

Appendix H

Biological Resources

**Water Year 2010 Interim Flows Project
Final
Environmental Assessment/Initial Study**



Table of Contents

1.0 Introduction.....	1-1
------------------------------	------------

Attachments

Attachment 1 – Special-Status Species Reported by California Natural
Diversity Database

Attachment 2 – U.S. Fish and Wildlife Service List of Special-Status
Species

Attachment 3 – Special-Status Plant and Wildlife Species with Potential to
Occur in the Study Area

List of Abbreviations and Acronyms

CNDDDB

California Natural Diversity Database

USFWS

U.S. Fish and Wildlife Service

1.0 Introduction

Appendix H, “Biological Resources,” consists of three attachments:

- Special-Status Species Reported by California Natural Diversity Database

The California Natural Diversity Database (CNDDB) is a database of recorded observations of special-status species. This attachment is a list of all the species with at least one record in the study area.

- U.S. Fish and Wildlife Service List of Special-Status Species

The U.S. Fish and Wildlife Service (USFWS) maintains a list of species that are Federally listed as threatened or endangered. USFWS compiles lists of these species by their potential to occur in a geographical region—U.S. Geological Survey quadrangle map and county. This attachment is the USFWS list of special-status species for the quadrangles and counties in which the study area is located. These quadrangles include Arena, Biola, Bliss Ranch, Delta Ranch, Firebaugh, Firebaugh northeast, Freson North, Friant, Gravelly Ford, Greg, Gustine, Herndon, Ingomar, Jamesan, Lanes Bridge, Little Table Mountain, Madera, Mendota dam, Millerton Lake East, Millerton Lake West, Newman, Oxalis, Poso Farm, San Luis Ranch, Sandy Mush, Santa Rita Bridge, Stevinson, Tranquility, and Turner Ranch.

- Special-Status Plant and Wildlife Species with Potential to Occur in the study area

This attachment presents two tables that list the special-status plant and wildlife species known or with the potential to occur in the study area, including their legal status and their habitat.

This page left blank intentionally.

Attachment 1

Special-Status Species Reported by California Natural Diversity Database

Biological Resources



California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtITableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Actinemys marmorata western pond turtle	G3G4 S3	CDFG: SC	Fed: None Cal: None	355 S:27	4	17	1	0	0	5	4	23	27	0	0
Agelaius tricolor tricolored blackbird	G2G3 S2	CDFG: SC	Fed: None Cal: None	424 S:29	4	1	1	0	4	19	14	15	25	0	4
Ambystoma californiense California tiger salamander	G2G3 S2S3	CDFG: SC	Fed: Threatened Cal: None	1002 S:56	5	11	3	2	4	31	14	42	52	1	3
Ammospermophilus nelsoni Nelson's antelope squirrel	G2 S2	CDFG:	Fed: None Cal: Threatened	253 S:2	0	0	0	0	0	2	2	0	2	0	0
Anniella pulchra pulchra silvery legless lizard	G3G4T3T4 Q S3	CDFG: SC	Fed: None Cal: None	46 S:2	0	0	1	1	0	0	0	2	2	0	0
Antrozous pallidus pallid bat	G5 S3	CDFG: SC	Fed: None Cal: None	398 S:2	0	0	0	0	0	2	1	1	2	0	0
Aquila chrysaetos golden eagle	G5 S3	CDFG:	Fed: None Cal: None	116 S:1	0	0	0	0	0	1	1	0	1	0	0
Ardea alba great egret	G5 S4	CDFG:	Fed: None Cal: None	34 S:1	0	0	0	0	0	1	1	0	1	0	0
Ardea herodias great blue heron	G5 S4	CDFG:	Fed: None Cal: None	131 S:1	0	0	0	0	0	1	1	0	1	0	0
Astragalus tener var. tener alkali milk-vetch	G1T1 S1.1	CNPS: 1B.2	Fed: None Cal: None	66 S:9	0	4	0	1	0	4	2	7	9	0	0
Athene cunicularia burrowing owl	G4 S2	CDFG: SC	Fed: None Cal: None	1182 S:11	2	1	3	2	1	2	3	8	10	1	0
Atriplex cordulata heartscale	G2? S2.2?	CNPS: 1B.2	Fed: None Cal: None	58 S:21	2	3	1	0	1	14	9	12	20	0	1
Atriplex depressa brittsescale	G2Q S2.2	CNPS: 1B.2	Fed: None Cal: None	52 S:7	0	4	0	0	0	3	1	6	7	0	0
Atriplex joaquiniana San Joaquin spearscale	G2 S2.1	CNPS: 1B.2	Fed: None Cal: None	91 S:3	0	1	0	0	0	2	2	1	3	0	0

California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtiTableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Atriplex minuscula lesser saltscale	G1 S1.1	CNPS: 1B.1	Fed: None Cal: None	27 S:11	3	3	1	0	0	4	3	8	11	0	0
Atriplex persistens vernal pool smallscale	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	33 S:11	1	2	0	0	0	8	1	10	11	0	0
Atriplex subtilis subtle orache	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	24 S:7	2	0	0	0	0	5	4	3	7	0	0
Atriplex vallicola Lost Hills crownscale	G1 S1.1	CNPS: 1B.2	Fed: None Cal: None	57 S:2	0	0	0	0	0	2	2	0	2	0	0
Branchinecta conservatio Conservancy fairy shrimp	G1 S1	CDFG:	Fed: Endangered Cal: None	29 S:4	0	1	0	0	0	3	0	4	4	0	0
Branchinecta longiantenna longhorn fairy shrimp	G1 S1	CDFG:	Fed: Endangered Cal: None	11 S:2	0	0	0	0	0	2	0	2	2	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S2S3	CDFG:	Fed: Threatened Cal: None	595 S:49	6	11	5	3	0	24	0	49	49	0	0
Branchinecta mesovallensis midvalley fairy shrimp	G2 S2	CDFG:	Fed: None Cal: None	99 S:4	1	0	0	0	0	3	1	3	4	0	0
Branta hutchinsii leucopareia cackling (=Aleutian Canada) goose	G5T4 S2	CDFG:	Fed: Delisted Cal: None	19 S:3	0	0	0	0	0	3	3	0	3	0	0
Buteo swainsoni Swainson's hawk	G5 S2	CDFG:	Fed: None Cal: Threatened	1677 S:55	6	19	4	1	1	24	20	35	54	1	0
Calicina mesaensis Table Mountain harvestman	G1 S1	CDFG:	Fed: None Cal: None	1	0	0	0	0	0	1	1	0	1	0	0
Carpenteria californica tree-anemone	G2 S2.2	CNPS: 1B.2	Fed: None Cal: Threatened	12 S:2	1	1	0	0	0	0	0	2	2	0	0
Castilleja campestris ssp. succulenta succulent owl's-clover	G4?T2 S2.2	CNPS: 1B.2	Fed: Threatened Cal: Endangered	88 S:17	6	2	2	2	1	4	3	14	16	1	0
Caulanthus californicus California jewel-flower	G1 S1.1	CNPS: 1B.1	Fed: Endangered Cal: Endangered	63 S:1	0	0	0	0	1	0	1	0	0	0	1

