend to occur with contiguous wetlands and upland habitats.

Urban. Approximately 273 acres of the project site is characterized as urban, which includes commercial and residential development and associated infrastructure. As stated by Mayer and Laudenslayer, most units of the urban vegetation are relatively static in species composition due to maintenance. Species commonly associated with the urban environment include scrub jays (*Aphelocoma californica*), raccoons (*Procyon lotor*), European starlings (*Sturnus vulgaris*), mockingbirds (*Mimus polyglottos*), house finches (*Carpodacus mexicanus*), striped skunks (*Mephitis mephitis*), opossum (*Didelphis virginiana*), and rock doves (*Columba livia*).

Special-status Plant Species Known to Occur Within the Study Area

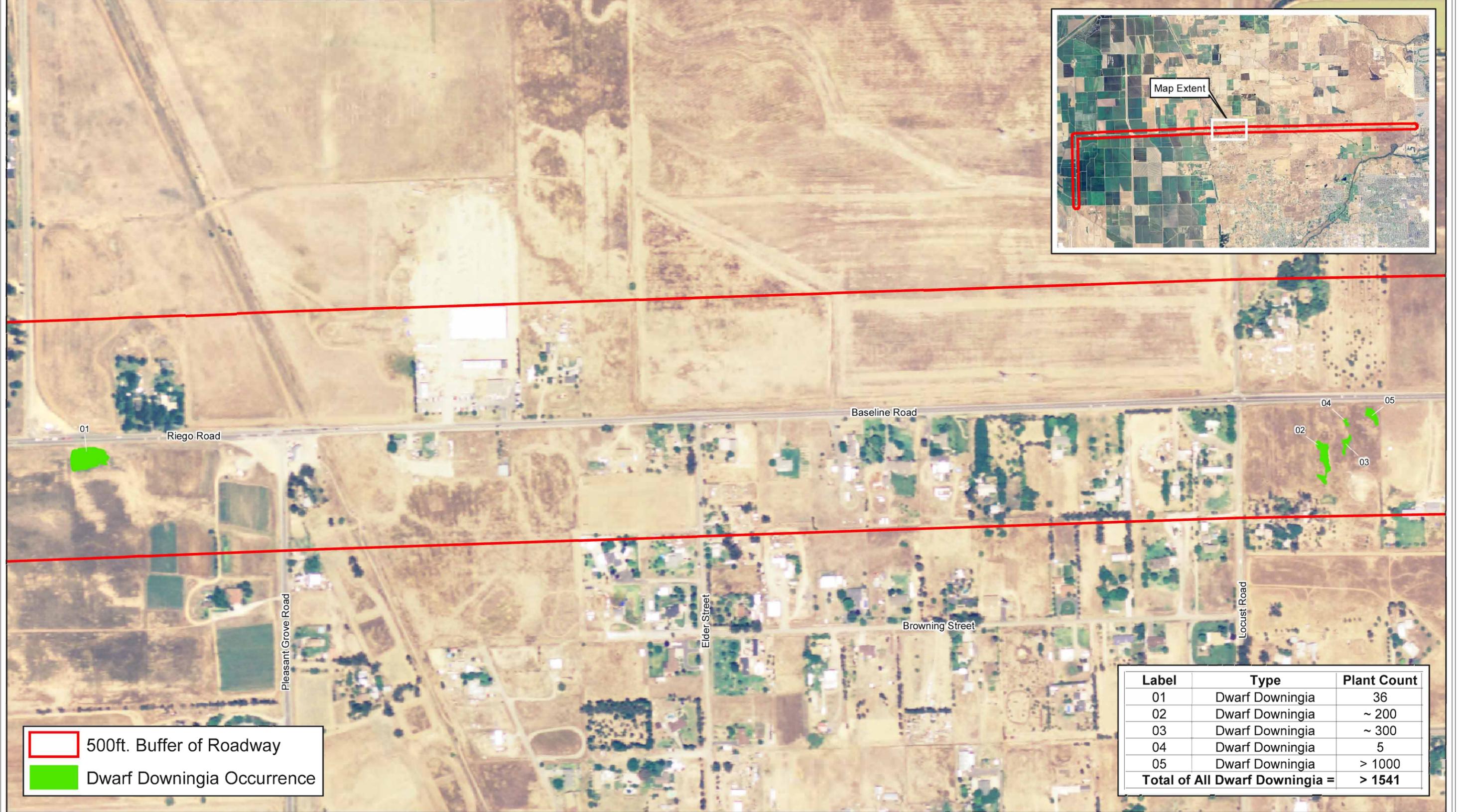
Dwarf Downingia. The dwarf downingia (*Downingia pusilla*) is a diminutive annual herb of the family Campanulaceae, the Bellflower family. This CNPS 2 plant species is found in mesic valley and foothill grassland within vernal pools. It generally prefers the muddy, open banks of small to large pools where competition with other vernal pool species is minimal. Dwarf downingia is found from Merced and Mariposa counties in the south to Tehama County in the north (CNPS 2003). Five occurrences of dwarf downingia were located and mapped within the study area (**Figure 3**). A total of approximately 1,541 individual plants were counted.

