
FINAL ENVIRONMENTAL ASSESSMENT (10-058)

*2010 WATERSMART: WATER AND ENERGY EFFICIENCY GRANT FOR THE
FRESNO IRRIGATION DISTRICT BRIGGS LATERAL CANAL IMPROVEMENT
PROJECT*

Appendix A

Reconnaissance Level Biological Survey Report (pages 27-49)

November 2011

Appendix A
California Natural Diversity Database Reports
United States Fish and Wildlife Service Reports
California Native Plant Society List

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

Scientific Name/Common Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 <i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020			G2G3	S2	SC
2 <i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	SC
3 <i>Antrozous pallidus</i> pallid bat	AMACC10010			G5	S3	SC
4 <i>Athene cunicularia</i> burrowing owl	ABNSB10010			G4	S2	SC
5 <i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened		G3	S2S3	
6 <i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070		Threatened	G5	S2	
7 <i>Castilleja campestris ssp. succulenta</i> succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2	S2.2	1B.2
8 <i>Caulanthus californicus</i> California jewel-flower	PDBRA31010	Endangered	Endangered	G1	S1.1	1B.1
9 <i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Candidate	Endangered	G5T3Q	S1	
10 <i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened		G3T2	S2	
11 <i>Dipodomys nitratoide exilis</i> Fresno kangaroo rat	AMAFD03151	Endangered	Endangered	G3T1	S1	
12 <i>Efferia antiochi</i> Antioch efferian robberfly	IIDIP07010			G1G3	S1S3	
13 <i>Eryngium spinosepalum</i> spiny-sepaled button-celery	PDAP10Z0Y0			G2	S2.2	1B.2
14 <i>Eumops perotis californicus</i> western mastiff bat	AMACD02011			G5T4	S3?	SC
15 <i>Imperata brevifolia</i> California satintail	PMPOA3D020			G2	S2.1	2.1
16 <i>Lasiurus cinereus</i> hoary bat	AMACC05030			G5	S4?	
17 <i>Leptosiphon serrulatus</i> Madera leptosiphon	PDPLM09130			G1?	S1?	1B.2
18 <i>Linderiella occidentalis</i> California linderiella	ICBRA06010			G3	S2S3	
19 <i>Lytta molesta</i> molestan blister beetle	IICOL4C030			G2	S2	
20 <i>Metapogon hurdi</i> Hurd's metapogon robberfly	IIDIP08010			G1G3	S1S3	
21 <i>Northern Claypan Vernal Pool</i>	CTT44120CA			G1	S1.1	
22 <i>Northern Hardpan Vernal Pool</i>	CTT44110CA			G3	S3.1	
23 <i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G2	S2.1	1B.1
24 <i>Perognathus inornatus inornatus</i> San Joaquin pocket mouse	AMAFD01061			G4T2T3	S2S3	
25 <i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G2	S2.1	1B.1

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Scientific Name - Portrait

Scientific Name/Common Name		Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
26	<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0			G3	S3	1B.2
27	<i>Spea hammondi</i> western spadefoot	AAABF02020			G3	S3	SC
28	<i>Taxidea taxus</i> American badger	AMAJF04010			G5	S4	SC
29	<i>Tropidocarpum capparideum</i> caper-fruited tropidocarpum	PDBRA2R010			G1	S1.1	1B.1
30	<i>Tuctoria greenei</i> Greene's tuctoria	PMPOA6N010	Endangered	Rare	G2	S2.2	1B.1
31	<i>Vulpes macrotis mutica</i> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	

**U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office**

**Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 110602043220

Database Last Updated: April 29, 2010

Quad Lists

Listed Species

Invertebrates

Branchinecta lynchi

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Fish

Hypomesus transpacificus

delta smelt (T)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Rana draytonii

California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila

blunt-nosed leopard lizard (E)

Thamnophis gigas

giant garter snake (T)

Mammals

Dipodomys nitratooides exilis

Fresno kangaroo rat (E)

Vulpes macrotis mutica

San Joaquin kit fox (E)

Plants

Caulanthus californicus

California jewelflower (E)

Quads Containing Listed, Proposed or Candidate Species:

MALAGA (357B)

County Lists

Fresno County

Listed Species

Invertebrates

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardii

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

Oncorhynchus (=Salmo) clarki henshawi

Lahontan cutthroat trout (T)

Oncorhynchus (=Salmo) clarki seleniris

Paiute cutthroat trout (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Critical habitat, CA tiger salamander, central population (X)

Rana draytonii

California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila

blunt-nosed leopard lizard (E)

Thamnophis gigas

giant garter snake (T)

Birds

Gymnogyps californianus

California condor (E)

Mammals

Dipodomys ingens

giant kangaroo rat (E)

Dipodomys nitratooides exilis

Critical habitat, Fresno kangaroo rat (X)

Fresno kangaroo rat (E)

Dipodomys nitratooides nitratooides

Tipton kangaroo rat (E)