California Department of Fish and Game

Natural Diversity Database

CNDDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtITableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Chamaesyce hooveri Hoover's spurge	G2 S2.1	CNPS: 1B.2	Fed: Threatened Cal: None	29 S:1	1	0	0	0	0	0	1	0	1	0	0
Charadrius montanus mountain plover	G2 S2?	CDFG: SC	Fed: None Cal: None	40 S:3	0	2	1	0	0	0	0	3	3	0	0
Circus cyaneus northern harrier	G5 S3	CDFG: SC	Fed: None Cal: None	42 S:4	2	1	0	0	0	1	1	3	4	0	0
Cismontane Alkali Marsh	G1 S1.1		Fed: None Cal: None	4 S:2	0	0	0	0	0	2	2	0	2	0	0
Coastal and Valley Freshwater Marsh	G3 S2.1		Fed: None Cal: None	60 S:3	0	0	0	0	0	3	3	0	3	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T3Q S1	CDFG:	Fed: Candidate Cal: Endangered	112 S:1	0	0	0	0	1	0	1	0	0	1	0
Cordylanthus mollis ssp. hispidus hispid bird's-beak	G2T2 S2.1	CNPS: 1B.1	Fed: None Cal: None	29 S:16	4	2	2	0	0	8	11	5	16	0	0
Cordylanthus palmatus palmate-bracted bird's-beak	G1 S1.1	CNPS: 1B.1	Fed: Endangered Cal: Endangered	24 S:8	0	6	0	0	2	0	2	6	6	1	1
Cryptantha hooveri Hoover's cryptantha	GH SH	CNPS: 1A	Fed: None Cal: None	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Delphinium recurvatum recurved larkspur	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	79 S:6	0	0	1	0	1	4	2	4	5	1	0
Desmocerus californicus dimorphus valley elderberry longhorn beetle	G3T2 S2	CDFG:	Fed: Threatened Cal: None	201 S:4	1	1	1	0	0	1	1	3	4	0	0
Dipodomys nitratoideis exilis Fresno kangaroo rat	G3T1 S1	CDFG:	Fed: Endangered Cal: Endangered	12 S:5	0	0	0	0	4	1	4	1	1	3	1
Downingia pusilla dwarf downingia	G3 S3.1	CNPS: 2.2	Fed: None Cal: None	117 S:1	0	0	0	0	0	1	1	0	1	0	0
Efferia antiochi Antioch efferian robberfly	G1G3 S1S3	CDFG:	Fed: None Cal: None	4 S:2	0	0	0	0	0	2	2	0	2	0	0

California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtITableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Eremophila alpestris actia California horned lark	G5T3Q S3	CDFG:	Fed: None Cal: None	75 S:3	0	0	0	1	0	2	0	3	3	0	0
Eriastrum hooveri Hoover's eriastrum	G3 S3.2	CNPS: 4.2	Fed: Delisted Cal: None	47 S:4	0	1	2	0	1	0	4	0	3	0	1
Eryngium racemosum Delta button-celery	G2Q S2.1	CNPS: 1B.1	Fed: None Cal: Endangered	26 S:17	3	5	2	0	0	7	12	5	17	0	0
Eryngium spinosepalum spiny-sepaed button-celery	G2 S2.2	CNPS: 1B.2	Fed: None Cal: None	60 S:4	1	1	0	0	0	2	2	2	4	0	0
Euderma maculatum spotted bat	G4 S2S3	CDFG: SC	Fed: None Cal: None	68 S:1	0	0	0	0	0	1	1	0	1	0	0
Eumops perotis californicus western mastiff bat	G5T4 S3?	CDFG: SC	Fed: None Cal: None	293 S:10	0	0	1	0	0	9	2	8	10	0	0
Falco columbarius merlin	G5 S3	CDFG:	Fed: None Cal: None	25 S:1	0	1	0	0	0	0	0	1	1	0	0
Falco mexicanus prairie falcon	G5 S3	CDFG:	Fed: None Cal: None	456 S:1	0	0	0	0	0	1	1	0	1	0	0
Gambelia sila blunt-nosed leopard lizard	G1 S1	CDFG:	Fed: Endangered Cal: Endangered	301 S:30	0	0	1	0	0	29	13	17	30	0	0
Gratiola heterosepala Boggs Lake hedge-hyssop	G3 S3.1	CNPS: 1B.2	Fed: None Cal: Endangered	87 S:6	2	0	1	0	0	3	2	4	6	0	0
Great Valley Mixed Riparian Forest	G2 S2.2		Fed: None Cal: None	68 S:1	0	0	0	0	0	1	1	0	1	0	0
Imperata brevifolia California satintail	G2 S2.1	CNPS: 2.1	Fed: None Cal: None	27 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasiurus blossevillei western red bat	G5 S3?	CDFG: SC	Fed: None Cal: None	117 S:3	0	0	0	0	0	3	0	3	3	0	0
Lasiurus cinereus hoary bat	G5 S4?	CDFG:	Fed: None Cal: None	235 S:4	0	0	0	0	0	4	3	1	4	0	0

California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtITableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Layia munzii Munz's tidy-tips	G1 S1.1	CNPS: 1B.2	Fed: None Cal: None	21 S:3	0	0	0	0	0	3	3	0	3	0	0
Lepidurus packardii vernal pool tadpole shrimp	G3 S2S3	CDFG:	Fed: Endangered Cal: None	249 S:16	4	4	1	0	0	7	0	16	16	0	0
Leptosiphon serrulatus Madera leptosiphon	G1? S1?	CNPS: 1B.2	Fed: None Cal: None	21 S:5	0	0	0	0	0	5	4	1	5	0	0
Linderiella occidentalis California linderiella	G3 S2S3	CDFG:	Fed: None Cal: None	367 S:26	2	7	1	0	0	16	0	26	26	0	0
Lupinus citrinus var. citrinus orange lupine	G2T2 S2.2	CNPS: 1B.2	Fed: None Cal: None	61 S:1	1	0	0	0	0	0	0	1	1	0	0
Lytta moesta moestan blister beetle	G2 S2	CDFG:	Fed: None Cal: None	12 S:1	0	0	0	0	1	0	1	0	0	1	0
Lytta molesta molestan blister beetle	G2 S2	CDFG:	Fed: None Cal: None	17 S:6	0	0	0	0	0	6	6	0	4	2	0
Masticophis flagellum ruddocki San Joaquin whipsnake	G5T2T3 S2?	CDFG: SC	Fed: None Cal: None	68 S:2	0	2	0	0	0	0	0	2	2	0	0
Metapogon hurdi Hurd's metapogon robberfly	G1G3 S1S3	CDFG:	Fed: None Cal: None	2 S:1	0	0	0	0	0	1	1	0	0	1	0
Monolopia congdonii San Joaquin woollythreads	G3 S3.2	CNPS: 1B.2	Fed: Endangered Cal: None	87 S:1	0	0	0	0	1	0	1	0	0	1	0
Mylopharodon conocephalus hardhead	G3 S3	CDFG: SC	Fed: None Cal: None	16 S:2	0	0	0	0	0	2	2	0	2	0	0
Myotis yumanensis Yuma myotis	G5 S4?	CDFG:	Fed: None Cal: None	256 S:3	0	0	0	0	0	3	0	3	3	0	0
Navarretia prostrata prostrate vernal pool navarretia	G2? S2.1?	CNPS: 1B.1	Fed: None Cal: None	30 S:4	3	0	0	0	0	1	1	3	4	0	0
Neostapfia colusana Colusa grass	G3 S3.1	CNPS: 1B.1	Fed: Threatened Cal: Endangered	61 S:4	0	1	0	0	3	0	1	3	1	2	1

