

Draft

Attachments 1-5

Botanical Resources and Wetlands Technical Report

Shasta Lake Water Resources Investigation, California

Prepared by:

**United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region**



Draft

**Attachment 1
Lists of All Special-Status Plant
Species Known from or Potentially
Present in the Primary and Extended
Study Areas**

**Botanical Resources and Wetlands Technical
Report**

Shasta Lake Water Resources Investigation, California

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**United States Department of the Interior
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Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>	-	-	-	1B.1					X
San Diego thorn-mint	<i>Acanthomintha ilicifolia</i>	-	T	E	1B.1					X
California adolphia	<i>Adolphia californica</i>	-	-	-	2.1					X
Shaw's agave	<i>Agave shawii</i>	-	-	-	2.1					X
Shasta ageratina	<i>Ageratina shastensis</i>	-	Endemic	-	4	P	P			
Henderson's bent grass	<i>Agrostis hendersonii</i>	m	-	-	3.2		X			X
Hoover's bent grass	<i>Agrostis hooveri</i>	-	-	-	1B.2					X
mountain bent grass	<i>Agrostis humilis</i>	-	-	-	2.3					X
Jepson's onion	<i>Allium jepsonii</i>	-	-	-	1B.2					X
Yucaipa onion	<i>Allium marvinii</i>	-	-	-	1B.1					X
Munz' onion	<i>Allium munzii</i>	-	E	T	1B.1					X
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	-	-	-	1B.2					X
Sharsmith's onion	<i>Allium sharsmithiae</i>	m	-	-	1B.3					X
Spanish Needle onion	<i>Allium shevockii</i>	-	-	-	1B.3					X
three-bracted onion	<i>Allium tribracteatum</i>	-	-	-	1B.2					X
Rawhide Hill onion	<i>Allium tuolumnense</i>	m	-	-	1B.2					X
Sonoma alopecurus	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	m	E	-	1B.1					
San Diego bur-sage	<i>Ambrosia chenopodiifolia</i>	-	-	-	2.1					X
San Diego ambrosia	<i>Ambrosia pumila</i>	-	E	-	1B.1					X
large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	m	E	E	1B.1					X
bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	-	-	-	1B.2	X				X
Santa Ynez groundstar	<i>Ancistrocarphus keilii</i>	-	-	-	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
slender silver-moss	<i>Anomobryum julaceum</i>	-	-	-	2.2					X
Deep Canyon snapdragon	<i>Antirrhinum cyathiferum</i>	-	-	-	2.3					X
dimorphic snapdragon	<i>Antirrhinum subcordatum</i>	m	-	-	4.3		P	P		P
aphanisma	<i>Aphanisma blitoides</i>	-	-	-	1B.2					X
pinyon rock cress	<i>Arabis dispar</i>	-	-	-	2.3					X
Johnston's rock cress	<i>Arabis johnstonii</i>	-	-	-	1B.2					X
Darwin rock cress	<i>Arabis pulchra</i> var. <i>munciensis</i>	-	-	-	2.3					X
Santa Cruz manzanita	<i>Arctostaphylos andersonii</i>	-	-	-	1B.2					X
Mt. Diablo manzanita	<i>Arctostaphylos auriculata</i>	m	-	-	1B.3				X	X
Baker's manzanita	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	m	-	Rare	1B.1					
Arroyo de la Cruz manzanita	<i>Arctostaphylos cruzensis</i>	-	-	-	1B.2					X
Gabilan Mountains manzanita	<i>Arctostaphylos gabilanensis</i>	-	-	-	1B.2					X
Del Mar manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	-	E	-	1B.1					X
Hooker's manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	-	-	-	1B.2					X
Klamath manzanita	<i>Arctostaphylos klamathensis</i>	m	-	-	1B.2					
Mallory's manzanita	<i>Arctostaphylos malloryi</i>	-	-	-	4	P				

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Contra Costa manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>Laevigata</i>	m	-	-	1B.2					X
Morro manzanita	<i>Arctostaphylos morroensis</i>	-	T	-	1B.1					X
lone manzanita	<i>Arctostaphylos myrtifolia</i>	m	T	-	1B.2					X
Nissenan manzanita	<i>Arctostaphylos nissenana</i>	-	-	-	1B.2					X
Otay manzanita	<i>Arctostaphylos otayensis</i>	-	-	-	1B.2					X
Pajaro manzanita	<i>Arctostaphylos pajaroensis</i>	-	-	-	1B.1					X
pallid manzanita	<i>Arctostaphylos pallida</i>	m	T	E	1B.1					X
Peninsular manzanita	<i>Arctostaphylos peninsularis</i> ssp. <i>peninsularis</i>	-	-	-	2.3					X
La Purisima manzanita	<i>Arctostaphylos purissima</i>	-	-	-	1B.1					X
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	-	-	-	1B.1					X
Refugio manzanita	<i>Arctostaphylos refugioensis</i>	-	-	-	1B.2					X
Kings Mountain manzanita	<i>Arctostaphylos regismontana</i>	-	-	-	1B.2					X
sand mesa manzanita	<i>Arctostaphylos rudis</i>	-	-	-	1B.2					X
Eastwood's manzanita	<i>Arctostaphylos tomentosa</i> ssp. <i>Eastwoodiana</i>	-	-	-	1B.1					X
Kusche's sandwort	<i>Arenaria macradenia</i> var. <i>kuschei</i>	-	-	-	1B.1					X
marsh sandwort	<i>Arenaria paludicola</i>	-	E	E	1B.1					X
Shasta County arnica	<i>Arnica venosa</i>	-	Endemic	-	4	P	P			

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Greata's aster	<i>Aster greatae</i>	-	-	-	1B.3					X
Suisun Marsh aster	<i>Aster lentus</i>	R	-	-	1B.2					X
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	-	E	-	1B.1					X
Dean's milk-vetch	<i>Astragalus deanei</i>	-	-	-	1B.1					X
Miles' milk-vetch	<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	-	-	-	1B.2					X
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	-	E	-	1B.2					X
Big Bear Valley woollypod	<i>Astragalus leucolobus</i>	m	-	-	1B.2					X
San Diego milk-vetch	<i>Astragalus oocarpus</i>	-	-	-	1B.2					X
Jaeger's milk-vetch	<i>Astragalus pachypus</i> var. <i>jaegeri</i>	-	-	-	1B.1					X
Depauperate milk-vetch	<i>Astragalus pauperculus</i>	-	-	-	4	P				
Lancaster milk-vetch	<i>Astragalus preussii</i> var. <i>laxiflorus</i>	-	-	-	1B.1					X
Ventura Marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	-	E	E	1B.1					X
Jepson's milk-vetch	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	m	-	-	1B.2					X
Ferris' milk-vetch	<i>Astragalus tener</i> var. <i>ferrisiae</i>	m	-	-	1B.1			X	X	X
alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	r	-	-	1B.2				X	X
coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	-	E	E	1B.1					X
triple-ribbed milk-vetch	<i>Astragalus tricarinatus</i>	-	E	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
heartscale	<i>Atriplex cordulata</i>	m	-	-	1B.2			X	X	X
San Jacinto Valley crownscale	<i>Atriplex coronata</i> var. <i>notatior</i>	-	E	-	1B.1					X
Coulter's saltbush	<i>Atriplex coulteri</i>	-	-	-	1B.2					X
brittlescale	<i>Atriplex depressa</i>	m	-	-	1B.2			X	X	X
Earlimart orache	<i>Atriplex erecticaulis</i>	-	-	-	1B.2					X
San Joaquin spearscale	<i>Atriplex joaquiniana</i>	m	-	-	1B.2			X	X	X
lesser saltscale	<i>Atriplex minuscula</i>	m	-	-	1B.1			X		X
South Coast saltscale	<i>Atriplex pacifica</i>	-	-	-	1B.2					X
Parish's brittlescale	<i>Atriplex parishii</i>	-	-	-	1B.1					X
vernal pool smallscale	<i>Atriplex persistens</i>	m	-	-	1B.2					X
Davidson's saltscale	<i>Atriplex serenana</i> var. <i> davidsonii</i>	-	-	-	1B.2					X
subtle orache	<i>Atriplex subtilis</i>	-	-	-	1B.2					X
Bakersfield smallscale	<i>Atriplex tularensis</i>	-	-	E	1B.1					X
Lost Hills crownscale	<i>Atriplex vallicola</i>	m	-	-	1B.2					X
ayenia	<i>Ayenia compacta</i>	-	-	-	2.3					X
Malibu baccharis	<i>Baccharis malibuensis</i>	-	-	-	1B.1					X
Encinitas baccharis	<i>Baccharis vanessae</i>	-	T	E	1B.1					X
big-scale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i> macrolepis</i>	-	-	-	1B.2					X
Nevin's barberry	<i>Berberis nevinii</i>	-	E	E	1B.1					X
golden-spined cereus	<i>Bergerocactus emoryi</i>	-	-	-	2.2					X
Sonoma sunshine	<i>Blennosperma bakeri</i>	m	E	E	1B.1					
big tarplant	<i>Blepharizonia plumosa</i>	m	-	-	1B.1				X	X

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		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
moonwort, grape-fern	<i>Botrychium</i> subgenus <i>Botrychium</i>	-	S	-	-	P				
scalloped moonwort	<i>Botrychium crenulatum</i>	-	S	-	2.2	P				
Indian Valley brodiaea	<i>Brodiaea coronaria</i> ssp. <i>Rosea</i>	m	-	E	1B.1					X
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	-	T	E	1B.1					X
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	-	-	-	1B.1					X
Chinese Camp brodiaea	<i>Brodiaea pallida</i>	m	T	E	1B.1					X
Bolander's bruchia	<i>Bruchia bolanderi</i>	-	-	-	2.2					X
elephant tree	<i>Bursera microphylla</i>	-	-	-	2.3					X
green bug moss	<i>Buxbaumia viridis</i>	-	S	-	-	P				
round-leaved filaree	<i>California macrophylla</i>	-	-	-	1B.1			X		X
Pleasant Valley mariposa lily	<i>Calochortus clavatus</i> var. <i>avius</i>	-	-	-	1B.2					X
slender mariposa lily	<i>Calochortus clavatus</i> var. <i>gracilis</i>	-	-	-	1B.2					X
Dunn's mariposa lily	<i>Calochortus dunnii</i>	-	-	Rare	1B.2					X
long-haired star-tulip	<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>	-	S	-	1B.2	P				
Munz' mariposa lily	<i>Calochortus palmeri</i> var. <i>Munzii</i>	-	-	-	1B.2					X
Palmer's mariposa lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	-	-	-	1B.2					X
Plummer's mariposa lily	<i>Calochortus plummerae</i>	-	-	-	1B.2					X
Mt. Diablo fairy-lantern	<i>Calochortus pulchellus</i>	m	-	-	1B.2					X
alkali mariposa lily	<i>Calochortus striatus</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

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		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Callahan's mariposa lily	<i>Calochortus syntrophus</i>	-	-	-	3	P				
Tiburon mariposa lily	<i>Calochortus tiburonensis</i>	m	T	T	1B.1					
intermediate mariposa lily	<i>Calochortus weedii</i> var. <i>intermedius</i>	-	-	-	1B.2					X
late-flowered mariposa lily	<i>Calochortus weedii</i> var. <i>vestus</i>	-	-	-	1B.2					X
Hoover's calycadenia	<i>Calycadenia hooveri</i>	-	-	-	1B.3					X
Butte County morning-glory	<i>Calystegia atriplicifolia</i> spp. <i>buttensis</i>	-	-	-	1B.2	P				
coastal bluff morning-glory	<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	-	-	-	1B.2					X
Santa Barbara morning-glory	<i>Calystegia sepium</i> ssp. <i>binghamiae</i>	-	-	-	1A					X
Stebbins' morning-glory	<i>Calystegia stebbinsii</i>	m	E	E	1B.1					X
San Benito evening-primrose	<i>Camissonia benitensis</i>	m	T	-	1B.1					X
chaparral harebell	<i>Campanula exigua</i>	-	-	-	1B.2					X
Sharsmith's harebell	<i>Campanula sharsmithiae</i>	m	-	-	1B.2					X
Castle Crags harebell	<i>Campanula shelteri</i>	-	-	-	1B.3	P				
Wilkin's bellflowero	<i>Campanula wilkinsiana</i>	-	S	-	1B.2					
white sedge	<i>Carex albida</i>	m	E	E	1B.1					
Buxbaum's sedge	<i>Carex buxbaumii</i>	-	-	-	4	P				
bristly sedge	<i>Carex comosa</i>	r	-	-	2.1	P			X	X
pointed broom sedge	<i>Carex scoparia</i>	-	-	-	2.2					X
Sheldon's sedge	<i>Carex sheldonii</i>	-	-	-	2.2					X
fox sedge	<i>Carex vulpinoidea</i>	-	-	-	2.2	P	X	X	X	X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
tree-anemone	<i>Carpenteria californica</i>	m	-	T	1B.1					
Tiburon Indian paintbrush	<i>Castilleja affinis</i> ssp. <i>neglecta</i>	m	E	T	1B.2					X
succulent owl's-clover	<i>Castilleja campestris</i> ssp. <i>succulenta</i>	m	T	E	1B.2					X
Mt. Gleason Indian paintbrush	<i>Castilleja gleasonii</i>	-	-	Rare	1B.2					X
San Bernardino Mountains owl's-clover	<i>Castilleja lasiorhyncha</i>	-	-	-	1B.2					X
pink creamsacs	<i>Castilleja rubicundula</i> ssp. <i>Rubicundula</i>	-	-	-	1B.2					X
California jewel-flower	<i>Caulanthus californicus</i>	-	E	E	1B.1					X
Lemmon's jewelflower	<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	-	-	-	1B.2					X
Lakeside ceanothus	<i>Ceanothus cyaneus</i>	-	-	-	1B.2					X
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	-	E	-	1B.1					X
Mason's ceanothus	<i>Ceanothus masonii</i>	m	-	Rare	1B.1					
Vail Lake ceanothus	<i>Ceanothus ophiochilus</i>	-	T	E	1B.1					X
Otay Mountain ceanothus	<i>Ceanothus otayensis</i>	-	-	-	1B.2					X
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	m	E	Rare	1B.2					X
wart-stemmed ceanothus	<i>Ceanothus verrucosus</i>	-	-	-	2.2					X
southern tarplant	<i>Centromadia parryi</i> ssp. <i>Australis</i>	-	-	-	1B.1					X
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>Congdonii</i>	m	-	-	1B.2					X
pappose tarplant	<i>Centromadia parryi</i> ssp. <i>Parryi</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
smooth tarplant	<i>Centromadia pungens</i> ssp. <i>Laevis</i>	-	-	-	1B.1					X
alpine dusty maidens	<i>Chaenactis douglasii</i> var. <i>alpine</i>	-	-	-	2.3					X
Orcutt's pincushion	<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	-	-	-	1B.1					X
Parish's chaenactis	<i>Chaenactis parishii</i>	-	-	-	1B.3					X
Shasta chaenactis	<i>Chaenactis suffrutescens</i>	-	S	-	1B.3	P				
Arizona spurge	<i>Chamaesyce arizonica</i>	-	-	-	2.3					X
Hoover's spurge	<i>Chamaesyce hooveri</i>	m	T	-	1B.2			X		X
Stony Creek spurge	<i>Chamaesyce ocellata</i> ssp. <i>rattanii</i>	-	-	-	1B.2					X
flat-seeded spurge	<i>Chamaesyce platysperma</i>	-	-	-	1B.2					X
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	-	-	-	1B.2					X
dwarf soaproot	<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	m	-	-	1B.2		P	P		P
San Benito spineflower	<i>Chorizanthe biloba</i> var. <i>immemora</i>	-	-	-	1B.2					X
San Francisco Bay spineflower	<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	-	-	-	1B.2					X
Orcutt's spineflower	<i>Chorizanthe orcuttiana</i>	-	E	E	1B.1					X
San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	-	C	E	1B.1					X
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	-	-	-	3.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
long-spined spineflower	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	-	-	-	1B.2					X
Monterey spineflower	<i>Chorizanthe pungens</i> var. <i>pungens</i>	-	T	-	1B.2					X
straight-awned spineflower	<i>Chorizanthe rectispina</i>	-	-	-	1B.3					X
robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	-	E	-	1B.1					X
Sonoma spineflower	<i>Chorizanthe valida</i>	m	E	E	1B.2					
white-bracted spineflower	<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	-	-	-	1B.2					X
Franciscan thistle	<i>Cirsium andrewsii</i>	-	-	-	1B.2					X
slough thistle	<i>Cirsium crassicaule</i>	m	-	-	1B.1			X		X
Mt. Hamilton thistle	<i>Cirsium fontinale</i> var. <i>campylon</i>	-	-	-	1B.2					X
Suisun thistle	<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>	R	E	-	1B.1			P		P
La Graciosa thistle	<i>Cirsium loncholepis</i>	-	E	T	1B.1					X
lost thistle	<i>Cirsium praeteriens</i>	-	-	-	1A					X
Surf thistle	<i>Cirsium rhotophilum</i>	-	-	T	1B.2					X
Small's southern clarkia	<i>Clarkia australis</i>	-	-	-	1B.2					X
Mariposa clarkia	<i>Clarkia biloba</i> ssp. <i>Australis</i>	m	-	-	1B.2					P
Brandegee's clarkia	<i>Clarkia biloba</i> ssp. <i>Brandegeae</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Shasta clarkia	<i>Clarkia borealis</i> ssp. <i>Arida</i>	m	-	-	1B	P				
northern clarkia	<i>Clarkia borealis</i> ssp. <i>Borealis</i>	-	-	-	1B.3	P				X
delicate clarkia	<i>Clarkia delicata</i>	-	-	-	1B.2					X
Presidio clarkia	<i>Clarkia franciscana</i>	-	E	E	1B.1					X
beaked clarkia	<i>Clarkia rostrata</i>	m	-	-	1B.3					X
Pismo clarkia	<i>Clarkia speciosa</i> ssp. <i>Immaculata</i>	-	E	Rare	1B.1					X
Vasek's clarkia	<i>Clarkia tembloriensis</i> ssp. <i>Calientensis</i>	-	-	-	1B.1					X
San Francisco collinsia	<i>Collinsia multicolor</i>	-	-	-	1B.2					X
summer holly	<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	-	-	-	1B.2					X
salt marsh bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	-	E	E	1B.2					X
Point Reyes bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	r	-	-	1B.2					X
hispid bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	m	-	-	1B.1					X
soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	R	E	Rare	1B.2				X	X
Mt. Diablo bird's-beak	<i>Cordylanthus nidularis</i>	m	-	Rare	1B.1					
Orcutt's bird's-beak	<i>Cordylanthus orcuttianus</i>	-	-	-	2.1					X
palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	m	E	E	1B.1			X	X	X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
seaside bird's-beak	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	-	-	E	1B.1					X
Mt. Hamilton coreopsis	<i>Coreopsis hamiltonii</i>	m	-	-	1B.2					X
sea dahlia	<i>Coreopsis maritima</i>	-	-	-	2.2					X
San Diego sand aster	<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	-	-	-	1B.1					X
Del Mar Mesa sand aster	<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	-	-	-	1B.1					X
Catalina crossosoma	<i>Crossosoma californicum</i>	-	-	-	1B.2					X
Clokey's cryptantha	<i>Cryptantha clokeyi</i>	-	-	-	1B.1					X
silky cryptantha	<i>Cryptantha crinita</i>	m	-	-	1B.2	P	X	X		X
subalpine cryptantha	<i>Cryptantha crymophila</i>	-	-	-	1B.3					X
Hoover's cryptantha	<i>Cryptantha hooveri</i>	-	-	-	1A				X	X
Mariposa cryptantha	<i>Cryptantha mariposae</i>	-	-	-	1B.3					X
Tecate cypress	<i>Cupressus forbesii</i>	-	-	-	1B.1					X
desert cymopterus	<i>Cymopterus deserticola</i>	-	-	-	1B.2					X
California lady's slipper	<i>Cypripedium californicum</i>	-	-	-	4	P				
Clustered lady's slipper	<i>Cypripedium fasciculatum</i>	-	SM	-	4	P				
Mountain lady's slipper	<i>Cypripedium montanum</i>	-	SM	-	4	P	P			
Red Rock tarplant	<i>Deinandra arida</i>	-	-	Rare	1B.2					X
Livermore tarplant	<i>Deinandra bacigalupii</i>	-	-	-	1B.2					X
Otay tarplant	<i>Deinandra conjugens</i>	-	T	E	1B.1					X
Hall's tarplant	<i>Deinandra halliana</i>	m	-	-	1B.1					X
leafy tarplant	<i>Deinandra increscens</i> ssp. <i>Foliosa</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Santa Susana tarplant	<i>Deinandra minthornii</i>	-	-	Rare	1B.2					X
Mojave tarplant	<i>Deinandra mohavensis</i>	-	-	E	1B.3					X
Baker's larkspur	<i>Delphinium bakeri</i>	m	E	E	1B.1					
Hospital Canyon larkspur	<i>Delphinium californicum</i> ssp. <i>Interius</i>	m	-	-	1B.2					X
yellow larkspur	<i>Delphinium luteum</i>	m	E	Rare	1B.1					
dune larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	-	-	-	1B.2					X
recurved larkspur	<i>Delphinium recurvatum</i>	m	-	-	1B.2				X	X
umbrella larkspur	<i>Delphinium umbracolorum</i>	-	-	-	1B.3					X
Norris' beard-moss	<i>Didymodon norrisii</i>	-	-	-	2.2					X
western leatherwood	<i>Dirca occidentalis</i>	-	-	-	1B.2					X
glandular ditaxis	<i>Ditaxis claryana</i>	-	-	-	2.2					X
California ditaxis	<i>Ditaxis serrata</i> var. <i>californica</i>	-	-	-	3.2					X
beach spectaclepod	<i>Dithyrea maritima</i>	-	-	T	1B.1					X
slender-horned spineflower	<i>Dodecahema leptoceras</i>	-	E	E	1B.1					X
dwarf downingia	<i>Downingia pusilla</i>	-	-	-	2.2		P		X	X
rock draba	<i>Draba corrugata</i> var. <i>saxosa</i>	-	-	-	1B.3					X
San Bernardino Mountains dudleya	<i>Dudleya abramsii</i> ssp. <i>affinis</i>	-	-	-	1B.2					X
Orcutt's dudleya	<i>Dudleya attenuata</i> ssp. <i>orcuttii</i>	-	-	-	2.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Blochman's dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	-	-	-	1B.1					X
short-leaved dudleya	<i>Dudleya brevifolia</i>	-	-	E	1B.1					X
Agoura Hills dudleya	<i>Dudleya cymosa</i> ssp. <i>agourensis</i>	-	T	-	1B.2					X
San Gabriel River dudleya	<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	-	-	-	1B.2					X
marcescent dudleya	<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	-	T	Rare	1B.2					X
Santa Monica Mountains dudleya	<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	-	T	-	1B.2					X
San Gabriel Mountains dudleya	<i>Dudleya densiflora</i>	-	-	-	1B.1					X
many-stemmed dudleya	<i>Dudleya multicaulis</i>	-	-	-	1B.2					X
Conejo dudleya	<i>Dudleya parva</i>	-	T	-	1B.2					X
Santa Clara Valley dudleya	<i>Dudleya setchellii</i>	-	E	-	1B.1					X
Laguna Beach dudleya	<i>Dudleya stolonifera</i>	-	T	T	1B.1					X
variegated dudleya	<i>Dudleya variegata</i>	-	-	-	1B.2					X
Verity's dudleya	<i>Dudleya verityi</i>	-	T	-	1B.2					X
island green dudleya	<i>Dudleya virens</i> ssp. <i>insularis</i>	-	-	-	1B.2					X
sticky dudleya	<i>Dudleya viscida</i>	-	-	-	1B.2					X
Four-angled spikerush ⁴	<i>Eleocharis quadrangulata</i>	m	-	-	2	P	P			
Grants Pass willowherb	<i>Epilobium oreganum</i>	-	S	-	1B.2	P				
Kern mallow	<i>Eremalche kernensis</i>	-	E	-	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Brandegee's eriastrum	<i>Eriastrum brandegeeeae</i>	m	-	-	1B.2	P				X
Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	-	E	E	1B.1					X
Hoover's eriastrum	<i>Eriastrum hooveri</i>	m	Delisted	-	4.2					P
Tracy's eriastrum	<i>Eriastrum tracyi</i>	-	-	Rare	1B.2					X
Eastwood's goldenbush	<i>Ericameria fasciculata</i>	-	-	-	1B.1					X
Palmer's goldenbush	<i>Ericameria palmeri</i> ssp. <i>palmeri</i>	-	-	-	2.2					X
Blochman's leafy daisy	<i>Erigeron blochmaniae</i>	-	-	-	1B.2					X
Lompoc yerba santa	<i>Eriodictyon capitatum</i>	-	E	Rare	1B.2					X
Trinity buckwheat	<i>Eriogonum alpinum</i>	-	S	E	1B.2	P				
lone buckwheat	<i>Eriogonum apricum</i> var. <i>prostratum</i>	m	E	E	1B.1					
Conejo buckwheat	<i>Eriogonum crocatum</i>	-	-	Rare	1B.2					X
leafy buckwheat	<i>Eriogonum foliosum</i>	-	-	-	1B.2					X
southern alpine buckwheat	<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	-	-	-	1B.3					X
Pinnacles buckwheat	<i>Eriogonum nortonii</i>	-	-	-	1B.3					X
Ben Lomond buckwheat	<i>Eriogonum nudum</i> var. <i>decurrens</i>	m	-	-	1B.1					X
Temblor buckwheat	<i>Eriogonum temblorense</i>	-	-	-	1B.2					X
Mt. Diablo buckwheat	<i>Eriogonum truncatum</i>	-	-	-	1B.1				X	X
Barstow woolly sunflower	<i>Eriophyllum mohavense</i>	-	-	-	1B.2					X
Hoover's button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	-	-	-	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	-	E	E	1B.1					X
Loch Lomond button-celery	<i>Eryngium constancei</i>	m	E	E	1B.1					
Pendleton button-celery	<i>Eryngium pendletonensis</i>	-	-	-	1B.1					X
Tuolumne button-celery	<i>Eryngium pinnatisectum</i>	-	-	-	1B.2					X
Delta button-celery	<i>Eryngium racemosum</i>	r	-	E	1B.1				X	X
spiny-sepaed button-celery	<i>Eryngium spinosepalum</i>	m	-	-	1B.2					X
coast wallflower	<i>Erysimum ammophilum</i>	-	-	-	1B.2					X
Contra Costa wallflower	<i>Erysimum capitatum</i> ssp. <i>angustatum</i>	R	E	E	1B.1				X	X
Yadon's wallflower	<i>Erysimum menziesii</i> ssp. <i>yadonii</i>	-	E	E	1B.1					X
Roderick's fawnlily	<i>Erythronium citrinum</i> var. <i>roderickii</i>	-	S	-	1B.3	P				
Tuolumne fawn lily	<i>Erythronium tuolumnense</i>	-	-	-	1B.2					X
Tejon poppy	<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	-	-	-	1B.1					X
Red Rock poppy	<i>Eschscholzia minutiflora</i> ssp. <i>twisselmannii</i>	-	-	-	1B.2					X
diamond-petaled California poppy	<i>Eschscholzia rhombipetala</i>	m	-	-	1B.1				X	X
cliff spurge	<i>Euphorbia misera</i>	-	-	-	2.2					X
San Diego barrel cactus	<i>Ferocactus viridescens</i>	-	-	-	2.1					X
hot springs fimbristylis	<i>Fimbristylis thermalis</i>	-	-	-	2.2					X
Palmer's frankenia	<i>Frankenia palmeri</i>	-	-	-	2.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Pine Hill flannelbush	<i>Fremontodendron decumbens</i>	m	E	Rare	1B.2					X
Mexican flannelbush	<i>Fremontodendron mexicanum</i>	-	E	Rare	1B.1					X
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	-	S	-	3.2	P	P			X
talus fritillary	<i>Fritillaria falcata</i>	-	-	-	1B.2					X
fragrant fritillary	<i>Fritillaria liliacea</i>	-	-	-	1B.2				X	X
Ojai fritillary	<i>Fritillaria ojaiensis</i>	-	-	-	1B.2					X
adobe-lily	<i>Fritillaria pluriflora</i>	m	-	-	1B.2		P	X		X
striped adobe-lily	<i>Fritillaria striata</i>	-	-	T	1B.1					X
San Benito fritillary	<i>Fritillaria viridea</i>	-	-	-	1B.2					X
San Jacinto Mountains bedstraw	<i>Galium angustifolium</i> ssp. <i>Jacinticum</i>	-	-	-	1B.3					X
California bedstraw	<i>Galium californicum</i> ssp. <i>Primum</i>	-	-	-	1B.2					X
El Dorado bedstraw	<i>Galium californicum</i> ssp. <i>Sierrae</i>	m	E	Rare	1B.2					X
San Gabriel bedstraw	<i>Galium grande</i>	-	-	-	1B.2					X
Campbell's liverwort	<i>Geothallus tuberosus</i>	-	-	-	1B.1					X
sand gilia	<i>Gilia tenuiflora</i> ssp. <i>Arenaria</i>	-	E	T	1B.2					X
Mission Canyon bluecup	<i>Githopsis diffusa</i> ssp. <i>Filicaulis</i>	-	-	-	3.1					X
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	m	-	E	1B.2		P		X	X
Orcutt's hazardia	<i>Hazardia orcuttii</i>	-	C	T	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Diablo helianthella	<i>Helianthella castanea</i>	m	-	-	1B.2					X
Bisbee Peak rush-rose	<i>Helianthemum suffrutescens</i>	-	-	-	3.2					X
Los Angeles sunflower	<i>Helianthus nuttallii</i> ssp. <i>Parishii</i>	-	-	-	1A					X
two-carpellate western flax	<i>Hesperolinon bicarpellatum</i>	-	-	-	1B.2					X
Brewer's western flax	<i>Hesperolinon breweri</i>	m	-	-	1B.2			X		X
Marin western flax	<i>Hesperolinon congestum</i>	m	T	T	1B.1					
drymaria-like western flax	<i>Hesperolinon drymarioides</i>	m	-	-	1B.2					P
Napa western flax	<i>Hesperolinon</i> sp. <i>Nov. "serpentinum"</i>	m	-	-	1B.1					X
Tehama County western flax	<i>Hesperolinon tehamense</i>	m	-	-	1B.3					X
shaggy-haired alumroot	<i>Heuchera hirsutissima</i>	-	-	-	1B.3					X
rose-mallow	<i>Hibiscus lasiocarpus</i>	m	-	-	2.2		P	X	X	X
Loma Prieta hoita	<i>Hoita strobilina</i>	-	-	-	1B.1					X
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	m	T	E	1B.1					X
Bolander's horkelia	<i>Horkelia bolanderi</i>	-	-	-	1B.2					X
mesa horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	-	-	-	1B.1					X
Kellogg's horkelia	<i>Horkelia cuneata</i> ssp. <i>sericea</i>	-	-	-	1B.1					X
Parry's horkelia	<i>Horkelia parryi</i>	m	-	-	1B.2					X
Ramona horkelia	<i>Horkelia truncata</i>	-	-	-	1B.3					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Baker's globe mallow	<i>Iliamna bakeri</i>	-	S	-	4.2	P				
Tuolumne iris	<i>Iris hartwegii</i> ssp. <i>columbiana</i>	-	-	-	1B.2					X
Carquinez goldenbush	<i>Isocoma arguta</i>	m	-	-	1B.1				X	X
decumbent goldenbush	<i>Isocoma menziesii</i> var. <i>decumbens</i>	-	-	-	1B.2					X
San Diego marsh-elder	<i>Iva hayesiana</i>	-	-	-	2.2					X
silver-haired ivesia	<i>Ivesia argyrocoma</i>	-	-	-	1B.2					X
Castle Crags ivesia	<i>Ivesia longibracteata</i>	-	S	-	1B.3	P				
Northern California black walnut	<i>Juglans hindsii</i>	r	-	-	1B.1				X	X
Ahart's dwarf rush	<i>Juncus leiospermus</i> var. <i>ahartii</i>	m	-	-	1B.2		P			X
Red Bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	-	-	-	1B.1		X	X		X
Contra Costa goldfields	<i>Lasthenia conjugens</i>	m	E	-	1B.1				X	X
Coulter's goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	-	-	-	1B.1					X
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	r	-	-	1B.2				X	X
Dubious pea	<i>Lathyrus sulphureus</i> var. <i>argillaceous</i>	-	-	-	3	P	P			
rayless layia	<i>Layia discoidea</i>	-	-	-	1B.1					X
pale-yellow layia	<i>Layia heterotricha</i>	m	-	-	1B.1					X
Jones' layia	<i>Layia jonesii</i>	-	-	-	1B.2					X
Comanche Point layia	<i>Layia leucopappa</i>	-	-	-	1B.1					X
Munz' tidy-tips	<i>Layia munzii</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Colusa layia	<i>Layia septentrionalis</i>	-	-	-	1B.2					X
legenere	<i>Legenere limosa</i>	m	-	-	1B.1		P		X	X
heart-leaved pitcher sage	<i>Lepechinia cardiophylla</i>	-	-	-	1B.2					X
Gander's pitcher sage	<i>Lepechinia ganderi</i>	-	-	-	1B.3					X
Panoche pepper-grass	<i>Lepidium jaredii</i> ssp. <i>album</i>	m	-	-	1B.2					X
Heckard's pepper-grass	<i>Lepidium latipes</i> var. <i>heckardii</i>	m	-	-	1B.2			X	X	X
Robinson's pepper-grass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	-	-	-	1B.2					X
Santa Rosa Mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>Hallii</i>	-	-	-	1B.3					X
Madera leptosiphon	<i>Leptosiphon serrulatus</i>	m	-	-	1B.2					X
smooth lessingia	<i>Lessingia micradenia</i> var. <i>glabrata</i>	-	-	-	1B.2					X
Cantelow's lewisia	<i>Lewisia cantelovii</i>	-	S	-	1B.2	X				X
Howell's lewisia	<i>Lewisia cotyledon</i> var. <i>howellii</i>	-	-	-	3	P				
saw-toothed lewisia	<i>Lewisia serrata</i>	m	-	-	1B.1					P
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	R	-	Rare	1B.1				X	X
Pitkin Marsh lily	<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	m	E	E	1B.1					
lemon lily	<i>Lilium parryi</i>	-	-	-	1B.2					X
Bellinger's meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>bellingiana</i>	m	-	-	1B	P	P			
Butte County meadowfoam	<i>Limnanthes floccosa</i> ssp. <i>californica</i>	m	E	E	1B.1		P	P		P