Potential Effects

Direct and indirect effects to CNPS List 2 species:

The project has the potential to directly and indirectly effect dwarf downingia. Direct effects include any permanent impacts to the watershed which provides hydrology to the vernal pools in which the dwarf downingia inhabits. Direct impacts may be caused by the staging, construction, road-rerouting, and/or placement of the pipeline. Direct impacts to dwarf downingia would also occur in the case of disturbance to the topography of the habitat as well. Any soil displacement, including the fill of wetlands or contamination, may have permanent impacts to the dwarf downingia populations. Indirect impacts may include watershed pollution due to construction-related run-off and/or impacts to the plants themselves should the habitat be traversed. Indirect impacts are likely to be temporary.

There are 121 reported occurrences of dwarf downingia populations documented in the CNDDDB, 15 of which occur within the Roseville, Rio Linda or Pleasant Grove 7.5-minute quadrangle. California Native Plant Society List 2 species' are considered rare, threatened, or endangered in California, but more common elsewhere. The loss of all five of the populations located within the study area would be significant, but not detrimental because 15 other occurrences have been documented in close proximity. Hence, there is potential for the species to successfully propagate and establish new populations in the study area. However, if a negative population and habitat trend



 500ft. Buffer of Roadway
 Dwarf Downingia Occurrence

Label	Type	Plant Count
01	Dwarf Downingia	36
02	Dwarf Downingia	~ 200
03	Dwarf Downingia	~ 300
04	Dwarf Downingia	5
05	Dwarf Downingia	> 1000
Total of All Dwarf Downingia =		> 1541


 Project site derived from 500 ft. buffer of road centerline.
 Survey Dates: May 5, 2006/Surveyors: CK,SI,EA.
 Date of Aerial: Feb. 2005 (NAIP).
 Map Date: July 27, 2006/Revisions:


 0 200 400 Feet



Figure 3.

continues near the study area, the species may become eligible for a more stringent special-status including a state or federal listing. The loss of habitat for dwarf downingia would be even more significant considering that destruction of vernal pool habitat due to urbanization is what has made this species, and other California vernal pools species, vulnerable to extinction. Furthermore, the quality of the vernal pools, a designated federal critical habitat, inhabited by the dwarf downingia is stable and may provide habitat for federal and state listed invertebrates as well. Therefore, loss of this habitat would result in the loss of a healthy vernal pool community, a resource that is rapidly disappearing in California.

Impact Avoidance and Minimization Recommendations

The following avoidance and minimization recommendations are taken from the CNPS Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants (February 1991, revised April 1998) and have been adjusted to suit the target species in respect to the project. California Native Plant Society List 2 plants meet the definition of Section 1901, Chapter 10 (Native Plant Protection Act) or Section 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA. List 2 plants may require mitigation; these mitigation options are listed below (CEQA, Section 15370):

- 1) Avoiding the impacts altogether by not taking a certain action.
- 2) Minimizing impacts by limiting the degree or magnitude of the action.
- 3) Rectifying the impacts by repairing, rehabilitating, or restoring the impacted environment.
- 4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the project.
- 5) Compensating for the impacts by replacing or providing substitute resources or environments.