California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtITableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Northern Basalt Flow Vernal Pool	G3 S2.2		Fed: None Cal: None	28 S:4	1	0	0	0	0	3	4	0	4	0	0
Northern Claypan Vernal Pool	G1 S1.1		Fed: None Cal: None	21 S:6	0	0	1	0	0	5	6	0	6	0	0
Northern Hardpan Vernal Pool	G3 S3.1		Fed: None Cal: None	126 S:9	1	1	1	2	0	4	8	1	9	0	0
Orcuttia inaequalis San Joaquin Valley orcutt grass	G2 S2.1	CNPS: 1B.1	Fed: Threatened Cal: Endangered	47 S:10	2	2	1	2	3	0	3	7	7	0	3
Orcuttia pilosa hairy orcutt grass	G2 S2.1	CNPS: 1B.1	Fed: Endangered Cal: Endangered	34 S:6	0	1	2	2	1	0	5	1	5	0	1
Perognathus inornatus inornatus San Joaquin pocket mouse	G4T2T3 S2S3	CDFG:	Fed: None Cal: None	109 S:6	0	0	0	0	1	5	5	1	5	0	1
Phrynosoma coronatum (frontale population) coast (California) horned lizard	G4G5 S3S4	CDFG: SC	Fed: None Cal: None	97 S:3	1	1	0	0	0	1	1	2	3	0	0
Plegadis chihi white-faced ibis	G5 S1	CDFG:	Fed: None Cal: None	19 S:1	0	0	0	0	0	1	1	0	1	0	0
Potamogeton filiformis slender-leaved pondweed	G5 S1S2	CNPS: 2.2	Fed: None Cal: None	12 S:1	0	0	0	0	0	1	1	0	1	0	0
Pseudobahia bahiifolia Hartweg's golden sunburst	G2 S2.1	CNPS: 1B.1	Fed: Endangered Cal: Endangered	24 S:6	3	2	0	0	1	0	1	5	5	0	1
Rana draytonii California red-legged frog	G4T2T3 S2S3	CDFG: SC	Fed: Threatened Cal: None	993 S:1	0	0	0	1	0	0	0	1	1	0	0
Riparia riparia bank swallow	G5 S2S3	CDFG:	Fed: None Cal: Threatened	190 S:1	0	0	0	0	0	1	1	0	1	0	0
Sagittaria sanfordii Sanford's arrowhead	G3 S3.2	CNPS: 1B.2	Fed: None Cal: None	62 S:10	0	0	0	0	0	10	10	0	10	0	0
Spea hammondii western spadefoot	G3 S3	CDFG: SC	Fed: None Cal: None	406 S:36	5	9	6	2	0	14	1	35	36	0	0

California Department of Fish and Game

Natural Diversity Database

CNDDB Wide Tabular Report

Arena,Biola,BlissRch,BroadviewF,DeltaRch,Firebaugh,FirebaughNE,FresnoN,Friant,GravellyFord,Gregg,Gustine,Herndon,Ingomar,Jamesan,LanesBrg,LtiTableMtn,Madera,MendotaDam,MillertonLakeW,MillertonLakeE,
Newman,Oxalis,PosoFarm,SanLuisRch,SandyMush,SantaRitaBrg,Stevinson,Tranquility,TurnerRch

Name (Scientific/Common)	CNDDB Ranks	Other Lists	Listing Status	Total EO's	Element Occ Ranks						Population Status		Presence		
					A	B	C	D	X	U	Historic >20 yr	Recent <=20 yr	Pres. Extant	Poss. Extirp.	Extirp.
Sycamore Alluvial Woodland	G1 S1.1		Fed: None Cal: None	17 S:2	0	0	1	0	0	1	0	2	2	0	0
Taxidea taxus American badger	G5 S4	CDFG: SC	Fed: None Cal: None	413 S:9	1	0	0	0	0	8	9	0	9	0	0
Thamnophis gigas giant garter snake	G2G3 S2S3	CDFG:	Fed: Threatened Cal: Threatened	223 S:25	2	2	0	0	0	21	18	7	25	0	0
Trichocoronis wrightii var. wrightii Wright's trichocoronis	G4T3 S1.1	CNPS: 2.1	Fed: None Cal: None	9 S:2	1	0	0	0	0	1	1	1	2	0	0
Tropidocarpum capparideum caper-fruited tropidocarpum	G1 S1.1	CNPS: 1B.1	Fed: None Cal: None	19 S:1	0	0	0	0	0	1	1	0	1	0	0
Valley Sacaton Grassland	G1 S1.1		Fed: None Cal: None	9 S:5	1	1	3	0	0	0	5	0	5	0	0
Valley Sink Scrub	G1 S1.1		Fed: None Cal: None	29 S:6	1	0	1	2	0	2	6	0	6	0	0
Vulpes macrotis mutica San Joaquin kit fox	G4T2T3 S2S3	CDFG:	Fed: Endangered Cal: Threatened	950 S:24	0	1	1	0	0	22	10	14	24	0	0
Xanthocephalus xanthocephalus yellow-headed blackbird	G5 S3S4	CDFG: SC	Fed: None Cal: None	9 S:1	0	0	0	0	0	1	1	0	1	0	0

Attachment 2

U.S. Fish and Wildlife Service List of Special-Status Species

Biological Resources



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: 090114064553

Database Last Updated: December 24, 2008

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Critical habitat, Conservancy fairy shrimp (X)

Branchinecta longiantenna

Critical habitat, longhorn fairy shrimp (X)

longhorn fairy shrimp (E)

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

Acipenser medirostris

green sturgeon (T) (NMFS)

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)

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

Rana aurora draytonii

California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Mammals

Dipodomys ingens
giant kangaroo rat (E)