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Parish's meadowfoam	<i>Limnanthes gracilis</i> ssp. <i>parishii</i>	-	-	E	1B.2					X
Sebastopol meadowfoam	<i>Limnanthese vinculans</i>	m	E	E	1B.1					
Delta mudwort	<i>Limosella subulata</i>	r	-	-	2.1				X	X
San Gabriel linanthus	<i>Linanthus concinnus</i>	-	-	-	1B.2					X
broad-lobed linanthus	<i>Linanthus latisectus</i>	-	-	-	4	P				
Little San Bernardino Mtns. Linanthus	<i>Linanthus maculatus</i>	-	-	-	1B.2					X
Mt. Tedoc linanthus	<i>Linanthus nutallii</i> ssp. <i>howellii</i>	m	-	-	1B.3	P				
Orcutt's linanthus	<i>Linanthus orcuttii</i>	-	-	-	1B.3					X
sagebrush loeflingia	<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	-	-	-	2.2					X
Congdon's lomatium	<i>Lomatium congdonii</i>	m	-	-	1B.2					X
Mt. Hamilton lomatium	<i>Lomatium observatorium</i>	-	-	-	1B.2					X
Stebbins' lomatium	<i>Lomatium stebbinsii</i>	-	-	-	1B.1					X
Santa Barbara honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	-	-	-	1B.2					X
Nuttall's lotus	<i>Lotus nuttallianus</i>	-	-	-	1B.1					X
red-flowered lotus	<i>Lotus rubriflorus</i>	m	-	-	1B.1		P	P		P
Peirson's lupine	<i>Lupinus peirsonii</i>	-	-	-	1B.3					X
shaggyhair lupine	<i>Lupinus spectabilis</i>	m	-	-	1B.2					X
Santa Catalina Island desert-thorn	<i>Lycium brevipes</i> var. <i>hassei</i>	-	-	-	1B.1					X
Parish's desert-thorn	<i>Lycium parishii</i>	-	-	-	2.3					X
Ziegler's aster	<i>Machaeranthera canescens</i> var. <i>ziegleri</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
showy madia	<i>Madia radiata</i>	m	-	-	1B.1				X	X
Stebbins' madia	<i>Madia stebbinsii</i>	-	S	-	1B.2	P				
Indian Valley bush mallow	<i>Malacothamnus aboriginum</i>	-	-	-	1B.2					X
arcuate bush mallow	<i>Malacothamnus arcuatus</i>	-	-	-	1B.2					X
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	-	-	-	1B.2					X
Hall's bush mallow	<i>Malacothamnus hallii</i>	m	-	-	1B.2					X
Parish's bush mallow	<i>Malacothamnus parishii</i>	-	-	-	1A					X
Carmel Valley malacothrix	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	-	-	-	1B.2					X
California marina	<i>Marina orcuttii</i> var. <i>orcuttii</i>	-	-	-	1B.3					X
spearleaf	<i>Matelea parvifolia</i>	-	-	-	2.3					X
Oregon meconella	<i>Meconella oregana</i>	-	-	-	1B.1					X
creamy blazing star	<i>Mentzelia tridentata</i>	-	-	-	1B.3					X
marsh microseris	<i>Microseris paludosa</i>	-	-	-	1B.2					X
elongate copper-moss	<i>Mielichhoferia elongata</i>	-	-	-	2.2					X
calico monkeyflower	<i>Mimulus pictus</i>	-	-	-	1B.2					X
pansy monkeyflower	<i>Mimulus pulchellus</i>	-	-	-	1B.2					X
Whipple's monkeyflower	<i>Mimulus whipplei</i>	-	-	-	1A					X
peanut sandwort	<i>Minuartia rosei</i>	-	S	-	4.2	P				
light gray lichen	<i>Mobergia calculiformis</i>	-	-	-	(blank)					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
San Antonio Hills monardella	<i>Monardella antonina</i> ssp. <i>Antonina</i>	m	-	-	3					P
crisp monardella	<i>Monardella crispera</i>	-	-	-	1B.2					X
veiny monardella	<i>Monardella douglasii</i> ssp. <i>venosa</i>	-	-	-	1B.1					X
Follett's monardella	<i>Monardella follettii</i>	-	-	-	1B.2					X
San Luis Obispo monardella	<i>Monardella frutescens</i>	-	-	-	1B.2					X
felt-leaved monardella	<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	-	-	-	1B.2					X
flax-like monardella	<i>Monardella linoides</i> ssp. <i>oblonga</i>	-	-	-	1B.3					X
Hall's monardella	<i>Monardella macrantha</i> ssp. <i>hallii</i>	-	-	-	1B.3					X
Pringle's monardella	<i>Monardella pringlei</i>	-	-	-	1A					X
Robison's monardella	<i>Monardella robisonii</i>	-	-	-	1B.3					X
robust monardella	<i>Monardella villosa</i> ssp. <i>Globosa</i>	-	-	-	1B.2					X
willow monardella	<i>Monardella viminea</i>	-	E	E	1B.1					X
San Joaquin woollythreads	<i>Monolopia congdonii</i>	m	E	-	1B.2					X
San Diego goldenstar	<i>Muilla clevelandii</i>	-	-	-	1B.1					X
little mousetail	<i>Myosurus minimus</i> ssp. <i>Apus</i>	-	-	-	3.1					X
mud nama	<i>Nama stenocarpum</i>	-	-	-	2.2					X
Gambel's water cress	<i>Nasturtium gambelii</i>	-	E	T	1B.1					X
spreading navarretia	<i>Navarretia fossalis</i>	-	T	-	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	-	-	-	1B.1				X	X
few-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>pauciflora</i>	m	E	T	1B.1					
many-flowered navarretia	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	m	E	E	1B.2					
pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	m	-	-	1B.1					X
shining navarretia	<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	-	-	-	1B.2					X
Baja navarretia	<i>Navarretia peninsularis</i>	-	-	-	1B.2					X
prostrate navarretia	<i>Navarretia prostrata</i>	-	-	-	1B.1					X
Piute Mountains navarretia	<i>Navarretia setiloba</i>	-	-	-	1B.1					X
awl-leaved navarretia	<i>Navarretia subuligera</i>	-	-	-	4	P				
coast woolly-heads	<i>Nemacaulis denudata</i> var. <i>denudata</i>	-	-	-	1B.2					X
slender woolly-heads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	-	-	-	2.2					X
Colusa grass	<i>Neostapfia colusana</i>	m	T	E	1B.1			X	X	X
Shasta snow-wreath	<i>Neviusia cliftonii</i>	m	S	-	1B.2	X				X
chaparral nolina	<i>Nolina cismontana</i>	-	-	-	1B.2					X
Dehesa nolina	<i>Nolina interrata</i>	-	-	E	1B.1					X
Antioch Dunes evening-primrose	<i>Oenothera deltooides</i> ssp. <i>howellii</i>	R	E	E	1B.1				X	X
short-joint beavertail	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Bakersfield cactus	<i>Opuntia basilaris</i> var. <i>treleasei</i>	-	E	E	1B.1					X
snake cholla	<i>Opuntia californica</i> var. <i>californica</i>	-	-	-	1B.1					X
California Orcutt grass	<i>Orcuttia californica</i>	-	E	E	1B.1					X
San Joaquin Valley orcutt grass	<i>Orcuttia inaequalis</i>	m	T	E	1B.1					X
hairy orcutt grass	<i>Orcuttia pilosa</i>	m	E	E	1B.1					X
slender orcutt grass	<i>Orcuttia tenuis</i>	m	T	E	1B.1		X	X		X
Sacramento orcutt grass	<i>Orcuttia viscida</i>	m	E	E	1B.1					X
woolly mountain-parsley	<i>Oreonana vestita</i>	-	-	-	1B.3					X
Baja California birdbush	<i>Ornithostaphylos oppositifolia</i>	-	-	E	2.1					X
Spjut's bristle-moss	<i>Orthotrichum spjutii</i>	-	-	-	1B.3					X
white-margined oxytheca	<i>Oxytheca emarginata</i>	-	-	-	1B.3					X
Gander's ragwort	<i>Packera ganderi</i>	-	-	Rare	1B.2					X
Layne's ragwort	<i>Packera layneae</i>	m	T	Rare	1B.2					X
Ahart's paronychia	<i>Paronychia ahartii</i>	m	-	-	1B.1		X			X
California beardtongue	<i>Penstemon californicus</i>	-	-	-	1B.2					X
thread-leaved beardtongue	<i>Penstemon filiformis</i>	m	-	-	1B	P				
Santa Cruz Mountains beardtongue	<i>Penstemon rattanii</i> var. <i>kleei</i>	-	-	-	1B.2					X
white-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	m	E	E	1B.1					P
slender pentachaeta	<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	-	-	-	1B.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Lyon's pentachaeta	<i>Pentachaeta lyonii</i>	-	E	E	1B.1					X
Parish's yampah	<i>Perideridia parishii</i> ssp. <i>parishii</i>	-	-	-	2.2					X
Merced phacelia	<i>Phacelia ciliata</i> var. <i>opaca</i>	m	-	-	1B.2					P
Scott Valley phacelia	<i>Phacelia greenei</i>	-	S	-	1B.2	P				
Charlotte's phacelia	<i>Phacelia nashiana</i>	-	-	-	1B.2					X
Mt. Diablo phacelia	<i>Phacelia phacelioides</i>	m	-	-	1B.2					X
Brand's phacelia	<i>Phacelia stellaris</i>	-	C	-	1B.1					X
slender-stem bean	<i>Phaseolus filiformis</i>	-	-	-	2.3					X
moss phlox	<i>Phlox muscoides</i>	-	-	-	2.3					X
torrey pine	<i>Pinus torreyana</i> ssp. <i>torreyana</i>	-	-	-	1B.2					X
narrow-petaled rein orchid	<i>Piperia leptopetala</i>	-	-	-	4	P				
Yadon's rein orchid	<i>Piperia yadonii</i>	-	E	-	1B.1					X
Choris' popcorn-flower	<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	-	-	-	1B.2					X
San Francisco popcorn-flower	<i>Plagiobothrys diffusus</i>	-	-	E	1B.1					X
hairless popcorn-flower	<i>Plagiobothrys glaber</i>	-	-	-	1A					X
bearded popcorn-flower	<i>Plagiobothrys hystriculus</i>	-	-	-	1B.1				X	X
Parish's popcorn-flower	<i>Plagiobothrys parishii</i>	-	-	-	1B.1					X
Calistoga popcorn-flower	<i>Plagiobothrys strictus</i>	m	E	T	1B.1					
hooked popcorn-flower	<i>Plagiobothrys uncinatus</i>	-	-	-	1B.2					X
North Coast semaphore grass	<i>Pleuropogon hooverianus</i>	m	-	T	1B.1					

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Napa bluegrass	<i>Poa napensis</i>	m	E	E	1B.1					
San Diego mesa mint	<i>Pogogyne abramsii</i>	-	E	E	1B.1					X
Otay Mesa mint	<i>Pogogyne nudiuscula</i>	-	E	E	1B.1					X
Mason's sky pilot	<i>Polemonium chartaceum</i>	-	S	-	1B.3	P				
Bidwell's knotweed	<i>Polygonum bidwelliae</i>	-	-	-	4	P				
Marin knotweed	<i>Polygonum marinense</i>	m	-	-	3.1				P	P
slender-leaved pondweed	<i>Potamogeton filiformis</i>	-	-	-	2.2					X
eel-grass pondweed	<i>Potamogeton zosteriformis</i>	m	-	-	2.2	P			X	
Ballona cinquefoil	<i>Potentilla multijuga</i>	-	-	-	1A					X
Newberry's cinquefoil	<i>Potentilla newberryi</i>	-	-	-	2.3					X
cliff cinquefoil	<i>Potentilla rimicola</i>	-	-	-	2.3					X
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	m	E	E	1B.1					X
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	m	T	E	1B.1					X
California chalk-moss	<i>Pterygoneurum californicum</i>	-	-	-	1B.1					X
Pacific fuzzwort	<i>Ptilidium californicum</i>	-	SM	-	-	P	P			
Nuttall's scrub oak	<i>Quercus dumosa</i>	-	-	-	1B.1					X
showy raillardella	<i>Raillardella pringlei</i>	-	S	-	1B.2	P				
scabrid raillardella	<i>Raillardopsis scabrida</i>	-	S	-	1B.3	P				
California beaked-rush	<i>Rhynchospora californica</i>	m	-	-	1B.1					P
brownish beaked-rush	<i>Rhynchospora capitellata</i>	-	-	-	2.2	P				X
Moreno currant	<i>Ribes canthariforme</i>	-	-	-	1B.3					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Parish's gooseberry	<i>Ribes divaricatum</i> var. <i>parishii</i>	-	-	-	1A					X
Santa Catalina Island currant	<i>Ribes viburnifolium</i>	-	-	-	1B.2					X
Columbia yellow cress	<i>Rorippa columbiae</i>	-	-	-	1B.2	P				X
small-leaved rose	<i>Rosa minutifolia</i>	-	-	E	2.1					X
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	m	-	-	1B.2	P			X	X
Latimer's woodland-gilia	<i>Saltugilia latimeri</i>	-	-	-	1B.2					X
Munz' sage	<i>Salvia munzii</i>	-	-	-	2.2					X
adobe sanicle	<i>Sanicula maritima</i>	-	-	Rare	1B.1					X
rock sanicle	<i>Sanicula saxatilis</i>	m	-	Rare	1B.2					X
San Miguel savory	<i>Satureja chandleri</i>	-	-	-	1B.2					X
Shevock's copper-moss	<i>Schizymerium shevockii</i>	-	-	-	1B.2					X
black sedge	<i>Schoenus nigricans</i>	-	-	-	2.2					X
tongue-leaf copper-moss	<i>Scopelophila cataractae</i>	-	-	-	2.2					X
black-flowered figwort	<i>Scrophularia atrata</i>	-	-	-	1B.2					X
southern skullcap	<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	-	-	-	1B.2					X
marsh skullcap	<i>Scutellaria galericulata</i>	m	-	-	2.2	P			X	
mad-dog skullcap	<i>Scutellaria lateriflora</i>	m	-	-	2.2				X	
Canyon Creek stonecrop	<i>Sedum paradisum</i>	-	S	-	1B	P	P			
desert spike-moss	<i>Selaginella eremophila</i>	-	-	-	2.2					X
rayless ragwort	<i>Senecio aphanactis</i>	-	-	-	2.2				X	X
Red Hills ragwort	<i>Senecio clevelandii</i> var. <i>heterophyllus</i>	m	-	-	1B.2					X
Coves' cassia	<i>Senna covesii</i>	-	-	-	2.2					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Hammitt's clay-cress	<i>Sibaropsis hammittii</i>	-	-	-	1B.2					X
Marin checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	m	-	-	1B.3					
Salt Spring checkerbloom	<i>Sidalcea neomexicana</i>	-	-	-	2.2					X
marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>hydrophila</i>	m	-	-	1B.3					P
Kenwood Marsh checkerbloom	<i>Sidalcea oregana</i> ssp. <i>valida</i>	m	E	E	1B.1					
bird-foot checkerbloom	<i>Sidalcea pedata</i>	-	E	E	1B.1					X
Scadden Flat checkerbloom	<i>Sidalcea stipularis</i>	-	-	E	1B.1					X
English Peak greenbriar	<i>Smilax jamesii</i>	m	S	-	1B	P	P			
bottle liverwort	<i>Sphaerocarpos drewei</i>	-	-	-	1B.1					X
purple stemodia	<i>Stemodia durantifolia</i>	-	-	-	2.1					X
Metcalf Canyon jewel-flower	<i>Streptanthus albidus</i> ssp. <i>albidus</i>	-	E	-	1B.1					X
most beautiful jewel-flower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	m	-	-	1B.2					X
green jewel-flower	<i>Streptanthus breweri</i> var. <i>hesperidis</i>	-	-	-	1B.2					X
Mt. Hamilton jewel-flower	<i>Streptanthus callistus</i>	m	-	-	1B.3					X
southern jewel-flower	<i>Streptanthus campestris</i>	-	-	-	1B.3					X
Mt. Diablo jewel-flower	<i>Streptanthus hispidus</i>	m	-	-	1B.3					X
Arbura ranch jewel-flower	<i>Streptanthus insignis</i> ssp. <i>lyonii</i>	m	-	-	1B.2					P
Tiburon jewel-flower	<i>Streptanthus niger</i>	m	E	E	1B.1					
oil neststraw	<i>Stylocline citroleum</i>	-	-	-	1B.1					X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
Mason's neststraw	<i>Stylocline masonii</i>	-	-	-	1B.1					X
California seablite	<i>Suaeda californica</i>	m	E	-	1B.1					X
estuary seablite	<i>Suaeda esteroa</i>	-	-	-	1B.2					X
splitting yarn lichen	<i>Sulcaria isidiifera</i>	-	-	-	(blank)					X
San Bernardino aster	<i>Symphyotrichum defoliatum</i>	-	-	-	1B.2					X
Suisun Marsh aster	<i>Symphyotrichum lentum</i>	-	-	-	1B.2				X	
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	-	-	-	1B.2					X
woven-spored lichen	<i>Texosporium sancti-jacobi</i>	-	-	-	(blank)					X
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	-	-	-	2.2					X
slender false-lupine	<i>Thermopsis gracilis</i> var. <i>gracilis</i>	-	-	-	4	X				
California screw-moss	<i>Tortula californica</i>	-	-	-	1B.2					X
Wright's trichocoronis	<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	-	-	-	2.1			X	X	X
showy indian clover	<i>Trifolium amoenum</i>	m	E	-	1B.1					X
saline clover	<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	-	-	-	1B.2					X
caper-fruited tropidocarpum	<i>Tropidocarpum capparideum</i>	-	-	-	1B.1				X	X
Greene's tuctoria	<i>Tuctoria greenei</i>	m	E	Rare	1B.1			X		X
Crampton's tuctoria	<i>Tuctoria mucronata</i>	r	E	E	1B.1				X	
California vervain	<i>Verbena californica</i>	m	T	T	1B.1					X
crownbeard	<i>Verbesina dissita</i>	-	T	T	1B.1					X
oval-leaved viburnum	<i>Viburnum ellipticum</i>	-	-	-	2.3	P	P			X

Table A1-1. Special-Status Plant Species Known or with Potential to Occur in the Primary and Extended Study Areas, Excluding Species Not Known But Potentially Present in CVP/SWP Service Areas¹ (contd.)

Common Name	Scientific Name	Status ²				Distribution in Primary and Extended Study Area ³				
		MSCS	Federal	State	CNPS	Shasta Lake and Vicinity	Sacramento River		Delta	CVP/SWP Service Areas
							Upper	Lower		
golden violet	<i>Viola aurea</i>	-	-	-	2.2					X
grey-leaved violet	<i>Viola pinetorum</i> ssp. <i>grisea</i>	-	-	-	1B.3					X
jackass-clover	<i>Wislizenia refracta</i> ssp. <i>refracta</i>	-	-	-	2.2					X
Brazilian watermeal	<i>Wolffia brasiliensis</i>	-	-	-	2.3			X		
El Dorado County mule ears	<i>Wyethia reticulata</i>	-	-	-	1B.2					X
Mecca-aster	<i>Xylorhiza cognata</i>	-	-	-	1B.2					X
Orcutt's woody-aster	<i>Xylorhiza orcuttii</i>	-		-	1B.2					X

Notes:

¹ Based on California Natural Diversity Database (2007), CNPS Rare Plant Inventory (2007), USFWS list. Plants concluded to be unlikely to occur in the study areas are not included.

² Status

³ P = Species with the potential to occur in an area, but not known. X = species known to occur in the area.

⁴ *Eleocharis quadrangulata* is considered naturalized, not native in California in The Jepson Manual, Ed. 2.

MSCS Status Categories:

- m Maintain
- r Contribute to recovery
- R Recovery

Federal Status Categories:

- T USFWS Threatened
- E USFWS Endangered
- S USFS Sensitive
- SM USFS recommended for survey and management per Northwest Forest Plan 2002
- Endemic USFS Endemic to specific region or National Forest

State Status Categories:

- Rare California Rare
- T California Threatened
- E California Endangered

California Native Plant Society (CNPS) Status Categories:

- 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
- 4 Plants of limited distribution – a watch list

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Acanthomintha lanceolata</i> Santa Clara thorn-mint	List 4.2			Chaparral (often on serpentinite), Cismontane woodland, Coastal scrub; in rocky habitats; 80-1200 m	ALA, FRE, MER, MNT, SBT, SCL, SJQ, STA
<i>Acanthomintha obovata</i> ssp. <i>cordata</i> heart-leaved thorn-mint	List 4.2			Chaparral (in openings), Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; on clay; 785-1540 m	LAX, MNT, SBA, SLO, VEN
<i>Acanthomintha obovata</i> ssp. <i>obovata</i> San Benito thorn-mint	List 4.2			Chaparral, Cismontane woodland, Valley and foothill grassland; on heavy clay, alkaline, and serpentinite substrates; 395-1500 m	FRE, MNT, SBT, SLO
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i> Abrams' oxytheca	List 1B.2			Chaparral (on sandy or shale substrates); 1143-2057 m	SBA, VEN
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i> Cushenbury oxytheca	List 1B.1		E	Pinyon and juniper woodland (on carbonate, talus); 1219-2377 m	SBD
<i>Acanthoscyphus parishii</i> var. <i>parishii</i> Parish's oxytheca	List 4.2			Chaparral, Lower montane coniferous forest; on sandy or gravelly substrates; 1220-2600 m	LAX, SBD, VEN
<i>Achnatherum diegoense</i> San Diego County needle grass	List 4.2			Chaparral, Coastal scrub; on rocky, often mesic sites; 10-700 m	ANA, SBA, SCZ, SDG, SMI, SNI, SRO, VEN
<i>Acleisanthes longiflora</i> angel trumpets	List 2.3			Sonoran desert scrub (on carbonate); 90-95 m	RIV
<i>Allium atrorubens</i> var. <i>cristatum</i> Inyo onion	List 4.3			Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; on sandy or rocky substrates; 1200-2560 m	INY, KRN, INY, KRN, SBD
<i>Allium howellii</i> var. <i>clokeyi</i> Mt. Pinos onion	List 1B.3			Great Basin scrub, Pinyon and juniper woodland; 1300-1850 m	KRN, KRN, LAX, SBA, SLO, VEN
<i>Allium parishii</i> Parish's onion	List 4.3			Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; on rocky sites; 900-1465 m	RIV, SBD, SDG
<i>Allium sanbornii</i> var. <i>congdonii</i> Congdon's onion	List 4.3			Chaparral, Cismontane woodland; serpentinite or volcanic substrates; 300-700 m	ELD, MPA, NEV, PLA, TUO
<i>Allium sanbornii</i> var. <i>sanbornii</i> Sanborn's onion	List 4.2			Chaparral, Cismontane woodland, Lower montane coniferous forest; usually on serpentinite, gravelly sites; 260-1510 m	BUT, CAL, ELD, NEV, PLA, PLU, SHA, TEH, TUO, YUB

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Allium yosemitense</i> Yosemite onion	List 1B.3	R		Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest; on rocky, metamorphic or granitic substrates; 535-2200 m	MPA, TUO
<i>Aloysia wrightii</i> oreganillo	List 4.3			Joshua tree "woodland", Pinyon and juniper woodland; on rocky substrates, often on carbonate; 900-1600 m	RIV, SBD
<i>Amaranthus watsonii</i> Watson's amaranth	List 4.3			Mojavean desert scrub, Sonoran desert scrub; 20-1700 m	IMP, IMP, LAX, SBD
<i>Ambrosia monogyra</i> singlewhorl burrobush	List 2.2			Chaparral, Sonoran desert scrub; on sandy substrates; 10-500 m	RIV, SBD, SDG
<i>Ammoselinum giganteum</i> desert sand-parsley	List 2.3			Sonoran desert scrub; 400-400 m	RIV
<i>Amsinckia douglasiana</i> Douglas' fiddleneck	List 4.2			Cismontane woodland, Valley and foothill grassland; on Monterey shale, in dry habitats; 0-1950 m	KRN, MNT, SBT, SBA, SLO, VEN
<i>Amsinckia vernicosa</i> var. <i>furcata</i> forked fiddleneck	List 4.2			Cismontane woodland, Valley and foothill grassland; 50-1000 m	FRE, KRN, KNG, MER, SBT, SLO
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Meadows and seeps, Pinyon and juniper woodland, Valley and foothill grassland; 150-1200 m	ALA, COL, CCA, FRE, GLE, KRN, LAX, MER, RIV, SBT, SBD, SCL, SDG, SIS, SJQ, SLO, SMT, SOL, STA, THE
<i>Androstephium breviflorum</i> small-flowered androstephium	List 2.3			Desert dunes, Mojavean desert scrub (bajadas); 220-640 m	INY, INY, RIV, SBD
<i>Angelica callii</i> Call's angelica	List 4.3			Cismontane woodland, Lower montane coniferous forest; in mesic habitats; 1100-2000 m	FRE, KRN, KRN, TUL
<i>Anomobryum julaceum</i> slender silver-moss	List 2.2			Broadleaved upland forest, Lower montane coniferous forest, North Coast coniferous forest; on damp rock and soil on outcrops, usually on roadcuts; 100-1000 m	BUT, CCA, HUM, LAX, MPA, SBA, SCR, SHA, SON
<i>Antirrhinum ovatum</i> oval-leaved snapdragon	List 4.2			Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; on clay or gypsum, often on alkaline substrates; 200-1000 m	FRE, KRN, KRN, MNT, SBT, SBA, SLO, VEN
<i>Arabis blepharophylla</i> coast rock cress	List 4.3			Broadleaved upland forest, Coastal bluff scrub, Coastal prairie, Coastal scrub; on rocky substrates; 3-1100 m	CCA, LAK, MRN, MNT, SCR, SFO, SMT, SON
<i>Arabis modesta</i> modest rock cress	List 4.3			Chaparral, Lower montane coniferous forest; 120-800 m	LAK, NAP, SIS, SOL, TRI, YOL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Arabis parishii</i> Parish's rock cress	List 1B.2			Pebble plain, Pinyon and juniper woodland, Upper montane coniferous forest; on rocky substrates, quartzite on clay, or sometimes carbonate; 1770-2900 m	SBD
<i>Arabis shockleyi</i> Shockley's rock cress	List 2.2			Pinyon and juniper woodland (on carbonate or quartzite, rocky or gravelly substrates); 875-2310 m	INY, INY, MNO, SBD
<i>Arctostaphylos gabrielensis</i> San Gabriel Manzanita	List 1B.2			Chaparral (on rocky sites); 1500-1500 m	LAX
<i>Arctostaphylos luciana</i> Santa Lucia Manzanita	List 1B.2			Chaparral, Cismontane woodland; on shale substrates; 350-850 m	SLO
<i>Arctostaphylos mewukka</i> ssp. <i>truei</i> True's Manzanita	List 4.2			Chaparral, Lower montane coniferous forest; sometimes along roadsides; 425-1310 m	BUT, ELD, NEV, PLA, PLU, YUB
<i>Arctostaphylos parryana</i> ssp. <i>tumescens</i> interior manzanita	List 4.3			Chaparral (montane), Cismontane woodland; 2100-2310 m	LAX, SBD
<i>Arctostaphylos pechoensis</i> Pecho Manzanita	List 1B.2			Closed-cone coniferous forest, Chaparral, Coastal scrub; on siliceous shale; 125-850 m	SBA, SLO
<i>Arctostaphylos pilosula</i> Santa Margarita manzanita	List 1B.2			Closed-cone coniferous forest, Chaparral, Cismontane woodland; 170-1100 m	MNT, SLO
<i>Arctostaphylos tomentosa</i> ssp. <i>subcordata</i> Santa Cruz Island Manzanita	List 4.2			Closed-cone coniferous forest, Chaparral; on rocky sites; 100-730 m	LAX, SBA, SCZ, SLO, SRO
<i>Arctostaphylos wellsii</i> Wells' Manzanita	List 1B.1			Broadleafed upland forest, Closed-cone coniferous forest, Chaparral; on sandstone; 30-400 m	SLO
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> rock sandwort	List 2.3			Subalpine coniferous forest, Upper montane coniferous forest; in mesic habitats, on sandy substrates; 1800-2600 m	SBD
<i>Arenaria ursina</i> Big Bear Valley sandwort	List 1B.2		T	Meadows and seeps, Pebble plain, Pinyon and juniper woodland; in mesic, rocky habitats; 1800-2900 m	SBD
<i>Artemisia palmeri</i> San Diego sagewort	List 4.2			Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; in sandy, mesic habitats; 15-915 m	SDG
<i>Asclepias solanoana</i> serpentine milkweed	List 4.2			Chaparral, Cismontane woodland, Lower montane coniferous forest; on serpentinite; 230-1860 m	COL, GLE, LAK, MEN, NAP, SHA, SON, TEH, TRI, YOL
<i>Aspidotis carlotta-halliae</i> Carlotta Hall's lace fern	List 4.2			Chaparral, Cismontane woodland; generally on serpentinite; 100-1400 m	ALA, MRN, MNT, SBT, SLO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Asplenium vespertinum</i> western spleenwort	List 4.2			Chaparral, Cismontane woodland, Coastal scrub; on rocky sites; 180-1000 m	LAX, ORA, RIV, SBD, SDG, VEN
<i>Astragalus albens</i> Cushenbury milk-vetch	List 1B.1		E	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; usually on carbonate, rarely on granitic substrates; 1095-2000 m	SBD
<i>Astragalus bicristatus</i> crested milk-vetch	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on sandy or rocky substrates, mostly on carbonate; 1700-2745 m	LAX, RIV, SBD
<i>Astragalus breweri</i> Brewer's milk-vetch	List 4.2			Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland (in open, often gravelly habitats); often on serpentinite or volcanic substrates; 90-730 m	COL, LAK, MRN, MEN, NAP, SON, YOL
<i>Astragalus clevelandii</i> Cleveland's milk-vetch	List 4.3			Chaparral, Cismontane woodland, Riparian forest; at serpentinite seeps; 200-1500 m	COL, LAK, NAP, SBT, SON, TEH, YOL
<i>Astragalus crotalariae</i> Salton milk-vetch	List 4.3			Sonoran desert scrub (sandy or gravelly); -60-250 m	IMP, IMP, RIV, SDG
<i>Astragalus douglasii</i> var. <i>perstrictus</i> Jacumba milk-vetch	List 1B.2			Chaparral, Cismontane woodland, Pinyon and juniper woodland, Riparian scrub, Valley and foothill grassland; on rocky sites; 900-1370 m	SDG
<i>Astragalus ertterae</i> Walker Pass milk-vetch	List 1B.3			Pinyon and juniper woodland (sandy, granitic); 1705-1900 m	KRN
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	List 1B.1			Meadows and seeps, Playas; along lake margins, alkaline habitats; 60-850 m	INY, KRN, SBD, TUL
<i>Astragalus insularis</i> var. <i>harwoodii</i> Harwood's milk-vetch	List 2.2			Desert dunes, Mojavean desert scrub (sandy or gravelly); 0-710 m	RIV, SDG
<i>Astragalus lentiginosus</i> var. <i>antoniuis</i> San Antonio milk-vetch	List 1B.3			Lower montane coniferous forest, Upper montane coniferous forest; 1500-2600 m	LAX, SBD
<i>Astragalus lentiginosus</i> var. <i>borreaganus</i> Borrogo milk-vetch	List 4.3			Mojavean desert scrub, Sonoran desert scrub; on sandy substrates; 30-270 m	IMP, RIV, SBD, SDG
<i>Astragalus lentiginosus</i> var. <i>sierrae</i> Big Bear Valley milk-vetch	List 1B.2			Mojavean desert scrub, Meadows and seeps, Pinyon and juniper woodland, Upper montane coniferous forest; on gravelly or rocky substrates; 1800-2600 m	SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Astragalus macrodon</i> Salinas milk-vetch	List 4.3			Chaparral(openings), Cismontane woodland, Valley and foothill grassland; on sandstone, shale, or serpentinite; 250-950 m	KRN, MNT, SBT, SLO, VEN
<i>Astragalus nutans</i> Providence Mountains milk-vetch	List 4.3			Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland, Sonoran desert scrub; on sandy or gravelly substrates; 450-1950 m	IMP, INY, RIV, SBD, SDG
<i>Astragalus nuttallii</i> var. <i>nuttallii</i> Nuttall's milk-vetch	List 4.2			Coastal bluff scrub, Coastal dunes; 3-120 m	ALA, MRN, MNT, SBA, SFO, SLO, SMT
<i>Astragalus rattanii</i> var. <i>rattanii</i> Rattan's milk-vetch	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest; along gravelly streambanks; 30-825 m	COL, GLE, HUM, LAK, MEN, SON, TEH, TRI
<i>Astragalus subvestitus</i> Kern County milk-vetch	List 4.3			Great Basin scrub, Meadows and seeps, Pinyon and juniper woodland; on gravelly or sandy substrates; 2450-2750 m	KRN, TUL
<i>Atractylodes flagellaceus</i> flagella-like atractylodes	List 2.2			Cismontane woodland; 100-500 m	BUT, TRI
<i>Atriplex coronata</i> var. <i>coronata</i> crownscale	List 4.2			Chenopod scrub, Valley and foothill grassland, Vernal pools; in alkaline habitats; 1-590 m	ALA, CCA, FRE, GLE, KRN, KNG, MER, MNT, SJQ, SLO, SOL, STA
<i>Azolla mexicana</i> Mexican mosquito fern	List 4.2			Marshes and swamps (in ponds, slow water); 30-100 m	BUT, KRN, LAK, MOD, NEV, PLU, SCL, SDG, TUL
<i>Baccharis plummerae</i> ssp. <i>plummerae</i> Plummer's Baccharis	List 4.3			Broadleaved upland forest, Chaparral, Cismontane woodland, Coastal scrub; on rocky sites; 5-425 m	ANA, LAX, SBA, SCZ, SLO, VEN
<i>Berberis fremontii</i> Fremont barberry	List 3			Chaparral, Joshua tree "woodland", Pinyon and juniper woodland; on rocky sites; 840-1850 m	SBD, SDG
<i>Bolandra californica</i> Sierra bolandra	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on mesic, rocky sites; 975-2450 m	ALP, AMA, CAL, ELD, MPA, STA, TUO
<i>Botrychium crenulatum</i> scalloped moonwort	List 2.2			Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps (freshwater); 1268-3280 m	BUT, COL, LAK, LAS, LAX, MOD, MNO, PLA, PLU, SBD, SHA, TEH, TUL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Botrychium minganense</i> Mingan moonwort	List 2.2			Bogs and fens, Lower montane coniferous forest, Upper montane coniferous forest; in mesic habitats; 1500-2055 m	BUT, FRE, LAS, MOD, PLA, PLU, SBD, SHA, TEH, TUL
<i>Brodiaea insignis</i> Kaweah brodiaea	List 1B.2	E		Cismontane woodland, Meadows and seeps, Valley and foothill grassland; on granitic or clay substrates; 150-1400 m	TUL
<i>Bulbostylis capillaris</i> thread-leaved beakseed	List 4.2			Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; 395-2075 m	ALP, BUT, FRE, MPA, NEV, PLU, SHA, SIE, TEH, TUO
<i>Calandrinia breweri</i> Brewer's calandrinia	List 4.2			Chaparral, Coastal scrub; on sandy or loamy substrates, disturbed sites and burns; 10-1220 m	CCA, LAX, MRN, MPA, MEN, MNT, NAP, ORA, RIV, SBA, SBD, SCL, SCR, SCZ, SDG, SHA, SLO, SMT, SON, SRO, VEN
<i>Calandrinia maritima</i> seaside calandrinia	List 4.2			Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; on sandy substrates; 5-300 m	ANA, LAX, ORA, SBR, SBA, SCM, SCT, SCZ, SDG, SRO, VEN
<i>Calliandra eriophylla</i> pink fairy-duster	List 2.3			Sonoran desert scrub (sandy or rocky); 120-1500 m	IMP, IMP, RIV, SDG
<i>Calochortus catalinae</i> Catalina mariposa lily	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; 15-700 m	LAX, ORA, SBA, SBD, SCT, SCZ, SDG, SLO, SRO, VEN
<i>Calochortus clavatus</i> var. <i>clavatus</i> club-haired mariposa lily	List 4.3			Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; usually on serpentinite, clay, rocky; 75-1300 m	LAX, SBT, SBA, SLO, VEN
<i>Calochortus obispoensis</i> San Luis mariposa lily	List 1B.2			Chaparral, Coastal scrub, Valley and foothill grassland; often on serpentinite; 75-730 m	SLO
<i>Calochortus simulans</i> La Panza mariposa lily	List 1B.3			Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; on sandy, often granitic substrates, sometimes on serpentinite; 395-1100 m	SBA, SLO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Calochortus umbellatus</i> Oakland star-tulip	List 4.2			Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; often on serpentinite; 100-700 m	ALA, CCA, LAK, MRN, SCL, SCR, SMT, STA
<i>Calochortus westonii</i> Shirley Meadows star-tulip	List 1B.2			Broadleaved upland forest, Lower montane coniferous forest, Meadows and seeps; on granitic substrates; 1500-2105 m	KRN, TUL
<i>Calycadenia micrantha</i> small-flowered calycadenia	List 1B.2			Chaparral, Meadows and seeps (on volcanic substrates), Valley and foothill grassland; along roadsides, in rocky, talus, or scree habitats, sometimes on serpentinite, and in sparsely vegetated areas; 5-1500 m	COL, LAK, MNT, NAP, TRI
<i>Calycadenia villosa</i> dwarf calycadenia	List 1B.1			Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland; on rocky, fine soils; 240-1350 m	FRE, MNT, SBA, SLO
<i>Calyptridium parryi</i> var. <i>hesseae</i> Santa Cruz Mountains pussypaws	List 3			Chaparral, Cismontane woodland; 305-1115 m	MNT, SBT, SCL, SCR
<i>Calystegia collina</i> ssp. <i>oxyphylla</i> Mt. Saint Helena morning-glory	List 4.2			Chaparral, Lower montane coniferous forest, Valley and foothill grassland; on serpentinite; 279-1010 m	LAK, MRN, MEN, NAP, SBT, SON
<i>Calystegia collina</i> ssp. <i>venusta</i> South Coast Range morning-glory	List 4.3			Chaparral, Cismontane woodland, Valley and foothill grassland; on serpentinite or sedimentary substrates; 425-1130 m	FRE, MNT, SBT, SBA, SCL
<i>Calystegia peirsonii</i> Peirson's morning-glory	List 4.2			Chaparral, Chenopod scrub, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; 30-1500 m	LAX
<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i> Cambria morning-glory	List 1B.2			Chaparral, Cismontane woodland, Coastal prairie; 60-500 m	SLO
<i>Camissonia arenaria</i> sand evening-primrose	List 4.3			Sonoran desert scrub (sandy or rocky); -70-915 m	IMP, IMP, RIV, SBD
<i>Camissonia boothii</i> ssp. <i>boothii</i> Booth's evening-primrose	List 2.3			Joshua tree "woodland", Pinyon and juniper woodland; 900-2400 m	INY, MNO, SBD
<i>Camissonia integrifolia</i> Kern River evening-primrose	List 1B.3			Chaparral; 700-1000 m	KRN