The location of all dwarf downingia occurrences will not be submitted to the CDFG for inclusion into the CNDDDB without client consent. Because seed dispersal relies on rainwater, new populations can spread throughout wetland complexes. In areas where these resources may be impacted by the project, additional surveys should be conducted to locate any new populations. The requirement for compensatory mitigation is at the discretion of the CEQA lead agency. Mitigation may consist of transplanting individuals, on-site mitigation, and purchasing off-site mitigation.

Conclusions and Determinations

If the recommended avoidances and minimizations (mitigations) are implemented, overall project impacts to dwarf downingia and its habitat should be temporary, and should not result in a net loss of dwarf downingia populations.

The following determination has been made regarding impacts to dwarf downingia populations within the study area: **No affect with appropriate avoidance, minimization, and mitigation implementation.**

References

California Department of Fish and Game (CDFG). November 2003. *California Natural Diversity Data Base (CNDDB)*. Sacramento, California.

_____. California Wildlife Habitat Relationship System. California Department of Fish and Game Biogeographic Data Branch. Available online at:
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California Endangered Species Act. Fish and Game Code, Sections 2050-2098. Native Plant Protection Act. Fish and Game Code, Sections 1900-1913.

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Mayer, Kenneth E.; Laudenslayer, William F., Jr., eds. 1988. A guide to wildlife habitats of California. Sacramento, CA: California Department of Fish and Game. Available online: <http://www.dfg.ca.gov/whdab/cwhr/pdfs/CSC.pdf> [2006, August 5].

Skinner, M. and B. Pavlik. 2001. Inventory of rare and endangered vascular plants of California, 6th edition. California Native Plant Society. Sacramento, CA.

Weather Underground, Inc. 2006. Weather data from the Sacramento and the Mather Air Force Base weather stations available online at
<http://www.wunderground.com/NORMS/DisplayNORMS.asp?AirportCode=KSAC&StateCode=CA&SafeCityName=Sacramento&Units=none&IATA=SAC&normals=on>

Personal Observation

Shirley Innecken, Gallaway Consulting, Inc. 2006.

Elena Alfieri, Gallaway Consulting, Inc. 2006

Appendix A: California Natural Diversity Database, California Native Plant Society and US Fish and Wildlife Service Species Lists

Status: search results - Mon, Aug. 6, 2007, 13:05 b

{QUADS_123} = ~ m/513A|529C|529D|512B|512C|528C|513B|513C Search

Tip: Words meant to be searched as a unit should be wrapped in quotes, e.g., "coastal dunes". [all tips and help.] [search history]

Your Quad Selection: Taylor Monument (513A) 3812165, Knights Landing (529C) 3812176, Verona (529D) 3812175, Rio Linda (512B) 3812164, Sacramento East (512C) 3812154, Pleasant Grove (528C) 3812174, Grays Bend (513B) 3812166, Davis (513C) 3812166, Sacramento West (513D) 3812155

Hits 1 to 12 of 12

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press

check all

check none

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u><i>Astragalus tener</i></u> var. <u><i>tener</i></u>	alkali milk-vetch	Fabaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Atriplex cordulata</i></u>	heartscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Atriplex depressa</i></u>	brittlescale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Atriplex joaquiniana</i></u>	San Joaquin spearscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Carex lenticularis</i></u> var. <u><i>limnophila</i></u>	lakeshore sedge	Cyperaceae	List 2.2
	<input type="checkbox"/>	1	<u><i>Cordylanthus palmatus</i></u>	palmate-bracted bird's-beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u><i>Downingia pusilla</i></u>	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u><i>Gratiola heterosepala</i></u>	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Hibiscus lasiocarpus</i></u>	rose-mallow	Malvaceae	List 2.2
	<input type="checkbox"/>	1	<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u><i>Lepidium latipes</i></u> var. <u><i>heckardii</i></u>	Heckard's pepper-grass	Brassicaceae	List 1B.2
	<input type="checkbox"/>	1	<u><i>Sagittaria sanfordii</i></u>	Sanford's arrowhead	Alismataceae	List 1B.2

To save selected records for later study, click the ADD button.