Dipodomys nitratoides exilis
Critical habitat, Fresno kangaroo rat (X)
Fresno kangaroo rat (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Chamaesyce hooveri
Critical habitat, Hoover's spurge (X)
Hoover's spurge (T)

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Neostapfia colusana
Colusa grass (T)
Critical habitat, Colusa grass (X)

Orcuttia inaequalis
Critical habitat, San Joaquin Valley Orcutt grass (X)
San Joaquin Valley Orcutt grass (T)

Orcuttia pilosa
Critical habitat, hairy Orcutt grass (X)
hairy Orcutt grass (E)

Pseudobahia bahiifolia
Hartweg's golden sunburst (E)

Candidate Species

Birds

Coccyzus americanus occidentalis
Western yellow-billed cuckoo (C)

Quads Containing Listed, Proposed or Candidate Species:

JAMESAN (359B)
TRANQUILLITY (360A)
FRIANT (378B)
LANES BRIDGE (379A)
GREGG (379B)
HERNDON (379C)
FRESNO NORTH (379D)
MADERA (380A)

GRAVELLY FORD (380C)
BIOLA (380D)
FIREBAUGH NE (381A)
POSO FARM (381B)
FIREBAUGH (381C)
MENDOTA DAM (381D)
OXALIS (382A)
MILLERTON LAKE WEST (398C)
MILLERTON LAKE EAST (398D)
LITTLE TABLE MTN. (399D)
BLISS RANCH (401C)
SANDY MUSH (402A)
TURNER RANCH (402B)
DELTA RANCH (402C)
SANTA RITA BRIDGE (402D)
SAN LUIS RANCH (403A)
INGOMAR (403B)
ARENA (422C)
GUSTINE (423C)
STEVINSON (423D)
NEWMAN (424D)

County Lists

No county species lists requested.

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) 414-6580.

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 April 14, 2009.

Attachment 3

Special-Status Plant and Wildlife Species with Potential to Occur in the Study Area

Biological Resources Appendix



Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area

Species	Listing Status			Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State	CNPS				
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	--	--	1B.2	Alkaline vernal pools and playas, and valley and foothill grassland with alkaline adobe clay soils; 3–2,000 feet elevation	Central Valley and eastern San Francisco Bay Area	March–June	Could occur; documented occurrences in Great Valley Grasslands State Park
Heartscale <i>Atriplex cordulata</i>	--	--	1B.2	Alkaline or saline sites in chenopod scrub, meadows and seeps, and valley and foothill grassland with sandy soils; 3–1,250 feet elevation	Western edge of the Central Valley	April–October	Known to occur; documented occurrences in Great Valley Grasslands State Park, south of the Restoration Area in Reaches 5 and 4B2, north of the Eastside Bypass, and in the Chowchilla Bypass, and in Reach 2A
Brittlescale <i>Atriplex depressa</i>	--	--	1B.2	Alkaline clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, or vernal pools; 3–1,050 feet elevation	Central Valley and Tulare Basin	May–October	Could occur; documented occurrences in Great Valley Grasslands State Park, south of the Restoration Area in Reaches 5 and 4B2 and north of the Eastside Bypass
San Joaquin spearscale <i>Atriplex joaquiniana</i>	--	--	1B.2	Alkaline soils in chenopod scrub, meadows and seeps, playas, and valley and foothill grassland; 3–2,750 feet elevation	Western edge of the Central Valley from Glenn to Tulare County	April–October	Could occur; suitable habitat present in the West Bear Creek Area and from south of the Restoration Area in Reach 5
Lesser saltscale <i>Atriplex minuscula</i>	--	--	1B.1	Alkaline, sandy soils in chenopod scrub, playas, and valley and foothill grassland; 50–700 feet elevation	Southern San Joaquin Valley	May–October	Known in Reach 3; documented occurrences in Great Valley Grasslands State Park and the Freitas Unit of San Luis National Wildlife Refuge

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status		Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State				
Vernal pool smallscale <i>Atriplex persistens</i>	--	--	Alkaline vernal pools; 30–400 feet elevation	Scattered locations throughout the Central Valley from Glenn, Merced, Stanislaus, and Tulare counties	June– October	Known to occur in Reach 5; also documented occurrences in the Bear Creek Unit of San Luis NWR, north of Eastside Bypass
Subtle orache <i>Atriplex subtilis</i>	--	--	Valley and foothill grassland; 130–330 feet elevation	Known from fewer than 20 occurrences, including locations in Fresno, King, Madera, and Merced counties	June– August (rarely to October)	Known to occur in Chowchilla and Eastside bypasses; suitable habitat present
Lost Hills crown scale <i>Atriplex vallicola</i>	--	--	Alkaline vernal pools, alkaline soils in chenopod scrub and valley and foothill grassland; 160–2,100 feet elevation	Lost Hills, vicinity of McKittrick in Kern County, and scattered locations in Fresno and Merced counties	April– August	Could occur; suitable habitat present and species known south of Mendota Pool
Succulent owl's-clover <i>Castilleja campestris</i> <i>ssp. succulenta</i>	T	E	Vernal pools, often acidic; 160–2,500 feet elevation	Southern Sierra Nevada foothills, eastern San Joaquin Valley, Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties	April–May	Could occur; suitable habitat present and species known adjacent to Reach 1A
California jewelflower <i>Caulanthus californicus</i>	E	E	Shadscale scrub, valley and foothill grassland, pinyon- juniper woodland, 0–3,000 feet elevation	From Fresno to Kern County and San Luis Obispo to Ventura County	February– May	Unlikely; one historic occurrence in the Fresno North quadrangle, but it has been extirpated; no other documented occurrences in the vicinity
Hoover's spurge <i>Chamaesyce hooveri</i>	T	--	Vernal pools; 80–820 feet elevation	Central Valley from Butte County to Tulare County	July– September (rarely to October)	Could occur; suitable habitat present and species known from the Turner Ranch quadrangle