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Camissonia kernensis</i> ssp. <i>kernensis</i> Kern County evening-primrose	List 4.3			Chaparral, Joshua tree "woodland", Pinyon and juniper woodland; on sandy or gravelly, granitic substrates; 790-2130 m	KRN, SBA
<i>Camissonia lewisii</i> Lewis' evening-primrose	List 3			Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; on sandy or clay substrates; 0-300 m	LAX, ORA, SDG
<i>Camissonia sierrae</i> ssp. <i>sierrae</i> Yosemite evening-primrose	List 4.3			Cismontane woodland, Lower montane coniferous forest; 500-1645 m	FRE, MAD, MPA, TUO
<i>Canbya candida</i> white pygmy-poppy	List 4.2			Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; on gravelly, sandy, granitic substrates; 600-1460 m	IMP, INY, KRN, LAX, SBD
<i>Cardamine pachystigma</i> var. <i>dissectifolia</i> dissected-leaved toothwort	List 3			Chaparral, Lower montane coniferous forest; usually on serpentinite, rocky sites; 255-2100 m	BUT, GLE, MEN, PLA, SON, TEH
<i>Carex limosa</i> mud sedge	List 2.2			Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps, Upper montane coniferous forest; 1200-2700 m	BUT, ELD, FRE, LAS, NEV, PLU, SIS, TUO
<i>Carex obispoensis</i> San Luis Obispo sedge	List 1B.2			Closed-cone coniferous forest, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland; often at serpentinite seeps, sometimes on gabbro; 10-790 m	MNT, SDG, SLO
<i>Carex occidentalis</i> western sedge	List 2.3			Lower montane coniferous forest, Meadows and seeps; 1645-3135 m	MNO, RIV, SBD
<i>Carex tompkinsii</i> Tompkins' sedge	List 4.3	R		Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; sometimes on granitic substrates; 420-1830 m	FRE, MPA, TUO
<i>Carlquistia muirii</i> Muir's tarplant	List 1B.3			Chaparral (montane), Lower montane coniferous forest, Upper montane coniferous forest; 1100-2500 m	FRE, KRN, MNT, TUL
<i>Castela emoryi</i> crucifixion thorn	List 2.3			Mojavean desert scrub, Playas, Sonoran desert scrub; on gravelly substrates; 90-670 m	IMP, RIV, SBD
<i>Castilleja cinerea</i> ash-gray paintbrush	List 1B.2		T	Mojavean desert scrub, Meadows and seeps, Pebble plain, Pinyon and juniper woodland, Upper montane coniferous forest (in openings); 1800-2835 m	SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Castilleja densiflora</i> ssp. <i>obispoensis</i> San Luis Obispo owl's-clover	List 1B.2			Meadows and seeps, Valley and foothill grassland; sometimes on serpentinite; 10-400 m	SLO
<i>Castilleja plagiotoma</i> Mojave paintbrush	List 4.3			Great Basin scrub (alluvial), Joshua tree "woodland", Lower montane coniferous forest, Pinyon and juniper woodland; 300-2500 m	KRN, LAX, SBD, SLO
<i>Caulanthus amplexicaulis</i> var. <i>barbarae</i> Santa Barbara jewel-flower	List 1B.1			Closed-cone coniferous forest, Chaparral, Cismontane woodland; on serpentinite; 470-1220 m	SBA
<i>Caulanthus californicus</i> California jewel-flower	List 1B.1	E	E	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland; on sandy substrates; 70-1000 m	FRE, KRN, KNG, SBA, SLO, TUL
<i>Caulanthus simulans</i> Payson's jewel-flower	List 4.2			Chaparral, Coastal scrub; on sandy, granitic substrates; 90-2200 m	ORA, RIV, SDG
<i>Ceanothus cuneatus</i> var. <i>fascicularis</i> Lompoc ceanothus	List 4.2			Chaparral (on sandy substrates); 5-400 m	SBA, SLO
<i>Ceanothus fresnensis</i> Fresno ceanothus	List 4.3			Cismontane woodland, Lower montane coniferous forest; 900-2103 m	CAL, ELD, FRE, MAD, MPA, PLA, TUL, TUO
<i>Ceanothus pinetorum</i> Kern ceanothus	List 4.3			Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; on rocky, granitic substrates; 1600-2745 m	INY, KRN, TUL
<i>Ceanothus purpureus</i> holly-leaved ceanothus	List 1B.2			Chaparral, Cismontane woodland; on volcanic, rocky substrates; 120-640 m	NAP, SHA, SOL, SON, TRI
<i>Centromadia parryi</i> ssp. <i>rudis</i> Parry's red tarplant	List 4.2			Valley and foothill grassland, Vernal pools; in alkaline, vernal mesic habitats, seeps, sometimes along roadsides; 0-100 m	BUT, COL, GLE, LAK, MER, SAC, SJQ, SOL, SUT, YOL
<i>Cercocarpus betuloides</i> var. <i>blancheae</i> island mountain-mahogany	List 4.3			Closed-cone coniferous forest, Chaparral; 30-600 m	LAX, SCT, SCZ, SRO, VEN
<i>Chaenactis carphoclinia</i> var. <i>peirsonii</i> Peirson's pincushion	List 1B.3			Sonoran desert scrub (sandy); 3-500 m	IMP, RIV, SDG
<i>Chamaebatia australis</i> southern mountain misery	List 4.2			Chaparral (on gabbroic or metavolcanic substrates); 300-700 m	LAX, SDG
<i>Chamaesyce abramsiana</i> Abrams' spurge	List 2.2			Mojavean desert scrub, Sonoran desert scrub; sandy; -5-915 m	IMP, RIV, SBD
<i>Chamaesyce revoluta</i> revolute spurge	List 4.3			Mojavean desert scrub (on rocky sites); 1095-3100 m	RIV, SBD, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Chamaesyce vallis-mortae</i> Death Valley sandmat	List 4.2			Mojavean desert scrub (on sandy or gravelly substrates); 230-1460 m	INY, KRN, SBD
<i>Chorizanthe blakleyi</i> Blakley's spineflower	List 1B.3			Chaparral; 600-1600 m	SBA, VEN
<i>Chorizanthe breweri</i> Brewer's spineflower	List 1B.3			Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub; on serpentinite, rocky or gravelly substrates; 45-800 m	MNT, SLO
<i>Chorizanthe douglasii</i> Douglas' spineflower	List 4.3			Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest; on sandy or gravelly substrates; 55-1600 m	MNT, SBT, SLO
<i>Chorizanthe leptotheca</i> Peninsular spineflower	List 4.2			Chaparral, Coastal scrub, Lower montane coniferous forest; on alluvial fans, granitic substrate; 300-1900 m	RIV, SBD, SDG
<i>Chorizanthe palmeri</i> Palmer's spineflower	List 4.2			Chaparral, Cismontane woodland, Valley and foothill grassland; on rocky, serpentinite substrates; 60-700 m	MNT, SBT, SBA, SLO
<i>Chorizanthe spinosa</i> Mojave spineflower	List 4.2			Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub; 6-1300 m	KRN, LAX, SBD, SLO
<i>Chorizanthe ventricosa</i> potbellied spineflower	List 4.3			Cismontane woodland, Valley and foothill grassland; on serpentinite; 65-1235 m	FRE, MNT, SBT, SLO
<i>Cirsium fontinale</i> var. <i>obispoense</i> San Luis Obispo fountain thistle	List 1B.2	E	E	Chaparral, Cismontane woodland, Valley and foothill grassland; at serpentinite seeps; 100-890 m	SLO
<i>Cladium californicum</i> California sawgrass	List 2.2			Meadows and seeps, Marshes and swamps (along lake margins); 60-600 m	INY, LAX, RIV, SBA, SBD, SLO
<i>Clarkia breweri</i> Brewer's clarkia	List 4.2			Chaparral, Cismontane woodland, Coastal scrub; often on serpentinite; 215-1000 m	ALA, FRE, MER, MNT, SBT, SCL, STA
<i>Clarkia concinna</i> ssp. <i>automixa</i> Santa Clara red ribbons	List 4.3			Chaparral, Cismontane woodland; 90-1500 m	ALA, SCL
<i>Clarkia exilis</i> slender clarkia	List 4.3			Cismontane woodland; 120-1000 m	KRN, TUL
<i>Clarkia lewisii</i> Lewis' clarkia	List 4.3			Broadleaved upland forest, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub; 30-610 m	MNT, SBT
<i>Clarkia springvillensis</i> Springville clarkia	List 1B.2	E	T	Chaparral, Cismontane woodland, Valley and foothill grassland; on granitic substrates; 245-1220 m	TUL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Clarkia virgata</i> Sierra clarkia	List 4.3			Cismontane woodland, Lower montane coniferous forest; 400-1615 m	AMA, CAL, ELD, MPA, PLU, TUO
<i>Clarkia xantiana</i> ssp. <i>parviflora</i> Kern Canyon clarkia	List 4.2			Chaparral, Cismontane woodland, Great Basin scrub, Valley and foothill grassland; often on sandy, sometimes rocky, slopes, sometimes along roadsides; 700-3620 m	INY, KRN, LAX, TUL
<i>Claytonia lanceolata</i> var. <i>peirsonii</i> Peirson's spring beauty	List 1B.1			Subalpine coniferous forest, Upper montane coniferous forest; on scree; 2135-2745 m	SBD
<i>Claytonia parviflora</i> ssp. <i>grandiflora</i> streambank spring beauty	List 4.2			Cismontane woodland; rocky sites; 250-1200 m	AMA, BUT, CAL, ELD, FRE, KRN, PLA, TUL, TUO
<i>Clinopodium mimuloides</i> monkey-flower savory	List 4.2			Chaparral, North Coast coniferous forest; along streambanks, in mesic habitats; 305-1800 m	LAX, MNT, SBA, SLO, VEN
<i>Collomia diversifolia</i> serpentine collomia	List 4.3			Chaparral, Cismontane woodland; on serpentinite, rocky or gravelly sites; 300-600 m	COL, CCA, GLE, LAK, MEN, NAP, SHA, STA, YOL
<i>Colubrina californica</i> Las Animas colubrina	List 2.3			Mojavean desert scrub, Sonoran desert scrub; 10-1000 m	IMP, RIV, SDG
<i>Condalia globosa</i> var. <i>pubescens</i> spiny abrojo	List 4.2			Sonoran desert scrub; 140-1000 m	IMP, RIV
<i>Convolvulus simulans</i> small-flowered morning-glory	List 4.2			Chaparral(openings), Coastal scrub, Valley and foothill grassland; on clay substrates, and at serpentinite seeps; 30-700 m	CCA, FRE, KRN, LAX, MER, ORA, RIV, SBT, SBA, SCM, SCT, SCZ, SDG, SJQ, SLO, STA
<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i> Kern Plateau bird's-beak	List 1B.3			Great Basin scrub, Joshua tree "woodland", Pinyon and juniper woodland, Upper montane coniferous forest; 1675-3000 m	INY, KRN, TUL
<i>Cordylanthus rigidus</i> ssp. <i>brevibracteatus</i> short-bracted bird's-beak	List 4.3			Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; in openings, on granitic substrates; 1000-2590 m	KRN, TUL
<i>Coryphantha alversonii</i> foxtail cactus	List 4.3			Mojavean desert scrub, Sonoran desert scrub; on sandy or rocky, usually granitic substrates; 75-1525 m	IMP, RIV, SBD
<i>Crataegus castlegarensis</i> Castlegar hawthorne	List 3			Riparian woodland; 0-975 m	MOD, SHA

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Croton wigginsii</i> Wiggins' croton	List 2.2	R		Desert dunes, Sonoran desert scrub; 50-100 m	IMP
<i>Cryptantha costata</i> ribbed cryptantha	List 4.3			Desert dunes, Mojavean desert scrub, Sonoran desert scrub; on sandy substrates; -60-500 m	IMP, INY, RIV, SBD, SDG
<i>Cryptantha excavata</i> deep-scarred cryptantha	List 1B.3			Cismontane woodland (in sandy or gravelly habitats); 100-500 m	COL, LAK, MEN, YOL
<i>Cryptantha ganderi</i> Gander's cryptantha	List 1B.1			Desert dunes, Sonoran desert scrub (on sandy substrates); 160-400 m	IMP, SDG
<i>Cryptantha holoptera</i> winged cryptantha	List 4.3			Mojavean desert scrub, Sonoran desert scrub; 100-1690 m	IMP, INY, RIV, SBD, SDG
<i>Cryptantha rattanii</i> Rattan's cryptantha	List 4.3			Cismontane woodland, Riparian woodland, Valley and foothill grassland; 245-915 m	FRE, MER, MNT, SBT
<i>Cupressus arizonica ssp. nevadensis</i> Piute cypress	List 1B.2			Closed-cone coniferous forest, Chaparral, Cismontane woodland, Pinyon and juniper woodland; 720-1830 m	KRN, TUL
<i>Cupressus bakeri</i> Baker's cypress	List 4.2			Chaparral, Lower montane coniferous forest; on serpentinite or volcanic substrates; 820-1995 m	MOD, PLU, SHA, SIS, TEH
<i>Cupressus stephensonii</i> Cuyamaca cypress	List 1B.1			Closed-cone coniferous forest, Chaparral, Riparian forest; on gabbroic substrates; 1035-1705 m	SDG
<i>Cuscuta californica var. apiculata</i> pointed dodder	List 3			Mojavean desert scrub, Sonoran desert scrub; on sandy substrates; 0-500 m	RIV, SBD
<i>Cynanchum utahense</i> Utah vine milkweed	List 4.3			Mojavean desert scrub, Sonoran desert scrub; on sandy or gravelly substrates; 150-1435 m	IMP, RIV, SBD, SDG
<i>Deinandra floribunda</i> Tecate tarplant	List 1B.2			Chaparral, Coastal scrub; 70-1220 m	SDG
<i>Deinandra increscens ssp. villosa</i> Gaviota tarplant	List 1B.1	E	E	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; 35-430 m	SBA
<i>Deinandra paniculata</i> paniculate tarplant	List 4.2			Coastal scrub, Valley and foothill grassland, Vernal pools; usually in vernal mesic habitats; 25-940 m	ORA, RIV, SBD, SDG
<i>Delphinium gypsophilum ssp. gypsophilum</i> gypsum-loving larkspur	List 4.2			Chenopod scrub, Cismontane woodland, Valley and foothill grassland; 100-825 m	ALA, FRE, KRN, KNG, MAD, MER, MNT, SBT, SJQ, SLO, STA, VEN

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Delphinium hansenii</i> ssp. <i>ewanianum</i> Ewan's larkspur	List 4.2			Cismontane woodland, Valley and foothill grassland; on rocky sites; 60-600 m	CAL, FRE, KRN, MAD, MER, TUL
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i> Cuyamaca larkspur	List 1B.2	R		Lower montane coniferous forest, Meadows and seeps; in mesic habitats; 1220-1631 m	RIV, SDG
<i>Delphinium parishii</i> ssp. <i>subglobosum</i> Colorado Desert larkspur	List 4.3			Chaparral, Cismontane woodland, Pinyon and juniper woodland, Sonoran desert scrub; 600-1800 m	IMP, RIV, SDG
<i>Delphinium parryi</i> ssp. <i>purpureum</i> Mt. Pinos larkspur	List 4.3			Chaparral, Mojavean desert scrub, Pinyon and juniper woodland; 1000-2600 m	KRN, VEN
<i>Delphinium purpusii</i> Kern County larkspur	List 1B.3			Chaparral, Cismontane woodland, Pinyon and juniper woodland; on rocky substrates, often carbonate; 300-1340 m	KRN, TUL
<i>Dichondra occidentalis</i> western dichondra	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; 50-500 m	LAX, MRN, ORA, SBA, SCT, SCZ, SDG, SMI, SRO, VEN
<i>Dieteria asteroides</i> var. <i>lagunensis</i> Mount Laguna aster	List 2.1	R		Cismontane woodland, Lower montane coniferous forest; 800-2400 m	SDG
<i>Dieteria canescens</i> var. <i>ziegleri</i> Ziegler's aster	List 1B.2			Lower montane coniferous forest, Upper montane coniferous forest; 1400-2470 m	RIV
<i>Digitaria californica</i> Arizona cottontop	List 2.3			Mojavean desert scrub, Sonoran desert scrub; at rocky sites; 290-1490 m	SBD, SDG
<i>Ditaxis claryana</i> glandular ditaxis	List 2.2			Mojavean desert scrub, Sonoran desert scrub; on sandy substrates; 0-465 m	IMP, RIV, SBD
<i>Downingia concolor</i> var. <i>brevior</i> Cuyamaca Lake downingia	List 1B.1	E		Meadows and seeps, Vernal pools; 1400-1500 m	SDG
<i>Dryopteris filix-mas</i> male fern	List 2.3			Upper montane coniferous forest (granitic, rocky substrates); 2400-3100 m	MNO, SBD
<i>Dudleya abramsii</i> ssp. <i>murina</i> mouse-gray dudleya	List 1B.3			Chaparral, Cismontane woodland, Valley and foothill grassland; on serpentinite; 90-440 m	SLO
<i>Dudleya alainae</i> Banner dudleya	List 3.2			Chaparral, Lower montane coniferous forest, Sonoran desert scrub; on rocky substrate; 740-1200 m	SDG
<i>Dudleya calcicola</i> limestone dudleya	List 4.3			Chaparral, Pinyon and juniper woodland; on carbonate; 500-2600 m	INY, KRN, TUL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i> San Gabriel River dudleya	List 1B.2			Chaparral; on volcanic, rocky substrates; 150-520 m	LAX
<i>Eleocharis parvula</i> small spikerush	List 4.3			Marshes and swamps; 1-3020 m	BUT, CCA, GLE, HUM, MNO, NAP, ORA, PLU, SHA, SIS, SLO, SON, VEN
<i>Eriastrum virgatum</i> virgate eriastrum	List 4.3			Coastal bluff scrub, Chaparral, Coastal dunes, Coastal scrub; on sandy substrates; 45-700 m	MNT, SBT
<i>Ericameria albida</i> white-flowered rabbitbrush	List 4.2			Chenopod scrub, Meadows and seeps, Playas; on saline or alkaline substrates; 300-1950 m	INY, KRN, MNO
<i>Ericameria cuneata</i> var. <i>macrocephala</i> Laguna Mountains goldenbush	List 1B.3			Chaparral (on granitic substrate); 1195-1850 m	SDG
<i>Ericameria ophitidis</i> serpentine goldenbush	List 4.3			Chaparral, Lower montane coniferous forest; generally on serpentinite; 1180-1690 m	SHA, TEH, TRI
<i>Erigeron aequifolius</i> Hall's daisy	List 1B.3			Broadleafed upland forest, Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; on rocky, granitic substrates; 1500-2440 m	FRE, KRN, TUL
<i>Erigeron biolettii</i> streamside daisy	List 3			Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest; in rocky, mesic habitats; 30-1100 m	HUM, MRN, MEN, NAP, SOL, SON
<i>Erigeron breweri</i> var. <i>jacinteus</i> San Jacinto Mountains daisy	List 4.3			Subalpine coniferous forest, Upper montane coniferous forest; on rocky sites; 2700-2900 m	LAX, RIV, SBD
<i>Erigeron nevadincola</i> Nevada daisy	List 2.3			Great Basin scrub, Lower montane coniferous forest, Pinyon and juniper woodland; on rocky sites; 1400-2900 m	LAS, PLA, PLU, SIE
<i>Erigeron parishii</i> Parish's daisy	List 1B.1		T	Mojavean desert scrub, Pinyon and juniper woodland; usually on carbonate, sometimes granitic substrate; 800-2000 m	SBD
<i>Erigeron petrophilus</i> var. <i>sierrensis</i> northern Sierra daisy	List 4.3			Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; sometimes on serpentinite; 300-2073 m	BUT, ELD, NEV, PLU, SIE, YUB
<i>Erigeron sanctarum</i> Saint's daisy	List 4.2			Chaparral, Cismontane woodland, Coastal scrub; 160-350 m	SBA, SCZ, SLO, SRO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Eriodictyon altissimum</i> Indian Knob mountainbalm	List 1B.1	E	E	Chaparral (maritime), Cismontane woodland, Coastal scrub; on sandstone; 80-270 m	SLO
<i>Eriogonum argillosum</i> clay-loving buckwheat	List 4.3			Cismontane woodland (on serpentinite or clay substrates); 150-800 m	MNT, SBT, SCL
<i>Eriogonum breedlovei</i> var. <i>breedlovei</i> Breedlove's buckwheat	List 1B.2			Pinyon and juniper woodland, Upper montane coniferous forest; often on carbonate; 1890-2590 m	KRN
<i>Eriogonum breedlovei</i> var. <i>shevockii</i> The Needles buckwheat	List 4.3			Pinyon and juniper woodland, Upper montane coniferous forest; on granitic, rocky substrates; 1615-2575 m	KRN, TUL
<i>Eriogonum eastwoodianum</i> Eastwood's buckwheat	List 1B.3			Cismontane woodland, Valley and foothill grassland; on sandy, shale, talus, or barren clay substrates; 200-1000 m	FRE, MNT
<i>Eriogonum evanidum</i> vanishing wild buckwheat	List 1B.1			Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; on sandy substrates; 1200-2225 m	RIV, SBD, SDG
<i>Eriogonum gossypinum</i> cottony buckwheat	List 4.2			Chenopod scrub, Valley and foothill grassland; on clay; 100-550 m	FRE, KRN, KNG, SLO
<i>Eriogonum heermannii</i> var. <i>occidentale</i> western Heermann's buckwheat	List 4.2			Cismontane woodland (on clay or shale); 600-1000 m	FRE, MNT, SBT
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i> southern mountain buckwheat	List 1B.2		T	Lower montane coniferous forest (on gravelly substrate), Pebble plain; 1770-2375 m	SBD, VEN
<i>Eriogonum kennedyi</i> var. <i>pinicola</i> Kern buckwheat	List 1B.1			Chaparral, Pinyon and juniper woodland; on clay; 1340-1950 m	KRN
<i>Eriogonum libertini</i> Dubakella Mountain buckwheat	List 4.2			Chaparral, Lower montane coniferous forest; on serpentinite; 1200-1720 m	SHA, SIS, TEH, TRI
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	List 1B.2			Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland; on serpentinite, sandy to gravelly substrates; 0-700 m	ALA, CCA, MRN, SON
<i>Eriogonum microthecum</i> var. <i>alpinum</i> northern limestone buckwheat	List 4.3			Alpine dwarf scrub, Great Basin scrub; sometimes in rocky or gravelly habitats; 2500-3300 m	ALP, MNO, SBD, TUO
<i>Eriogonum microthecum</i> var. <i>johnstonii</i> Johnston's buckwheat	List 1B.3			Subalpine coniferous forest, Upper montane coniferous forest; at rocky sites; 2225-2900 m	LAX, SBD
<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i> Bear Lake buckwheat	List 1B.1			Great Basin scrub, Lower montane coniferous forest; on clay outcrops; 2000-2100 m	SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Eriogonum nudum</i> var. <i>indictum</i> protruding buckwheat	List 4.2			Chaparral, Chenopod scrub, Cismontane woodland; on clay substrates, serpentinite; 150-1463 m	FRE, KRN, MER, MNT, SBT, SLO
<i>Eriogonum nudum</i> var. <i>regirivum</i> Kings River buckwheat	List 1B.2			Cismontane woodland (on carbonate, rocky substrates); 150-300 m	FRE
<i>Eriogonum ovalifolium</i> var. <i>vineum</i> Cushenbury buckwheat	List 1B.1		E	Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; on carbonate; 1400-2440 m	SBD
<i>Eriogonum tripodum</i> tripod buckwheat	List 4.2			Chaparral, Cismontane woodland; often on serpentinite; 200-1600 m	AMA, COL, ELD, GLE, LAK, MPA, NAP, PLA, TEH, TUO
<i>Eriogonum umbellatum</i> var. <i>bahiiforme</i> bay buckwheat	List 4.2			Alpine boulder and rock field, Chaparral, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest; on rocky sites, usually on serpentinite; 1700-2800 m	ALA, COL, CCA, GLE, HUM, LAK, MEN, MNT, NAP, SBT, SCL, SIS, SJQ, STA
<i>Eriogonum umbellatum</i> var. <i>minus</i> alpine sulfur-flowered buckwheat	List 4.3			Meadows and seeps, Upper montane coniferous forest; on volcanic, rocky substrates; 1855-2620 m	LAX, SBD
<i>Eriogonum umbellatum</i> var. <i>torreyanum</i> Donner Pass buckwheat	List 1B.2			Cismontane woodland, Lower montane coniferous forest; on rocky sites, often on serpentinite; 700-2200 m	NEV, PLA, SIE
<i>Eriogonum vestitum</i> Idria buckwheat	List 4.3			Valley and foothill grassland; 235-900 m	FRE, MER, SBT
<i>Eriophyllum confertiflorum</i> var. <i>tanacetiflorum</i> tansy-leaved woolly sunflower	List 4.3			Cismontane woodland, Lower montane coniferous forest; 305-1340 m	CAL, MPA
<i>Eriophyllum jepsonii</i> Jepson's woolly sunflower	List 4.3			Chaparral, Cismontane woodland, Coastal scrub; sometimes on serpentinite; 200-1025 m	ALA, CCA, KRN, MNT, SBT, SCL, SLO, STA, VEN
<i>Eriophyllum lanatum</i> var. <i>hallii</i> Fort Tejon woolly sunflower	List 1B.1			Chaparral, Cismontane woodland; 1065-1500 m	KRN, SBA
<i>Eriophyllum lanatum</i> var. <i>obovatum</i> southern Sierra woolly sunflower	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on sandy loam substrates; 1114-2500 m	FRE, KRN, SBD, TUL
<i>Eriophyllum nubigenum</i> Yosemite woolly sunflower	List 1B.3			Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; on gravelly, granitic substrates; 1525-2750 m	MAD, MPA, TUO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery	List 1B.1			Vernal pools; 3-45 m	ALA, SBT, SCL, SDG, SLO
<i>Erysimum capitatum</i> ssp. <i>lomdocense</i> San Luis Obispo wallflower	List 4.2			Chaparral, Coastal scrub; on sandy substrates; 60-500 m	SBA, SLO
<i>Erysimum franciscanum</i> San Francisco wallflower	List 4.2			Chaparral, Coastal dunes, Coastal scrub, Valley and foothill grassland; often on serpentinite or granitic substrates, sometimes along roadsides; 0-550 m	MRN, SCL, SCR, SFO, SMT, SON
<i>Erysimum insulare</i> ssp. <i>suffrutescens</i> suffrutescent wallflower	List 4.2			Coastal bluff scrub, Chaparral (maritime), Coastal dunes, Coastal scrub; 0-150 m	LAX, SBA, SLO, VEN
<i>Eschscholzia hypocoides</i> San Benito poppy	List 4.3			Chaparral, Cismontane woodland, Valley and foothill grassland; on serpentinite clay; 325-1500 m	FRE, IMP, MEN, MNT, SBT, SLO
<i>Eschscholzia procera</i> Kernville poppy	List 3			Cismontane woodland (on sandy floodplain); 810-1025 m	KRN
<i>Eucnide rupestris</i> annual rock-nettle	List 2.2			Sonoran desert scrub; 500-600 m	IMP, SDG
<i>Fraxinus parryi</i> chaparral ash	List 2.2			Chaparral; 213-620 m	SDG
<i>Fritillaria agrestis</i> stinkbells	List 4.2			Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland; on clay substrates and sometimes serpentinite; 10-1555 m	ALA, CCA, FRE, KRN, MPA, MEN, MER, MNT, PLA, SAC, SBT, SBA, SCL, SCR, SLO, SMT, STA, TUO, VEN, YUB
<i>Fritillaria brandegeei</i> Greenhorn fritillary	List 1B.3			Lower montane coniferous forest (on granitic substrates); 1415-2100 m	KRN, TUL
<i>Fritillaria pinetorum</i> pine fritillary	List 4.3			Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest; on granitic or metamorphic substrates; 1800-3300 m	ALP, FRE, KRN, LAX, MNO, SBD, TUL, VEN
<i>Galium andrewsii</i> ssp. <i>gatense</i> serpentine bedstraw	List 4.2			Chaparral, Cismontane woodland, Lower montane coniferous forest; on serpentinite, rocky sites; 150-1450 m	ALA, COL, CCA, FRE, LAX, MNT, SBT, SCL, SLO
<i>Galium angustifolium</i> ssp. <i>gabrielense</i> San Antonio Canyon bedstraw	List 4.3			Chaparral, Lower montane coniferous forest; on granitic, sandy or rocky substrates; 1200-2650 m	LAX, SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Galium angustifolium</i> ssp. <i>gracillimum</i> slender bedstraw	List 4.2			Joshua tree "woodland", Sonoran desert scrub; on granitic, rocky substrates; 130-1550 m	RIV, SBD
<i>Galium angustifolium</i> ssp. <i>jacinticum</i> San Jacinto Mountains bedstraw	List 1B.3			Lower montane coniferous forest; 1350-2100 m	RIV
<i>Galium angustifolium</i> ssp. <i>onycense</i> Onyx Peak bedstraw	List 1B.3			Cismontane woodland, Pinyon and juniper woodland; on granitic, rocky substrates; 860-2300 m	KRN, TUL
<i>Galium cliftonsmithii</i> Santa Barbara bedstraw	List 4.3			Cismontane woodland; 200-1220 m	LAX, MNT, SBA, SLO, VEN
<i>Galium jepsonii</i> Jepson's bedstraw	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on granitic, rocky or gravelly substrates; 1540-2500 m	LAX, SBD
<i>Galium johnstonii</i> Johnston's bedstraw	List 4.3			Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland; 1220-2300 m	LAX, RIV, SBD, SDG
<i>Geraea viscida</i> sticky geraea	List 2.3			Chaparral (often in disturbed areas); 450-1700 m	IMP, SDG
<i>Gilia interior</i> inland gilia	List 4.3			Cismontane woodland, Joshua tree "woodland", Lower montane coniferous forest; at rocky sites; 700-1700 m	KRN, TUL
<i>Gilia latiflora</i> ssp. <i>cuyamensis</i> Cuyama gilia	List 4.3			Pinyon and juniper woodland (on sandy substrates); 600-2000 m	KRN, LAX, SBA, SLO, VEN
<i>Gilia leptantha</i> ssp. <i>leptantha</i> San Bernardino gilia	List 1B.3			Lower montane coniferous forest (on sandy or gravelly substrates); 1500-2560 m	SBD
<i>Gilia leptantha</i> ssp. <i>pinetorum</i> pine gilia	List 4.3			Lower montane coniferous forest (on rocky or sandy substrate); 1500-2800 m	KRN, SBA, SLO, VEN
<i>Githopsis pulchella</i> ssp. <i>serpentinicola</i> serpentine bluecup	List 4.3			Cismontane woodland; on serpentinite or lone formation; 320-610 m	AMA, ELD, MPA, STA, TUO
<i>Githopsis tenella</i> delicate bluecup	List 1B.3			Chaparral, Cismontane woodland; in mesic habitats; 1100-1900 m	KRN, MNT, TUL
<i>Goodmania luteola</i> golden goodmania	List 4.2			Mojavean desert scrub, Meadows and seeps, Playas, Valley and foothill grassland; on alkaline or clay substrates; 20-2200 m	FRE, INY, KRN, LAX, MAD, MNO, TUL
<i>Grindelia hirsutula</i> var. <i>hallii</i> San Diego gumplant	List 1B.2			Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland; 185-1745 m	SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Grusonia parishii</i> Parish club-cholla	List 2.3			Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub; on sandy, rocky substrates; 300-1524 m	IMP, RIV, SBD
<i>Hackelia amethystina</i> amethyst stickseed	List 4.3			Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; in openings, disturbed areas; 1500-2130 m	GLE, LAK, LAS, MEN, PLA, PLU, TEH, TRI
<i>Harmonia doris-nilesiae</i> Niles' harmonia	List 1B.1			Chaparral, Cismontane woodland, Lower montane coniferous forest; usually on serpentinite, in openings, on rocky sites; 650-1660 m	SHA, TEH, TRI
<i>Harmonia stebbinsii</i> Stebbins' harmonia	List 1B.2			Chaparral, Lower montane coniferous forest; on serpentinite; 400-1580 m	SHA, TEH, TRI
<i>Harpagonella palmeri</i> Palmer's grapplinghook	List 4.2			Chaparral, Coastal scrub, Valley and foothill grassland; on clay; 20-955 m	LAX, ORA, RIV, SCT, SDG
<i>Helianthus exilis</i> serpentine sunflower	List 4.2			Chaparral, Cismontane woodland; at seeps on serpentinite; 150-1525 m	COL, GLE, LAK, NAP, SCL, SHA, SIS, SON, TEH, TRI
<i>Hesperevax caulescens</i> hogwallow starfish	List 4.2			Valley and foothill grassland (in mesic habitats, on clay substrates), Vernal pools; 0-505 m	ALA, AMA, BUT, COL, CCA, FRE, GLE, KRN, MER, MNT, NAP, SAC, SDG, SJQ, SLO, SOL, STA, SUT, TEH, YOL
<i>Heterotheca shevockii</i> Shevock's golden-aster	List 1B.3			Chaparral, Cismontane woodland; on sandy substrates; 230-900 m	KRN
<i>Heuchera abramsii</i> Abrams' alumroot	List 4.3			Upper montane coniferous forest (at rocky sites); 2800-3500 m	LAX, SBD
<i>Heuchera brevistaminea</i> Laguna Mountains alumroot	List 1B.3			Broadleaved upland forest, Chaparral, Cismontane woodland, Riparian forest; at rocky sites; 1370-2000 m	SDG
<i>Heuchera elegans</i> urn-flowered alumroot	List 4.3			Cismontane woodland, Lower montane coniferous forest, Riparian forest (montane), Upper montane coniferous forest; on rocky sites; 1155-2650 m	KRN, LAX, SBD
<i>Heuchera parishii</i> Parish's alumroot	List 1B.3			Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; on rocky, sometimes carbonate substrates; 1500-3800 m	RIV, SBD, SIS

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Heuchera rubescens</i> var. <i>versicolor</i> San Diego County alumroot	List 2.3			Chaparral, Lower montane coniferous forest; on rocky substrate; 1500-4000 m	SDG
<i>Holocarpha virgata</i> ssp. <i>elongata</i> graceful tarplant	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; 60-1100 m	ORA, RIV, SDG
<i>Hordeum intercedens</i> vernal barley	List 3.2			Coastal dunes, Coastal scrub, Valley and foothill grassland (on saline flats and in depressions), Vernal pools; 5-1000 m	ANA, FRE, KNG, LAX, MNO, ORA, RIV, SBR, SBT, SBA, SCM, SCT, SCZ, SDG, SMI, SMT, SNI, SRO, VEN
<i>Horkelia wilderae</i> Barton Flats horkelia	List 1B.1			Chaparral (edges), Lower montane coniferous forest, Upper montane coniferous forest; 1675-2925 m	SBD
<i>Horkelia yadonii</i> Santa Lucia horkelia	List 4.2			Broadleafed upland forest, Chaparral, Cismontane woodland, Meadows and seeps, Riparian woodland; on granitic, sandy substrates; 300-1900 m	MNT, SBA, SLO
<i>Horsfordia alata</i> pink velvet-mallow	List 4.3			Sonoran desert scrub (on rocky sites); 100-500 m	IMP, RIV
<i>Horsfordia newberryi</i> Newberry's velvet-mallow	List 4.3			Sonoran desert scrub (on rocky sites); 3-800 m	IMP, RIV, SDG
<i>Hulsea californica</i> San Diego sunflower	List 1B.3			Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; in openings and burned areas; 915-2915 m	RIV, SDG
<i>Hulsea mexicana</i> Mexican hulsea	List 2.3			Chaparral (on volcanic substrates, often on burns or disturbed areas); 1200-1200 m	IMP, SDG
<i>Hulsea vestita</i> ssp. <i>callicarpha</i> beautiful hulsea	List 4.2			Chaparral, Lower montane coniferous forest; on rocky or gravelly, granitic substrates; 915-3050 m	RIV, SDG
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i> San Gabriel Mountains sunflower	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on rocky sites; 1500-2500 m	LAX, SBD, VEN
<i>Hulsea vestita</i> ssp. <i>parryi</i> Parry's sunflower	List 4.3			Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; on granitic or carbonate, rocky substrates, in openings; 1370-2895 m	KRN, LAX, MNO, SBD, VEN
<i>Hulsea vestita</i> ssp. <i>pygmaea</i> pygmy hulsea	List 1B.3			Alpine boulder and rock field, Subalpine coniferous forest; on granitic, gravelly substrates; 2835-3900 m	SBD, TUL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Hymenothrix wrightii</i> Wright's hymenothrix	List 4.3			Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; 1400-1550 m	SDG
<i>Imperata brevifolia</i> California satintail	List 2.1			Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; in mesic habitats; 0-500 m	BUT, FRE, INY, KRN, IMP, LAK, LAX, ORA, RIV, SBD, TEH, TUL, VEN
<i>Ipomopsis tenuifolia</i> slender-leaved ipomopsis	List 2.3			Chaparral, Pinyon and juniper woodland, Sonoran desert scrub; on gravelly or rocky substrates; 100-1200 m	IMP, SDG
<i>Iris longipetala</i> coast iris	List 4.2			Coastal prairie, Lower montane coniferous forest, Meadows and seeps; in mesic habitats; 0-600 m	ALA, CCA, HUM, MRN, MEN, MNT, NAP, SBT, SCL, SFO, SMT, SOL, SON
<i>Isocoma menziesii</i> var. <i>diabolica</i> Satan's goldenbush	List 4.2			Cismontane woodland; 15-400 m	SBT, SCL
<i>Ivesia sericoleuca</i> Plumas ivesia	List 1B.2			Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools; in vernal mesic habitats, usually on volcanic substrates; 1465-2200 m	LAS, NEV, PLA, PLU, SIE
<i>Jepsonia heterandra</i> foothill jepsonii	List 4.3			Cismontane woodland, Lower montane coniferous forest; on rocky, metamorphic sites; 50-500 m	AMA, CAL, ELD, MPA, STA, TUO
<i>Juglans californica</i> Southern California black walnut	List 4.2			Chaparral, Cismontane woodland, Coastal scrub; alluvial habitats; 50-900 m	LAX, ORA, RIV, SBA, SBD, SDG, VEN
<i>Juncus acutus</i> ssp. <i>leopoldii</i> southwestern spiny rush	List 4.2			Coastal dunes (in mesic habitats), Meadows and seeps (alkaline seeps), Marshes and swamps (coastal salt); 3-900 m	IMP, LAX, ORA, SBA, SDG, SLO, VEN
<i>Juncus cooperi</i> Cooper's rush	List 4.3			Meadows and seeps (in mesic, alkaline or saline habitats); -260-1770 m	IMP, INY, RIV, SBD, SDG
<i>Juncus duranii</i> Duran's rush	List 4.3			Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; in mesic habitats; 1768-2804 m	LAX, RIV, SBD
<i>Juncus marginatus</i> var. <i>marginatus</i> red-anthered rush	List 2.2			Marshes and swamps; 820-1000 m	NEV