Ovis canadensis californiana

Sierra Nevada (=California) bighorn sheep (E)

Vulpes macrotis mutica

San Joaquin kit fox (E)

Plants

Calyptridium pulchellum

Mariposa pussy-paws (T)

Camissonia benitensis

San Benito evening-primrose (T)

Castilleja campestris ssp. succulenta

Critical habitat, succulent (=fleshy) owl's-clover (X)

succulent (=fleshy) owl's-clover (T)

Caulanthus californicus

California jewelflower (E)

Cordylanthus palmatus

palmate-bracted bird's-beak (E)

Monolopia congdonii (=Lembertia congdonii)

San Joaquin woolly-threads (E)

Orcuttia inaequalis

Critical habitat, San Joaquin Valley Orcutt grass (X)

San Joaquin Valley Orcutt grass (T)

Orcuttia pilosa

Critical habitat, hairy Orcutt grass (X)

Pseudobahia bahiifolia

Hartweg's golden sunburst (E)

Pseudobahia peirsonii

San Joaquin adobe sunburst (T)

Sidalcea keckii

Critical habitat, Keck's checker-mallow (X)

Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Amphibians

Bufo canorus

Yosemite toad (C)

Rana muscosa

mountain yellow-legged frog (C)

Mammals

Martes pennanti

fisher (C)

Key:

(E) *Endangered* - Listed 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 Oceanic & Atmospheric Administration 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.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(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.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- 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 area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the 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 and/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. See our [Protocol](#) and [Recovery Permits](#) pages.

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 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 [Map Room](#) page.

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.

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. [More info](#)

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) 414-6520.

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 August 31, 2011.

SCINAME	COM_NAME	CNPS_LIST	STATE_STAT	FED_STAT
<i>Castilleja campestris</i> ssp. <i>succulenta</i>	succulent owl's-clover	List 1B.2	Endangered	Threatened
<i>Caulanthus californicus</i>	California jewel-flower	List 1B.1	Endangered	Endangered
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	List 1B.2		
<i>Imperata brevifolia</i>	California satintail	List 2.1		
<i>Leptosiphon serrulatus</i>	Madera leptosiphon	List 1B.2		
<i>Orcuttia inaequalis</i>	San Joaquin Valley Orcutt grass	List 1B.1	Endangered	Threatened
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	List 1B.1	Endangered	Threatened
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	List 1B.2		
<i>Schizymenium shevockii</i>	Shevock's copper moss	List 1B.2		
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	List 1B.1		
<i>Tuctoria greenei</i>	Greene's tuctoria	List 1B.1	Rare	Endangered

Appendix B

Photographs

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 1: View west (downstream) of Briggs canal as it flows out of project area and underneath railroad.



Photo 2: View north of adjacent Jefferson pond from southwest portion of Briggs Canal alignment.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 3: View southeast with Briggs Canal midframe and citrus orchard in background.



Photo 4: View east with eastern end of Jefferson Pond at right, slope of pond bank at center and upstream end of project area on the Briggs Canal at far upper right.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 5: Close-up of Briggs Canal inside bank with common yellow monkey flower and grass growth.



Photo 6: Outer bank of Briggs Canal.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 7: Agricultural debris and trash on south side of Briggs Canal. Western fence lizards are using debris for cover.



Photo 8: View west of Briggs Canal facilities with manual and automated controls at upstream end of project area.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 9: View west of Malaga Canal. Note vegetation is limited by weed control on both banks and traffic on northern levee.



Photo 10: View south of agricultural storage yard adjacent to canal.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 11: View north of section Briggs Canal alignment that will contain newly constructed parallel pipeline .



Photo 12: View east of Briggs Canal alignment that will contain newly constructed parallel pipeline (underground). Fowler Avenue and adjacent vineyard is in background.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 13: View west of adjacent row crop from Briggs Canal along section that will contain parallel pipeline.



Photo 14: View south of Briggs Canal from upstream of section that will contain parallel pipeline.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 15: View west (downstream) of Malaga Canal at westernmost of two improvement locations.



Photo 16: View southwest of Malaga Canal at westernmost of two improvement locations.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 17: View northwest at westernmost of two improvement locations.



Photo 18: View east at westernmost of two improvement locations. Vineyard is at left. Tracks at right are on access route for pipeline and farm.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 19: View east of existing facility on Malaga Canal pipeline at easternmost of two improvement locations. American Avenue is at far right.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 20: View south from easternmost of two Malaga Canal pipeline improvement locations. Consolidated Irrigation District (CID) ponds is in background. American Avenue is in foreground.



Photo 21: View southeast of CID ponds from easternmost of two Malaga Canal pipeline improvement locations. Note drop in elevation from pipeline alignment at left to roadway at center and from road way to pond at right.

BRIGGS IMPROVEMENTS

Reconnaissance Level Biological Survey Report



Photo 22: View north at easternmost of two Malaga Canal pipeline facility improvement locations.



Photo 23: View east along northern pond bank about 50 feet south of Malaga Canal improvement location.