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status			Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State	CNPS				
Hispid bird's-beak <i>Cordylanthus mollis</i> <i>ssp. hispidus</i>	--	--	1B.1	Mesic alkaline soils in meadows and seeps, playas, and valley and foothill grassland; 3–500 feet elevation	Scattered locations in San Joaquin Valley from Solano County to Kern County	June–September	Could occur; documented occurrences in the West Bear Creek area of the San Luis NWR
Palmate-bracted bird's-beak <i>Cordylanthus palmatus</i>	E	E	1B.1	Alkaline soils in chenopod scrub and valley and foothill grassland; 15–500 feet elevation	Glenn, Colusa, Yolo, Alameda, Madera, and Fresno counties	May–October	Could occur; suitable habitat present and species known to occur at the Alkali Sink Ecological Area and Mendota Wildlife Area (between Chowchilla Bypass and Reach 3)
Hoover's cryptantha <i>Cryptantha hooveri</i>	--	--	1A	Inland dunes and sandy soils in valley and foothill grassland; 30–500 feet elevation	Contra Costa, Merced, Stanislaus, Madera, and Kern counties	April–May	Unlikely; although a historic record from the Bliss Ranch quadrangle, this species is presumed extinct by CNPS
Recurved larkspur <i>Delphinium recurvatum</i>	--	--	1B.2	Alkaline soils in cismontane woodland and valley and foothill grassland; 10–2,500 feet elevation	Central Valley and foothills from Contra Costa to Kern County	March–June	Could occur; suitable habitat present and species known from encompassing quadrangles
Dwarf downingia <i>Downingia pusilla</i>	--	--	2.2	Vernally mesic sites in valley and foothill grassland and vernal pools; 3–1,500 feet elevation	Inner North Coast Ranges, the southern Sacramento Valley, and the northern and central San Joaquin Valley	March–May	Could occur; suitable habitat present and species known from the Friant quadrangle
Four-angled spikerush <i>Eleocharis quadrangulata</i>	--	--	2.2	Freshwater marshes and swamps; 100–1,600 feet elevation	Butte, Merced, Shasta, and Tehama counties	May–September	Could occur; suitable habitat present and species reported from encompassing quadrangles in McBain and Trush (2002), but not documented in CNDDB or CNPS

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status		Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State				
Round-leaved filaree <i>Erodium macrophyllum</i>	--	--	1B.1 Clay soils in cismontane woodland and valley and foothill grassland; 50–4,000 feet elevation	Distributed in 25 counties in California from Humboldt to San Diego County	March–May	Could occur; suitable habitat present and species documented in the Ingomar quadrangle
Delta button-celery <i>Eryngium racemosum</i>	--	E	1B.1 Vernally mesic clay depressions in riparian scrub habitat; 10–100 feet elevation	San Joaquin River Delta and floodplains	June–September	Known to occur in many locations in Eastside and Mariposa bypasses, Reaches 4B1, 4B2, and 5; documented occurrences in Great Valley Grasslands State Park and the West Bear Creek Unit of San Luis NWR
Spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	--	--	1B.2 Vernal pools and valley and foothill grassland; 250–850 feet elevation	Southern and eastern San Joaquin Valley	April–May	Known to occur in Reach 1A; suitable habitat present
Bogg's Lake hedge-hyssop <i>Gratiola heterosepala</i>	--	E	1B.2 Lake margin marshes and swamps and vernal pools in clay soils; 30–7,800 feet elevation	Fresno, Lake, Lassen, Madera, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Joaquin, Solano, and Tehama counties	April–August	Could occur; suitable habitat present and species known from encompassing quadrangles
California satintail <i>Imperata brevifolia</i>	--	--	2.1 Mesic sites in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub; 0–1,650 feet elevation	San Joaquin Valley, south coast, San Gabriel and San Bernardino Mountains, and Mojave Desert from Fresno to Riverside County; also reported from Tehama, Butte, Lake, and Sonoma counties in northern California	September–May	Could occur; suitable habitat present and species documented in the Fresno North quadrangle

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status			Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State	CNPS				
Munz's tidy-tips <i>Layia munzii</i>	--	--	1B.2	Alkaline clay soils in chenopod scrub and valley and foothill grassland; 150–2,600 feet elevation	Western San Joaquin Valley and foothills from Fresno County to San Luis Obispo County	March–April	Known to occur in Reach 3; suitable habitat present
Madera leptosiphon <i>Leptosiphon serrulatus</i>	--	--	1B.2	Woodlands and lower montane coniferous forest; 950–4,300 feet elevation	Fresno, Madera, Mariposa, Tulare, and Kern counties	April–May	Could occur; documented in the vicinity of the Restoration Area in the Friant, Madera, and Millerton Lake West quadrangles, including occurrences at Millerton Lake
San Joaquin woollythreads <i>Monolopia congdonii</i>	E	--	1B.2	Alkali sinks and valley and foothill grassland with sandy soils; 200–2,650 feet elevation	Southwest San Joaquin Valley from San Benito and Fresno counties to Santa Barbara, San Luis Obispo, and Kern counties	February–May	Unlikely; historic record of this species in the Tranquility quadrangle, but this record several miles from the river and possibly extirpated (last seen in 1935)
Little mouseltail <i>Myosurus minimus</i> ssp. <i>apus</i>	--	--	3.1	Alkaline vernal pools and other wetland habitats in valley and foothill grassland and coastal sage scrub; 65–2,100 feet elevation	Scattered locations in the northern Sacramento Valley and Inner North Coast Ranges, San Francisco Bay Area, San Joaquin Valley from Stanislaus to Tulare County, southern coast and southern Coast Ranges, the Peninsular and Transverse Ranges, and the Mohave Desert	March–June	Could occur; suitable habitat present and species known from encompassing quadrangles

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status		Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State				
Prostrate navarretia <i>Navarretia prostrata</i>	--	--	1B.1	Vernally mesic sites in coastal scrub, alkaline soils in valley and foothill grassland, and vernal pools; 50–650 feet elevation.	Alameda, Merced, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, San Diego, Riverside, and San Bernardino counties	April–July Known to occur in Reach 5; suitable habitat present
Colusa grass <i>Neostapfia colusana</i>	T	E	1B.1	Large vernal pools with adobe clay soils; 15–4,000 feet elevation	Merced, Solano, Stanislaus, and Yolo counties	May–August Could occur; suitable habitat present and species known from the Sandy Mush and Turner Ranch quadrangles
San Joaquin Valley Orcutt grass <i>Orcuttia inaequalis</i>	T	E	1B.1	Vernal pools; 30–2,500 feet elevation	Eastern San Joaquin Valley from Stanislaus to Tulare County; also reported in Solano County	April–September Known to occur in Reach 1A; suitable habitat present
Hairy Orcutt grass <i>Orcuttia pilosa</i>	E	E	1B.1	Vernal pools; 175–650 feet elevation	Butte, Glenn, Madera, Merced, Stanislaus, and Tehama counties	May–September Could occur; suitable habitat present and species known from north of Reach 1A
Slender-leaved pondweed <i>Potamogeton filiformis</i>	--	--	2.2	Assorted shallow freshwater marsh and swamp habitats; 950–7,050 feet elevation	Central Sierra Nevada, San Joaquin Valley, San Francisco Bay Area, and Modoc Plateau	May–July Known; documented occurrences in the West Bear Creek area
Hartweg's golden sunburst <i>Pseudobahia bahiifolia</i>	E	E	1B.1	Clay, often acidic, soils in cismontane and valley and foothill grassland habitats, especially on northern and northeastern aspects in mima mound topography; 50–500 feet elevation	Eastern San Joaquin Valley from Stanislaus and Tuolumne counties to Fresno County; also a historic record in Yuba County	March–April Unlikely; species is known from the Millerton Lake West and Friant quadrangles, but the specific edaphic and topographic habitat requirements not expected to be present

Table 1.
Special-Status Plant Species Known or with Potential to Occur in the San Joaquin River Restoration Area (contd.)