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Juncus nodosus</i> knotted rush	List 2.3			Meadows and seeps, Marshes and swamps (along lake margins); 30-1980 m	INY, SBD, STA, TUL
<i>Lasthenia ferrisiae</i> Ferris' goldfields	List 4.2			Vernal pools (alkaline, clay substrates); 20-700 m	ALA, BUT, COL, CCA, FRE, KRN, KNG, MER, MNT, SAC, SBT, SJQ, SLO, SOL, STA, TUL, VEN, YOL
<i>Lasthenia leptalea</i> Salinas Valley goldfields	List 4.3			Cismontane woodland, Valley and foothill grassland; 60-1065 m	KRN, MNT, SLO
<i>Lathyrus splendens</i> pride-of-California	List 4.3			Chaparral; 200-1525 m	SDG
<i>Lavatera assurgentiflora</i> ssp. <i>assurgentiflora</i> island mallow	List 1B.1			Coastal bluff scrub, Coastal scrub; on sandy or rocky substrates; 15-245 m	ANA, SDG, SMI, SNI, SRO
<i>Layia carnosa</i> beach layia	List 1B.1	E	E	Coastal dunes, Coastal scrub (on sandy substrates); 0-60 m	HUM, MRN, MNT, SBA, SFO
<i>Lepechinia fragrans</i> fragrant pitcher sage	List 4.2			Chaparral; 20-1310 m	LAX, SCT, SCZ, SRO, VEN
<i>Lepechinia rossii</i> Ross' pitcher sage	List 1B.2			Chaparral; 305-790 m	LAX, VEN
<i>Lepidium jaredii</i> ssp. <i>jaredii</i> Jared's pepper-grass	List 1B.2			Valley and foothill grassland (on alkaline, adobe substrates); 335-1005 m	KRN, SLO
<i>Leptosiphon acicularis</i> bristly leptosiphon	List 4.2			Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland; 55-1500 m	ALA, BUT, CCA, FRE, HUM, LAK, MRN, MEN, NAP, SCL, SMT, SON
<i>Leptosiphon ambiguus</i> serpentine leptosiphon	List 4.2			Cismontane woodland, Coastal scrub, Valley and foothill grassland; usually on serpentinite; 120-1130 m	ALA, CCA, MER, SBT, SCL, SCR, SJQ, SMT, STA
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i> Santa Rosa Mountains leptosiphon	List 1B.3			Pinyon and juniper woodland, Sonoran desert scrub; 1000-2000 m	RIV, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	List 4.2			Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal dunes, Coastal prairie, Coastal scrub, Valley and foothill grassland; usually on sandy substrates; 5-1220 m	ALA, KRN, MAD, MRN, MER, MNT, SBA, SCL, SCR, SFO, SLO, SMT, SON
<i>Leptosiphon latisectus</i> broad-lobed leptosiphon	List 4.3			Broadleafed upland forest, Cismontane woodland; 170-1500 m	COL, DNT, GLE, HUM, LAK, MEN, NAP, SHA, SON, TEH, TRI
<i>Lesquerella kingii</i> ssp. <i>bernardina</i> San Bernardino Mountains bladderpod	List 1B.1		E	Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest; usually on carbonate; 1850-2700 m	SBD
<i>Lessingia glandulifera</i> var. <i>tomentosa</i> Warner Springs lessingia	List 1B.3			Chaparral (on sandy substrates); 870-1220 m	SDG
<i>Lessingia hololeuca</i> woolly-headed lessingia	List 3			Broadleafed upland forest, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; on clay, serpentinite; 15-305 m	ALA, MRN, MNT, NAP, SCL, SMT, SOL, SON, YOL
<i>Lessingia occidentalis</i> western lessingia	List 4.3			Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; on clay or serpentinite; 450-850 m	FRE, MNT, SBT
<i>Lessingia tenuis</i> spring lessingia	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest; in openings; 300-2150 m	ALA, KRN, MNT, SBT, SBA, SCL, SLO, STA, VEN
<i>Lewisia brachycalyx</i> short-sepaled lewisia	List 2.2			Lower montane coniferous forest, Meadows and seeps; in mesic habitats; 1370-2300 m	SBD, SDG
<i>Lewisia disepala</i> Yosemite lewisia	List 1B.2			Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; on granitic, sandy substrates; 1035-3500 m	FRE, KRN, MAD, MPA, TUL, TUO
<i>Lilium humboldtii</i> ssp. <i>humboldtii</i> Humboldt lily	List 4.2			Chaparral, openings, Cismontane woodland, openings, Lower montane coniferous forest; in openings; 90-1195 m	AMA, BUT, CAL, ELD, FRE, MAD, MPA, NEV, PLA, TEH, TUO, YUB
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i> ocellated Humboldt lily	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; in openings; 30-1800 m	ANA, LAX, ORA, RIV, SBA, SBD, SCZ, SDG, SLO, SRO, VEN

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Lilium rubescens</i> redwood lily	List 4.2			Broadleaved upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest; sometimes on serpentinite, sometimes along roadsides; 30-1715 m	DNT, GLE, HUM, LAK, MEN, NAP, SCR, SHA, SIS, SON, TRI
<i>Limnanthes floccosa</i> ssp. <i>floccosa</i> woolly meadowfoam	List 4.2			Chaparral, Cismontane woodland, Valley and foothill grassland, Vernal pools; in vernal mesic habitats; 60-1095 m	BUT, LAK, NAP, SHA, SIS, TEH, TRI
<i>Linanthus bellus</i> desert beauty	List 2.3			Chaparral (on sandy substrates); 1000-1400 m	SDG
<i>Lomatium repostum</i> Napa lomatium	List 4.3			Chaparral, Cismontane woodland; on serpentinite; 90-830 m	LAK, NAP, SOL, SON
<i>Lomatium shevockii</i> Owens Peak lomatium	List 1B.3			Lower montane coniferous forest, Upper montane coniferous forest; on rocky sites; 1770-2200 m	KRN
<i>Lotus crassifolius</i> var. <i>otayensis</i> Otay Mountain lotus	List 1B.1			Chaparral (on metavolcanic substrates, often in disturbed areas); 915-1005 m	SDG
<i>Lotus formosissimus</i> harlequin lotus	List 4.2			Broadleaved upland forest, Coastal bluff scrub, Closed-cone coniferous forest, Cismontane woodland, Coastal prairie, Coastal scrub, Meadows and seeps, Marshes and swamps, North Coast coniferous forest, Valley and foothill grassland; 0-700 m	DNT, HUM, MRN, MEN, MNT, SBT, SCR, SFO, SLO, SMT, SON
<i>Lotus haydonii</i> pygmy lotus	List 1B.3			Pinyon and juniper woodland, Sonoran desert scrub; on rocky sites; 520-1200 m	IMP, SDG
<i>Lupinus excubitus</i> var. <i>johnstonii</i> interior bush lupine	List 4.3			Chaparral, Lower montane coniferous forest; on decomposed granitic; 1500-2500 m	LAX
<i>Lupinus excubitus</i> var. <i>medius</i> Mountain Springs bush lupine	List 1B.3			Pinyon and juniper woodland, Sonoran desert scrub; 425-1370 m	IMP, SDG
<i>Lupinus ludovicianus</i> San Luis Obispo County lupine	List 1B.2			Chaparral, Cismontane woodland; on sandstone or sandy substrates; 50-525 m	SLO
<i>Lycium californicum</i> California box-thorn	List 4.2			Coastal bluff scrub, Coastal scrub; 5-150 m	ANA, LAX, ORA, SBR, SBD, SCM, SCT, SCZ, SDG, SMI, SNI

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Lycopodiella inundata</i> inundated bog club-moss	List 2.2			Bogs and fens (in coastal areas), Lower montane coniferous forest (in mesic habitats), Marshes and swamps (along lake margins); 5-1000 m	HUM, NEV
<i>Lyrocarpa coulteri</i> var. <i>palmeri</i> Coulter's lyrepod	List 4.3			Sonoran desert scrub (on gravelly or rocky substrates); 120-795 m	IMP, SDG
<i>Malacothamnus niveus</i> San Luis Obispo County bush-mallow	List 4.3			Chaparral; 365-790 m	MNT, SBA, SLO
<i>Malacothrix incana</i> dunedelion	List 4.3			Coastal dunes, Coastal scrub; 2-35 m	SBA, SCM, SCZ, SDG, SLO, SMI, SNI, SRO, VEN
<i>Malacothrix phaeocarpa</i> dusky-fruited malacothrix	List 4.3			Closed-cone coniferous forest, Chaparral; in openings, burned or disturbed areas; 100-1400 m	MNT, SBA, SCL, SLO
<i>Malacothrix saxatilis</i> var. <i>saxatilis</i> cliff malacothrix	List 4.2			Coastal bluff scrub, Coastal scrub; 3-200 m	ORA, SBA, VEN
<i>Malaxis monophyllos</i> ssp. <i>brachypoda</i> white bog adder's-mouth	List 2.1			Bogs and fens, Meadows and seeps, Upper montane coniferous forest; in mesic habitats; 2200-2743 m	RIV, SBD
<i>Malperia tenuis</i> brown turbans	List 2.3			Sonoran desert scrub (on sandy substrates); 15-335 m	IMP, SDG
<i>Meesia triquetra</i> three-ranked hump-moss	List 4.2			Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest; mesic sites; 1300-2953 m	ALP, BUT, ELD, FRE, HUM, LAS, MAD, MPA, NEV, PLA, PLU, RIV, SHA, SIE, SIS, TEH, TUL
<i>Meesia uliginosa</i> broad-nerved hump-moss	List 2.2			Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest; on sites with damp soil; 1300-2804 m	ELD, FRE, MAD, NEV, PLU, RIV, SIE, SIS, TEH, TUL
<i>Mentzelia eremophila</i> solitary blazing star	List 4.2			Mojavean desert scrub; 700-1220 m	INY, KRN, SBD
<i>Mentzelia hirsutissima</i> hairy stickleaf	List 2.3			Sonoran desert scrub (on rocky sites); 0-700 m	IMP, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Micropus amphibolus</i> Mt. Diablo cottonweed	List 3.2			Broadleafed upland forest, Chaparral, Cismontane woodland, Valley and foothill grassland; in rocky habitats; 45-825 m	ALA, COL, CCA, LAK, MRN, MNT, NAP, SBA, SCL, SCR, SJQ, SLO, SOL, SON
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> small-flowered microseris	List 4.2			Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; on clay; 15-1070 m	LAX, ORA, RIV, SCM, SCT, SDG
<i>Microseris sylvatica</i> sylvan microseris	List 4.2			Chaparral, Cismontane woodland, Great Basin scrub, Pinyon and juniper woodland, Valley and foothill grassland; on serpentinite; 45-1500 m	ALA, AMA, BUT, COL, CCA, FRE, GLE, KRN, LAS, LAX, MER, NAP, NEV, PLA, SBT, SCL, SOL, STA, SUT, TEH, TUL, TUO, YOL
<i>Mimulus aridus</i> low bush monkeyflower	List 4.3			Chaparral (on rocky sites); 750-1100 m	IMP, SDG
<i>Mimulus clevelandii</i> Cleveland's bush monkeyflower	List 4.2			Chaparral, Cismontane woodland, Lower montane coniferous forest; on gabbroic, rocky substrates, often in disturbed areas or openings; 815-2000 m	ORA, RIV, SDG
<i>Mimulus diffusus</i> Palomar monkeyflower	List 4.3			Chaparral, Lower montane coniferous forest; on sandy or gravelly substrates; 1220-1830 m	ORA, RIV, SDG
<i>Mimulus exiguus</i> San Bernardino Mountains monkeyflower	List 1B.2			Meadows and seeps, Pebble plain, Upper montane coniferous forest; in mesic habitats, on clay; 1800-2315 m	SBD
<i>Mimulus filicaulis</i> slender-stemmed monkeyflower	List 1B.2			Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; in vernal mesic habitats; 900-1750 m	MPA, TUO
<i>Mimulus fremontii</i> var. <i>vandenbergensis</i> Vandenberg monkeyflower	List 1B.1			Chaparral (at Burton Mesa), Cismontane woodland, Coastal dunes; Central dune scrub; on sandy substrates, often in disturbed areas; 75-120 m	SBA
<i>Mimulus glaucescens</i> shield-bracted monkeyflower	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; on serpentinite at seeps; 60-1240 m	BUT, COL, LAK, NEV, SHA, TEH
<i>Mimulus grayi</i> Gray's monkeyflower	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; in mesic habitats; 550-2900 m	FRE, MAD, MPA, TUL, TUO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Mimulus inconspicuus</i> small-flowered monkeyflower	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest; in mesic habitats; 274-760 m	AMA, BUT, CAL, FRE, MPA, TUO
<i>Mimulus johnstonii</i> Johnston's monkeyflower	List 4.3			Lower montane coniferous forest (on scree, in disturbed areas, on rocky or gravelly sites, along roadsides); 975-2920 m	LAX, SBD
<i>Mimulus laciniatus</i> cut-leaved monkeyflower	List 4.3			Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; 490-2650 m	AMA, BUT, FRE, MAD, MPA, PLU, TUL, TUO
<i>Mimulus microphyllus</i> small-leaved monkeyflower	List 4.3			Meadows and seeps; 1770-2450 m	KRN
<i>Mimulus mohavensis</i> Mojave monkeyflower	List 1B.2			Joshua tree "woodland", Mojavean desert scrub; on sandy or gravelly substrates, often in washes; 600-1200 m	SBD
<i>Mimulus purpureus</i> little purple monkeyflower	List 1B.2			Meadows and seeps, Pebble plain, Upper montane coniferous forest; 1900-2300 m	RIV, SBD
<i>Mimulus shevockii</i> Kelso Creek monkeyflower	List 1B.2			Joshua tree "woodland", Pinyon and juniper woodland; on granitic or metamorphic, sandy or gravelly substrates; 800-1340 m	KRN
<i>Mirabilis tenuiloba</i> slender-lobed four o'clock	List 4.3			Sonoran desert scrub; 300-1095 m	IMP, RIV, SBD, SDG
<i>Monardella antonina ssp. benitensis</i> San Benito monardella	List 4.3			Chaparral (on serpentinite); 500-915 m	MNT, SBT, SLO
<i>Monardella candicans</i> Sierra monardella	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest; sandy or gravelly sites; 150-800 m	AMA, CAL, ELD, FRE, KRN, MAD, MPA, NEV, PLA, SJQ, STA, TUL, TUO
<i>Monardella cinerea</i> gray monardella	List 4.3			Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; 1800-3050 m	LAX, SBD
<i>Monardella leucocephala</i> Merced monardella	List 1A			Valley and foothill grassland (in sandy, mesic habitats); 35-100 m	MER, STA
<i>Monardella nana ssp. leptosiphon</i> San Felipe monardella	List 1B.2			Chaparral, Lower montane coniferous forest; 1200-1855 m	RIV, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Monardella stoneana</i> Jennifer's monardella	List 1B.2			Closed-cone coniferous forest, Chaparral, Coastal scrub, Riparian scrub; usually on rocky intermittent streambeds; 10-790 m	SDG
<i>Monardella undulata</i> curly-leaved monardella	List 4.2			Closed-cone coniferous forest, Chaparral, Coastal dunes, Coastal prairie, Coastal scrub, Lower montane coniferous forest (ponderosa pine sandhills); on sandy substrates; 0-305 m	MRN, MNT, SBA, SCR, SFO, SLO, SMT, SON
<i>Monardella viridis</i> ssp. <i>saxicola</i> rock monardella	List 4.2			Chaparral, Lower montane coniferous forest; on rocky sites; 500-1800 m	LAX, SBD
<i>Monardella viridis</i> ssp. <i>viridis</i> green monardella	List 4.3			Broadleaved upland forest, Chaparral, Cismontane woodland; 100-1010 m	LAK, NAP, SOL, SON
<i>Mucronea californica</i> California spineflower	List 4.2			Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; on sandy substrates; 0-1400 m	KRN, LAX, MNT, RIV, SBA, SBD, SDG, SLO, VEN
<i>Muhlenbergia appressa</i> appressed muhly	List 2.2			Coastal scrub, Mojavean desert scrub, Valley and foothill grassland; on rocky sites; 20-1600 m	LAX, SBD, SCM
<i>Muhlenbergia californica</i> California muhly	List 4.3			Chaparral, Coastal scrub, Lower montane coniferous forest, Meadows and seeps; in mesic habitats, at seeps and streambanks; 100-2000 m	LAX, RIV, SBD
<i>Muhlenbergia jonesii</i> Jones' muhly	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; 1130-2130 m	LAS, MOD, MNO, NEV, PLA, PLU, SHA, SIS, TRI
<i>Muilla coronata</i> crowned muilla	List 4.2			Chenopod scrub, Joshua tree "woodland", Mojavean desert scrub, Pinyon and juniper woodland; 765-1960 m	INY, KRN, LAX, SBD, TUL
<i>Navarretia cotulifolia</i> cotula navarretia	List 4.2			Chaparral, Cismontane woodland, Valley and foothill grassland; on adobe substrates; 4-1830 m	ALA, BUT, COL, CCA, GLE, LAK, MRN, MEN, NAP, SBT, SCL, SIS, SOL, SON, SUT, YOL
<i>Navarretia eriocephala</i> hoary navarretia	List 4.3			Cismontane woodland, Valley and foothill grassland; on vernal mesic sites; 105-400 m	AMA, CAL, ELD, PLA, SAC
<i>Navarretia heterandra</i> Tehama navarretia	List 4.3			Valley and foothill grassland (in mesic habitats), Vernal pools; 30-1010 m	BUT, COL, LAK, NAP, SHA, TEH, TRI, YUB

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Navarretia jaredii</i> Paso Robles navarretia	List 4.3			Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools; on clay, serpentinite substrates; 200-645 m	FRE, MNT, SBT, SBA, SLO, VEN
<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i> adobe navarretia	List 4.2			Valley and foothill grassland (in vernal mesic habitats), Vernal pools (sometimes); on clay substrates, sometimes on serpentinite; 100-1000 m	ALA, BUT, COL, CCA, FRE, KRN, MER, MNT, PLA, SUT, TUL
<i>Navarretia prolifera</i> ssp. <i>lutea</i> yellow bur navarretia	List 4.3			Chaparral, Cismontane woodland; 900-1402 m	ELD, PLA
<i>Nemacladus gracilis</i> slender nemacladus	List 4.3			Cismontane woodland, Valley and foothill grassland; on sandy or gravelly substrates; 120-1900 m	FRE, KRN, KNG, LAX, MER
<i>Nemophila parviflora</i> var. <i>quercifolia</i> oak-leaved nemophila	List 4.3			Cismontane woodland, Lower montane coniferous forest; 700-2200 m	FRE, KRN, MAD, TUL
<i>Ophioglossum californicum</i> California adder's-tongue	List 4.2			Chaparral, Valley and foothill grassland, Vernal pools (at margins); in mesic habitats; 60-525 m	AMA, BUT, MPA, MER, MNT, ORA, SBD, SDG, STA, TUO
<i>Ophioglossum pusillum</i> northern adder's-tongue	List 2.2			Marshes and swamps (along margins), Valley and foothill grassland (on mesic sites); 1000-2000 m	ELD, LAK, MEN, SIS
<i>Opuntia munzii</i> Munz' cholla	List 1B.3			Sonoran desert scrub (on sandy or gravelly substrates); 150-600 m	IMP, RIV
<i>Opuntia wigginsii</i> Wiggins' cholla	List 3.3			Sonoran desert scrub (on sandy substrates); 30-885 m	IMP, RIV, SBD, SDG
<i>Opuntia wolfii</i> Wolf's cholla	List 4.3			Sonoran desert scrub; 100-1200 m	IMP, SDG
<i>Orobanche parishii</i> ssp. <i>brachyloba</i> short-lobed broomrape	List 4.2			Coastal bluff scrub, Coastal dunes, Coastal scrub; on sandy substrates; 3-305 m	LAX, SBA, SCT, SCZ, SDG, SLO, SMI, SNI, SRO
<i>Orobanche valida</i> ssp. <i>valida</i> Rock Creek broomrape	List 1B.2			Chaparral, Pinyon and juniper woodland; on granitic substrates; 1250-2000 m	LAX, SBD, VEN
<i>Orthotrichum shevockii</i> Shevock's bristle-moss	List 1B.3			Joshua tree "woodland", Pinyon and juniper woodland; on granitic, rocky substrate; 750-2100 m	KRN, MNO
<i>Oxytropis oreophila</i> var. <i>oreophila</i> rock-loving oxytrope	List 2.3			Alpine boulder and rock field, Subalpine coniferous forest; on gravelly or rocky substrates; 3400-3800 m	SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Packera bernardina</i> San Bernardino ragwort	List 1B.2			Meadows and seeps (sometimes alkaline), Pebble plain, Upper montane coniferous forest; 1800-2300 m	SBD
<i>Packera ionophylla</i> Tehachapi ragwort	List 4.3			Lower montane coniferous forest, Upper montane coniferous forest; on granitic, rocky substrates; 1500-2700 m	KRN, LAX, SBD
<i>Parnassia cirrata</i> var. <i>cirrata</i> San Bernardino grass-of-Parnassus	List 1B.3			Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; in mesic habitats, on streamsides, sometimes on calcareous substrates; 1250-2440 m	LAX, SBD, SHA, SIS, TRI
<i>Penstemon clevelandii</i> var. <i>connatus</i> San Jacinto beardtongue	List 4.3			Chaparral, Pinyon and juniper woodland, Sonoran desert scrub; on rocky sites; 400-1500 m	IMP, RIV, SDG
<i>Penstemon heterodoxus</i> var. <i>shastensis</i> Shasta beardtongue	List 4.3			Broadleafed upland forest, Chaparral, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; on volcanic, clay loam substrates; 1100-2400 m	BUT, LAS, MOD, PLU, SHA, SIS
<i>Penstemon thurberi</i> Thurber's beardtongue	List 4.2			Chaparral, Joshua tree "woodland", Pinyon and juniper woodland, Sonoran desert scrub; 500-1220 m	IMP, RIV, SBD, SDG
<i>Pentachaeta aurea</i> golden-rayed pentachaeta	List 4.2			Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland; 80-1850 m	LAX, ORA, RIV, SBD, SDG
<i>Pentachaeta fragilis</i> fragile pentachaeta	List 4.3			Chaparral, Lower montane coniferous forest (in sandy habitats); 45-2100 m	KRN, MAD, MER, MNT, SBA, SLO, TUO
<i>Perideridia bacigalupii</i> Bacigalupi's yampah	List 4.2			Chaparral, Lower montane coniferous forest; on serpentinite; 450-1000 m	AMA, BUT, CAL, KRN, MAD, MPA, NEV, TUO, YUB
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i> Gairdner's yampah	List 4.2			Broadleafed upland forest, Chaparral, Coastal prairie, Valley and foothill grassland, Vernal pools; in vernal mesic habitats; 0-365 m	CCA, DNT, KRN, LAX, MRN, MEN, MNT, NAP, ORA, SBT, SCL, SCR, SDG, SLO, SMT, SOL, SON
<i>Perideridia pringlei</i> adobe yampah	List 4.3			Chaparral, Cismontane woodland, Coastal scrub, Pinyon and juniper woodland; on serpentinite, often on clay; 300-1800 m	KRN, LAX, MNT, SBA, SLO, TUL, VEN

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Petradoria pumila</i> ssp. <i>pumila</i> rock goldenrod	List 4.3			Pinyon and juniper woodland (on rocky, carbonate substrates); 1070-3400 m	SBD, TUL
<i>Phacelia cicutaria</i> var. <i>hubbyi</i> Hubby's phacelia	List 4.2			Chaparral, Coastal scrub, Valley and foothill grassland; on gravelly, rocky substrates, talus; 0-1000 m	KRN, LAX, SBA, VEN
<i>Phacelia exilis</i> Transverse Range phacelia	List 4.3			Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; on sandy or gravelly substrates; 1100-2700 m	KRN, LAX, SBD, TUL, VEN
<i>Phacelia mohavensis</i> Mojave phacelia	List 4.3			Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; on sandy or gravelly substrates; 1400-2500 m	LAX, SBD, TUL
<i>Phacelia novemmillensis</i> Nine Mile Canyon phacelia	List 1B.2			Broadleafed upland forest, Cismontane woodland, Pinyon and juniper woodland, Upper montane coniferous forest; on sandy or gravelly substrates; 1645-2640 m	INY, KRN, TUL
<i>Phacelia parishii</i> Parish's phacelia	List 1B.1			Mojavean desert scrub, Playas; on clay or alkaline substrates; 540-1200 m	SBD
<i>Phacelia ramosissima</i> var. <i>australitoralis</i> south coast branching phacelia	List 4.2			Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); on sandy, sometimes rocky substrates; 6-300 m	LAX, MNT, ORA, SBA, SDG, SLO, VEN
<i>Phacelia stebbinsii</i> Stebbins' phacelia	List 1B.2			Cismontane woodland, Lower montane coniferous forest, Meadows and seeps; 610-2010 m	ELD, NEV, PLA
<i>Phacelia suaveolens</i> ssp. <i>keckii</i> Santiago Peak phacelia	List 1B.3			Closed-cone coniferous forest, Chaparral; 610-1600 m	ORA, RIV
<i>Phlox dolichantha</i> Big Bear Valley phlox	List 1B.2			Pebble plain, Upper montane coniferous forest (in openings); 1830-2970 m	SBD
<i>Pickeringia montana</i> var. <i>tomentosa</i> Montana chaparral pea	List 4.3			Chaparral; on gabbroic, granitic, clay substrates; 0-1700 m	LAX, ORA, RIV, SBD, SDG
<i>Pilostyles thurberi</i> Thurber's pilostyles	List 4.3			Sonoran desert scrub; 0-365 m	IMP, RIV, SDG
<i>Piperia colemanii</i> Coleman's rein orchid	List 4.3			Chaparral, Lower montane coniferous forest; often on sandy sites; 1200-2300 m	BUT, CAL, COL, ELD, FRE, MAD, MPA, PLA, PLU, SHA, SIS, TEH, TUL, TUO

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Piperia cooperi</i> chaparral rein orchid	List 4.2			Chaparral, Cismontane woodland, Valley and foothill grassland; 15-1585 m	LAX, ORA, RIV, SBD, SCT, SDG, VEN
<i>Piperia michaelii</i> Michael's rein orchid	List 4.2			Coastal bluff scrub, Closed-cone coniferous forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest ; 3-915 m	ALA, AMA, BUT, CCA, FRE, HUM, LAX, MRN, MNT, SBT, SBA, SCL, SCR, SCZ, SFO, SLO, SMT, STA, TUL, TUO, VEN, YUB
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i> Hickman's popcorn-flower	List 4.2			Chaparral, Coastal prairie, Coastal scrub; in mesic habitats; 15-160 m	MNT, SBT, SCL, SCR, SLO, SMT
<i>Plagiobothrys glyptocarpus</i> var. <i>modestus</i> Cedar Crest popcorn-flower	List 3			Cismontane woodland, Valley and foothill grassland (in mesic habitats); 870-870 m	NEV, YUB
<i>Plagiobothrys myosotoides</i> forget-me-not popcorn-flower	List 4.3			Chaparral; 500-2000 m	FRE, SCL, TUL
<i>Poa atropurpurea</i> San Bernardino blue grass	List 1B.2		E	Meadows and seeps; 1360-2455 m	SBD, SDG
<i>Podistera nevadensis</i> Sierra podistera	List 4.3			Alpine boulder and rock field; 3000-4000 m	ALP, ELD, MNO, PLA, SBD, TUO
<i>Polygala acanthoclada</i> thorny milkwort	List 2.3			Chenopod scrub, Joshua tree "woodland", Pinyon and juniper woodland; 760-2285 m	RIV, SBD
<i>Polygala comuta</i> var. <i>fishiae</i> Fish's milkwort	List 4.3			Chaparral, Cismontane woodland, Riparian woodland; 100-1100 m	LAX, ORA, RIV, SBA, SDG, VEN
<i>Polystichum kruckebergii</i> Kruckeberg's sword fern	List 4.3			Subalpine coniferous forest, Upper montane coniferous forest; on rocky sites; 2100-3200 m	ALP, BUT, PLU, SBD, SHA, SIE, SIS, TUO
<i>Portulaca halimoides</i> desert portulaca	List 4.2			Joshua tree "woodland" (on sandy substrates); 1000-1200 m	RIV, SBD
<i>Potamogeton epihydrus</i> ssp. <i>nuttallii</i> Nuttall's pondweed	List 2.2			Marshes and swamps (in assorted shallow freshwater habitats); 369-1900 m	ELD, MPA, MEN, MOD, PLU, SHA
<i>Potentilla glandulosa</i> ssp. <i>ewanii</i> Ewan's cinquefoil	List 1B.3			Lower montane coniferous forest (near seeps and springs); 1900-2400 m	LAX, SBD
<i>Proboscidea althaeifolia</i> desert unicorn-plant	List 4.3			Sonoran desert scrub (on sandy substrates); 150-1000 m	IMP, RIV, SBD, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Prunus fasciculata</i> var. <i>punctata</i> sand almond	List 4.3			Chaparral (maritime), Cismontane woodland, Coastal dunes, Coastal scrub; on sandy substrates; 15-200 m	SBA, SLO
<i>Pseudognaphalium leucocephalum</i> white rabbit-tobacco	List 2.2			Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; on sandy, gravelly substrates; 0-2100 m	LAX, ORA, RIV, SBA, SDG, SLO, VEN
<i>Pseudostellaria sierrae</i> Sierra starwort	List 3.2			Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; 1250-2194 m	ELD, MPA, NEV, PLA, PLU, TUO
<i>Psilocarphus brevissimus</i> var. <i>multiflorus</i> Delta woolly-marbles	List 4.2			Vernal pools; 10-500 m	ALA, NAP, SCL, SDG, SJQ, SOL, STA, YOL
<i>Psoralea arborescens</i> var. <i>arborescens</i> Mojave indigo-bush	List 4.3			Mojavean desert scrub, Riparian scrub; 400-1185 m	KRN, SBD
<i>Puccinellia parishii</i> Parish's alkali grass	List 1B.1			Meadows and seeps (at alkaline springs and seeps); 700-1000 m	KRN, SBD
<i>Pyrrocoma uniflora</i> var. <i>gossypina</i> Bear Valley pyrrocoma	List 1B.2			Meadows and seeps, Pebble plain; 1600-2300 m	SBD
<i>Quercus cedrosensis</i> Cedros Island oak	List 2.2			Closed-cone coniferous forest, Chaparral, Coastal scrub; 255-490 m	SDG
<i>Quercus durata</i> var. <i>gabrielensis</i> San Gabriel oak	List 4.2			Chaparral, Cismontane woodland; 450-1000 m	LAX
<i>Quercus engelmannii</i> Engelmann oak	List 4.2			Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland; 120-1300 m	LAX, ORA, RIV, SCT, SDG
<i>Quercus parvula</i> var. <i>parvula</i> Santa Cruz Island oak	List 4.2			Closed-cone coniferous forest, Chaparral, Cismontane woodland; 30-915 m	SBA, SCZ
<i>Ranunculus lobbii</i> Lobb's aquatic buttercup	List 4.2			Cismontane woodland, North Coast coniferous forest, Valley and foothill grassland, Vernal pools; in mesic habitats; 15-470 m	ALA, CCA, MRN, MEN, NAP, SAC, SCL, SCR, SMT, SOL, SON
<i>Ribes amarum</i> var. <i>hoffmannii</i> Hoffmann's bitter gooseberry	List 3			Chaparral, Riparian woodland; 150-1190 m	SBA, SDG
<i>Ribes menziesii</i> var. <i>ixoderme</i> aromatic canyon gooseberry	List 1B.2			Chaparral, Cismontane woodland; 610-1160 m	FRE, KRN, TUL

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Ribes roezlii</i> var. <i>amictum</i> hoary gooseberry	List 4.3			Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; 120-2300 m	HUM, LAK, MEN, SHA, TRI
<i>Ribes victoris</i> Victor's gooseberry	List 4.3			Broadleaved upland forest, Chaparral; in mesic, shady habitats; 100-750 m	MRN, MEN, NAP, SOL, SON
<i>Romneya coulteri</i> Coulter's matilija poppy	List 4.2			Chaparral, Coastal scrub; often in burns; 20-1200 m	LAX, ORA, RIV, SDG
<i>Rorippa gambelii</i> Gambel's water cress	List 1B.1	E	E	Marshes and swamps (freshwater or brackish); 5-330 m	LAX, ORA, SBA, SBD, SDG, SLO
<i>Rupertia rigida</i> Parish's rupertia	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; 700-2500 m	RIV, SBD, SDG
<i>Saltugilia caruifolia</i> caraway-leaved woodland-gilia	List 4.3			Chaparral, Lower montane coniferous forest; on sandy substrates, in openings; 1400-2300 m	RIV, SDG
<i>Salvia eremostachya</i> desert sage	List 4.3			Sonoran desert scrub (on rocky or gravelly substrates); 700-1400 m	RIV, SDG
<i>Salvia greatae</i> Orocopia sage	List 1B.3			Mojavean desert scrub, Sonoran desert scrub; -40-825 m	IMP, RIV, SBD
<i>Sanicula hoffmannii</i> Hoffmann's sanicle	List 4.3			Broadleaved upland forest, Chaparral, Coastal scrub; often on serpentinite or clay; 30-300 m	MNT, SBA, SCR, SCZ, SLO, SMT, SRO
<i>Sanicula tracyi</i> Tracy's sanicle	List 4.2			Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; in openings; 100-1585 m	BUT, DNT, HUM, TEH, TRI
<i>Sclerocactus polyancistrus</i> Mojave fish-hook cactus	List 4.2			Great Basin scrub, Joshua tree "woodland", Mojavean desert scrub; usually on carbonate; 640-2320 m	INY, KRN, SBD
<i>Sedum laxum</i> ssp. <i>flavidum</i> pale yellow stonecrop	List 4.3			Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; on serpentinite or volcanic substrates; 455-2000 m	DNT, GLE, HUM, SHA, SIS, TEH, TRI
<i>Sedum niveum</i> Davidson's stonecrop	List 4.2			Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; on rocky; 2075-3000 m	RIV, SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Selaginella asprella</i> bluish spike-moss	List 4.3			Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest; on granitic, rocky substrates; 1600-2700 m	KRN, LAX, ORA, RIV, SBD, SDG, TUL
<i>Senecio astephanus</i> San Gabriel ragwort	List 4			Coastal bluff scrub, Chaparral; on rocky slopes; 400-1500 m	KRN, LAX, MNT, SBA, SBD, SDG, SLO
<i>Sidalcea keckii</i> Keck's checkerbloom	List 1B.1		E	Cismontane woodland, Valley and foothill grassland; on serpentinite, clay; 120-425 m	FRE, MER, TUL
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	List 4.2			Broadleaved upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland; often in disturbed areas; 2-730 m	DNT, HUM, MEN, MNT, SCL, SCR, SON
<i>Sidotheca caryophylloides</i> chickweed oxytheca	List 4.3			Lower montane coniferous forest (on sandy substrates); 1114-2600 m	LAX, RIV, SBD, TUL, VEN
<i>Sidotheca emarginata</i> white-margined oxytheca	List 1B.3			Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; 1200-2500 m	RIV
<i>Silene campanulata</i> ssp. <i>campanulata</i> Red Mountain catchfly	List 4.2	E		Chaparral, Lower montane coniferous forest; usually on serpentinite, rocky sites; 425-2085 m	COL, GLE, MEN, SHA, TEH, TRI
<i>Silene occidentalis</i> ssp. <i>longistipitata</i> long-stiped campion	List 1B.2			Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; 1000-2000 m	BUT, PLU, SHA, THE, TRI
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	List 1B.2			Coastal bluff scrub, Chaparral, Coastal prairie, Coastal scrub, Valley and foothill grassland; in sandy habitats; 30-645 m	SCR, SFO, SMT, SUT
<i>Sphenopholis obtusata</i> prairie wedge grass	List 2.2			Cismontane woodland (mesic), Meadows and seeps; 300-2000 m	AMA, FRE, INY, MNO, RIV, SBD, SDG, TUL
<i>Stellaria longifolia</i> long-leaved starwort	List 2.2			Bogs and fens, Meadows and seeps, Riparian woodland, Upper montane coniferous forest; 900-1830 m	BUT, CAL, PLU, SHA
<i>Stellaria obtusa</i> obtuse starwort	List 4.3			Lower montane coniferous forest, Riparian woodland, Upper montane coniferous forest; in mesic habitats, and along streambanks; 150-2135 m	BUT, GLE, HUM, LAS, NEV, PLU, SHA, SIE, TEH, TUO
<i>Streptanthus bernardinus</i> Laguna Mountains jewel-flower	List 4.3			Chaparral, Lower montane coniferous forest; 670-2500 m	RIV, SBD, SDG

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Streptanthus cordatus</i> var. <i>piutensis</i> Piute Mountains jewel-flower	List 1B.2			Broadleaved upland forest, Closed-cone coniferous forest, Pinyon and juniper woodland; on clay or metamorphic substrates; 1095-1735 m	KRN
<i>Streptanthus drepanoides</i> sickle-fruit jewel-flower	List 4.3			Chaparral, Cismontane woodland, Lower montane coniferous forest; on serpentinite; 275-1660 m	BUT, COL, GLE, LAK, MEN, SHA, TEH, TRI
<i>Streptanthus farnsworthianus</i> Farnsworth's jewel-flower	List 4.3			Cismontane woodland; 400-1400 m	FRE, KRN, MAD, TUL
<i>Streptanthus longisiliquus</i> long-fruit jewel-flower	List 4.3			Cismontane woodland, Lower montane coniferous forest; in openings; 715-1500 m	BUT, SHA, TEH
<i>Stylocline sonorensis</i> mesquite neststraw	List 1A			Sonoran desert scrub (on sandy substrates); 425-425 m	RIV
<i>Suaeda taxifolia</i> woolly seablite	List 4.2			Coastal bluff scrub, Coastal dunes, Marshes and swamps (margins of coastal salt); 0-50 m	ANA, LAX, ORA, SBR, SBA, SCM, SCT, SCZ, SDG, SLO, SNI, SRO, VEN
<i>Swertia neglecta</i> pine green-gentian	List 4.3			Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; 1400-2500 m	KRN, LAX, SBD, VEN
<i>Symphyotrichum greatae</i> Greata's aster	List 1B.3			Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; in mesic habitats; 300-2010 m	LAX, SBD, VEN
<i>Syntrichopappus lemmonii</i> Lemmon's syntrichopappus	List 4.3			Chaparral, Joshua tree "woodland", Pinyon and juniper woodland; on sandy or gravelly substrates; 500-1830 m	KRN, LAX, MNT, RIV, SBD
<i>Tetracoccus hallii</i> Hall's tetracoccus	List 4.3			Mojavean desert scrub, Sonoran desert scrub; 30-1200 m	IMP, RIV, SBD
<i>Tetradymia argyraea</i> striped horsebrush	List 4.3			Pinyon and juniper woodland (on rocky sites); 1400-2230 m	RIV, SBD
<i>Thermopsis californica</i> var. <i>argentata</i> silvery false lupine	List 4.3			Lower montane coniferous forest, Pinyon and juniper woodland; 900-1595 m	KRN, LAS, LAX, MOD, SBA, SHA, SIS, VEN
<i>Thermopsis macrophylla</i> Santa Ynez false lupine	List 1B.3	R		Chaparral (on sandy, granitic substrates, in disturbed areas); 425-1400 m	SBA
<i>Tragia ramosa</i> desert tragia	List 4.3			Chenopod scrub, Pinyon and juniper woodland; on rocky sites; 900-1860 m	RIV, SBD

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1,2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Trichostema micranthum</i> small-flowered bluecurls	List 4.3			Lower montane coniferous forest (in mesic habitats), Meadows and seeps; 1525-2300 m	RIV, SBD
<i>Trichostema ovatum</i> San Joaquin bluecurls	List 4.2			Chenopod scrub, Valley and foothill grassland; 65-320 m	FRE, KRN, KNG, TUL
<i>Trichostema rubisepalum</i> Hernandez bluecurls	List 4.3			Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Vernal pools; on volcanic substrates or serpentinite, in gravelly habitats; 300-1000 m	MPA, NAP, SBT, TUO
<i>Trifolium dedeckeriae</i> DeDecker's clover	List 1B.3			Lower montane coniferous forest, Pinyon and juniper woodland, Subalpine coniferous forest, Upper montane coniferous forest; on granitic, rocky substrates; 2100-3500 m	INY, KRN, MNO, TUL
<i>Trifolium jokerstii</i> Butte County golden clover	List 1B.2			Valley and foothill grassland (in mesic habitats), Vernal pools; 50-385 m	BUT
<i>Trifolium lemmonii</i> Lemmon's clover	List 4.2			Great Basin scrub, Lower montane coniferous forest; 1500- 1830 m	NEV, PLU, SIE
<i>Triquetrella californica</i> coastal triquetrella	List 1B.2			Coastal bluff scrub, Coastal scrub; 10-100 m	CCA, DNT, MRN, MEN, SDG, SFO, SMT, SON
<i>Triteleia lugens</i> dark-mouthed triteleia	List 4.3			Broadleafed upland forest, Chaparral, Coastal scrub, Lower montane coniferous forest; 100-1000 m	LAK, MNT, NAP, SBT, SOL, SON
<i>Twisselmannia californica</i> Kings gold	List 1B.1			Chenopod scrub; 65-65 m	KNG
<i>Veratrum insolitum</i> Siskiyou false-hellebore	List 4.3			Chaparral, Lower montane coniferous forest; on clay substrates; 45-1635 m	DNT, HUM, SHA, SIS, TRI
<i>Viguiera laciniata</i> San Diego County viguiera	List 4.2			Chaparral, Coastal scrub; 60-750 m	ORA, RIV, SDG
<i>Viola tomentosa</i> woolly violet	List 4.2			Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; gravelly sites; 1435-2000 m	BUT, ELD, NEV, PLA, PLU, SIE

Table A1-2. Special-Status Plant Species Not Known but with Potential to Occur in the CVP/SWP Service Areas^{1, 2}(contd.)