ADD checked items to Plant Press

check all

check none

Selections will appear in a new window.

No more hits.



Status: search results - Mon, Aug. 6, 2007, 13:02 b

{QUADS_123} = ~ m/528D|512A|512B|527B|527C|511B|528A|528E

Tip: Words meant to be searched as a unit should be wrapped in quotes, e.g., "coastal dunes". [\[all tips and help.\]](#) [\[search history\]](#)

Your Quad Selection: Roseville (528D) 3812173, Citrus Heights (512A) 3812163, Rio Linda (512B) 3812164, Gold Hill (527B) 3812182, Rocklin (527C) 3812172, Folsom (511B) 3812162, Lincoln (528A) 3812183, Sheridan (528B) 3812184, Pleasant Grove (528C) 3812174

Hits 1 to 11 of 11

Requests that specify top o quads will return only Lists 1-3.

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Balsamorhiza macrolepis</u> var. <u>macrolepis</u>	big-scale balsamroot	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Clarkia biloba</u> ssp. <u>brandegeeae</u>	Brandegee's clarkia	Onagraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Cordylanthus mollis</u> ssp. <u>hispidus</u>	hispid bird's-beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Downingia pusilla</u>	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u>Gratiola heterosepala</u>	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. <u>ahartii</u>	Ahart's dwarf rush	Juncaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. <u>leiospermus</u>	Red Bluff dwarf rush	Juncaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Legenere limosa</u>	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Navarretia myersii</u> ssp. <u>myersii</u>	pincushion navarretia	Polemoniaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Orcuttia viscida</u>	Sacramento Orcutt grass	Poaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	List 1B.2

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

No more hits.



Status: search results - Mon, Aug. 6, 2007, 13:01 b

{QUADS_123} = ~ m/512B|528C|528D|513A|513D|529D|512A|512r

Tip: Having trouble with a multi-word search? Try a single word, e.g. ginger or cobra.
[\[all tips and help.\]](#) [\[search history\]](#)

Your Quad Selection: Rio Linda (512B) [3812164](#), Pleasant Grove (528C) [3812174](#), Roseville (528D) [3812173](#), Taylor Monument (513A) [3812165](#), Sacramento West (513D) [3812155](#), Verona (529D) [3812175](#), Citrus Heights (512A) [3812163](#), Sacramento East (512C) [3812154](#), Carmichael (512D) [3812153](#)

Hits 1 to 9 of 9

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Balsamorhiza macrolepis</u> var. macrolepis 	big-scale balsamroot	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Cordylanthus mollis</u> ssp. hispidus	hispid bird's- beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Downingia pusilla</u> 	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u>Gratiola heterosepala</u> 	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Hibiscus lasiocarpus</u> 	rose-mallow	Malvaceae	List 2.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. ahartii 	Ahart's dwarf rush	Juncaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. leiospermus 	Red Bluff dwarf rush	Juncaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Legenere limosa</u> 	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Sagittaria sanfordii</u> 	Sanford's arrowhead	Alismataceae	List 1B.2

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

No more hits.