Species	Listing Status		Habitat	Distribution in California	Flowering Period	Potential for Occurrence
	Fed.	State				
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--	--	Assorted shallow freshwater marshes and swamps; 0–2,000 feet elevation	Butte, Del Norte, Fresno, Kern, Merced, Orange, Sacramento, Shasta, San Joaquin, Tehama, and Ventura counties	May–October	Known to occur in Reach 1A at the DFG Milburn Ecological Reserve, Mendota Pool, and Eastside Bypass; suitable habitat in Restoration Area
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	--	--	Alkaline soils of marshes and swamps, meadows and seeps, riparian forest, and vernal pools; usually on mud flats; 15–1,500 feet elevation	Central Valley and south coast	May–September	Known to occur in Chowchilla Bypass; reported occurrence in Great Valley Grasslands State Park
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	--	--	Mesic alkaline soils in valley and foothill grassland, vernal pools; 160–1,300 feet elevation	Scattered locations in the Central Valley and central west coast	March–April	Could occur; suitable habitat present and documented occurrence south of Reach 1A

Sources: CNDDB 2009, CNPS 2009

U.S. Fish and Wildlife Service

(USFWS) Federal Listing Categories:

T = Federally listed as threatened.

E = Federally listed as endangered.

California Department of Fish and Game (DFG)

State Listing Category:

E = California listed as endangered.

California Native Plant Society (CNPS) Listing Categories:

1A = Presumed extinct in California.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2 = Plants rare, threatened, or endangered in California but more common elsewhere.

3 = Plants for which more information is needed – a review list.

Extensions:

1 = Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat).

2 = Fairly endangered in California (20–80% of occurrences are threatened).

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Invertebrates				
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	USFWS: endangered Designated critical habitat	Vernal pools and swales	Known to occur in suitable habitat on the San Luis National Wildlife Refuge (NWR) complex in Reaches 4B2 and 5 and Eastside Bypass
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	USFWS: endangered Designated critical habitat	Vernal pools and swales	Known to occur in suitable habitat on the San Luis NWR complex in Reach 5
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	USFWS: threatened Designated critical habitat	Vernal pools and other seasonal wetlands	Known to occur in suitable habitat on the San Luis NWR complex in Reaches 4B1, 4B2, and 5, and Chowchilla and Eastside bypasses
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	USFWS: endangered Designated critical habitat	Vernal pools, swales, and other ephemeral wetlands	Known to occur in suitable habitat on the San Luis NWR complex and at the Great Valley Grasslands State Park in Reaches 4B1, 4B2, and 5, and Chowchilla and Eastside bypasses
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	USFWS: threatened	Elderberry shrubs, typically in riparian habitats	Known to occur in elderberry shrubs present in the riparian woodland in Reach 1A; expected to occur in suitable habitat in other locations in the Restoration Area
Amphibians				
California tiger salamander	<i>Ambystoma californiense</i>	USFWS: threatened Designated critical habitat CA: species of special concern	Small ponds, lakes, or vernal pools in grasslands or oak woodlands	Known to occur in suitable habitat on the San Luis NWR complex and at the Great Valley Grasslands State Park in Reaches 4B1, 4B2, and 5, and Chowchilla Bypass; other occurrences reported adjacent to Restoration Area in Reach 1A

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area (contd).

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Western spadefoot	<i>Spea hammondi</i>	CA: species of special concern	Vernal pools and seasonal wetlands in upland with burrows and other belowground refuge	Known to occur in suitable habitat on the San Luis NWR complex and at the Great Valley Grasslands State Park in Reaches 4B1, 4B2, and 5; other occurrences reported adjacent to Restoration Area in Reach 1A
California red-legged frog	<i>Rana aurora draytonii</i>	USFWS: threatened CA: species of special concern	Aquatic habitats, such as creeks, streams, and ponds	Unlikely to occur; no longer occurs on the floor of the Central Valley
Reptiles				
Western pond turtle	<i>Actinemys marmorata marmorata</i>	CA: species of special concern	Ponds, marshes, rivers, streams, sloughs; nests in nearby uplands with suitable soils	Known to occur in suitable habitat on the San Luis NWR complex, in the Mendota Wildlife Area, and at Mendota Pool; expected to occur in suitable habitat in other locations in the Restoration Area
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	USFWS: endangered CA: endangered, fully protected	Open habitats with scattered low bushes on alkali flats, plains, washes, and arroyos	Known to occur in Chowchilla Bypass and adjacent to Reach 3
California horned lizard	<i>Phrynosoma coronatum frontale</i>	CA: species of special concern	Grasslands, brushlands, woodlands, and open coniferous forests	Could occur in suitable habitat
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	CA: species of special concern	Loose soil or thick leaf litter in chaparral, woodland, and riparian areas	Known to occur in suitable habitat on the San Luis NWR complex and near the confluence of Willow Slough
San Joaquin whipsnake	<i>Masticophis flagellum ruddocki</i>	CA: species of special concern	Open, dry vegetation in valley grasslands and saltbush scrub	Could occur; suitable habitat present in Restoration Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Giant garter snake	<i>Thamnophis gigas</i>	USFWS: threatened CA: threatened	Streams, sloughs, ponds, and irrigation/drainage ditches; also requires upland refugia not subject to flooding during its inactive season	Known to occur in suitable habitat on the San Luis NWR complex and in the Mendota Wildlife Area; reported from Mendota Pool; expected to occur in suitable habitat in other locations in the Restoration Area
Birds				
Redhead	<i>Aythya americana</i>	CA: species of special concern	Nests in freshwater emergent wetlands with dense patches of tules or cattails interspersed with areas of deep, open water; forages in open water	Uncommon but regular breeder in Central Valley; known to nest at Mendota Pool and also occurs at the San Luis NWR and Mendota Wildlife Area; expected in the Restoration Area
American white pelican	<i>Pelecanus erythrorhynchos</i>	CA: species of special concern	Nests in protected inland wetlands; forages in shallow inland waters, including marshes and along lakes or rivers and in shallow coastal marine areas	Common in winter throughout Central Valley; expected in the Restoration Area
Least bittern	<i>Ixobrychus exilis</i>	CA: species of special concern	Nests in dense emergent vegetation in fresh and brackish marsh	Uncommon but regular breeder in suitable habitat in the San Joaquin Valley; expected in the Restoration Area
Double-crested cormorant (rookery)	<i>Phalacrocorax auritus</i>	CA: watch list	Forages in inland ponds and lakes; nests in riparian forests	Known to occur in suitable habitat on the San Luis NWR complex; known along Reach 1A at DFG's Milburn Ecological Reserve
Great blue heron (rookery)	<i>Ardea herodias</i>	CA: CNDDDB tracked	Colonial nester in tall trees, cliff sides, and sequestered spots on marshes; common over most of North America	Rookeries known to occur at base of Friant Dam, Milburn and Rank Island Ecological Reserves in Reach 1A