Scientific and Common Names	Status ³			Habitat	Counties ⁴
	CNPS	State	Federal		
<i>Zigadenus micranthus</i> var. <i>fontanus</i> marsh zigadenus	List 4.2			Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Marshes and swamps; in vernal mesic habitats, often on serpentinite; 15-1000 m	LAK, MRN, MEN, MNT, NAP, SBT, SCR, SLO, SMT, SON

Notes:

¹ Based on plant habitat, distribution, and status information in the CNPS Rare Plant Inventory (2007), and GIS data layers of vegetation (CDF 2002), General Plan designations (California Resources Agency and University of California Davis 2004), and water district boundaries (Reclamation 2006).

² All MSCS species were included in Table X-1.

³ Status codes are:

CNPS

- 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
- 4 Plants of limited distribution – a watch list

State

- R California Rare
- T California Threatened
- E California Endangered

Federal

- T USFWS Threatened
- E USFWS Endangered

⁴ County abbreviations follow CNPS (2007).

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Attachment 2

List of Plant Species Observed in the Shasta Lake and Vicinity Portion of the Primary Study Area

**Botanical Resources and Wetlands Technical
Report**

Shasta Lake Water Resources Investigation, California

Prepared by:

**United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region**



**U.S. Department of the Interior
United States Department of the Interior**

June 2013

Table A2-1. Plant Species Observed at Shasta Lake

Scientific Name	Common Name	Family Name	Site
EMERGENT WETLAND			
<i>Agrostis exarata</i>	Spike bentgrass	Poaceae	SC
<i>Artemisia douglasiana</i>	Mugwort	Asteraceae	SC
<i>Aruncus dioicus</i> var. <i>pubescens</i>	Goat's beard	Rosaceae	SC
<i>Carex nudata</i>	Torrent sedge	Cyperaceae	SC
<i>Chenopodium botrys</i>	Jerusalem oak	Chenopodiaceae	SC
<i>Cyperus eriogrostus</i>	Nutsedge	Cyperaceae	SC
<i>Darmera peltata</i>	Umbrella plant	Saxifragaceae	SC
<i>Datisca glomerata</i>	Durango root	Datiscaceae	SC
<i>Digitaria sanguinalis</i>	Large crabgrass	Poaceae	SC
<i>Equisetum arvense</i>	Field horsetail	Equisetaceae	SC
<i>Fraxinus latifolia</i>	Oregon ash	Oleaceae	SC
<i>Iris pseudacorus</i>	Iris	Iridaceae	SC
<i>Lathyrus latifolius</i>	Everlasting peavine	Fabaceae	SC
<i>Mentha pulegium</i>	Pennyroyal	Lamiaceae	SC
<i>Myriophyllum aquaticum</i>	Parrot's feather	Haloragaceae	SC
<i>Panicum acuminatum</i>	Panicgrass	Poaceae	SC
<i>Phalaris</i> spp.	Canarygrass	Poaceae	SC
<i>Phytolacca americana</i>	Pokeweed	Phytolaccaceae	SC
<i>Plantago major</i>	Common plantain	Plantaganaceae	SC
<i>Polygonum</i> spp.	Knotweed	Polygonaceae	SC
<i>Populus fremontii</i>	Fremont cottonwood	Salicaceae	SC
<i>Rubus discolor</i>	Himalayan blackberry	Rosaceae	SC
<i>Rumex crispus</i>	Curly dock	Polygonaceae	SC
<i>Salix exigua</i>	Narrowleaf willow	Salicaceae	SC
<i>Salix gooddingii</i>	Black willow	Salicaceae	SC
<i>Salix laevigata</i>	Red willow	Salicaceae	SC
<i>Salix lucida</i>	Shining willow	Salicaceae	SC
<i>Typha angustifolia</i>	Narrow-leaved cattail	Typhaceae	SC
<i>Vitis californica</i>	California grape	Vitaceae	SC
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	SC

Table A2-1. Plant Species Observed at Shasta Lake

Scientific Name	Common Name	Family Name	Site
RIPARIAN			
<i>Acer circinatum</i>	Vine maple	Aceraceae	BB, CC, FC, MS, NS, PC, RP, SC, SL
<i>Acer macrophyllum</i>	Bigleaf maple	Aceraceae	BB, CC, DK, FC, LB, MS, NS, PC, RP, SC, SQ, SL, US
<i>Achillea millifolium</i>	Yarrow	Asteraceae	US
<i>Adenocaulon bicolor</i>	Trailplant	Asteraceae	CC, DK, FC
<i>Adiantum capillus-veneris</i>	Southern maiden-hair	Pteridaceae	BB, SQ
<i>Adiantum jordanii</i>	California maiden-hair	Pteridaceae	CC, DK, NS, PC, SL
<i>Aesculus californica</i>	California buckeye	Hippocastanaceae	LB, NS, SC, SL
<i>Agrostis exarata</i>	Spike bentgrass	Poaceae	PC, SC, SL, US
<i>Aira caryophylla</i>	European hairgrass	Poaceae	BB
<i>Allium amplexans</i>	White lily	Liliaceae	US
<i>Alnus rhombifolia</i>	White alder	Betulaceae	BB, CC, DK, FC, LB, MS, NS, PC, RP, SC, SQ, SL, US
<i>Amelanchier utahensis</i>	Utah serviceberry	Rosaceae	FC, NS, PC, SC, SL, US
<i>Andropogon virginicus</i> var. <i>virginicus</i>	Broomsedge bluestem	Poaceae	BB, SQ
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Poaceae	BB
<i>Antirrhinum</i> spp.	Snapdragon	Scrophulariaceae	LB
<i>Apium graveolens</i>	Celery	Apiaceae	NS
<i>Apocynum cannabinum</i>	Indian hemp	Apocynaceae	NS, SC, US
<i>Aquilegia formosa</i>	Columbine	Ranunculaceae	DK, FC, MS, NS, RP, SC
<i>Arabis glabra</i> var. <i>glabra</i>	Smooth rock cress	Brassicaceae	SQ
<i>Aralia californica</i>	California spikenard	Araliaceae	CC, DK, FC, NS, PC, RP, SC, SL, US
<i>Arbutus menziesii</i>	Pacific madrone	Ericaceae	NS
<i>Arctostaphylos viscida</i> var. <i>viscida</i>	Whiteleaf manzanita	Ericaceae	BB
<i>Aristolochia californica</i>	Pipevine	Aristolochiaceae	BB, NS, RP, SQ
<i>Artemisia douglasiana</i>	Mugwort	Asteraceae	BB, DK, FC, RP, SQ, US
<i>Aruncus dioicus</i> var. <i>pubescens</i>	Goat's beard	Rosaceae	CC, DK, LB, MS, NS, PC, RP, SC, SQ, SL, US
<i>Asarum hartwegii</i>	Wild-ginger	Aristolochiaceae	BB
<i>Asclepias cordifolia</i>	Purple milkweed	Asclepiadaceae	BB
<i>Asclepias fascicularis</i>	Narrow-leaved milkweed	Asclepiadaceae	SQ

Attachment 2
List of Plant Species Observed in the Shasta Lake and Vicinity
Portion of the Primary Study Area

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Asclepias speciosa</i>	Showy milkweed	Asclepiadaceae	US
<i>Athyrium filix-femina</i>	Lady fern	Dryopteridaceae	LB
<i>Avena fatua</i>	Wild oat	Poaceae	PC, SQ
<i>Berberis aquifolium</i>	Oregon grape	Berberidaceae	CC
<i>Brickellia californica</i>	Brickellbush	Asteraceae	CC, FC, NS, PC, SC, SL, US
<i>Briza minor</i>	Lesser quaking grass	Poaceae	BB
<i>Brodiaea elegans</i>	Harvest brodiaea	Liliaceae	SC
<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	Poaceae	BB, SQ
<i>Bromus diandrus</i>	Ripgut grass	Poaceae	BB, FC, PC, RP
<i>Bromus hordeaceus</i>	Soft chess	Poaceae	BB
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	Poaceae	BB
<i>Calochortus tolmiei</i>	Pussy ears	Liliaceae	BB
<i>Calycanthus occidentalis</i>	Spicebush	Calycanthaceae	BB, CC, FC, LB, MS, NS, PC, RP, SC, SQ, SL, US
<i>Calystegia occidentalis</i>	Western morning-glory	Convolvulaceae	DK, NS
<i>Carex barbarae</i>	Santa Barbara sedge	Cyperaceae	SQ
<i>Carex bolanderi</i>	Sedge	Cyperaceae	DK, MS, SC
<i>Carex deweyana</i> var. <i>leptopoda</i>	Short-scaled sedge	Cyperaceae	BB, SQ
<i>Carex feta</i>	Greensheath sedge	Cyperaceae	BB, SQ
<i>Carex nudata</i>	Torrent sedge	Cyperaceae	BB, CC, DK, LB, MS, NS, PC, RP, SC, SQ, US
<i>Catalpa speciosa</i>	Catalpa	Bignoniaceae	US
<i>Ceanothus integerrimus</i>	Deer brush	Rhamnaceae	BB, CC
<i>Centaurea solstitialis</i>	Yellow star-thistle	Asteraceae	BB, SC
<i>Centaureum venustum</i>	Canchalagua	Gentianaceae	SQ, US
<i>Cephalanthus occidentalis</i> var. <i>californicus</i>	California button willow	Rubiaceae	MS, SQ, SL, US
<i>Cercis occidentalis</i>	Redbud	Fabaceae	BB, CC, NS, SC, SL, US
<i>Cercocarpus betuloides</i>	Birchleaf mountain mahogany	Rosaceae	CC
<i>Cheilanthes gracillima</i>	Cheilanthes	Pteridaceae	LB
<i>Chenopodium botrys</i>	Jerusalum oak	Chenopodiaceae	MS, US
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap plant	Liliaceae	BB
<i>Cirsium vulgare</i>	Bull thistle	Asteraceae	CC, SL

Shasta Lake Water Resources Investigation
 Biological Resources Appendix – Botanical Resources Technical Report

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Claytonia perfoliata</i>	Miner's lettuce	Portulacaceae	DK
<i>Claytonia rubra</i> ssp. <i>rubra</i>	Red-stemmed miner's lettuce	Portulacaceae	BB, SQ
<i>Clematis ligusticifolia</i>	Virgin's bower	Ranunculaceae	CC, MS, NS, PC, SC, SQ, SL, US
<i>Collinsia tinctoria</i>	Sticky chinese houses	Scrophulariaceae	FC, RP
<i>Collomia heterophylla</i>	Variableleaf collomia	Polemoniaceae	BB, CC, DK, FC, PC, SQ
<i>Conium maculatum</i>	Poison hemlock	Apiaceae	US
<i>Cornus nuttallii</i>	Mountain dogwood	Cornaceae	CC, DK, FC, MS, NS, PC, RP, SC, SQ, SL, US
<i>Cornus sericea</i>	Red twig	Cornaceae	CC, MS, NS, SC, SL
<i>Cornus sessilis</i>	Miner's dogwood	Cornaceae	BB, CC, MS, NS, SC, SL
<i>Corylus cornuta</i>	Hazelnut	Betulaceae	BB, CC, FC, MS, RP, SQ, SL
<i>Crataegus douglasii</i>	Black Hawthorn	Rosaceae	FC, MS, NS, RP, SL, US
<i>Cynodon dactylon</i>	Bermuda grass	Poaceae	US
<i>Cynosurus echinatus</i>	Hedgehog dogtail	Poaceae	DK, NS, PC, SQ, US
<i>Cyperus eragrostis</i>	Tall flatsedge	Cyperaceae	BB
<i>Cyperus eriogrostus</i>	Nutsedge	Cyperaceae	NS, PC, SL, US
<i>Cyperus esculentus</i>	Yellow nut sedge	Cyperaceae	LB, PC
<i>Cyperus squarrosus</i>	Umbrella sedge	Cyperaceae	BB, SQ
<i>Cytisus scoparius</i>	Scotch broom	Fabaceae	US
<i>Dactylis glomerata</i>	Orchard grass	Poaceae	SC
<i>Darmera peltata</i>	Umbrella plant	Saxifragaceae	BB, CC, DK, FC, MS, NS, PC, RP, SC, SQ, SL, US
<i>Datisca glomerata</i>	Durango root	Datisceae	MS, NS, RP, SC, SQ
<i>Daucus carota</i>	Queen Anne's lace	Apiaceae	BB
<i>Delphinium nudicaule</i>	Red larkspur	Ranunculaceae	SQ
<i>Deschampsia cespitosa</i>	Tufted hairgrass	Poaceae	BB, SQ
<i>Deschampsia danthonioides</i>	Annual hairgrass	Poaceae	US
<i>Dicentra formosa</i>	Bleeding heart	Papaveraceae	CC
<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Blue dicks	Liliaceae	BB, US
<i>Eleocharis</i> spp.	Spike rush	Cyperaceae	US
<i>Elymus elymoides</i>	Squirreltail	Poaceae	US

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Elymus glaucus</i>	Blue wild rye	Poaceae	BB, CC, DK, MS, NS, PC, SC, SQ, SL, US
<i>Epilobium angustifolium</i> ssp. <i>circumvagum</i>	Fireweed	Onagraceae	BB
<i>Epilobium canum</i>	California fuchsia	Onagraceae	CC, US
<i>Epilobium ciliatum</i>	Fireweed	Onagraceae	CC, DK, MS, NS, RP, SL
<i>Epilobium torreyi</i>	Boisduvalia	Onagraceae	BB
<i>Epipactus gigantea</i>	Stream orchid	Orchidaceae	MS, NS, US
<i>Equisetum arvense</i>	Field horsetail	Equisetaceae	NS, PC, SC, SQ, US
<i>Equisetum laevigatum</i>	Smooth scouring rush	Equisetaceae	US
<i>Erigeron philadelphicus</i>	Fleabane daisy	Asteraceae	CC, DK, FC, PC, RP, SQ
<i>Eriodictyon californicum</i>	Yerba Santa	Hydrophyllaceae	BB, LB
<i>Eriogonum nudum</i>	Naked buckwheat	Polygonaceae	BB, US
<i>Eriogonum umbellatum</i>	Sulfur flower	Polygonaceae	US
<i>Eriophyllum lanatum</i>	Woolly sunflower	Asteraceae	SL, US
<i>Eriophyllum lanatum</i> var. <i>grandiflorum</i>	Woolly sunflower	Asteraceae	BB
<i>Erodium botrys</i>	Broadleaf filaree	Geraniaceae	BB
<i>Erodium cicutarium</i>	Storksbill	Geraniaceae	RP
<i>Eryngium articulatum</i>	Eryngium	Apiaceae	US
<i>Ficus carica</i>	Edible fig	Moraceae	BB, SQ
<i>Fraxinus dipetala</i>	California ash	Oleaceae	NS
<i>Fraxinus latifolia</i>	Oregon ash	Oleaceae	BB, CC, DK, FC, MS, NS, PC, RP, SC, SQ, SL, US
<i>Galium bolanderi</i>	Bolander's bedstraw	Rubiaceae	BB
<i>Galium</i> spp.	Bedstraw	Rubiaceae	CC, FC, PC, SC, SL
<i>Gnaphalium</i> spp.	Cudweed	Asteraceae	US
<i>Hastingsia alba</i>	Hastingsia	Liliaceae	LB, US
<i>Heuchera micrantha</i>	Crevice heuchera	Saxifragaceae	DK, FC, NS, RP, SC, SQ, SL, US
<i>Hieracium albiflorum</i>	Hawkweed	Asteraceae	CC, NS, US
<i>Hoita orbicularis</i>	Hoita	Fabaceae	US
<i>Holcus lanatus</i>	Velvet grass	Poaceae	SQ
<i>Hypericum perforatum</i>	Klamathweed	Hypericaceae	BB, CC, DK, FC, LB, NS, PC, RP, SQ, US
<i>Hypochaeris radicata</i>	Rough cat's-ear	Asteraceae	BB, SC
<i>Iris tenuissima</i>	Iris	Iridaceae	BB

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Juncus effusus</i>	Common rush	Juncaceae	BB, SQ, SL, US
<i>Juncus ensifolius</i>	Sword-leaved rush	Juncaceae	SQ
<i>Juncus mexicanus</i>	Mexican rush	Juncaceae	US
<i>Juncus</i> sp.	Rush	Juncaceae	BB, LB, SQ
<i>Juncus tenuis</i>	Slender rush	Juncaceae	SQ
<i>Juncus xiphioides</i>	Rush	Juncaceae	US
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae	SQ
<i>Lathyrus latifolius</i>	Everlasting peavine	Fabaceae	CC, SC, US
<i>Lathyrus polyphyllus</i>	Wild pea	Fabaceae	DK, PC
<i>Lathyrus sulphureus</i>	Snub pea	Fabaceae	BB
<i>Ledum glandulosum</i>	Labrador tea	Ericaceae	LB
<i>Lewisia cantelovii</i>	Cantelow's lewisia	Portulacaceae	US
<i>Lilium pardalinum</i> ssp. <i>pardalinum</i>	Leopard lily	Liliaceae	BB, DK, FC, MS, NS, PC, RP, SC, SL
<i>Lithocarpus densiflora</i>	Tan oak	Fagaceae	LB
<i>Lonicera hispidula</i> var. <i>vacillans</i>	Hairy honeysuckle	Caprifoliaceae	BB, CC, LB, MS, NS, PC, SL
<i>Lotus crassifolius</i>	Lotus	Fabaceae	NS, SC
<i>Lotus oblongifolius</i>	Bird's-foot trefoil	Fabaceae	SC, US
<i>Lotus oblongifolius</i> var. <i>oblongifolius</i>	Streambank bird's-foot trefoil	Fabaceae	BB
<i>Lotus purshianus</i> var. <i>purshianus</i>	Spanish lotus	Fabaceae	US
<i>Lupinus albifrons</i>	Silver bush lupine	Fabaceae	BB, US
<i>Lupinus bicolor</i>	Miniature lupine	Fabaceae	BB
<i>Madia</i> spp.	Tarweed	Asteraceae	CC, DK, FC, PC, RP, SL
<i>Marah watsonii</i>	Watson's wild-cucumber	Cucurbitaceae	BB
<i>Melica californica</i>	California melic	Poaceae	BB
<i>Melilotus alba</i>	White sweet clover	Fabaceae	NS, US
<i>Melissa officinalis</i>	Melissa	Lamiaceae	FC, MS, NS, PC, RP, SC
<i>Mentha pulegium</i>	Pennyroyal	Lamiaceae	PC
<i>Mimulus cardinalis</i>	Scarlet monkey flower	Scrophulariaceae	DK, FC, LB, NS, PC, SC, US
<i>Mimulus guttatus</i>	Common monkeyflower	Scrophulariaceae	BB, CC, FC, LB, MS, NS, PC, RP, SC, SQ, SL, US
<i>Montia parvifolia</i>	Showy rock-montia	Portulacaceae	BB, DK, NS, PC, RP, SL
<i>Muhlenbergia minutissima</i>	Muhly	Poaceae	PC, SC, US

Attachment 2
List of Plant Species Observed in the Shasta Lake and Vicinity
Portion of the Primary Study Area

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Nemophila heterophylla</i>	Variable-leaved nemophila	Hydrophyllaceae	BB, SQ
<i>Neviusia cliftonii</i>	Shasta snow-wreath	Rosaceae	CC
<i>Osmorhiza chilensis</i>	Mountain sweet-cicely	Apiaceae	FC, PC
<i>Panicum acuminatum</i> var. <i>acuminatum</i>	Panicgrass	Poaceae	BB, LB, NS, SC, SQ, SL, US
<i>Pellaea mucronata</i> var. <i>californica</i>	Bird's-foot fern	Pteridaceae	US
<i>Pellaea mucronata</i> var. <i>mucronata</i>	Bird's-foot fern	Pteridaceae	SQ
<i>Penstemon azureus</i> var. <i>azureus</i>	Azure beardtongue	Scrophulariaceae	SQ, US
<i>Pentagramma triangularis</i> ssp. <i>triangularis</i>	Goldback fern	Pteridaceae	BB, SC, US
<i>Perideridia gairdneri</i>	Yampah	Apiaceae	DK, RP, US
<i>Petrorhagia dubia</i>	Windmill pink	Caryophyllaceae	BB, SC, SQ, US
<i>Phacelia hastata</i>	Silverleaf phacelia	Hydrophyllaceae	SC
<i>Phalaris arundinacea</i>	Reed canary grass	Poaceae	SC
<i>Philadelphus lewisii</i>	Wild mock orange	Philadelphaceae	BB, CC, FC, MS, NS, PC, RP, SL, US
<i>Physocarpus capitatus</i>	Pacific ninebark	Rosaceae	CC, FC, MS, NS, PC, RP, SC, US
<i>Phytolacca americana</i>	Pokeweed	Phytolaccaceae	DK, NS, SC
<i>Pinus attenuata</i>	Knobcone pine	Pinaceae	SC
<i>Pinus ponderosa</i>	Ponderosa pine	Pinaceae	BB, SC
<i>Plagiobothrys tener</i>	Slender popcornflower	Boraginaceae	BB
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae	BB, SC, SQ, US
<i>Polygonum lapathifolium</i>	Willow weed	Polygonaceae	BB, SQ
<i>Polypogon interruptus</i>	Rabbitfoot grass	Poaceae	CC, SC, US
<i>Polypogon monspeliensis</i>	Annual beard grass	Poaceae	BB
<i>Polystichum imbricans</i>	Narrowleaf sword fern	Dryopteridaceae	BB, SQ
<i>Polystichum munitum</i>	Swordfern	Dryopteridaceae	NS
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	Black cottonwood	Salicaceae	DK, US
<i>Populus fremontii</i>	Fremont cottonwood	Salicaceae	BB, CC, MS, SC, SQ, SL, US
<i>Potentilla</i> spp.	Cinquefoil	Rosaceae	FC, NS, RP, US
<i>Prunella vulgaris</i>	Self-heal	Lamiaceae	FC, MS, NS, PC, RP, SC, SL, US

Shasta Lake Water Resources Investigation
 Biological Resources Appendix – Botanical Resources Technical Report

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Prunus subcordata</i>	Klamath plum	Rosaceae	MS, NS
<i>Prunus virginiana</i>	Western choke-cherry	Rosaceae	SL
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas-fir	Pinaceae	BB, CC, DK, FC, SC
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	Dennstaedtiaceae	BB, MS, PC, SL, US
<i>Pycnanthemum californicum</i>	Mountain mint	Lamiaceae	BB, SQ
<i>Quercus chrysolepis</i>	Canyon live oak	Fagaceae	BB, DK, PC, SC, SQ, SL
<i>Quercus kelloggii</i>	Black oak	Fagaceae	BB, SC
<i>Quercus lobata</i>	Valley oak	Fagaceae	SC
<i>Ranunculus californicus</i>	California buttercup	Ranunculaceae	BB
<i>Rhamnus purshiana</i>	Cascara	Rhamnaceae	FC, PC
<i>Rhododendron occidentale</i>	Western azalea	Ericaceae	LB, MS, SL, US
<i>Rhus trilobata</i>	Skunkbrush	Anacardiaceae	BB, CC, SQ
<i>Ribes aureum</i>	Golden currant	Grossulariaceae	NS
<i>Ribes divaricatum</i>	Gooseberry	Grossulariaceae	BB, SQ
<i>Ribes roezlii</i>	Sierra gooseberry	Grossulariaceae	RP
<i>Robinia pseudoacacia</i>	Black locust	Fabaceae	US
<i>Rosa californica</i>	California rose	Rosaceae	MS, NS, SQ, US
<i>Rosa gymnocarpa</i>	Wood rose	Rosaceae	BB, FC
<i>Rubus discolor</i>	Himalayan blackberry	Rosaceae	BB, LB, MS, PC, SC, SQ, SL, US
<i>Rubus laciniatus</i>	Cut-leaved blackberry	Rosaceae	US
<i>Rubus leucodermis</i>	Western raspberry	Rosaceae	BB, CC, NS, SQ
<i>Rubus parviflorus</i>	Thimbleberry	Rosaceae	CC, PC, RP
<i>Rubus ursinus</i>	California blackberry	Rosaceae	BB, CC, DK, FC, MS, NS, PC, RP, SC, SQ, SL
<i>Rumex acetosella</i>	Red sorrel	Polygonaceae	CC, NS
<i>Rumex crispus</i>	Curly dock	Polygonaceae	PC, SC, SQ
<i>Salix exigua</i>	Narrow-leaved willow	Salicaceae	BB, CC, DK, MS, NS, PC, SQ
<i>Salix gooddingii</i>	Black willow	Salicaceae	CC, DK, MS, NS, PC, SL, US
<i>Salix laevigata</i>	Red willow	Salicaceae	BB, CC, FC, NS, PC, RP, SC, SQ, SL, US
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae	BB, NS, PC, SC, SL, US

Attachment 2
List of Plant Species Observed in the Shasta Lake and Vicinity
Portion of the Primary Study Area

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Salix lucida</i>	Shining willow	Salicaceae	CC, LB, MS, NS, SC, SQ, SL, US
<i>Saponaria officinalis</i>	Bouncing bet	Caryophyllaceae	MS, SC, US
<i>Scutellaria siphocampyloides</i>	Narrowleaf skullcap	Lamiaceae	NS
<i>Sedum spathulifolium</i>	Pacific sedum	Crassulaceae	BB, CC, DK FC, LB, NS, RP, SC, SQ, US
<i>Silene californica</i>	California Indian pink	Caryophyllaceae	DK, NS
<i>Smilacina racemosa</i>	False solomon's seal	Liliaceae	CC, DK
<i>Smilax californica</i>	Greenbriar	Liliaceae	BB, CC, FC, MS, NS, RP, SC, SQ, SL, US
<i>Solanum dulcamara</i>	Bittersweet nightshade	Solanaceae	NS
<i>Solanum parishii</i>	Parish's nightshade	Solanaceae	BB
<i>Solanum sarrachoides</i>	White nightshade	Solanaceae	NS
<i>Spiraea douglasii</i>	Spiraea	Rosaceae	SC, US
<i>Spiranthes romanzoffiana</i>	Ladies tresses	Orchidaceae	SC, US
<i>Stachys ajugoides</i>	Hedge nettle	Lamiaceae	BB, MS, PC, SQ, US
<i>Streptanthus tortuosus</i> var. <i>tortuosus</i>	Mountain jewelflower	Brassicaceae	BB, LB
<i>Styrax officianalis</i>	Snowdrop bush	Styraceae	FC, NS
<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	Snowberry	Caprifoliaceae	BB, CC, FC, NS, PC, RP, SC, SL
<i>Taxus brevifolia</i>	Pacific yew	Taxaceae	FC, NS, PC, SL
<i>Tellima grandiflora</i>	Fringe cups	Saxifragaceae	BB, CC, DK, FC, NS, PC, RP, SQ
<i>Torilis arvensis</i>	False hedge-parsley	Apiaceae	BB, DK, FC, NS, SQ
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae	BB, CC, DK, FC, MS, NS, PC, RP, SC, SQ, SL, US
<i>Trientalis latifolia</i>	Starflower	Primulaceae	BB, NS
<i>Trifolium hirtum</i>	Rose clover	Fabaceae	BB, SQ
<i>Trifolium variegatum</i>	White-tipped clover	Fabaceae	BB, SQ
<i>Trifolium willdenovii</i>	Clover	Fabaceae	SC
<i>Triteleia hyacinthina</i>	White brodiaea	Liliaceae	BB, NS, RP, SC, SQ, US
<i>Typha latifolia</i>	Broad-leaved cattail	Typhaceae	SQ
<i>Umbellularia californica</i>	California bay	Lauraceae	BB, LB, SQ
<i>Urtica dioica</i>	Stinging nettle	Urticaceae	CC, PC, SC
<i>Vaccinium parvifolium</i>	Red huckleberry	Ericaceae	LB
<i>Verbascum blattaria</i>	Moth mullein	Scrophulariaceae	SC, US

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Verbascum thapsus</i>	Woolly mullein	Scrophulariaceae	BB, SC, SQ
<i>Verbena lasiostachys</i>	Common verbena	Verbenaceae	BB, CC, FC, SQ
<i>Viola glabella</i>	Stream violet	Violaceae	BB, CC, SQ
<i>Vitis californica</i>	California grape	Vitaceae	BB, CC, DK, FC, MS, NS, SC, SQ, SL, US
<i>Vulpia myuros</i>	Rattail fescue	Poaceae	BB, SQ
<i>Woodwardia fimbriata</i>	Giant chain fern	Blechnaceae	CC, FC, LB, NS, PC, SQ, SL, US
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	MS, SQ
<i>Zigadenus venenosus</i> var. <i>venenosus</i>	Death camas	Liliaceae	SQ
UPLAND			
<i>Acer circinatum</i>	Vine maple	Aceraceae	CC, SC
<i>Acer macrophyllum</i>	Bigleaf maple	Aceraceae	BB, CC, DK, FC, PS, SC, SQ
<i>Achillea millefolium</i>	Yarrow	Asteraceae	BB, SQ
<i>Achnatherum occidentale</i>	Needle grass	Poaceae	SQ
<i>Adenocaulon bicolor</i>	Trail plant	Asteraceae	BB, DK, PS, SQ
<i>Adiantum capillus-veneris</i>	Southern maiden-hair	Pteridaceae	BB, SQ
<i>Adiantum jordanii</i>	California maiden-hair	Pteridaceae	CC, DK, FC, NS, PS, RP
<i>Aesculus californica</i>	California buckeye	Hippocastanaceae	BB, CC, DK, FC, NS, PS, RP, SQ, SL, US
<i>Agoseris glauca</i>	Mountain dandelion	Asteraceae	BB, SQ
<i>Ailanthus altissima</i>	Tree of heaven	Simaroubaceae	BB, US
<i>Aira caryophylla</i>	European hairgrass	Poaceae	SC, US
<i>Aira caryophyllea</i>	Silver European hairgrass	Poaceae	BB, SQ
<i>Allium amplexans</i>	Narrow-leaved onion	Liliaceae	SQ
<i>Alnus rhombifolia</i>	White alder	Betulaceae	SQ
<i>Amelanchier utahensis</i>	Utah serviceberry	Rosaceae	CC, FC, SQ, SL
<i>Anaphalis margaritacea</i>	Pearly everlasting	Asteraceae	BB, SQ
<i>Andropogon virginicus</i> var. <i>virginicus</i>	Broomsedge bluestem	Poaceae	BB, SQ
<i>Anthoxanthum odoratum</i>	Sweet vernal grass	Poaceae	BB, SQ
<i>Anthriscus caucalis</i>	Bur-chervil	Apiaceae	BB
<i>Antirrhinum vexillo-calyculatum</i> ssp. <i>breweri</i>	Brewer's sail-flower snapdragon	Scrophulariaceae	SQ
<i>Apocynum cannabinum</i>	Indian hemp	Apocynaceae	SC