Status: search results - Mon, Aug. 6, 2007, 13:06 b

{QUADS_123} = ~ m/528C|512A|512B|529D|529A|513A|528D|528/

Tip: Word fragments must be completed with a wildcard, e.g., *esch** *hyp** for *Eschscholzia hypocoides*. [\[all tips and help\]](#) [\[search history\]](#)

Your Quad Selection: Pleasant Grove (528C) 3812174, Citrus Heights (512A) 3812163, Rio Linda (512B) 3812164, Verona (529D) 3812175, Nicolaus (529A) 3812185, Taylor Monument (513A) 3812165, Roseville (528D) 3812173, Lincoln (528A) 3812183, Sheridan (528B) 3812184

Hits 1 to 9 of 9

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Balsamorhiza macrolepis</u> <u>var. macrolepis</u> 	big-scale balsamroot	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	<u>Cordylanthus mollis</u> ssp. <u>hispidus</u>	hispid bird's- beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Downingia pusilla</u> 	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u>Gratiola heterosepala</u> 	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. <u>ahartii</u> 	Ahart's dwarf rush	Juncaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Juncus leiospermus</u> var. <u>leiospermus</u> 	Red Bluff dwarf rush	Juncaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Legenere limosa</u> 	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Navarretia myersii</u> ssp. <u>myersii</u> 	pincushion navarretia	Polemoniaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Sagittaria sanfordii</u> 	Sanford's arrowhead	Alismataceae	List 1B.2

To save selected records for later study, click the ADD button.

Selections will appear in a new window.

No more hits.



Status: search results - Mon, Aug. 6, 2007, 13:03 b

{QUADS_123} = ~ m/512A|528C|528D|511B|511C|527C|512B|512C

Tip: Want to search by habitat? Try the **Checkbox and Preset** search page. [\[all tips and help.\]](#)
[\[search history\]](#)

Your Quad Selection: Citrus Heights (512A) 3812163, Pleasant Grove (528C) 3812174, Roseville (528D) 3812173, Folsom (511B) 3812162, Buffalo Creek (511C) 3812152, Rocklin (527C) 3812172, Rio Linda (512B) 3812164, Sacramento East (512C) 3812154, Carmichael (512D) 3812153

Hits 1 to 12 of 12

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	Balsamorhiza macrolepis var. macrolepis 	big-scale balsamroot	Asteraceae	List 1B.2
	<input type="checkbox"/>	1	Clarkia biloba ssp. brandegeeae 	Brandegee's clarkia	Onagraceae	List 1B.2
	<input type="checkbox"/>	1	Cordylanthus mollis ssp. hispidus	hispid bird's-beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	Downingia pusilla 	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	Gratiola heterosepala 	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	Juncus leiopermus var. ahartii 	Ahart's dwarf rush	Juncaceae	List 1B.2
	<input type="checkbox"/>	1	Juncus leiopermus var. leiospermus 	Red Bluff dwarf rush	Juncaceae	List 1B.1
	<input type="checkbox"/>	1	Legenere limosa 	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	Navarretia myersii ssp. myersii 	pincushion navarretia	Polemoniaceae	List 1B.1
	<input type="checkbox"/>	1	Orcuttia tenuis 	slender Orcutt grass	Poaceae	List 1B.1
	<input type="checkbox"/>	1	Orcuttia viscida 	Sacramento Orcutt grass	Poaceae	List 1B.1
	<input type="checkbox"/>	1	Sagittaria sanfordii 	Sanford's arrowhead	Alismataceae	List 1B.2

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

No more hits.



Status: search results - Mon, Aug. 6, 2007, 13:00 b

{QUADS_123} = ~ m/529D|513A|513B|528B|528C|512B|529A|529E

Tip: Want to search by habitat? Try the **Checkbox and Preset** search page. [\[all tips and help.\]](#)
[\[search history\]](#)

Your Quad Selection: Verona (529D) ☺12176, Taylor Monument (513A) ☺12166, Grays Bend (513B) ☺12166, Sheridan (528B) ☺12164, Pleasant Grove (528C) ☺12174, Rio Linda (512B) ☺12164, Nicolaus (529A) ☺12166, Sutter Causeway (529B) ☺12166, Knights Landing (529C) ☺12176

Hits 1 to 10 of 10

Requests that specify topo quads will return only Lists 1-3.