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Great egret (rookery)	<i>Ardea alba</i>	CA: CNDDDB tracked	Nests in colonies with other species, in shrubs and trees over water, and on islands; feeds in variety of wetlands, including marshes, swamps, streams, rivers, ponds, lakes, tide flats, canals, and flooded fields	Rookeries known to occur at base of Friant Dam, Milburn and Rank Island Ecological Reserves in Reach 1A
White-faced ibis (rookery)	<i>Plegadis chihi</i>	CA: species of special concern	Freshwater marshes with tules, rushes, and cattails, and flooded agricultural fields	Known to occur in suitable habitat on the San Luis NWR complex and other sites in the Restoration Area
Cackling (Aleutian) Canada goose	<i>Branta hutchinsii leucopareia</i>	USFWS: delisted CA: CNDDDB tracked	Nests in the Aleutian Islands, winters in the Central Valley south to Merced	Known to winter in suitable habitat on the San Luis NWR complex and other suitable sites in the Restoration Area
Cooper's hawk	<i>Accipiter cooperii</i>	CA: watch list	Nests primarily in deciduous riparian forests; may also occupy dense canopied forests from gray pine-oak woodland to ponderosa pine; forages in open woodlands	Potential nesting habitat present in Restoration Area; known to occur in suitable habitat in the San Joaquin Valley
Sharp-shinned hawk	<i>Accipiter striatus</i>	CA: watch list	Dense to open canopy pine or mixed conifer forest, riparian habitats, and grassland with scattered trees; permanent resident in parts of the Sierra Nevada, Cascade, Klamath, and North Coast Ranges; usually nests in conifers	Potential foraging and wintering habitat is present in Restoration Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Golden eagle (nesting and wintering)	<i>Aquila chrysaetos</i>	CA: watch list and fully protected species	Nests on cliff faces with suitable ledges or in large trees in open areas; forages over open terrain	Uncommon winter visitor throughout the Central Valley; known to occur in suitable habitat on the San Luis NWR complex and other areas along the San Joaquin River
Ferruginous hawk (wintering)	<i>Buteo regalis</i>	CA: species of special concern	Forages in open grasslands and agricultural fields	Known to occur during winter in suitable habitat on the San Luis NWR complex
Swainson's hawk (nesting)	<i>Buteo swainsoni</i>	CA: threatened	Forages in grasslands and agricultural fields; nests in open woodland or scattered trees	Known to nest in suitable habitat on the San Luis NWR complex and Great Valley Grasslands State Park and other areas along the San Joaquin River
Northern harrier (nesting)	<i>Circus cyaneus</i>	CA: species of special concern	Forages and nests in grassland, agricultural fields, and marshes	Known to occur in suitable habitat on the San Luis NWR complex and other areas along the San Joaquin River
White-tailed kite (nesting)	<i>Elanus leucurus</i>	CA: fully protected species	Forages in grasslands and agricultural fields; nests in isolated trees or small woodland patches	Known to occur in suitable habitat in Lost Lake Park; expected to occur in suitable habitat in Restoration Area
Bald eagle (nesting and wintering)	<i>Haliaeetus leucocephalus</i>	USFWS: delisted CA: endangered and fully protected	Forages along inland waters; nests in adjacent large, old-growth trees or snags	Known to nest in suitable habitat on Lake Millerton and Chowchilla Bypass and occurs during winter and migration in the San Luis NWR complex
Merlin (wintering)	<i>Falco columbarius</i>	CA: watch list	Forages in open woodlands, savannas, edges of grasslands and deserts, farms, and ranches	Known to occur in suitable habitat on the San Luis NWR complex
Prairie falcon	<i>Falco mexicanus</i>	CA: watch list and fully protected species	Nests on cliffs overlooking a large, open area; forages in open habitats	Uncommon visitor in suitable habitat in the Study Area; expected in the Restoration Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
American peregrine falcon	<i>Falco peregrinus anatum</i>	USFWS: delisted CA: endangered and fully protected	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes; permanent resident in the north and south Coast Ranges; winters in the Central Valley southward through the Transverse and Peninsular ranges; feeds almost exclusively on birds	Known to occur at the San Luis NWR; expected to occur in suitable habitat in Restoration Area
Lesser sandhill crane (wintering)	<i>Grus canadensis canadensis</i>	CA: species of special concern	Forages in grasslands, pastures, and agricultural fields (particularly recently disturbed grain fields); roosts in a variety of wetlands with shallow water depths	Known to winter at the Merced NWR; expected to occur in suitable habitat in Restoration Area
Greater sandhill crane (nesting and wintering)	<i>Grus canadensis tabida</i>	CA: threatened, fully protected species	Shallow lakes and freshwater marshes	Known to occur during winter in suitable habitat on the San Luis NWR complex and along the San Joaquin River; no nesting habitat
Mountain plover (wintering)	<i>Charadrius montanus</i>	CA: species of special concern	Open plains or rolling hills with short grasses or sparse vegetation	Known to occur in winter in suitable habitat near Tranquility
Long-billed curlew	<i>Numenius americanus</i>	CA: watch list	Nests in open grassland in the prairie region and far northeastern California; winters in range of wetland habitats, foraging in pastures, agricultural fields, and tidal estuaries	Common winter resident in the Central Valley in wet habitats, including San Luis NWR; expected in the Restoration Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Black tern	<i>Chlidonias niger</i>	CA: species of special concern	Nests semicolonially in protected marshes and rice fields; forages on fish and insects	Uncommon visitor in suitable habitat in the Study Area, including San Luis NWR; expected during the nonbreeding season in the Restoration Area
Western yellow-billed cuckoo (nesting)	<i>Coccyzus americanus occidentalis</i>	USFWS: candidate CA: endangered	Inhabits wide, dense riparian forests with a thick understory of willows for nesting; prefers sites with a dominant cottonwood overstory for foraging	Known to nest in suitable habitat in Restoration Area
Short-eared owl (nesting)	<i>Asio flammeus</i>	CA: species of special concern	Tall (ungrazed) grasslands and marshes with dense vegetation	Known to occur in suitable habitat on the San Luis NWR complex, where it possibly also nests
Burrowing owl (burrow sites)	<i>Athene cunicularia hypugea</i>	CA: species of special concern	Grasslands and agricultural fields	Known to occur in suitable habitat along Chowchilla Bypass and on the San Luis NWR complex and at Mendota Pool
Loggerhead shrike (nesting)	<i>Lanius ludovicianus</i>	CA: species of special concern	Forages in grasslands and agricultural fields; nests in scattered shrubs and trees	Known to nest in suitable habitat on the San Luis NWR complex; expected to nest in other suitable habitat
Willow flycatcher	<i>Empidonax traillii</i>	USFWS: endangered (<i>E. t. iextimus</i>) CA: endangered	Riparian habitats and large wet meadows with abundant willows during migration	Known as rare spring and uncommon fall migrants in riparian habitats of the San Luis and West Bear Creek units of the San Luis NWR
Least Bell's vireo (nesting)	<i>Vireo bellii pusillus</i>	USFWS: endangered CA: endangered	Cottonwood-willow forest, oak woodland, shrubby thickets, and dry washes with willow thickets	Known to nest in suitable habitat on the San Joaquin River NWR in the San Luis NWR complex
California horned lark	<i>Eremophila alpestris actia</i>	CA: watch list	Grasslands and agricultural areas, especially sparsely vegetated or barren areas	Known to nest in suitable habitat on the San Luis NWR complex