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Aquilegia formosa</i>	Columbine	Ranunculaceae	NS, PS, SQ
<i>Arabis glabra</i> var. <i>glabra</i>	Smooth rock cress	Brassicaceae	BB
<i>Arbutus menziesii</i>	Pacific madrone	Ericaceae	BB, NS, SQ
<i>Arctostaphylos manzanita</i>	Common manzanita	Ericaceae	BB, SC, US
<i>Arctostaphylos viscida</i>	Whiteleaf manzanita	Ericaceae	BB, LB, NS, SC, SQ, US
<i>Aristolochia californica</i>	Pipevine	Aristolochiaceae	BB, CC, DK, FC, PS, RP, SQ
<i>Artemisia douglasiana</i>	Mugwort	Asteraceae	BB, SC, SQ
<i>Aruncus dioicus</i> var. <i>pubescens</i>	Goat's beard	Rosaceae	SC
<i>Asarum hartwegii</i>	Wild ginger	Aristolochiaceae	CC, NS, PS, RP, SC, SQ
<i>Asclepias cordifolia</i>	Purple milkweed	Asclepiadaceae	BB
<i>Asclepias fascicularis</i>	Narrow-leaved milkweed	Asclepiadaceae	SC
<i>Asclepias speciosa</i>	Showy milkweed	Asclepiadaceae	SC
<i>Athyrium filix-femina</i>	Lady fern	Dryopteridaceae	FC, PS, RP
<i>Avena fatua</i>	Wild oat	Poaceae	BB, SC, SQ, US
<i>Berberis aquifolium</i>	Oregon grape	Berberidaceae	BB, CC, PS, SC, SQ
<i>Brassica nigra</i>	Black mustard	Brassicaceae	BB, US
<i>Brodiaea coronaria</i>	Brodiaea	Liliaceae	SC
<i>Brodiaea coronaria</i> ssp. <i>coronaria</i>	Harvest brodiaea	Liliaceae	BB
<i>Bromus carinatus</i>	California brome	Poaceae	SQ
<i>Bromus diandrus</i>	Ripgut grass	Poaceae	BB, DK, SC, SQ, US
<i>Bromus hordeaceus</i>	Softchess	Poaceae	BB, DK, SC, SQ, US
<i>Bromus inermis</i>	Smooth brome	Poaceae	LB
<i>Bromus laevipes</i>	Woodland brome	Poaceae	SQ
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome	Poaceae	BB, SQ
<i>Bromus tectorum</i>	Cheatgrass	Poaceae	SC, SQ
<i>Calocedrus decurrens</i>	Incense cedar	Cupressaceae	LB, NS, PS, RP, SC, SQ, US
<i>Calycadenia fremontii</i>	Fremont's calycadenia	Asteraceae	SQ
<i>Calycadenia truncata</i>	Rosin weed	Asteraceae	BB, SQ
<i>Calycanthus occidentalis</i>	Spicebush	Calycanthaceae	SQ
<i>Calystegia occidentalis</i>	Western morning glory	Convolvulaceae	BB, SC, SQ, US
<i>Campanula prenanthoides</i>	California bluebell	Campanulaceae	SC
<i>Capsella bursa-pastoris</i>	Shepherd's purse	Brassicaceae	BB

Shasta Lake Water Resources Investigation
 Biological Resources Appendix – Botanical Resources Technical Report

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Carex deweyana</i> var. <i>leptopoda</i>	Short-scaled sedge	Cyperaceae	SQ
<i>Castilleja applegatei</i>	Wavy-leaved Indian paintbrush	Scrophulariaceae	SQ
<i>Ceanothus cuneatus</i>	Buck brush	Rhamnaceae	BB, SC, SQ
<i>Ceanothus integerrimus</i>	Deer brush	Rhamnaceae	BB, CC, FC, NS, PS, SC, SQ, SL
<i>Ceanothus lemmonii</i>	Lemmon's ceanothus	Rhamnaceae	SL
<i>Centaurea solstitialis</i>	Yellow star thistle	Asteraceae	BB, SC, SQ, US
<i>Centaurium venustum</i>	Canchalagua	Gentianaceae	SQ
<i>Cercis occidentalis</i>	Redbud	Fabaceae	BB, CC, DK, NS, RP, SC, SQ, SL, US
<i>Cercocarpus betuloides</i>	Birchleaf mountain mahogany	Rosaceae	CC, SC, SQ, US
<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Soap plant	Liliaceae	BB, SQ
<i>Cirsium occidentale</i>	Snowy thistle	Asteraceae	BB
<i>Cirsium</i> sp.	Thistle	Asteraceae	SQ
<i>Cirsium vulgare</i>	Bull thistle	Asteraceae	NS
<i>Clarkia purpurea</i>	Purple clarkia	Onagraceae	BB, SQ
<i>Claytonia perfoliata</i>	Miner's lettuce	Portulacaceae	NS
<i>Claytonia rubra</i> ssp. <i>rubra</i>	Red-stemmed miner's lettuce	Portulacaceae	BB, SQ
<i>Clematis ligusticifolia</i>	Virgin's bower	Ranunculaceae	SQ
<i>Collomia heterophylla</i>	Variableleaf collomia	Polemoniaceae	BB, NS, SQ
<i>Conyza canadensis</i>	Horseweed	Asteraceae	SQ
<i>Cornus nuttallii</i>	Mountain dogwood	Cornaceae	BB, CC, DK, FC, NS, PS, SC, SQ
<i>Cornus sericea</i>	American dogwood	Cornaceae	BB, SC, SQ
<i>Corylus cornuta</i>	Hazelnut	Betulaceae	BB, CC, DK, NS, PS, RP, SC, SQ, SL
<i>Cynoglossum grande</i>	Hound's tongue	Boraginaceae	CC, SQ
<i>Cynosurus echinatus</i>	Hedgehog dogtail	Poaceae	BB, DK, FC, NS, RP, SC, SQ
<i>Cyperus eriogrostus</i>	Nutsedge	Cyperaceae	NS
<i>Cyperus squarrosus</i>	Umbrella sedge	Cyperaceae	SQ
<i>Cytisus scoparius</i>	Scotch broom	Fabaceae	SC, US
<i>Datisca glomerata</i>	Durango root	Datisceae	US
<i>Datura stramonium</i>	Jimson weed	Solanaceae	SQ

Attachment 2
List of Plant Species Observed in the Shasta Lake and Vicinity
Portion of the Primary Study Area

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Daucus carota</i>	Wild carrot	Apiaceae	US
<i>Daucus pusillus</i>	Rattlesnake weed	Apiaceae	BB, SQ
<i>Delphinium nudicaule</i>	Red larkspur	Ranunculaceae	SQ
<i>Dendromecon rigida</i>	Bush poppy	Papaveraceae	BB, SQ
<i>Dicentra formosa</i>	Bleeding heart	Papaveraceae	CC, DK, NS
<i>Dichelostemma capitatum</i>	Blue dicks	Liliaceae	BB, DK, SQ
<i>Dichelostemma ida-mae</i>	Firecracker flower	Liliaceae	BB, SQ
<i>Digitalis purpurea</i>	Foxglove	Scrophulariaceae	LB
<i>Disporum hookeri</i>	Hooker's fairybells	Liliaceae	BB, SQ
<i>Echinochloa crus-galli</i>	Barnyard grass	Poaceae	SQ
<i>Elymus elymoides</i>	Squirreltail	Poaceae	LB, SC, SQ
<i>Elymus glaucus</i>	Blue wild rye	Poaceae	BB, DK, NS, RP, SC, SQ, SL, US
<i>Epilobium pallidum</i>	Large-flower spike-primrose	Onagraceae	BB
<i>Epilobium</i> sp.	Willow herb	Onagraceae	BB
<i>Equisetum arvense</i>	Common horsetail	Equisetaceae	SQ, US
<i>Eremocarpus setigerus</i>	Dove weed	Euphorbiaceae	BB, SQ
<i>Eriodictyon californicum</i>	Yerba Santa	Hydrophyllaceae	BB, SQ, US
<i>Eriogonum nudum</i>	Naked buckwheat	Polygonaceae	BB, SC, SQ
<i>Eriophyllum lanatum</i>	Woolly sunflower	Asteraceae	BB, CC, LB, SC, SQ, US
<i>Erodium botrys</i>	Filaree	Geraniaceae	BB
<i>Eschscholzia caespitosa</i>	Foothill poppy	Papaveraceae	BB, SQ
<i>Eschscholzia californica</i>	California poppy	Papaveraceae	SC
<i>Fraxinus dipetala</i>	California ash	Oleaceae	DK, SC, SQ
<i>Fraxinus latifolia</i>	Oregon ash	Oleaceae	DK, PS, SC, SQ
<i>Galium bolanderi</i>	Bolander's bedstraw	Rubiaceae	BB, SQ
<i>Galium porrigens</i>	Climbing bedstraw	Rubiaceae	BB, SQ
<i>Galium</i> sp.	Bedstraw	Rubiaceae	BB, CC, DK, NS, PS, RP, US
<i>Galium triflorum</i>	Sweet-scented bedstraw	Rubiaceae	SQ
<i>Gastridium ventricosum</i>	Nit grass	Poaceae	BB, SQ
<i>Gilia capitata</i>	Globe gilia	Polemoniaceae	BB, SQ
<i>Gilia tricolor</i>	Bird's eyes	Polemoniaceae	SQ
<i>Gnaphalium</i> sp.	Cudweed	Asteraceae	SQ

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Goodyera oblongifolia</i>	Rattlesnake plantain	Orchidaceae	PS
<i>Grindelia nana</i>	Idaho gumweed	Asteraceae	SQ
<i>Helianthella californica</i>	California helianthella	Asteraceae	SQ
<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae	BB, LB
<i>Heuchera micrantha</i>	Crevice heuchera	Saxifragaceae	NS
<i>Hieracium albiflorum</i>	White-flowered hawkweed	Asteraceae	BB, NS
<i>Hieracium albiflorum</i>	White-flowered hawkweed	Asteraceae	SQ, SL
<i>Hypericum perforatum</i>	Klamathweed	Hypericaceae	BB, CC, NS, SC, SQ, SL
<i>Hypochaeris radicata</i>	Rough cat's ears	Asteraceae	BB, SQ
<i>Iris tenuissima</i>	Slender iris	Iridaceae	BB, SQ
<i>Juniperus</i> spp.	Ornamental juniper	Cupressaceae	SC
<i>Keckiella lemmonii</i>	Lemmon's keckiella	Scrophulariaceae	CC, NS, SQ, SL
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae	SC, SQ
<i>Lamium amplexicaule</i>	Giraffehead	Lamiaceae	SQ
<i>Lathyrus latifolius</i>	Everlasting peavine	Fabaceae	SC
<i>Lathyrus polyphyllus</i>	Wild pea	Fabaceae	CC, SC, SL
<i>Lathyrus sulphureus</i>	Sulfur pea	Fabaceae	BB, SQ
<i>Lepidium densiflorum</i> var. <i>pubicarpum</i>	Hairy peppergrass	Brassicaceae	SQ
<i>Lolium</i> spp.	Ryegrass	Poaceae	SC
<i>Lomatium macrocarpum</i>	Lomatium	Apiaceae	US
<i>Lomatium utriculatum</i>	Common lomatium	Apiaceae	BB, SQ
<i>Lonicera hispidula</i> var. <i>vacillans</i>	Hairy honeysuckle	Caprifoliaceae	BB, DK, FC, NS, PS, RP, SC, SQ, SL, US
<i>Lonicera interrupta</i>	Chaparral honeysuckle	Caprifoliaceae	BB, SQ
<i>Lonicera</i> spp.	Ornamental honeysuckle	Caprifoliaceae	SC
<i>Lotus denticulatus</i>	Toothed lotus	Fabaceae	BB, SQ
<i>Lotus humistratus</i>	Foothill lotus	Fabaceae	BB, SQ
<i>Lotus purshianus</i> var. <i>purshianus</i>	Spanish lotus	Fabaceae	BB, SQ
<i>Lupinus albilfrons</i>	Silver bush lupine	Fabaceae	BB, SQ
<i>Lupinus bicolor</i>	Bi-colored lupine	Fabaceae	BB, SQ
<i>Luzula comosa</i>	Common wood rush	Juncaceae	BB, SQ
<i>Madia</i> spp.	Tarweed	Asteraceae	NS, US
<i>Marah watsonii</i>	Watson's wild-cucumber	Cucurbitaceae	BB, SQ

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Medicago polymorpha</i>	California burclover	Fabaceae	BB
<i>Melica californica</i>	California melic	Poaceae	BB, SQ
<i>Mentha pulegium</i>	Pennyroyal	Lamiaceae	SC
<i>Micropus californicus</i>	Slender cottonweed	Asteraceae	SQ
<i>Mimulus guttatus</i>	Seep-spring monkey flower	Scrophulariaceae	US
<i>Mimulus kelloggii</i>	Kellogg's monkeyflower	Scrophulariaceae	SQ
<i>Minuartia californica</i>	California sandwort	Caryophyllaceae	BB
<i>Monardella odoratissima</i>	Mountain monardella	Lamiaceae	SQ
<i>Montia parviflora</i>	Little-leaf montia	Portulacaceae	SC
<i>Nemophila heterophylla</i>	Variable-leaved nemophila	Hydrophyllaceae	BB, SQ
<i>Neviusia cliftonii</i>	Shasta snow-wreath	Rosaceae	CC, RP
<i>Oemlaria cerasiformis</i>	Oso berry	Rosaceae	CC, SC
<i>Osmorhiza chilensis</i>	Sierran sweet-cicely	Apiaceae	DK, FC, NS, PS, RP, SC, SL
<i>Osmorhiza occidentalis</i>	Sierran sweet-cicely	Apiaceae	BB, SQ
<i>Panicum acuminatum</i> var. <i>acuminatum</i>	Panicgrass	Poaceae	BB, SC, SQ
<i>Pellaea mucronata</i> var. <i>mucronata</i>	Bird's-foot fern	Pteridaceae	BB, SQ
<i>Penstemon heterophyllus</i> var. <i>purdyi</i>	Foothill beardtongue	Scrophulariaceae	BB
<i>Pentagramma triangularis</i>	Goldenback fern	Pteridaceae	NS
<i>Pentagramma triangularis</i> ssp. <i>triangularis</i>	Goldback fern	Pteridaceae	BB, LB, SQ
<i>Petrorhagia dubia</i>	Windmill pink	Caryophyllaceae	BB, SC, SQ, SL
<i>Phacelia hastata</i>	Silverleaf phacelia	Hydrophyllaceae	BB, SC, SQ
<i>Phacelia heterophylla</i>	Phacelia	Hydrophyllaceae	SQ
<i>Phalaris arundinacea</i>	Reed canary grass	Poaceae	SQ, US
<i>Philadelphus lewisii</i>	Wild mock orange	Philadelphaceae	BB, DK, NS, RP, SC, SQ
<i>Phoradendron villosum</i>	Oak mistletoe	Viscaceae	BB, SQ
<i>Physocarpus capitatus</i>	Pacific ninebark	Rosaceae	CC, RP, SC, SQ
<i>Pinus attenuata</i>	Knobcone pine	Pinaceae	BB, CC, LB, SQ
<i>Pinus lambertiana</i>	Sugar pine	Pinaceae	SQ
<i>Pinus ponderosa</i>	Ponderosa pine	Pinaceae	BB, CC, DK, LB, NS, SC, SQ, SL, US
<i>Pinus sabiniana</i>	Gray pine	Pinaceae	BB, SC, SQ, US
<i>Piperia elongata</i>	Dense-flowered rein orchid	Orchidaceae	SQ

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Plagiobothrys tenellus</i>	Pacific popcornflower	Boraginaceae	BB
<i>Plantago lanceolata</i>	English plantain	Plantaganaceae	NS, SC, SQ, US
<i>Poa annua</i>	Annual bluegrass	Poaceae	SQ
<i>Polemonium micranthum</i>	Annual sky pilot	Polemoniaceae	SQ
<i>Polypodium calirhiza</i>	Polypody	Polypodiaceae	NS
<i>Polypogon maritimus</i>	Mediterranean beard grass	Poaceae	SQ
<i>Polystichum imbricans</i>	Narrow-leaved sword fern	Dryopteridaceae	BB, SQ
<i>Polystichum munitum</i>	Swordfern	Dryopteridaceae	CC, DK, FC, LB, NS, PS, RP, SC, SL
<i>Potentilla glandulosa</i>	Common cinquefoil	Rosaceae	SQ
<i>Potentilla</i> spp.	Cinquefoil	Rosaceae	CC, NS, SC, SL
<i>Prunella vulgaris</i>	Self-heal	Lamiaceae	NS, SQ
<i>Prunus cerasifera</i>	Cherry plum	Rosaceae	SC
<i>Prunus subcordata</i>	Klamath plum	Rosaceae	CC, DK, FC, PS, SC
<i>Prunus virginiana</i>	Western choke-cherry	Rosaceae	NS, SC, SQ
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas-fir	Pinaceae	BB, CC, DK, FC, LB, NS, PS, RP, SC, SQ, SL, US
<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	Dennstaedtiaceae	BB, CC, NS, PS, RP, SC, SQ
<i>Quercus berberidifolia</i>	Scrub oak	Fagaceae	BB, SQ
<i>Quercus chrysolepis</i>	Canyon live oak	Fagaceae	BB, CC, DK, FC, LB, NS, PS, RP, SC, SQ, SL, US
<i>Quercus douglasii</i>	Blue oak	Fagaceae	SQ
<i>Quercus garryana</i>	Oregon white oak	Fagaceae	SC
<i>Quercus garryana</i> var. <i>breweri</i>	Brewer's oak	Fagaceae	NS, SC, SL, US
<i>Quercus garryana</i> var. <i>garryana</i>	Oregon oak	Fagaceae	BB, SQ
<i>Quercus kelloggii</i>	Black oak	Fagaceae	BB, CC, FC, NS, PS, SC, SQ, SL, US
<i>Quercus lobata</i>	Valley oak	Fagaceae	SC
<i>Quercus wislizenii</i>	Interior live oak	Fagaceae	BB, SQ
<i>Quercus x morehus</i>	Oracle oak	Fagaceae	BB
<i>Rhamnus purshiana</i>	Cascara	Rhamnaceae	BB, NS
<i>Rhamnus rubra</i>	Sierra coffeeberry	Rhamnaceae	BB, CC, DK, LB, NS, PS, SC, SQ
<i>Rhamnus tomentella</i> ssp. <i>tomentella</i>	Hoary coffeeberry	Rhamnaceae	BB, SQ

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Rhododendron occidentale</i>	Western azalea	Ericaceae	NS, SC, SQ, SL
<i>Rhus trilobata</i>	Skunkbrush	Anacardiaceae	BB, CC, DK, NS, RP, SC, SQ, SL
<i>Ribes divaricatum</i>	Gooseberry	Grossulariaceae	BB
<i>Ribes roezlii</i>	Sierra gooseberry	Grossulariaceae	DK, FC, SC, SQ, US
<i>Rosa californica</i>	California rose	Rosaceae	SQ
<i>Rosa gymnocarpa</i>	Wood rose	Rosaceae	BB, DK, NS, RP, SQ, SL
<i>Rosmarinus</i> spp.	Rosemary	Lamiaceae	SC
<i>Rubus discolor</i>	Himalayan blackberry	Rosaceae	BB, NS, PS, SC, SQ, SL
<i>Rubus laciniatus</i>	Cut-leaved blackberry	Rosaceae	US
<i>Rubus leucodermis</i>	Black cap raspberry	Rosaceae	DK, NS, SC
<i>Rubus parviflorus</i>	Thimbleberry	Rosaceae	BB, FC, NS, SC, SQ
<i>Rubus ursinus</i>	California blackberry	Rosaceae	CC, DK, FC, NS, PS, SQ, SL
<i>Rumex acetosella</i>	Red sorrel	Polygonaceae	SC
<i>Rumex crispus</i>	Curly dock	Polygonaceae	NS, SC, US
<i>Salix laevigata</i>	Red willow	Salicaceae	SQ
<i>Salix lucida</i>	Shining willow	Salicaceae	SC
<i>Salvia sonomensis</i>	Creeping sage	Lamiaceae	SQ
<i>Sanicula bipinnatifida</i>	Purple sanicle	Apiaceae	BB, SQ
<i>Scutellaria antirrhinoides</i>	Snapdragon skullcap	Lamiaceae	SQ
<i>Scutellaria siphocampyloides</i>	Skullcap	Lamiaceae	BB, SQ
<i>Scutellaria tuberosa</i>	Common skullcap	Lamiaceae	SQ
<i>Sedum spathulifolium</i>	Pacific sedum	Crassulaceae	SC, SQ
<i>Silene californica</i>	California Indian pink	Caryophyllaceae	CC, RP, SQ, US
<i>Silene gallica</i>	Common catchfly	Caryophyllaceae	BB
<i>Smilax californica</i>	Greenbriar	Liliaceae	BB, CC, DK, FC, NS, PS, RP, SQ, US
<i>Solanum parishii</i>	Parish's nightshade	Solanaceae	BB, SQ
<i>Streptanthus tortuosus</i>	Mountain jewelflower	Brassicaceae	BB, SQ
<i>Streptopus amplexifolius</i> var. <i>americanus</i>	Twisted stalk	Liliaceae	PS
<i>Styrax officianalis</i>	Snowdrop bush	Styraceae	BB, CC, DK, FC, LB, NS, PS, RP, SQ, US
<i>Swertia albicaulis</i> var. <i>nitida</i>	White-stemmed swertia	Gentianaceae	SQ
<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	Snowberry	Caprifoliaceae	BB, CC, FC, NS, PS, RP, SC, SQ, SL

Table A2-1. Plant Species Observed at Shasta Lake (contd)

Scientific Name	Common Name	Family Name	Site
<i>Taeniatherum caput-medusae</i>	Medusahead	Poaceae	SC
<i>Tellima grandiflora</i>	Fringe cups	Saxifragaceae	RP, SQ, SL
<i>Torilis arvensis</i>	Hedge-parsley	Apiaceae	BB, CC, DK, DK, FC, RP, SC, SQ, SL, US
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae	BB, CC, DK, FC, NS, PS, RP, SC, SQ, SL, US
<i>Tragopogon dubius</i>	Western salsify	Asteraceae	SQ
<i>Trientalis latifolia</i>	Starflower	Primulaceae	CC, DK, NS, PS, RP, SQ, SL
<i>Trifolium hirtum</i>	Rose clover	Fabaceae	BB, SC, SQ, US
<i>Trifolium microcephalum</i>	Small-headed clover	Fabaceae	SQ
<i>Trillium albidum</i>	Trillium	Liliaceae	CC, RP
<i>Triteleia hyacinthina</i>	White brodiaea	Liliaceae	SL
<i>Umbellularia californica</i>	California bay	Lauraceae	BB, SL
<i>Verbascum blattaria</i>	Moth mullein	Scrophulariaceae	BB, SQ, US
<i>Verbascum thapsus</i>	Woolly mullein	Scrophulariaceae	BB, SQ
<i>Verbena lasiostachys</i>	Common verbena	Verbenaceae	SC
<i>Viola glabella</i>	Stream violet	Violaceae	SQ
<i>Viola lobata</i>	Pine violet	Violaceae	CC, FC, NS, PS, RP, SL
<i>Vitis californica</i>	California grape	Vitaceae	BB, CC, DK, FC, PS, RP, SC, SQ, SL, US
<i>Vulpia myuros</i>	Rattail fescue	Poaceae	BB, SQ
<i>Woodwardia fimbriata</i>	Giant chain fern	Blechnaceae	SC, SQ
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	SC, SQ

Key:

BB = Big Backbone Creek	FC = Flat Creek	PC = Potem Creek	SQ = Squaw Creek
CC = Campbell Creek	LB = Little Backbone Creek	RP = Ripgut Creek	SL = Sugarloaf Creek
DK = Dekkas Creek	MS = Middle Salt Creek	SC = Salt Creek	US = Upper Sacramento River
	NS = Nasoni Creek		

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Attachment 3 Special-Status Plant Species Known to Occur in the Shasta Lake and Vicinity Portion of the Primary Study Area

**Botanical Resources and Wetlands Technical
Report**

Shasta Lake Water Resources Investigation, California

Prepared by:

**United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region**

Shasta Snow Wreath (*Neviusia cliftonii*)

Shasta snow-wreath is a recently discovered shrub of the rose family endemic to northern California in the vicinity of Shasta Lake, Shasta County. Shasta snow-wreath is now known to occur in limestone outcrops and adjacent slopes along drainages or small canyons; and in mixed woodland, ponderosa pine, and montane hardwood-conifer habitats with metasedimentary/metavolcanic geologic substrates along small drainages and stream corridors (Lindstrand and Nelson 2006). Elevations range between 1,070 and 1,800 feet.

Shasta snow-wreath has been recorded in 17 locations on the Pit River Arm, McCloud River Arm, and the main body of Shasta Lake. Up to 9 of these 17 known sites may be directly affected by the project.

Slender False Lupine (*Thermopsis macrophylla* var. *venosa*)

Slender false lupine is a rhizomatous herb in the family Fabaceae. It occurs at elevations from 328 to 4,495 feet in chaparral, cismontane woodland, lower montane coniferous forest, meadows, seeps, and north coast coniferous forests. Blooming occurs from March through July. This species is known to occur in Del Norte, Humboldt, Shasta, Siskiyou, and Trinity counties in California (California Native Plant Society 2007).

Many slender false-lupine occurrences were found throughout the ESL during the botanical surveys, and individuals at many of these sites would be directly impacted by the proposed project. However, this species has been found to be relatively common throughout the Shasta Lake and vicinity portion of the primary study area and general vicinity.

Cantelow's Lewisia (*Lewisia cantelovii*)

Cantelow's lewisia is a perennial herb found in moist rock outcrops in broad-leaved and conifer forests. It blooms from May through October, and occurs at elevations of 1,080 to 4,500 feet (California Native Plant Society 2007). This species is known to occur in Butte, Nevada, Plumas, Shasta, and Sierra counties.

The Cantelow's lewisia discovery within the Shasta Lake and vicinity portion of the primary study area consists of one occurrence found on a rock outcrop on the right bank of the Upper Sacramento River riverine reach near the Shasta Lake/Upper Sacramento River transition zone. Most likely, at least a portion of the individuals at this location would be directly affected by the project.

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Attachment 4 Lists of All Sensitive Plant Species in the Extended Study Area Reported to the CNDDB

Botanical Resources and Wetlands Technical Report

Shasta Lake Water Resources Investigation, California

Prepared by:

**United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region**



**U.S. Department of the Interior
United States Department of the Interior**

June 2013

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas

Common Name	Scientific Name	General Habitat Description	Micro Habitat
adobe sanicle	<i>Sanicula maritima</i>	Meadows and seeps, valley and foothill grassland, chaparral, coastal prairie.	Moist clay or ultramafic soils. 30–240m.
adobe-lily	<i>Fritillaria pluriflora</i>	Chaparral, cismontane woodland, foothill grassland.	Usually on clay soils; sometimes serpentine. 55–820m.
Agoura Hills dudleya	<i>Dudleya cymosa</i> ssp. <i>agourensis</i>	Chaparral, cismontane woodland.	Rocky, volcanic breccia. 200–500m.
Ahart's dwarf rush	<i>Juncus leiospermus</i> var. <i>ahartii</i>	Vernal pools.	Restricted to the edges of vernal pools. 30–100m.
Ahart's paronychia	<i>Paronychia ahartii</i>	Valley and foothill grassland, vernal pools, cismontane woodland.	Stony, nearly barren clay of swales and higher ground around vernal pools. 30–510m.
alkali mariposa lily	<i>Calochortus striatus</i>	Chaparral, chenopod scrub, mojavean desert scrub, meadows.	Alkaline meadows and ephemeral washes. 90–1,595m.
alkali milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	Alkali playa, valley and foothill grassland, vernal pools.	Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 1–170m.
alpine dusty maidens	<i>Chaenactis douglasii</i> var. <i>alpine</i>	Alpine boulder and rock fields.	Open, subalpine to alpine gravel and crevices; granitic substrate. 2,725–3,400m.
Antioch Dunes evening-primrose	<i>Oenothera deltoides</i> ssp. <i>Howellii</i>	Interior dunes.	Remnant river bluffs and sand dunes east of Antioch. 0–30m.
aphanisma	<i>Aphanisma blitoides</i>	Coastal bluff scrub, coastal dunes, coastal scrub.	On bluffs and slopes near the ocean in sandy or clay soils. In steep decline on the islands and the mainland. 1–305m.
arcuate bush mallow	<i>Malacothamnus arcuatus</i>	Chaparral.	Gravelly alluvium. 80–355m.
Arizona spurge	<i>Chamaesyce arizonica</i>	Sonoran desert scrub.	Sandy soils. 50–300m.
Arroyo de la Cruz manzanita	<i>Arctostaphylos cruzensis</i>	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub, & grassland.	On sandy soils in several different habitat types from chaparral to coastal scrub to woodland. 60–310m.
ayenia	<i>Ayenia compacta</i>	Mojavean desert scrub, sonoran desert scrub.	Sandy and gravelly washes in the desert; dry desert canyons. 150–1,095m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Baja California birdbush	<i>Ornithostaphylos oppositifolia</i>	Chaparral.	Associated with ceanothus verrucosus and salvia mellifera in California. 55–800m.
Baja navarretia	<i>Navarretia peninsularis</i>	Lower montane coniferous forest, chaparral.	Wet areas in open forest. 1,500–2,425m.
Baker's navarretia	<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 5–950m.
Bakersfield cactus	<i>Opuntia basilaris</i> var. <i>treleasei</i>	Chenopod scrub, valley and foothill grassland, cismontane woodland.	Coarse or cobbly well-drained granitic sand on bluffs, low hills, and flats within grassland. 90–550m.
Bakersfield smallscale	<i>Atriplex tularensis</i>	Chenopod scrub, alkali meadow.	Historically in valley sink scrub or with saltgrass. 90–110m.
Ballona cinquefoil	<i>Potentilla multijuga</i>	Meadows and seeps.	Brackish meadows. 0–2m.
Barstow woolly sunflower	<i>Eriophyllum mohavense</i>	Desert chenopod scrub, mojavean desert scrub, desert playas.	Mostly in open, silty or sandy areas w/saltbush scrub, or creosote. Bush scrub. Barren ridges or margins of playas. 500–900m
beach spectaclepod	<i>Dithyrea maritima</i>	Coastal dunes, coastal scrub. Formerly more widespread in coastal habitats in Southern California.	Sea shores, on sand dunes, and sandy places near the shore. 3–50m.
beaked clarkia	<i>Clarkia rostrata</i>	Cismontane woodland, valley and foothill grassland.	North-facing slopes; sometimes on sandstone. 60–460m.
bearded popcorn-flower	<i>Plagiobothrys hystriculus</i>	Vernal pools, valley and foothill grassland.	Wet sites. 10–50m.
Ben Lomond buckwheat	<i>Eriogonum nudum</i> var. <i>decurrens</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	Ponderosa pine sandhills in Santa Cruz County. 50–800m.
bent-flowered fiddleneck	<i>Amsinckia lunaris</i>	Cismontane woodland, valley and foothill grassland.	50–500m.
Big Bear Valley woollypod	<i>Astragalus leucolobus</i>	Lower montane coniferous forest, pebble plain, pinyon and juniper woodland, upper montane coniferous forest.	Dry pine woods, gravelly knolls among sagebrush, or stony lake shores in the pine belt. (425) 1,670–2,515m.
big tarplant	<i>Blepharizonia plumosa</i>	Valley and foothill grassland.	Dry hills & plains in annual grassland. Clay to clay-loam soils; usually on slopes and often in burned areas. 15–455m.
big-scale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Valley and foothill grassland, cismontane woodland.	Sometimes on serpentine. 35–1,000m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
bird-foot checkerbloom	<i>Sidalcea pedata</i>	Meadows and seeps, pebble plains.	Vernally mesic sites in meadows or pebble plains. 1,600–2,500m.
Bisbee Peak rush-rose	<i>Helianthemum suffrutescens</i>	Chaparral.	Often on serpentine, gabbroic, or igneous formation soils; in openings in chaparral. 45–610m.
black sedge	<i>Schoenus nigricans</i>	Marshes and swamps.	Often in alkaline marshes. 150–2,000m.
black-flowered figwort	<i>Scrophularia atrata</i>	Closed-cone coniferous forest, chaparral, coastal dunes, coastal scrub, riparian scrub.	Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. 10–250m.
Blochman's dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Coastal scrub, coastal bluff scrub, valley and foothill grassland.	Open, rocky slopes; often in shallow clays over serpentine or in rocky areas w/little soil. 5–450m.
Blochman's leafy daisy	<i>Erigeron blochmaniae</i>	Coastal dunes.	Sand dunes and hills. 3–185m.
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	Marshes and swamps (freshwater), vernal pools.	Clay soils; usually in vernal pools, sometimes on lake margins. 5–2,400m.
Bolander's bruchia	<i>Bruchia bolanderi</i>	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest.	Moss which grows on damp soil. This species has an ephemeral nature and takes advantage of disturbed sites. 1,700–2,800m.
Bolander's horkelia	<i>Horkelia bolanderi</i>	Lower montane coniferous forest, chaparral, meadows, valley and foothill grassland.	Grassy margins of vernal pools and meadows. 450–850m.
bottle liverwort	<i>Sphaerocarpos drewei</i>	Chaparral, coastal scrub. Much of suitable habitat lost to urbanization.	Liverwort in openings; on soil. 90–600m.
Brandegee's clarkia	<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Chaparral, cismontane woodland.	Often in roadcuts. 295–885m.
Brandegee's eriastrum	<i>Eriastrum brandegeae</i>	Chaparral, cismontane woodland.	On barren volcanic soils; often in open areas. 345–1,000m.
Brand's phacelia	<i>Phacelia stellaris</i>	Coastal scrub, coastal dunes.	Open areas. 5–1,515m.
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland.	Recent burns or disturbed areas; in stiff gravelly clay soils overlying granite or limestone. 4–640m.
Brewer's western flax	<i>Hesperolinon breweri</i>	Chaparral, cismontane woodland, valley and foothill grassland.	Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. 30–885m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
bristly sedge	<i>Carex comosa</i>	Marshes and swamps.	Lake margins, wet places; site below sea level is on a delta island. -5–1,005m.
brittlescale	<i>Atriplex depressa</i>	Chenopod scrub, meadows, playas, valley and foothill grassland, vernal pools.	Usually in alkali scalds or alk. Clay in meadows or annual grassland; rarely assoc w/riparian, marshes, or v.p's. 1–320m.
brownish beaked-rush	<i>Rhynchospora capitellata</i>	Lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest.	Mesic sites. 455–2,000m.
Butte County fritillary	<i>Fritillaria eastwoodiae</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	Usually on dry slopes but also found in wet places; soils can be serpentine, red clay, or sandy loam. 40–1,500m.
calico monkeyflower	<i>Mimulus pictus</i>	Broadleafed upland forest, cismontane woodland.	In bare ground around gooseberry bushes or around granite rock outcrops. 100–1,300m.
California adolphia	<i>Adolphia californica</i>	Chaparral, coastal sage scrub, valley and foothill grassland.	From sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 15–300m.
California beardtongue	<i>Penstemon californicus</i>	Chaparral, lower montane coniferous forest, pinyon-juniper woodland.	Stony slopes and shrubby openings; sandy or granitic soils. 1,160–2,300m.
California bedstraw	<i>Galium californicum</i> ssp. <i>primum</i>	Chaparral, lower montane coniferous forest.	Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. 360m.
California chalk-moss	<i>Pterygoneurum californicum</i>	Chenopod scrub, alkali playas, valley and foothill grassland.	Moss growing on alkali soil. 10–100m
California ditaxis	<i>Ditaxis serrata</i> var. <i>californica</i>	Sonoran desert scrub.	On sandy washes and alluvial fans of the foothills and lower desert slopes. 30–1,000m.
California jewel-flower	<i>Caulanthus californicus</i>	Chenopod scrub, valley and foothill grassland, pinyon-juniper woodland.	Historical from various valley habitats in both the central valley and carrizo plain. 65–900m.
California marina	<i>Marina orcuttii</i> var. <i>orcuttii</i>	Pinyon and juniper woodland, sonoran desert scrub, chaparral.	Gravelly hillsides, rocky soil. 1,050–1,160m.
California Orcutt grass	<i>Orcuttia californica</i>	Vernal pools.	15–660m.
California screw-moss	<i>Tortula californica</i>	Chenopod scrub, valley and foothill grassland.	Moss growing on sandy soil. 10–1,460m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
California seablite	<i>Suaeda californica</i>	Marshes and swamps.	Margins of coastal salt marshes. 0–5m.
California vervain	<i>Verbena californica</i>	Cismontane woodland, valley and foothill grassland.	Mesic sites on serpentine; usually serpentine seeps or creeks. 255–400m.
Campbell's liverwort	<i>Geothallus tuberosus</i>	Coastal scrub, vernal pools. Most suitable habitat lost to urbanization.	Liverwort known from mesic soil. 10–600m.
Cantelow's lewisia	<i>Lewisia cantelovii</i>	Broadleafed upland forest, lower montane coniferous forest, cismontane woodland, chaparral.	Mesic rock outcrops and wet cliffs, usually in moss or clubmoss; on granitics or sometimes on serpentine. 330–1,340m.
caper-fruited tropidocarpum	<i>Tropidocarpum capparideum</i>	Valley and foothill grassland.	Alkaline clay. 0–455m.
Carmel Valley malacothrix	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	Chaparral.	Rock outcrops or steep rocky roadcuts. 25–1,215m.
Carquinez goldenbush	<i>Isocoma arguta</i>	Valley and foothill grassland.	Alkaline soils, flats, lower hills. On low benches near drainages & on tops & sides of mounds in swale habitat. 1–20m.
Catalina crossosoma	<i>Crossosoma californicum</i>	Chaparral, coastal scrub.	On rocky sea bluffs, wooded canyons, and dry, open sunny spots on rocky clay. 0–500m.
chaparral harebell	<i>Campanula exigua</i>	Chaparral.	Rocky sites, usually on serpentine in chaparral. 300–1,250m.
chaparral nolina	<i>Nolina cismontana</i>	Chaparral, coastal scrub.	Primarily on sandstone and shale substrates; also known from gabbro. 140–1,275m.
chaparral sand-verbena	<i>Abronia villosa</i> var. <i>aurita</i>	Chaparral, coastal scrub	Sandy areas. 80–1,600m.
Charlotte's phacelia	<i>Phacelia nashiana</i>	Joshua tree woodland, mojavean desert scrub, pinyon-juniper woodland.	Granitic soils; sandy or rocky areas on steep slopes or flats. 600–2,200m.
Chinese Camp brodiaea	<i>Brodiaea pallida</i>	Valley and foothill grassland.	In flat, rocky, intermittent streambed on serpentine. 385m.
Choris' popcorn-flower	<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Chaparral, coastal scrub, coastal prairie.	Mesic sites. 15–100m.
cliff cinquefoil	<i>Potentilla rimicola</i>	Subalpine coniferous forest, upper montane coniferous forest.	Granite crevices; rocky sites. 2,390–3,030m.
cliff spurge	<i>Euphorbia misera</i>	Coastal bluff scrub, coastal scrub.	Rocky sites. 10–500m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Clokey's cryptantha	<i>Cryptantha clokeyi</i>	Mojavean desert scrub.	Sandy or gravelly soils. One site: 850m.
Coachella Valley milk-vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Sonoran desert scrub.	Sandy flats, washes, outwash fans, sometimes on dunes. 60–360m.
coast wallflower	<i>Erysimum ammophilum</i>	Chaparral (maritime), coastal dunes, coastal scrub.	Sandy openings. 0–130m.
coast woolly-heads	<i>Nemacaulis denudata</i> var. <i>denudata</i>	Coastal dunes.	0–100m.
coastal bluff morning-glory	<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	Coastal dunes, coastal scrub.	15–105m.
coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	Coastal bluff scrub, coastal dunes.	Moist, sandy depressions of bluffs or dunes along and near the pacific ocean; one site on a clay terrace. 1–50m.
Columbia yellow cress	<i>Rorippa columbiae</i>	Pinyon-juniper woodland, meadows and seeps, playas.	Moist sandy soil, low gravelly river banks, basaltic lava slopes. 360–1,800m.
Colusa grass	<i>Neostapfia colusana</i>	Vernal pools.	Usually in large, or deep vernal pool bottoms; adobe soils. 5–110m.
Colusa layia	<i>Layia septentrionalis</i>	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 145–1,095m.
Comanche Point layia	<i>Layia leucopappa</i>	Chenopod scrub, valley and foothill grassland.	Dry hills in white-grey clay soils, often with weedy grasses. 100–350m.
Conejo buckwheat	<i>Eriogonum crocatum</i>	Chaparral, coastal scrub, valley and foothill grassland.	Conejo volcanic outcrops; rocky sites. 50–580m.
Conejo dudleya	<i>Dudleya parva</i>	Coastal scrub, valley and foothill grassland.	In clayey or volcanic soils on rocky slopes and grassy hillsides. 60–450m.
Congdon's lomatium	<i>Lomatium congdonii</i>	Cismontane woodland, chaparral.	Serpentine soils with serpentine chaparral plants and grey pines. 300–610m.
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Valley and foothill grassland.	Alkaline soils, sometimes described as heavy white clay. 1–230m.
Contra Costa goldfields	<i>Lasthenia conjugens</i>	Valley and foothill grassland, vernal pools, cismontane woodland. Extirpated from most of its range; extrem. Endangered.	Vernal pools, swales, low depressions, in open grassy areas. 1–445m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Contra Costa manzanita	<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	Chaparral.	Rocky slopes. 500–1,100m.
Contra Costa wallflower	<i>Erysimum capitatum</i> ssp. <i>angustatum</i>	Inland dunes.	Stabilized dunes of sand and clay near antioch along the san joaquin river. 3–20m.
Coulter's goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coastal salt marshes, playas, valley and foothill grassland, vernal pools.	Usually found on alkaline soils in playas, sinks, and grasslands. 1–1,400m.
Coulter's saltbush	<i>Atriplex coulteri</i>	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland.	Ocean bluffs, ridgetops, as well as alkaline low places. 10–440m.
Coves' cassia	<i>Senna covesii</i>	Sonoran desert scrub.	Dry, sandy desert washes, slopes. 200–1,070m.
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	Chaparral, valley and foothill grassland, coastal scrub.	Serpentine sites in the mt. Hamilton range. 120–455m.
creamy blazing star	<i>Mentzelia tridentata</i>	Mojavean desert scrub.	700–1,160m.
crisp monardella	<i>Monardella crispera</i>	Coastal dunes, coastal scrub.	Often on the borders of open, sand areas, usually adjacent to typical backdune scrub vegetation. 5–120m.
crownbeard	<i>Verbesina dissita</i>	90% in southern maritime chaparral, 10% in coastal sage scrub.	Steep, rocky, primarily n-facing slopes within 1.5 miles of the ocean, in gravelly soils. 45–210m.
Darwin rock cress	<i>Arabis pulchra</i> var. <i>munciensis</i>	Chenopod scrub, mojavean desert scrub.	On limestone. 1,100–2,075m.
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	Coastal scrub, riparian woodland, chaparral.	Sandy washes. 180–855m.
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	Coastal bluff scrub, coastal scrub.	Alkaline soil. 3–250m.
Dean's milk-vetch	<i>Astragalus deanei</i>	Chaparral, coastal scrub, riparian forest.	Open, brushy south-facing slopes in diegan coastal sage, sometimes on recently burned-over hillsides. 75–670m.
decumbent goldenbush	<i>Isocoma menziesii</i> var. <i>decumbens</i>	Coastal scrub.	Sandy soils; often in disturbed sites. 10–910m.
Deep Canyon snapdragon	<i>Antirrhinum cyathiferum</i>	Sonoran desert scrub.	Rocky sites. 0–800m.
Dehesa nolina	<i>Nolina interrata</i>	Chaparral.	Typically on rocky hillsides or ravines on ultramafic soils (gabbro or metavolcanic). 180–855m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Del Mar manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Chaparral, closed-cone coniferous forest.	Sandy coastal mesas and ocean bluffs; in chaparral or torrey pine forest. 0–365m.
Del Mar Mesa sand aster	<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Chaparral, coastal scrub.	In coastal, shrubby communities on maritime sediments and conglomerates. 30–150m.
delicate clarkia	<i>Clarkia delicata</i>	Cismontane woodland, chaparral.	235–1,000m.
Delta button-celery	<i>Eryngium racemosum</i>	Riparian scrub.	Seasonally inundated floodplain on clay. 3–75m.
Delta mudwort	<i>Limosella subulata</i>	Riparian scrub, freshwater marsh, brackish marsh. Probably the rarest of the suite of delta rare plants.	Usually on mud banks of the delta in marshy or scrubby riparian associations; often with <i>lilaeopsis masonii</i> . 0–3m.
Delta tule pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	Freshwater and brackish marshes.	Often found w/ typha, aster lentus, rosa calif., juncus spp., scirpus, etc. Usually on marsh and slough edges.
desert cymopterus	<i>Cymopterus deserticola</i>	Joshua tree woodland, mojavean desert scrub. Most occurrences located near or in edwards afb.	On fine to coarse, loose, sandy soil of flats in old dune areas with well-drained sand. 625–910m.
desert spike-moss	<i>Selaginella eremophila</i>	Sonoran desert scrub.	Shaded sites, gravelly soils; crevices or among rocks. 300–2,425m.
Diablo helianthella	<i>Helianthella castanea</i>	Broadleaved upland forest, chaparral, cismontane wdind, coastal scrub, riparian woodland, valley & foothill grassland.	Usually in chaparral/oak woodland interface in rocky, azonal soils. Often in partial shade. 25–1,150m.
diamond-petaled California poppy	<i>Eschscholzia rhombipetala</i>	Valley and foothill grassland.	Alkaline, clay slopes and flats. 0–975m.
dune larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	Chaparral, coastal dunes (maritime).	On rocky areas and dunes. 30–375m.
Dunn's mariposa lily	<i>Calochortus dunnii</i>	Closed-cone coniferous forest, chaparral.	On gabbro or metavolcanic soils; also known from sandstone; often assoc with chaparral. 375–1,830m.
dwarf downingia	<i>Downingia pusilla</i>	Valley and foothill grassland (mesic sites), vernal pools.	Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1–485m.
Earlimart orache	<i>Atriplex erecticaulis</i>	Valley and foothill grassland.	40–100m.
Eastwood's goldenbush	<i>Ericameria fasciculata</i>	Closed-cone coniferous forest, chaparral (maritime), coastal scrub, coastal dunes.	In sandy openings. 30–275m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Eastwood's manzanita	<i>Arctostaphylos tomentosa</i> ssp. <i>eastwoodiana</i>	Chaparral.	In maritime chaparral in the la purisima ridge, burton mesa, and point sal areas. 90–365m.
El Dorado bedstraw	<i>Galium californicum</i> ssp. <i>sierrae</i>	Cismontane woodland, chaparral, lower montane coniferous forest.	More often in pine-oak woodland than in chaparral; restricted to gabbroic soils. 100–585m.
El Dorado County mule ears	<i>Wyethia reticulata</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	Stony red clay and gabbroic soils; often in openings in gabbro chaparral. 180–630m.
elephant tree	<i>Bursera microphylla</i>	Sonoran desert scrub.	Hillsides and washes and on canyon sides in california; rocky sites. 200–700m.
elongate copper-moss	<i>Mielichhoferia elongata</i>	Cismontane woodland. Commonly called “copper mosses”.	Moss growing on metamorphic rock; usually vernal mesic. 500–1,300m.
Encinitas baccharis	<i>Baccharis vanessae</i>	Chaparral.	On sandstone soils in steep, open, rocky areas with chaparral associates. 60–720m.
estuary seablite	<i>Suaeda esteroa</i>	Marshes and swamps.	Coastal salt marshes in clay, silt, and sand substrates. 0–5m.
felt-leaved monardella	<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	Chaparral, cismontane woodland.	Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil. 300–1,575m.
Ferris' milk-vetch	<i>Astragalus tener</i> var. <i>ferrisiae</i>	Meadows, valley and foothill grassland.	Subalkaline flats on overflow land in the central valley; usually seen in dry, adobe soil. 5–75m.
flat-seeded spurge	<i>Chamaesyce platysperma</i>	Sonoran desert scrub, desert dunes.	Sandy places or shifting dunes. Possibly a waif in california; more common in arizona and mexico. 60–950m.
flax-like monardella	<i>Monardella linoides</i> ssp. <i>oblonga</i>	Lower montane coniferous forest, upper montane coniferous forest, pinyon-juniper woodland.	On dry slopes of yellow pine forest, decomposed granitic soils; also in roadside disturbed areas. 1,695–2,470m.
Follett's monardella	<i>Monardella follettii</i>	Lower montane coniferous forest.	Open rocky serpentine slopes. 600–2,000m.
fox sedge	<i>Carex vulpinoidea</i>	Marshes and swamps, riparian woodland.	Wet places. 30–1,200m.
fragrant fritillary	<i>Fritillaria liliacea</i>	Coastal scrub, valley and foothill grassland, coastal prairie.	Often on serpentine; various soils reported though usually clay, in grassland. 3–410m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Franciscan onion	<i>Allium peninsulare</i> var. <i>franciscanum</i>	Cismontane woodland, valley and foothill grassland.	Clay soils; often on serpentine. Dry hillsides. 100–300m.
Franciscan thistle	<i>Cirsium andrewsii</i>	Coastal bluff scrub, broadleaved upland forest, coastal scrub.	Sometimes serpentine seeps. 0–135m.
Gabilan Mountains manzanita	<i>Arctostaphylos gabilanensis</i>	Chaparral, cismontane woodland.	Grainitic substrates. 300–700m.
Gambel's water cress	<i>Nasturtium gambelii</i>	Marshes and swamps.	Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5–1,305m.
Gander's pitcher sage	<i>Lepechinia ganderi</i>	Closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland.	Usu. Found in chap. Or coastal scrub; sometimes in tecate cypress wdln. Gabbro or metavolcanic substrate. 300–1,000m.
Gander's ragwort	<i>Packera ganderi</i>	Chaparral.	Recently burned sites and gabbro outcrops. 400–1,200m.
glandular ditaxis	<i>Ditaxis claryana</i>	Mojavean desert scrub, sonoran desert scrub.	In dry washes and on rocky hillsides. Sandy soils. 0–465m.
golden violet	<i>Viola aurea</i>	Great basin scrub, pinyon-juniper woodland.	Dry, sandy slopes. 835–1,800m.
golden-spined cereus	<i>Bergerocactus emoryi</i>	Coastal scrub, sometimes chaparral margins.	Limited to the coastal belt. Usually on clay soils. 3–395m.
Greata's aster	<i>Aster greatae</i>	Chaparral, cismontane woodland.	Mesic canyons. 800–1,500m.
green jewel-flower	<i>Streptanthus breweri</i> var. <i>hesperidis</i>	Chaparral, cismontane woodland.	Openings in chaparral or woodland; serpentine, rocky sites. 130–760m.
Greene's tuctoria	<i>Tuctoria greenei</i>	Vernal pools, valley and foothill grassland.	Dry bottoms of vernal pools in open grasslands. 30–1,065m.
grey-leaved violet	<i>Viola pinetorum</i> ssp. <i>grisea</i>	Subalpine coniferous forest, upper montane coniferous forest.	Dry mountain peaks and slopes. 1,800–2,600m.
hairless popcorn-flower	<i>Plagiobothrys glaber</i>	Meadows and seeps, marshes and swamps.	Coastal salt marshes and alkaline meadows. 5–180m.
hairy orcutt grass	<i>Orcuttia pilosa</i>	Vernal pools.	25–125m.
Hall's bush mallow	<i>Malacothamnus hallii</i>	Chaparral.	Some populations on serpentine. 10–550m.
Hall's monardella	<i>Monardella macrantha</i> ssp. <i>hallii</i>	Broadleaved upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley & foothill grassland.	Dry slopes and ridges in openings within the above communities. 695–2,195m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Hall's tarplant	<i>Deinandra halliana</i>	Cismontane woodland, chenopod scrub, valley and foothill grassland.	Reported from a variety of substrates incl. Clay, sand, and alkaline soils. 300–950m.
Hammitt's clay-cress	<i>Sibaropsis hammittii</i>	Valley and foothill grassland, chaparral.	Mesic microsites in open areas on clay soils in stipa grassland. Often surrounded by adenostoma chaparral. 730–1,065m.
Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	Valley and foothill grassland, cismontane woodland.	Clay soils, predominantly on the northern slopes of knolls, but also along shady creeks or near vernal pools. 15–150m.
heart-leaved pitcher sage	<i>Lepechinia cardiophylla</i>	Closed-cone coniferous forest, chaparral, cismontane woodland.	550–1,370m.
heartscale	<i>Atriplex cordulata</i>	Chenopod scrub, valley and foothill grassland, meadows.	Alkaline flats and scalds in the central valley, sandy soils. 1–150(600)m.
Heckard's pepper-grass	<i>Lepidium latipes</i> var. <i>heckardii</i>	Valley and foothill grassland, vernal pools.	Grassland, and sometimes vernal pool edges. Alkaline soils. 3–30m.
Henderson's bent grass	<i>Agrostis hendersonii</i>	Valley and foothill grassland, vernal pools.	Little information exists; moist places in grassland or vernal pool habitat. 70–305m.
hispid bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	Meadows, playas, valley and foothill grassland.	In damp alkaline soils, especially in alkaline meadows and alkali sinks with distichlis. 10–155m.
hooked popcorn-flower	<i>Plagiobothrys uncinatus</i>	Chaparral, cismontane woodland, valley and foothill grassland, coastal bluff scrub.	Sandstone outcrops and canyon sides; often in burned or disturbed areas. 300–820m.
Hooker's manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Chaparral, coastal scrub, closed-cone coniferous forest, cismontane woodland.	Sandy soils, sandy shales, sandstone outcrops. 85–300m.
Hoover's bent grass	<i>Agrostis hooveri</i>	Chaparral, cismontane woodland, valley and foothill grassland.	Sandy sites. 60–600m.
Hoover's button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	Vernal pools.	Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 5–45m.
Hoover's calycadenia	<i>Calycadenia hooveri</i>	Cismontane woodland, valley and foothill grassland.	On exposed, rocky, barren soil. 65–260m.
Hoover's cryptantha	<i>Cryptantha hooveri</i>	Valley and foothill grassland.	In coarse sand. 5–150m.
Hoover's spurge	<i>Chamaesyce hooveri</i>	Vernal pools, valley and foothill grassland.	Vernal pools on volcanic mudflow or clay substrate. 25–130m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Hospital Canyon larkspur	<i>Delphinium californicum</i> ssp. <i>interius</i>	Cismontane woodland, chaparral.	In wet, boggy meadows, openings in chaparral and in canyons. 225–1,060m.
hot springs fimbristylis	<i>Fimbristylis thermalis</i>	Meadows (alkaline).	Near hot springs. 120–1,340m.
Indian Valley brodiaea	<i>Brodiaea coronaria</i> ssp. <i>rosea</i>	Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland, meadows.	Serpentine gravelly creek bottoms, and in meadows and swales. 335–1,450m.
Indian Valley bush mallow	<i>Malacothamnus aboriginum</i>	Cismontane woodland, chaparral.	Granitic outcrops and sandy bare soil, often in disturbed soils. 150–1,700m.
intermediate mariposa lily	<i>Calochortus weedii</i> var. <i>intermedius</i>	Coastal scrub, chaparral, valley and foothill grassland.	Dry, rocky open slopes and rock outcrops. 120–850m.
lone manzanita	<i>Arctostaphylos myrtifolia</i>	Chaparral, cismontane woodland.	On ione clay with chaparral associates. Often comprises 50–80% cover. 75–560m.
island green dudleya	<i>Dudleya virens</i> ssp. <i>insularis</i>	Coastal bluff scrub, coastal scrub.	Rocky soils. 5–300m.
jackass-clover	<i>Wislizenia refracta</i> ssp. <i>refracta</i>	Playas, desert dunes, mojavean desert scrub, sonoran desert scrub.	Sandy washes, roadsides, alkaline flats. 130–800m.
Jaeger's milk-vetch	<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland.	Dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 365–915m.
Jepson's milk-vetch	<i>Astragalus rattanii</i> var. <i>jepsonianus</i>	Cismontane woodland, valley and foothill grassland, chaparral.	Commonly on serpentine in grassland or openings in chaparral. 320–700m.
Jepson's onion	<i>Allium jepsonii</i>	Cismontane woodland, lower montane coniferous forest.	On serpentine soils in sierra foothills, volcanic soil on table mtn. On slopes and flats; usu in an open area. 450–1,130m
Johnston's rock cress	<i>Arabis johnstonii</i>	Chaparral, lower montane coniferous forest.	Granitic soil with pleistocene, non-marine clay deposits. With adenostoma, quercus wislizenii. 1,350–2,150m.
Jones' layia	<i>Layia jonesii</i>	Chaparral, valley and foothill grassland.	Clay soils and serpentine outcrops. 5–155m.
Kellogg's horkelia	<i>Horkelia cuneata</i> ssp. <i>sericea</i>	Closed-cone coniferous forest, coastal scrub, chaparral.	Old dunes, coastal sandhills; openings. 10–200m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Kern mallow	<i>Eremalche kernensis</i>	Chenopod scrub, valley and foothill grassland.	On dry, open sandy to clayey soils; usually within valley saltbush scrub; often at edge of balds. 70–515m.
Kings Mountain manzanita	<i>Arctostaphylos regismontana</i>	Broadleaved upland forest, chaparral, north coast coniferous forest.	Granitic or sandstone outcrops. 305–730m.
Kusche's sandwort	<i>Arenaria macradenia</i> var. <i>kuschei</i>	Habitat little known.	Mojave desert. 1,220m.
La Graciosa thistle	<i>Cirsium loncholepis</i>	Coastal dunes, brackish marshes, riparian scrub.	Lake edges, riverbanks, other wetlands; often in dune areas. 5–185m.
La Purisima manzanita	<i>Arctostaphylos purissima</i>	Chaparral.	Sandstone outcrops, sandy soil. 120–300m.
Laguna Beach dudleya	<i>Dudleya stolonifera</i>	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland.	In thin soil on north-facing sandstone cliffs. 10–260m.
Lakeside ceanothus	<i>Ceanothus cyaneus</i>	Closed-cone coniferous forest, chaparral.	100–1,515m.
Lancaster milk-vetch	<i>Astragalus preussii</i> var. <i>laxiflorus</i>	Chenopod scrub.	Alkaline clay flats or gravelly or sandy washes and along draws in gullied badlands. 725m in California.
large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	Cismontane woodland, valley and foothill grassland.	Annual grassland in various soils. 275–550m.
late-flowered mariposa lily	<i>Calochortus weedii</i> var. <i>vestus</i>	Chaparral, cismontane woodland.	Dry, open coastal woodland, chaparral; on serpentine. 270–1,910m.
Latimer's woodland-gilia	<i>Saltugilia latimeri</i>	Chaparral, mojavean desert scrub.	Rocky or sandy substrate. 400–1,900m.
Layne's ragwort	<i>Packera layneae</i>	Chaparral, cismontane woodland.	Ultramafic soil; occasionally along streams. 200–1,000m.
leafy buckwheat	<i>Eriogonum foliosum</i>	Chaparral, lower montane coniferous forest, pinyon and juniper woodland.	Sandy sites. 970–2,200m.
leafy tarplant	<i>Deinandra increscens</i> ssp. <i>foliosa</i>	Valley and foothill grassland.	300–500m.
legenere	<i>Legenere limosa</i>	Vernal pools. Many historical occurrences are extirpated.	In beds of vernal pools. 1–880m.
Lemmon's jewelflower	<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	Pinyon-juniper woodland, valley and foothill grassland.	80–1,220m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
lemon lily	<i>Lilium parryi</i>	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest.	Wet, mountainous terrain; gen in forested areas; on shady edges of streams, in open boggy meadows & seeps. 1,300–2,790m.
lesser saltscare	<i>Atriplex minuscula</i>	Chenopod scrub, playas, valley and foothill grassland.	In alkali sink and grassland in sandy, alkaline soils. 20–100m.
light gray lichen	<i>Mobergia calculiformis</i>	Coastal scrub?	Abundant on cobbles in right habitat; only known from one site in Baja and one in San Diego area.
little mousetail	<i>Myosurus minimus</i> ssp. <i>apus</i>	Vernal pools. This subspecies has taxonomic problems; distinguishing between this and m. <i>Sessilis</i> is difficult. Hybrid?	Alkaline soils. 20-640m. (note: central valley EO's not mapped).
Little San Bernardino Mtns. linanthus	<i>Linanthus maculatus</i>	Desert dunes, sonoran desert scrub, mojavean desert scrub, joshua tree woodland.	Sandy places; microhab difficult to pin down. Usu. In light-colored quartz sand; often in wash or bajada. 195–2,075m.
Livermore tarplant	<i>Deinandra bacigalupii</i>	Meadows and seeps.	Alkaline meadows. 150–185m.
Loma Prieta hoita	<i>Hoita strobilina</i>	Chaparral, cismontane woodland, riparian woodland.	Serpentine; mesic sites.
Lompoc yerba santa	<i>Eriodictyon capitatum</i>	Closed-cone coniferous forest, chaparral.	Sandy soils on terraces. 40–455m.
long-spined spineflower	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	Chaparral, coastal scrub, meadows, valley and foothill grassland.	Gabbroic clay. 30–1,450m.
Los Angeles sunflower	<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Marshes and swamps (coastal salt and freshwater). Historical from southern california.	5–1,675m.
Lost Hills crownscale	<i>Atriplex vallicola</i>	Chenopod scrub, valley and foothill grassland, vernal pools.	In powdery, alkaline soils that are vernal moist with <i>frankenja</i> , <i>atriplex</i> spp. and <i>distichlis</i> . 0–605m.
lost thistle	<i>Cirsium praeteriens</i>	Little information exists on this plant; it was collected from the palo alto area at the turn of the 20th century.	Although not seen since 1901, this cirsium is thought to be quite distinct from other cirsiums acc. To d. Keil. 0–100m.
Lyon's pentachaeta	<i>Pentachaeta lyonii</i>	Chaparral, valley and foothill grassland.	Edges of clearings in chap., usually at the ecotone btwn grassland and chaparral or edges of firebreaks. 30–630m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Madera leptosiphon	<i>Leptosiphon serrulatus</i>	Cismontane woodland, lower montane coniferous forest.	Dry slopes; often on decomposed granite in woodland. 80–1,575m.
Malibu baccharis	<i>Baccharis malibuensis</i>	Coastal scrub, chaparral, cismontane woodland.	In conejo volcanic substrates, often on exposed roadcuts. Sometimes occupies oak woodland habitat. 150–260m.
many-stemmed dudleya	<i>Dudleya multicaulis</i>	Chaparral, coastal scrub, valley and foothill grassland.	In heavy, often clayey soils or grassy slopes. 0–790m.
marcescent dudleya	<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	Chaparral.	On sheer rock surfaces and rocky volcanic cliffs. 180–520m.
Mariposa cryptantha	<i>Cryptantha mariposae</i>	Chaparral.	On serpentine outcrops. 200–650m.
marsh microseris	<i>Microseris paludosa</i>	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland.	5–300m.
marsh sandwort	<i>Arenaria paludicola</i>	Marshes and swamps.	Growing up through dense mats of <i>typha</i> , <i>juncus</i> , <i>scirpus</i> , etc. In freshwater marsh. 10–170m.
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>	Freshwater and brackish marshes, riparian scrub.	Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. 0–10m.
Mason's neststraw	<i>Stylocline masonii</i>	Chenopod scrub, pinyon-juniper woodland.	Sandy washes. 100–1,200m.
Mecca-aster	<i>Xylorhiza cognata</i>	Sonoran desert scrub.	Steep canyon slopes, in sandstone and clay. 20–305m.
mesa horkelia	<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Chaparral, cismontane woodland, coastal scrub.	Sandy or gravelly sites. 70–810m.
Metcalf Canyon jewel-flower	<i>Streptanthus albidus</i> ssp. <i>albidus</i>	Valley and foothill grassland.	Relatively open areas in dry grassy meadows on serpentine soils; also on serpentine balds. 45–245m.
Mexican flannelbush	<i>Fremontodendron mexicanum</i>	Closed-cone coniferous forest, chaparral, cismontane woodland.	Usually scattered along the borders of creeks or in dry canyons; sometimes on gabbro soils. 10–490m.
Miles' milk-vetch	<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	Coastal scrub.	Clay soils. 20–90m.
Mission Canyon bluecup	<i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	Chaparral.	Probably in open, grassy places within chaparral; much overlooked. 450–700m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Mojave tarplant	<i>Deinandra mohavensis</i>	Riparian scrub, chaparral.	Low sand bars in river bed; mostly in riparian areas or in ephemeral grassy areas. 850–1,600m.
Monterey spineflower	<i>Chorizanthe pungens</i> var. <i>pungens</i>	Coastal dunes, chaparral, cismontane woodland, coastal scrub.	Sandy soils in coastal dunes or more inland within chaparral or other habitats. 0–150m.
Moreno currant	<i>Ribes canthariforme</i>	Chaparral.	Among boulders in oak-manzanita thickets; shaded or partially shaded sites. 340–1,200m.
Morro manzanita	<i>Arctostaphylos morroensis</i>	Chaparral, cismontane woodland, coastal dunes (pre-flandrian), coastal scrub.	On baywood sands usually with chaparral associates. 5–205m.
moss phlox	<i>Phlox muscoides</i>	Alpine boulder and rock field, subalpine coniferous forest, great basin scrub.	Open rocky slopes. 1,270–2,700m.
most beautiful jewel-flower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	Chaparral, valley and foothill grassland, cismontane woodland.	Serpentine outcrops, on ridges and slopes. 120–730m.
mountain bent grass	<i>Agrostis humilis</i>	Alpine boulder and rock field, meadows and seeps, subalpine coniferous forest.	Probably undercollected; high elevation grass. 2,700–3,200m.
Mt. Diablo buckwheat	<i>Eriogonum truncatum</i>	Chaparral, coastal scrub, valley and foothill grassland.	Dry, exposed clay or sandy substrates. 100–600m.
Mt. Diablo fairy-lantern	<i>Calochortus pulchellus</i>	Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland.	On wooded and brushy slopes. 200–800m.
Mt. Diablo jewel-flower	<i>Streptanthus hispidus</i>	Valley and foothill grassland, chaparral.	Talus or rocky outcrops. 275–970m.
Mt. Diablo manzanita	<i>Arctostaphylos auriculata</i>	Chaparral.	In canyons and on slopes. On sandstone. 120–500m.
Mt. Diablo phacelia	<i>Phacelia phacelioides</i>	Chaparral, cismontane woodland.	Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. 500–1,370m.
Mt. Gleason Indian paintbrush	<i>Castilleja gleasonii</i>	Lower montane coniferous forest.	On open flats or slopes in granitic soil. Restricted to the san gabriel mountains. 1,650–1,830m.
Mt. Hamilton coreopsis	<i>Coreopsis hamiltonii</i>	Cismontane woodland.	On steep shale talus with open southwestern exposure. 530–1,300m.
Mt. Hamilton jewel-flower	<i>Streptanthus callistus</i>	Chaparral, cismontane woodland.	Open talus slopes on shale with grey pine and/or black oak. 600–790m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Mt. Hamilton lomatium	<i>Lomatium observatorium</i>	Cismontane woodland.	Open to partially shaded openings in pinus coulteri-oak woodland. Sedimentary franciscan rocks & volcanics. 1,219–1,330m.
Mt. Hamilton thistle	<i>Cirsium fontinale</i> var. <i>campylon</i>	Cismontane woodland, chaparral, valley and foothill grassland.	In seasonal and perennial drainages on serpentine. 95–890m.
mud nama	<i>Nama stenocarpum</i>	Marshes and swamps.	Lake shores, river banks, intermittently wet areas. 5–500m.
Munz' mariposa lily	<i>Calochortus palmeri</i> var. <i>munzii</i>	Lower montane coniferous forest, chaparral, meadows.	Seen in open jeffrey pine forest as well as in chaparral. 900–1,640m.
Munz' onion	<i>Allium munzii</i>	Chaparral, coastal scrub, cismontane woodland, pinyon-juniper woodland, valley and foothill grassland.	Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 300–1,035m.
Munz' sage	<i>Salvia munzii</i>	Coastal scrub, chaparral.	Rolling hills and slopes, in rocky soil. 120–1,090m.
Munz' tidy-tips	<i>Layia munzii</i>	Chenopod scrub, valley and foothill grassland.	Hillsides, in white-grey alkaline clay soils, w/grasses and chenopod scrub associates. 45–760m.
Napa western flax	<i>Hesperolinon</i> sp. nov. "serpentinum"	Chaparral.	Mostly found in serpentine chaparral. 225–850m.
Nevin's barberry	<i>Berberis nevinii</i>	Chaparral, cismontane woodland, coastal scrub, riparian scrub.	On steep, n-facing slopes or in low grade sandy washes. 290–1,575m.
Newberry's cinquefoil	<i>Potentilla newberryi</i>	Marshes and swamps.	Receding shorelines; drying marsh margins. 1,290–2,200m.
Nissenan manzanita	<i>Arctostaphylos nissenana</i>	Closed-cone coniferous forest, chaparral.	Usually on metamorphics, associated w/ other chaparral species. 450–1,100m.
Norris' beard-moss	<i>Didymodon norrisii</i>	Cismontane woodland, lower montane coniferous forest.	Moss from intermittently mesic sites; on rocks. 600–1,700m.
Northern California black walnut	<i>Juglans hindsii</i>	Riparian forest, riparian woodland. Few extant native stands remain; widely naturalized.	Deep alluvial soil associated with a creek or stream. 0–395m.
northern clarkia	<i>Clarkia borealis</i> ssp. <i>borealis</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	400–800m.
Nuttall's lotus	<i>Lotus nuttallianus</i>	Coastal dunes, coastal scrub.	On sand dunes; plants are threatened by encroachment of exotics. 0–10m.
Nuttall's scrub oak	<i>Quercus dumosa</i>	Closed-cone coniferous forest, chaparral, coastal scrub. More common scrub oak now = <i>q. Berberidifolia</i> .	Generally on sandy soils near the coast; sometimes on clay loam. 15–400m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
oil neststraw	<i>Stylocline citroleum</i>	Shadscale Scrub, Coastal Sage Scrub	Flats, clay soils in oil-producing areas. 50–300m.
Ojai fritillary	<i>Fritillaria ojaiensis</i>	Broadleaved upland forest (mesic), chaparral, lower montane coniferous forest.	Rocky sites; one reported as “moist shale talus.” 300–670m.
Orcutt's bird's-beak	<i>Cordylanthus orcuttianus</i>	Coastal scrub.	Found in coastal scrub associations on slopes; also reported from intermittently moist swales, and in washes. 100–200m
Orcutt's brodiaea	<i>Brodiaea orcuttii</i>	Vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows.	Mesic, clay habitats; sometimes serpentine; usu in vernal pools and small drainages. 30–1,615m.
Orcutt's dudleya	<i>Dudleya attenuata</i> ssp. <i>orcuttii</i>	Coastal scrub, coastal bluff scrub, chaparral.	Rocky mesas, canyons, and ridges. 3–50m.
Orcutt's hazardia	<i>Hazardia orcuttii</i>	Chaparral, coastal scrub.	Often on clay; in grassy edges of chaparral and coastal scrub. 85m.
Orcutt's linanthus	<i>Linanthus orcuttii</i>	Chaparral, lower montane coniferous forest.	Sometimes in disturbed areas; often in gravelly clearings. 1,060–2,000m.
Orcutt's pincushion	<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Coastal bluff scrub, coastal dunes.	Sandy sites. 3–100m.
Orcutt's spineflower	<i>Chorizanthe orcuttiana</i>	Coastal scrub, chaparral, closed-cone coniferous forest.	Sandy sites and openings; sometimes in transition zones. 3–125m.
Orcutt's woody-aster	<i>Xylorhiza orcuttii</i>	Sonoran desert scrub.	Arid canyons; often in washes. 265–365m.
Oregon meconella	<i>Meconella oregana</i>	Coastal prairie, coastal scrub.	Open, moist places. 250–500m.
Otay manzanita	<i>Arctostaphylos otayensis</i>	Chaparral, cismontane woodland.	Metavolcanic soils with other chaparral associates. 275–1,700m.
Otay Mesa mint	<i>Pogogyne nudiuscula</i>	Vernal pools.	Dry beds of vernal pools and moist swales w/ <i>eryngium aristulatum</i> var <i>parishii</i> and <i>orcuttia californica</i> . 85–250m.
Otay Mountain ceanothus	<i>Ceanothus otayensis</i>	Chaparral.	Metavolcanic or gabbroic soils. 600–1,100m.
Otay tarplant	<i>Deinandra conjugens</i>	Coastal scrub, valley and foothill grassland.	Coastal plains, mesas, and river bottoms; often in open, disturbed areas; clay soils. 25–300m.
oval-leaved viburnum	<i>Viburnum ellipticum</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	215–1,400m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Pajaro manzanita	<i>Arctostaphylos pajaroensis</i>	Chaparral.	Sandy soils. 30–760m.
pale-yellow layia	<i>Layia heterotricha</i>	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland.	Alkaline or clay soils; open areas. 270–1,365 (2,675)m.
pallid manzanita	<i>Arctostaphylos pallida</i>	Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub.	Grows on uplifted marine terraces on siliceous shale or thin chert. May require fire. 185–465m.
palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	Chenopod scrub, valley and foothill grassland.	Usually on pescadero silty clay which is alkaline, with distichlis, frankenia, etc. 5–155m.
Palmer's frankenia	<i>Frankenia palmeri</i>	Coastal dunes, marshes (coastal salt), playas.	0–10m.
Palmer's goldenbush	<i>Ericameria palmeri</i> ssp. <i>palmeri</i>	Coastal scrub, chaparral.	On granitic soils, on steep hillsides. Mesic sites. 100–600m.
Palmer's mariposa lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	Meadows and seeps, chaparral, lower montane coniferous forest.	Vernally moist places in yellow-pine forest, chaparral. 600–2,245m.
Panoche pepper-grass	<i>Lepidium Jaredii</i> ssp. <i>album</i>	Valley and foothill grassland.	Alkali bottoms, slopes, washes, alluvial fans; clay and gypsum-rich soils. 65–910m.
pansy monkeyflower	<i>Mimulus pulchellus</i>	Lower montane coniferous forest, meadows and seeps.	Sandy decomposed granite soils and moist meadows; vernal wet sites. 600–2,000m.
pappose tarplant	<i>Centromadia parryi</i> ssp. <i>parryi</i>	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland.	Vernally mesic, often alkaline sites. 2–420m.
Parish's brittlescale	<i>Atriplex parishii</i>	Alkali meadows, vernal pools, chenopod scrub, playas.	Usually on drying alkali flats with fine soils. 4–140m.
Parish's bush mallow	<i>Malacothamnus parishii</i>	Chaparral, coastal sage scrub.	In a wash. One site known: 485m.
Parish's chaenactis	<i>Chaenactis parishii</i>	Chaparral.	Rocky sites. 1,300–2,500m.
Parish's desert-thorn	<i>Lycium parishii</i>	Coastal scrub, sonoran desert scrub.	300–1,000m.
Parish's gooseberry	<i>Ribes divaricatum</i> var. <i>parishii</i>	Riparian woodland.	Salix swales in riparian habitats. 65–100m.
Parish's meadowfoam	<i>Limnanthes gracilis</i> ssp. <i>parishii</i>	Meadows and seeps, vernal pools.	Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 600–1,760m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Parish's popcorn-flower	<i>Plagiobothrys parishii</i>	Great basin scrub, joshua tree woodland.	Alkaline soils; mesic sites. 750–1,400m.
Parish's yampah	<i>Perideridia parishii</i> ssp. <i>parishii</i>	Lower montane coniferous forest, meadows, upper montane coniferous forest.	Damp meadows or along streambeds-prefers an open pine canopy. 1,390–3,000m.
Parry's horkelia	<i>Horkelia parryi</i>	Chaparral, cismontane woodland.	Openings in chaparral or woodland; especially known from the lone formation in Amador County. 80–1,035m.
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	Coastal scrub, chaparral.	Dry slopes and flats; sometimes at interface of 2 veg types, such as chap and oak wdland; dry, sandy soils. 40–1,705m.
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	Chaparral, coastal scrub.	Stony, decomposed gabbro soil. 150–1,000m.
Peirson's lupine	<i>Lupinus peirsonii</i>	Joshua tree woodland, pinyon-juniper woodland, upper montane coniferous forest.	Decomposed granite slide and talus, on slopes and ridges. 1000–2,000m.
Pendleton button-celery	<i>Eryngium pendletonensis</i>	Coastal bluff scrub, valley and foothill grassland, vernal pools.	Vernally mesic sites. 15–110m.
Peninsular manzanita	<i>Arctostaphylos peninsularis</i> ssp. <i>peninsularis</i>	Chaparral.	1,240–1,520m.
pincushion navarretia	<i>Navarretia myersii</i> ssp. <i>myersii</i>	Vernal pools, valley and foothill grassland.	Clay soils within nonnative grassland. 20–330m.
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	Chaparral, cismontane woodland.	Gabbroic soils; often in "historically disturbed" areas with an ensemble of other rare plants. 260–630m.
Pine Hill flannelbush	<i>Fremontodendron decumbens</i>	Chaparral, cismontane woodland.	Rocky ridges; gabbro or serpentine endemic; often among rocks and boulders. 420–685m.
pink creamsacs	<i>Castilleja rubicundula</i> ssp. <i>rubicundula</i>	Chaparral, meadows and seeps, valley and foothill grassland.	Openings in chaparral or grasslands. On serpentine. 20–900m.
Pinnacles buckwheat	<i>Eriogonum nortonii</i>	Chaparral, valley and foothill grassland.	Sandy soils; often on recent burns; Wwestern Santa Lucias. 390–975m.
pinyon rock cress	<i>Arabis dispar</i>	Joshua tree woodland, pinyon-juniper woodland, mojavean desert scrub.	Granitic, gravelly slopes & mesas. Often under desert shrubs which support it as it grows. 1,200–2,400m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Pismo clarkia	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	Chaparral, cismontane woodland, valley and foothill grassland.	On ancient sand dunes not far from the coast. Sandy soils, openings. 25–185m.
Piute Mountains navarretia	<i>Navarretia setiloba</i>	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland.	Red clay soils, other clay soils, or on gravelly loam. 300–1,110m.
Pleasant Valley mariposa lily	<i>Calochortus clavatus</i> var. <i>avius</i>	Lower montane coniferous forest.	Josephine silt loam and volcanically derived soil; often in rocky areas. 305–1,700m.
Plummer's mariposa lily	<i>Calochortus plummerae</i>	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 90–1,610m.
Point Reyes bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	Coastal salt marsh.	Usually in coastal salt marsh with salicornia, distichlis, jaumea, spartina, etc. 0–15m.
pointed broom sedge	<i>Carex scoparia</i>	Great basin scrub.	Wet, open places. 130–1,000m.
Presidio clarkia	<i>Clarkia franciscana</i>	Coastal scrub, valley and foothill grassland.	Serpentine outcrops in grassland or scrub. 20–335m.
Pringle's monardella	<i>Monardella pringlei</i>	Coastal scrub.	Sandy hills. 300–400m.
prostrate navarretia	<i>Navarretia prostrata</i>	Coastal scrub, valley and foothill grassland, vernal pools.	Alkaline soils in grassland, or in vernal pools. 15–700m.
purple stemodia	<i>Stemodia durantifolia</i>	Sonoran desert scrub.	Sandy soils; mesic sites. 180–300m.
Rainbow manzanita	<i>Arctostaphylos rainbowensis</i>	Chaparral. Previously called a. Peninsularis or considered a hybrid between a. Glandulosa & a. Glauca.	Usually found in gabbro chaparral in riverside and san diego counties. 270–790m.
Ramona horkelia	<i>Horkelia truncata</i>	Chaparral, cismontane woodland.	Habitats in california include: mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil. 400–1,300m.
Rawhide Hill onion	<i>Allium tuolumnense</i>	Cismontane woodland.	Restricted to serpentine soil, usu in grey pine chaparral. Steep, rocky, s-facing slopes or small drainages. 300–600m.
rayless layia	<i>Layia discoidea</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	On serpentine alluvium and serpentine talus. 785–1,585m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
rayless ragwort	<i>Senecio aphanactis</i>	Cismontane woodland, coastal scrub.	Drying alkaline flats. 20–575m.
recurved larkspur	<i>Delphinium recurvatum</i>	Chenopod scrub, valley and foothill grassland, cismontane woodland.	On alkaline soils; often in valley saltbush or valley chenopod scrub. 3–685m.
Red Bluff dwarf rush	<i>Juncus leiospermus</i> var. <i>leiospermus</i>	Chaparral, valley and foothill grassland, cismontane woodlands, vernal pools.	Vernally mesic sites. Sometimes on edges of vernal pools. 30–1,020m.
Red Hills ragwort	<i>Senecio clevelandii</i> var. <i>heterophyllus</i>	Cismontane woodland.	Drying serpentine soils; often along streams. 255–385m.
Red Hills soaproot	<i>Chlorogalum grandiflorum</i>	Cismontane woodland, chaparral, lower montane coniferous forest.	Occurs on both serpentine and gabbro substrates; often on “historically disturbed” sites. 240–760m.
Red Rock poppy	<i>Eschscholzia minutiflora</i> ssp. <i>twisselmannii</i>	Mojavean desert scrub.	Volcanic tuff; with <i>larrea</i> , <i>lycium</i> , <i>erigonum</i> , <i>isomeris</i> , <i>hemizonia</i> . 680–1,230m.
Red Rock tarplant	<i>Deinandra arida</i>	Mojavean desert scrub.	Clay soil; dry to moist sites where water has collected along ephemeral streams, & along road edges. 300–950m.
Refugio manzanita	<i>Arctostaphylos refugioensis</i>	Chaparral.	On sandstone. 300–820m.
Robinson’s pepper-grass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Chaparral, coastal scrub.	Dry soils, shrubland. 1–945m.
Robison’s monardella	<i>Monardella robinsonii</i>	Pinyon-juniper woodland, joshua tree woodland.	Rocky desert slopes, often among granitic boulders. 1,000–1,500m.
robust monardella	<i>Monardella villosa</i> ssp. <i>globosa</i>	Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland.	Openings. 30–300m.
robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	Cismontane woodland, coastal dunes, coastal scrub.	Sandy terraces and bluffs or in loose sand. 3–120m.
rock draba	<i>Draba corrugata</i> var. <i>saxosa</i>	Alpine boulder and rock fields, subalpine coniferous forest, upper montane coniferous forest.	Rocky sites. 2,440–3,600m.
rock sanicle	<i>Sanicula saxatilis</i>	Broadleaved upland forest, chaparral, valley and foothill grassland.	Bedrock outcrops and talus slopes in chaparral or oak woodland habitat. 615–1,215m.
rose-mallow	<i>Hibiscus lasiocarpus</i>	Marshes and swamps (freshwater).	Moist, freshwater-soaked river banks & low peat islands in sloughs; in Calif., known from the delta watershed. 0–150m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
round-leaved filaree	<i>California macrophyllum</i>	Cismontane woodland, valley and foothill grassland.	Clay soils. 15–1,200m.
Sacramento orcutt grass	<i>Orcuttia viscida</i>	Vernal pools.	30–100m.
sagebrush loeflingia	<i>Loeflingia squarrosa</i> var. <i>artemisiarum</i>	Great basin scrub, sonoran desert scrub, desert dunes.	Sandy flats and dunes. Sandy areas around clay slicks w/ <i>sarcobatus</i> , <i>atriplex</i> , <i>tetradymia</i> , etc. 700–1,200m.
saline clover	<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	Marshes and swamps, valley and foothill grassland, vernal pools.	Mesic, alkaline sites. 0–300m.
salt marsh bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i>	Coastal salt marsh, coastal dunes.	Limited to the higher zones of the salt marsh habitat. 0–30m.
Salt Spring checkerbloom	<i>Sidalcea neomexicana</i>	Alkali playas, brackish marshes, chaparral, coastal scrub, lower montane coniferous forest, mojavean desert scrub.	Alkali springs and marshes. 0–1,500m.
San Benito evening-primrose	<i>Camissonia benitensis</i>	Chaparral, cismontane woodland.	On gravelly serpentine alluvial terraces. 750–1,280m.
San Benito fritillary	<i>Fritillaria viridea</i>	Chaparral.	Serpentine slopes. 200–1,525m.
San Benito spineflower	<i>Chorizanthe biloba</i> var. <i>immemora</i>	Chaparral, cismontane woodland.	Sandy and gravelly soils on the east slope of the diablo range. 695–750m.
San Bernardino aster	<i>Symphotrichum defoliatum</i>	Meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, grassland.	Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 2–2,040m.
San Bernardino Mountains dudleya	<i>Dudleya abramsii</i> ssp. <i>affinis</i>	Pebble (pavement) plain, upper montane coniferous forest, pinyon and juniper woodland.	Outcrops, granite or quartzite, rarely limestone. 1,270–2,600m.
San Bernardino Mountains owl's-clover	<i>Castilleja lasiorhyncha</i>	Meadows, pebble plain, upper montane coniferous forest, chaparral.	Mesic to drying soils in open areas of stream and meadow margins or of vernal wet areas. 1,135–2,390m.
San Diego ambrosia	<i>Ambrosia pumila</i>	Chaparral, coastal scrub, valley and foothill grassland, vernal pools.	Sandy loam or clay soil. In valleys; persists where disturbance has been superficial. 20–415m.
San Diego barrel cactus	<i>Ferocactus viridescens</i>	Chaparral, diegan coastal scrub, valley and foothill grassland.	Often on exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. 3–485m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
San Diego bur-sage	<i>Ambrosia chenopodiifolia</i>	Coastal scrub, mostly associated with maritime succulent scrub.	Slopes of canyons in open succulent scrub usually with little herbaceous cover. 55–150m.
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	Vernal pools, coastal scrub, valley and foothill grassland.	San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; usu surr by scrub. 15–620m.
San Diego goldenstar	<i>Muilla clevelandii</i>	Chaparral, coastal scrub, valley and foothill grassland, vernal pools.	Mesa grasslands, scrub edges; clay soils. Often on mounds between vernal pools in fine, sandy loam. 50–1,090m.
San Diego marsh-elder	<i>Iva hayesiana</i>	Marshes and swamps, playas.	Riverwashes. 10–500m.
San Diego mesa mint	<i>Pogogyne abramsii</i>	Vernal pools.	Vernal pools within grasslands, chamise chaparral or coastal sage scrub communities; w/other rare plants. 90–200m.
San Diego milk-veitch	<i>Astragalus oocarpus</i>	Chaparral, cismontane woodland, meadows.	Openings in chaparral or on gravelly flats and slopes in thin oak woodland. 305–1,500m.
San Diego sand aster	<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	Coastal scrub, coastal bluff scrub, chaparral.	Most sites are disturbed, so hard to tell: possibly in disturbed sites and ecotones. 3-115m.
San Diego thorn-mint	<i>Acanthomintha ilicifolia</i>	Chaparral, coastal scrub, valley and foothill grassland, vernal pools.	Endemic to active vertisol clay soils of mesas & valleys. Usu on clay lenses w/in grassland or chap communities. 10–935m.
San Fernando Valley spineflower	<i>Chorizanthe parryi</i> var. <i>fernandina</i>	Coastal scrub.	Sandy soils. 3–1,035m.
San Francisco Bay spineflower	<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub.	Closely related to c. Pungens. Sandy soil on terraces and slopes. 5–550m.
San Francisco collinsia	<i>Collinsia multicolor</i>	Closed-cone coniferous forest, coastal scrub.	On decomposed shale (mudstone) mixed with humus. 30–250m.
San Francisco popcorn-flower	<i>Plagiobothrys diffusus</i>	Valley and foothill grassland, coastal prairie.	Historically from grassy slopes with marine influence. 60–485m.
San Gabriel bedstraw	<i>Galium grande</i>	Cismontane woodland, chaparral, broadleafed upland forest, lower montane coniferous forest.	Open chaparral and low, open oak forest; on rocky slopes; probably undercollected due to inaccessible hab. 425–1,200m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
San Gabriel linanthus	<i>Linanthus concinnus</i>	Lower montane coniferous forest, upper montane coniferous forest.	Dry rocky slopes, often in Jeffrey pine/canyon oak forest. 1,575–2,545m.
San Gabriel Mountains dudleya	<i>Dudleya densiflora</i>	Chaparral, coastal scrub, lower montane coniferous forest.	In crevices and on decomposed granite on cliffs and canyon walls. 300–520m.
San Gabriel River dudleya	<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i>	Chaparral, coastal scrub.	On granite cliffs and outcrops, surrounded by scrub. 365m.
San Jacinto Mountains bedstraw	<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	Lower montane coniferous forest.	Open mixed forest. 1,630–1,940m.
San Jacinto Valley crownscale	<i>Atriplex coronata</i> var. <i>notatior</i>	Playas, chenopod scrub, valley and foothill grassland, vernal pools.	Dry, alkaline flats in the San Jacinto River Valley. 400–500m.
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	Valley and foothill grassland, cismontane woodland.	Grassy valley floors and rolling foothills in heavy clay soil. 85–800m.
San Joaquin spearscale	<i>Atriplex joaquiniana</i>	Chenopod scrub, alkali meadow, valley and foothill grassland.	In seasonal alkali wetlands or alkali sink scrub with <i>distichlis spicata</i> , <i>frankeniana</i> , etc. 1–250m.
San Joaquin Valley orcutt grass	<i>Orcuttia inaequalis</i>	Vernal pools.	30–755m.
San Joaquin woollythreads	<i>Monolopia congdonii</i>	Chenopod scrub and valley and foothill grassland.	Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 60–800m.
San Luis Obispo monardella	<i>Monardella frutescens</i>	Coastal dunes, coastal scrub.	Stabilized sand of the immediate coast. 10–100m.
San Miguel savory	<i>Satureja chandleri</i>	Chaparral, cismontane woodland, coastal scrub, rip woodland, valley and foothill grassland.	Rocky, gabbroic or metavolcanic substrate. 120–1,005m.
sand gilia	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	Coastal dunes, coastal scrub, chaparral (maritime), cismontane woodland.	Bare, wind-sheltered areas often near dune summit or in the hind dunes; 2 records from pleistocene inland dunes. 0–245m.
sand mesa manzanita	<i>Arctostaphylos rudis</i>	Chaparral, coastal scrub.	On sandy soils in lompop/nipomo area. 25–230m.
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	Marshes and swamps.	In standing or slow-moving freshwater ponds, marshes, and ditches. 0–610m.
Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Coastal scrub, chaparral.	In sandy soils on river floodplains or terraced fluvial deposits. 150–610m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Santa Barbara honeysuckle	<i>Lonicera subspicata</i> var. <i>subspicata</i>	Chaparral, cismontane woodland, coastal scrub.	35–1,000m.
Santa Barbara morning-glory	<i>Calystegia sepium</i> ssp. <i>binghamiae</i>	Coastal marshes.	0–30m.
Santa Catalina Island currant	<i>Ribes viburnifolium</i>	Chaparral.	Among shrubs in canyons. 30–300m.
Santa Catalina Island desert-thorn	<i>Lycium brevipes</i> var. <i>hassei</i>	Coastal bluff scrub, coastal scrub.	Coastal bluffs and slopes. 10–300m.
Santa Clara Valley dudleya	<i>Dudleya setchellii</i>	Valley and foothill grassland, cismontane woodland.	On rocky serpentine outcrops and on rocks within grassland or woodland. 80–335m.
Santa Cruz manzanita	<i>Arctostaphylos andersonii</i>	Broadleaved upland forest, chaparral, north coast coniferous forest.	Open sites, redwood forest. 180–800m.
Santa Cruz Mountains beardtongue	<i>Penstemon rattanii</i> var. <i>kleei</i>	Chaparral, lower montane coniferous forest.	Sandy shale slopes; sometimes in the transition between forest and chaparral. 400–1,100m.
Santa Cruz tarplant	<i>Holocarpha macradenia</i>	Coastal prairie, valley and foothill grassland.	Light, sandy soil or sandy clay; often with nonnatives. 10–260m.
Santa Monica Mountains dudleya	<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	Chaparral, coastal scrub.	In canyons on sedimentary conglomerates; primarily n-facing slopes. 210–500m.
Santa Rosa Mountains leptosiphon	<i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	Sonoran desert scrub.	Desert canyons. 900–1,275m.
Santa Susana tarplant	<i>Deinandra minthornii</i>	Chaparral, coastal scrub.	On sandstone outcrops and crevices, in shrubland. 280–760m.
Santa Ynez groundstar	<i>Ancistrocarphus keilii</i>	Chaparral, cismontane woodland.	Sandy soils. 40–130m.
Scadden Flat checkerbloom	<i>Sidalcea stipularis</i>	Marshes and swamps.	Wet montane marshes fed by springs. 700–740m.
sea dahlia	<i>Coreopsis maritima</i>	Coastal scrub, coastal bluff scrub.	Occurs on a variety of soil types, including sandstone. 5–150m.
seaside bird's-beak	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, coastal dunes.	Sandy, often disturbed sites, usually within chaparral or coastal scrub. 0–215m.
see individual subspecies!	<i>Streptanthus morrisonii</i>	Chaparral, cismontane woodland, closed-cone coniferous forest.	The complex has been mapped as the species, though at least 4 ssp. Have been recognized. On serpentine. 210–910m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
shaggyhair lupine	<i>Lupinus spectabilis</i>	Chaparral, cismontane woodland.	Open rocky slopes of serpentine. Mostly in serpentine chaparral surr. By grey pine woodland. 260–800m.
shaggy-haired alumroot	<i>Heuchera hirsutissima</i>	Subalpine coniferous forest, upper montane coniferous forest.	Often near large rocks. 1,500–3,500m.
Sharsmith's harebell	<i>Campanula sharsmithiae</i>	Chaparral.	Serpentine barrens. 480–1,820m.
Sharsmith's onion	<i>Allium sharsmithiae</i>	Cismontane woodland.	Rocky, serpentine slopes. 400–1,200m.
Shasta snow-wreath	<i>Neviusia cliftonii</i>	Lower montane coniferous forest, riparian woodland.	Shaded, north-facing, or sheltered canyons. Sometimes on limestone. Mesic areas. 300–500m.
Shaw's agave	<i>Agave shawii</i>	Coastal bluff scrub, coastal scrub.	Coastal bluffs and slopes within coastal sage scrub and adjacent to torrey pine forest at one site. 10–75m.
Sheldon's sedge	<i>Carex sheldonii</i>	Lower montane coniferous forest, marshes and swamps, riparian scrub.	Mesic sites; along creeks and in wet meadows. 1,065–1,755m.
Shevock's copper-moss	<i>Schizymerium shevockii</i>	Cismontane woodland.	Moss on metamorphic rocks, mesic sites. On rocks along roads, in same habitat as <i>mielichhoferia elongata</i> . 750–1,400m.
shining navarretia	<i>Navarretia nigelliformis</i> ssp. <i>radicans</i>	Cismontane woodland, valley and foothill grassland, vernal pools.	Apparently in grassland, and not necessarily in vernal pools. 200–1,000m.
short-joint beavertail	<i>Opuntia basilaris</i> var. <i>brachyclada</i>	Chaparral, joshua tree woodland, mojavean desert scrub, pinyon-juniper woodland, riparian woodland.	Sandy soil or coarse, granitic loam. 425–1,800m.
short-leaved dudleya	<i>Dudleya brevifolia</i>	Chaparral, coastal scrub.	On torrey sandstone soils; in pebbly openings. 30–250m.
showy indian clover	<i>Trifolium amoenum</i>	Valley and foothill grassland, coastal bluff scrub.	Sometimes on serpentine soil, open sunny sites, swales. Most recently sited on roadside and eroding cliff face. 5–560m.
showy madia	<i>Madia radiata</i>	Valley and foothill grassland, cismontane woodland, chenopod scrub.	Mostly on adobe clay in grassland or among shrubs. 25–1,125m.
silky cryptantha	<i>Cryptantha crinita</i>	Cismontane woodland, valley foothill grassland, lower montane coniferous forest, riparian forest, riparian woodland.	In gravelly stream beds. 85–220m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
silver-haired ivesia	<i>Ivesia argyrocoma</i>	Meadows, pebble plains, upper montane coniferous forest.	In pebble plains and meadows with other rare plants. 1,480–2,680m.
slender mariposa lily	<i>Calochortus clavatus</i> var. <i>gracilis</i>	Chaparral, coastal scrub.	Shaded foothill canyons; often on grassy slopes within other habitat. 420–760m
slender orcutt grass	<i>Orcuttia tenuis</i>	Vernal pools.	30–1,735m.
slender pentachaeta	<i>Pentachaeta exilis</i> ssp. <i>aeolica</i>	Cismontane woodland, valley and foothill grassland.	Grassy areas. 635–855m.
slender silver-moss	<i>Anomobryum julaceum</i>	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest.	Moss which grows on damp rocks and soil; usually seen on roadcuts. 100–1,000m.
slender woolly-heads	<i>Nemacaulis denudata</i> var. <i>gracilis</i>	Coastal dunes, desert dunes, sonoran desert scrub.	In dunes or sand. 0–560m.
slender-horned spineflower	<i>Dodecahema leptoceras</i>	Chaparral, coastal scrub (alluvial fan sage scrub).	Flood deposited terraces and washes; assoc include <i>encelia</i> , <i>dalea</i> , <i>lepidospartum</i> , etc. 200–760m.
slender-leaved pondweed	<i>Potamogeton filiformis</i>	Marshes and swamps.	Shallow, clear water of lakes and drainage channels. 15–2,310m.
slender-stem bean	<i>Phaseolus filiformis</i>	Sonoran desert scrub.	Gravelly washes bordered by creosote bush-dominated rocky slopes. One site in california: 125m.
slough thistle	<i>Cirsium crassicaule</i>	Chenopod scrub, marshes and swamps, riparian scrub.	Sloughs, riverbanks, and marshy areas. 3–100m.
small-leaved rose	<i>Rosa minutifolia</i>	Coastal scrub, chaparral.	In the united states, on cobbly soil at the head of a small, dry canyon on otay mesa. 150–160m.
Small's southern clarkia	<i>Clarkia australis</i>	Cismontane woodland, lower montane coniferous forest.	Open, rocky sites in conifer forest or oak woodland. 900–2,060m.
smooth lessingia	<i>Lessingia micradenia</i> var. <i>glabrata</i>	Chaparral.	Serpentine; often on roadsides. 120–485m.
smooth tarplant	<i>Centromadia pungens</i> ssp. <i>laevis</i>	Valley and foothill grassland, chenopod scrub, meadows, playas, riparian woodland.	Alkali meadow, alkali scrub; also in disturbed places. 0–480m.
snake cholla	<i>Opuntia californica</i> var. <i>californica</i>	Chaparral, coastal scrub.	30–150m.
soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	Coastal salt marsh.	In coastal salt marsh with <i>distichlis</i> , <i>salicornia</i> , <i>frankenia</i> , etc. 0–3m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Sonoran maiden fern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Meadows and seeps.	Along streams, seepage areas. 50–550m.
South Coast saltscale	<i>Atriplex pacifica</i>	Coastal scrub, coastal bluff scrub, playas, chenopod scrub.	Alkali soils. 1–500m.
southern alpine buckwheat	<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	Alpine boulder and rock fields, subalpine coniferous forest.	Dry granitic gravel. 2,600–3,500m.
southern jewel-flower	<i>Streptanthus campestris</i>	Chaparral, lower montane coniferous forest, pinyon-juniper woodland.	Open, rocky areas. 600–2,790m.
southern skullcap	<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 425–2,000m.
southern tarplant	<i>Centromadia parryi</i> ssp. <i>australis</i>	Marshes and swamps (margins), valley and foothill grassland, vernal pools.	Often in disturbed sites near the coast; also in alkaline soils sometimes with saltgrass; also vernal pools. 0–425m.
Spanish Needle onion	<i>Allium shevockii</i>	Pinyon-juniper woodland, upper montane coniferous forest.	In soil pockets on rock outcrops and talus slopes; bulbs mostly on margins of outcrops. 2,000–2,300m.
spearleaf	<i>Matelea parvifolia</i>	Mojavean desert scrub, sonoran desert scrub.	Dry rocky ledges and slopes. 440–1,095m.
spiny-sepaled button-celery	<i>Eryngium spinosepalum</i>	Vernal pools, valley and foothill grassland.	Some sites on clay soil of granitic origin; vernal pools, within grassland. 100–420m.
Spjut's bristle-moss	<i>Orthotrichum spjutii</i>	Lower montane coniferous forest, pinyon-juniper woodland, subalpine coniferous forest, upper montane coniferous forest.	Moss growing on granitic rock; known only from near sonora pass. 2,100–2,400m.
splitting yarn lichen	<i>Sulcaria isidiifera</i>	Chaparral, cismontane woodland.	On branches of oaks and shrubs. 20–30m.
spreading navarretia	<i>Navarretia fossalis</i>	Vernal pools, chenopod scrub, marshes and swamps, playas.	San Diego hardpan & San Diego claypan vernal pools; in swales & V.P's, often surr. By other habitat types. 30–1,300m.
Stebbins' lomatium	<i>Lomatium stebbinsii</i>	Lower montane coniferous forest, chaparral.	Thin, gravelly volcanic clay in open yellow pine forest. Grows where other vegetation is absent. 1,235–1,850m.
Stebbins' morning-glory	<i>Calystegia stebbinsii</i>	Chaparral, cismontane woodland.	On red clay soils of the pine hill formation; gabbro or serpentinite; open areas. 180–725m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
sticky dudleya	<i>Dudleya viscida</i>	Coastal scrub, coastal bluff scrub, chaparral.	On north and south-facing cliffs and banks. 10–550m.
Stony Creek spurge	<i>Chamaesyce ocellata</i> ssp. <i>rattanii</i>	Valley and foothill grassland.	Sandy or rocky soils. 85–800m.
straight-awned spineflower	<i>Chorizanthe rectispina</i>	Chaparral, cismontane woodland, coastal scrub.	Often on granite in chaparral. 355–1,035m.
striped adobe-lily	<i>Fritillaria striata</i>	Cismontane woodland, valley and foothill grassland.	Heavy clay adobe soils in oak grassland. 135–1,455m.
subalpine cryptantha	<i>Cryptantha crymophila</i>	Subalpine coniferous forest.	On dry talus of volcanic formation. 2,600–3,200m.
subtle orache	<i>Atriplex subtilis</i>	Valley and foothill grassland.	Little info available. Madrono vol. 44 no.2 only source currently. 40–100m.
succulent owl's-clover	<i>Castilleja campestris</i> ssp. <i>succulenta</i>	Vernal pools, valley and foothill grassland.	Moist places, often in acidic soils. 25–750m.
Suisun Marsh aster	<i>Aster lentus</i>	Marshes and swamps (brackish and freshwater).	Most often seen along sloughs with <i>phragmites</i> , <i>scirpus</i> , blackberry, <i>typha</i> , etc. 0–3m.
summer holly	<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Chaparral.	Often in mixed chaparral in California, sometimes post-burn. 30–550m.
Surf thistle	<i>Cirsium rhotophilum</i>	Coastal dunes, coastal bluff scrub.	Open areas in central dune scrub; usually in coastal dunes. 3–60m.
talus fritillary	<i>Fritillaria falcata</i>	Chaparral, cismontane woodland, lower montane coniferous forest.	On shale, granite, or serpentine talus. 300–1,525m.
Tecate cypress	<i>Cupressus forbesii</i>	Closed-cone coniferous forest, chaparral.	Primarily on north-facing slopes; groves often associated with chaparral. 250–1,500m.
Tehama County western flax	<i>Hesperolinon tehamense</i>	Chaparral, cismontane woodland.	Serpentine barrens in chaparral. 545–1,155m.
Tejon poppy	<i>Eschscholzia lemmonii</i> ssp. <i>kernensis</i>	Valley and foothill grassland.	Little information available on habitat. 250–750m.
Temblor buckwheat	<i>Eriogonum temblorense</i>	Valley and foothill grassland.	Barren clay or sandstone substrates. 300–1,000m.
thread-leaved brodiaea	<i>Brodiaea filifolia</i>	Cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools.	Usually associated with annual grassland and vernal pools; often surr by shrubland habitats. Clay soils. 25–860m.
three-bracted onion	<i>Allium tribracteatum</i>	Chaparral, lower montane coniferous forest, upper montane coniferous forest.	Volcanic slopes and ridges. 1,100–2,750m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
Tiburon Indian paintbrush	<i>Castilleja affinis</i> ssp. <i>neglecta</i>	Valley and foothill grassland.	Rocky serpentine sites. 75–400m.
tongue-leaf copper-moss	<i>Scopelophila cataractae</i>	Cismontane woodland.	Moss on metamorphic substrate; on soil. 400m.
torrey pine	<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Closed-cone coniferous forest, chaparral.	On dry, sandstone slopes. 70–160m.
Tracy's eriastrum	<i>Eriastrum tracyi</i>	Chaparral, cismontane woodland.	Gravelly shale or clay; often in open areas. 315–760m.
triple-ribbed milk-vetch	<i>Astragalus tricarinatus</i>	Joshua tree woodland, sonoran desert scrub.	Hot, rocky slopes in canyons and along edge of boulder-strewn desert washes, w/ larrea and encelia. 450–790m.
Tuolumne button-celery	<i>Eryngium pinnatisectum</i>	Vernal pools, cismontane woodland, lower montane coniferous forest.	Volcanic soils; vernal pools and mesic sites within other natural communities. 250–450m.
Tuolumne fawn lily	<i>Erythronium tuolumnense</i>	Broadleaved upland forest, chaparral, lower montane coniferous forest.	Often on clay soils; on cliffs and near drainages. 510–1,460m.
Tuolumne iris	<i>Iris hartwegii</i> ssp. <i>columbiana</i>	Cismontane woodland, lower montane coniferous forest.	600–1,400m.
two-carpellate western flax	<i>Hesperolinon bicarpellatum</i>	Serpentine chaparral.	Serpentine barrens at edge of chaparral. 150–820m.
umbrella larkspur	<i>Delphinium umbracolorum</i>	Cismontane woodland.	Mesic sites. 400–1,600m.
Vail Lake ceanothus	<i>Ceanothus ophiochilus</i>	Chaparral.	Gabbro seams on north-facing ridges on the eastern sides of mountains. 620–825m.
variegated dudleya	<i>Dudleya variegata</i>	Chaparral, coastal scrub, cismontane woodland, valley and foothill grassland, vernal pools.	In rocky or clay soils; sometimes associated with vernal pool margins. 3–550m.
Vasek's clarkia	<i>Clarkia tembloriensis</i> ssp. <i>calientensis</i>	Valley and foothill grassland.	North-facing slopes with isomeris, other clarkia spp. 270–335m.
veiny monardella	<i>Monardella douglasii</i> ssp. <i>venosa</i>	Valley and foothill grassland, cismontane woodland.	In heavy clay; mostly with grassland associates. Rediscovered in 1992. 60–410m.
Ventura Marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Coastal salt marsh.	Within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs. 1–35m.
Verity's dudleya	<i>Dudleya verityi</i>	Chaparral, cismontane woodland, coastal scrub.	On volcanic rock outcrops in the Santa Monica mountains. 60–120m.