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

open	save	hits	scientific	common	family	CNPS
	<input type="checkbox"/>	1	<u>Astragalus tener</u> var. <u>tener</u> ☺	alkali milk-vetch	Fabaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex depressa</u> ☺	brittlescale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Atriplex joaquiniana</u> ☺	San Joaquin spearscale	Chenopodiaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Carex lenticularis</u> var. <u>limnophila</u> ☺	lakeshore sedge	Cyperaceae	List 2.2
	<input type="checkbox"/>	1	<u>Cordylanthus palmatus</u> ☺	palmate-bracted bird's-beak	Scrophulariaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Downingia pusilla</u> ☺	dwarf downingia	Campanulaceae	List 2.2
	<input type="checkbox"/>	1	<u>Gratiola heterosepala</u> ☺	Boggs Lake hedge-hyssop	Scrophulariaceae	List 1B.2
	<input type="checkbox"/>	1	<u>Hibiscus lasiocarpus</u> ☺	rose-mallow	Malvaceae	List 2.2
	<input type="checkbox"/>	1	<u>Legenere limosa</u> ☺	legenere	Campanulaceae	List 1B.1
	<input type="checkbox"/>	1	<u>Lepidium latipes</u> var. <u>heckardii</u> ☺	Heckard's pepper-grass	Brassicaceae	List 1B.2

To save selected records for later study, click the ADD button:

Selections will appear in a new window.

No more hits.



Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
TAYLOR MONUMENT (513A)
U.S.G.S. 7 1/2 Minute Quad

Database Last Updated: April 11, 2006

Document Number: 060428034013

Listed Species

Invertebrates

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (X)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - Critical Habitat, Central Valley spring-run chinook (X)

Oncorhynchus tshawytscha - Critical habitat, winter-run chinook salmon (X)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Ambystoma californiense - California tiger salamander, central population (T)

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Oncorhynchus tshawytscha - Critical habitat, Central Valley fall/late fall-run chinook (C)

Birds

Coccyzus americanus occidentalis - Western yellow-billed cuckoo (C)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Marine Fisheries Service](#). Consult with them directly about these species.
- *Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey [7½ minute quads](#). The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [critical habitat page](#) for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by

section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be July 27, 2006.

Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
ROSEVILLE (528D)
U.S.G.S. 7 1/2 Minute Quad
Database Last Updated: April 11, 2006
Document Number: 060428034150

Listed Species

Invertebrates

Branchinecta lynchi - vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)

Lepidurus packardi - vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus - delta smelt (T)

Oncorhynchus mykiss - Central Valley steelhead (T)

Oncorhynchus mykiss - Critical habitat, Central Valley steelhead (X)

Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T)

Oncorhynchus tshawytscha - winter-run chinook salmon, Sacramento River (E)

Amphibians

Rana aurora draytonii - California red-legged frog (T)

Reptiles

Thamnophis gigas - giant garter snake (T)

Birds

Haliaeetus leucocephalus - bald eagle (T)

Candidate Species

Fish

Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
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- *Critical Habitat* - Area essential to the conservation of a species.

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Plants

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Critical Habitat

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Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we

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Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species
that Occur in or may be Affected by Projects in the
RIO LINDA (512B)
U.S.G.S. 7 1/2 Minute Quad

Database Last Updated: August 10, 2006

Document Number: 060821025821

Species of Concern - The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. See www.fws.gov/sacramento/es/spp_concern.htm for more information and links to these sensitive species lists.

Red-Legged Frog Critical Habitat - The Service has designated final critical habitat for the California red-legged frog. The designation became final on May 15, 2006. See our [map index](#).

Listed Species

Invertebrates

Branchinecta lynchi

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardii

vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus

delta smelt (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana aurora draytonii

California red-legged frog (T)

Reptiles

Thamnophis gigas

giant garter snake (T)

Birds

Haliaeetus leucocephalus

bald eagle (T)

Candidate Species

Fish

Oncorhynchus tshawytscha

Central Valley fall/late fall-run chinook salmon (C) (NMFS)

Key:

- (E) *Endangered* - Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Marine Fisheries Service](#). Consult with them directly about these species.
- *Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey [7½ minute quads](#). The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regard-less of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [critical habitat page](#) for maps.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 19, 2006.