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Bank swallow (nesting)	<i>Riparia riparia</i>	CA: threatened	Forages in various habitats; nests in banks or bluffs, typically adjacent to water	Known to nest in suitable habitat near Mendota Pool
Yellow warbler (nesting)	<i>Dendroica petechia brewsteri</i>	CA: species of special concern	Riparian woodlands.	No recent nesting records, but potential nesting habitat present; known to occur during migration in suitable habitat on the San Luis NWR complex and other sites in the Restoration Area
Yellow-breasted chat (nesting)	<i>Icteria virens</i>	CA: species of special concern	Dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds	Potential nesting habitat present in Restoration Area; known to occur during migration in suitable habitat in the San Joaquin Valley
Grasshopper sparrow (nesting)	<i>Ammodramus savannarum</i>	CA: species of special concern	Grassland, especially moderately open grassland with scattered shrubs	Known to breed in the Los Banos Wildlife Area, the North Grasslands Wildlife Area, the San Luis NWR complex, and the Mendota Wildlife Area
Tricolored blackbird (nesting colony)	<i>Agelaius tricolor</i>	CA: species of special concern	Forages in grasslands and agricultural fields; nests in freshwater marsh, riparian scrub, and other dense shrubs and herbs	Known to occur in suitable habitat on the San Luis NWR complex and other sites in the Restoration Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	CA: species of special concern	Nests in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds; its range extends as far west as central-interior British Columbia, moving directly south through the central-interior west coast to northeastern Baja California	Known to occur in suitable habitat throughout San Joaquin Valley, including the San Luis NWR complex; potential nesting habitat present in Restoration Area
Mammals				
Pallid bat (roosting)	<i>Antrozous pallidus</i>	CA: species of special concern	Deserts, grasslands, shrublands, woodlands, and forests; most common in open, dry habitats with rocky areas for roosting	Could occur in the Restoration Area, but highly associated with oak woodlands in the Central Valley
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	CA: species of special concern	Forages along edges of a variety of habitats; roosts in caves, tunnels, mines, trees, and buildings	No records known from the Restoration Area, although could occur in suitable habitat
Spotted bat	<i>Euderma maculatum</i>	CA: species of special concern	Shrub-steppe grasslands	Known to occur near Friant Dam
Western red bat	<i>Lasiurus blossevillii</i>	CA: species of special concern	From Shasta County south to Mexico, west of the Sierra Nevada/Cascade crest and deserts; the winter range includes western lowlands and coastal regions south of San Francisco Bay; roosting habitat includes forests and woodlands from sea level up through mixed conifer forests	Known to occur in Restoration Area along Reach 3, north of Mendota Wildlife Area

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Hoary bat	<i>Lasiurus cinereus</i>	CA: CNDDDB tracked	Prefers woodlands and coniferous forests, but hunts over open areas and lakes; noncolonial	Could occur in the Restoration Area, roosting in riparian trees and foraging over open water and in open woodland habitats
Yuma myotis	<i>Myotis yumanensis</i>	CA: CNDDDB tracked	Roosts colonially in caves, tunnels, trees, and buildings; inhabits arid regions; distributed throughout the western United States, Mexico, and Canada	Known to occur in Restoration Area along Reach 3, north of Mendota Wildlife Area
Western mastiff bat (roosting)	<i>Eumops perotis californicus</i>	CA: species of special concern	Crevice on cliffs faces, boulders, and buildings, usually with space for at least a 10-foot vertical drop	Known to occur in suitable habitat in the San Joaquin Valley
Riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	USFWS: endangered CA: endangered	Dense thickets of brush associated with riparian or chaparral habitats	No records known from the Restoration Area, although could occur in suitable habitat; recently reintroduced on private land adjacent to the San Joaquin River NWR
Nelson's antelope squirrel	<i>Ammospermophilus nelsoni</i>	CA: threatened	Arid grasslands with loamy soils and moderate shrub cover	Could occur if suitable habitat is present in Restoration Area; reported south of Mendota Pool
Giant kangaroo rat	<i>Dipodomys ingens</i>	USFWS: endangered CA: endangered	Annual grasslands and shrubland habitats with sparse vegetative cover	Unlikely to occur in the Restoration Area; although historically known from the region, now known to occur only in the Kettleman Hills in Kings County and western Kern County

Table 2.
Special-Status Wildlife Species Known or
with Potential to Occur in the San Joaquin River Restoration Area

Common Name	Scientific Name	Status	Habitat	Potential for Occurrence
Fresno kangaroo rat	<i>Dipodomys nitratoides exilis</i>	USFWS: endangered Designated critical habitat CA: endangered	Alkali desert scrub habitats between 200 and 300 feet elevation	Known to occur in suitable habitat at the Alkali Sink Ecological Reserve and Mendota Wildlife Area near the Restoration Area, although may be extirpated along the San Joaquin River
San Joaquin pocket mouse	<i>Perognathus inornatus inornatus</i>	CA: CNDDB tracked	Inhabits grassland and scrub habitats in Central and San Joaquin valleys; associated with friable soils	Known to occur in suitable habitat in and in the immediate vicinity of the Restoration Area
San Joaquin (riparian) woodrat	<i>Neotoma fuscipes riparia</i>	USFWS: endangered CA: species of special concern	Riparian forests	No records known from the Restoration Area, although could occur in suitable habitat
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	USFWS: endangered CA: threatened	Saltbush scrub, grasslands, oak savannas, and freshwater scrub	Known to occur in suitable habitat on the San Luis NWR complex and other sites in the Restoration area
Ringtail	<i>Bassariscus astutus</i>	CA: fully protected species	Wooded and brushy areas, especially near water courses	Could occur in the Restoration Area, but species distribution not well known; unlikely to occur on the valley floor, but could occur in Reach 1
American badger	<i>Taxidea taxus</i>	CA: species of special concern	Scrub habitats	Known to occur in suitable habitat in the San Joaquin Valley; reported from Reaches 4B2 and 5

Sources: CNDDB 2007, USFWS 2007

Key:

CA = California

USFWS = U.S. Fish and Wildlife Service.