Table A4-1. Habitats of Special-Status Species Known to Occur in the CVP/SWP Service Areas (contd)

Common Name	Scientific Name	General Habitat Description	Micro Habitat
vernal pool smallscale	<i>Atriplex persistens</i>	Vernal pools.	Alkaline vernal pools. 10–115m.
wart-stemmed ceanothus	<i>Ceanothus verrucosus</i>	Chaparral.	1–380m.
western leatherwood	<i>Dirca occidentalis</i>	Broadleafed upland forest, chaparral, closed-cone conif for, cismontane wdln, n coast conif for, rip for, rip wdln.	On brushy slopes, mesic sites; mostly in mixed evergreen & foothill woodland communities. 30–550m.
Whipple's monkeyflower	<i>Mimulus whipplei</i>	Lower montane coniferous forest.	Hillsides and rocky places in yellow pine forest. One site known: 670m.
white-bracted spineflower	<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Mojavean desert scrub, pinyon-juniper woodland.	300–1,200m.
white-margined oxytheca	<i>Oxytheca emarginata</i>	Lower montane coniferous forest, pinyon and juniper woodland.	Gravelly to rocky soil in the san jacinto and santa rosa mtns. 1,200–2,500m.
willowy monardella	<i>Monardella viminea</i>	Coastal scrub/alluvial ephemeral washes with adjacent coastal scrub, chaparral, or sycamore woodland.	In canyons, in rocky and sandy places, sometimes in washes or floodplains; w/baccharis, iva, etc. 50–225m.
woolly mountain-parsley	<i>Oreonana vestita</i>	Subalpine coniferous forest, upper montane coniferous forest.	High ridges; on scree, talus, or gravel. 2,410–3,500m.
woven-spored lichen	<i>Texosporium sancti-jacobi</i>	Chaparral.	Open sites; in California w/ <i>adenostoma fas.</i> , <i>eriogonum</i> , <i>selaginella</i> . At pinnacles, on small mammal pellets. 290–660m.
Wright's trichocoronis	<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Marshes and swamps, riparian forest, meadows and seeps, vernal pools.	Mud flats of vernal lakes, drying river beds, alkali meadows. 5–435m.
Yadon's rein orchid	<i>Piperia yadonii</i>	Closed-cone coniferous forest, chaparral, coastal bluff scrub.	On sandstone and sandy soil, but poorly drained and often dry. 10–415m.
Yadon's wallflower	<i>Erysimum menziesii</i> ssp. <i>yadonii</i>	Coastal dunes.	Foredunes. 0–15m.
Yucaipa onion	<i>Allium marvinii</i>	Chaparral.	In openings on clay soils. 760–1,065m.
Ziegler's aster	<i>Machaeranthera canescens</i> var. <i>ziegleri</i>	Lower montane coniferous forest, upper montane coniferous forest.	Dry ridges scattered under pines, along roadsides, and in dry, somewhat disturbed clearings. 1,400–2,470m.

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas

Common Name	Community Type	Project Area	Water District
Alkali Meadow	Meadow and Seep	CVP	Byron-Bethany I.D.
			Contra Costa W.D.
			Placer Co. Water Agency Zone 1
Alkali Seep	Meadow and Seep	CVP	Contra Costa W.D.
			Placer Co. Water Agency Zone 1
		SWP	Buttonwillow Improvement Dist.
			Semitropic W.S.D.
Big Tree Forest	Lower Montane Coniferous Forest	CVP	Calaveras Co. W.D.
			Tuolumne Utilities District
California Walnut Woodland	Cismontane Woodland	CVP	Casitas M.W.D.
			United W.C.D.
		SWP	Metropolitan Water District
Canyon Live Oak Ravine Forest	Riparian Forest	SWP	Antelope Valley-East Kern W.A.
			Metropolitan Water District
			San Bernardino Valley M.W.D.
Central Coast Arroyo Willow Riparian Forest	Riparian Forest	CVP	Santa Ynez River W.C.D.
Central Dune Scrub	Coastal Dunes	CVP	Monterey Co. Recycling Project
			Pajaro Valley W.M.A.
			Santa Maria Valley W.C.D.
			Santa Ynez River W.C.D.
Central Foredunes	Coastal Dunes	CVP	Santa Maria Valley W.C.D.
Central Maritime Chaparral	Chaparral	CVP	Santa Ynez River W.C.D.
Cismontane Alkali Marsh	Wetland	CVP	Central California I.D.
			Contra Costa W.D.
			Grasslands W.D.
			Laguna W.D.
			San Luis Canal Co.
		SWP	Metropolitan Water District

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Coastal and Valley Freshwater Marsh	Wetland	CVP	Pacific Realty Associates, L.P. (M & T Chico Ranch)
			Pajaro Valley W.M.A.
			Reclamation District No. 1004
			San Luis Canal Co.
			Santa Maria Valley W.C.D.
			United W.C.D.
		West Stanislaus I.D.	
		SWP	Metropolitan Water District
Coastal Brackish Marsh	Wetland	CVP	Contra Costa W.D. Monterey Co. Recycling Project
		SWP	Metropolitan Water District
Desert Fan Palm Oasis Woodland	Riparian Woodlands	SWP	Coachella Valley W.D.
			Desert Water Agency
			Metropolitan Water District
Elderberry Savanna	Riparian Scrubs	CVP	City of Sacramento W.S.A.
			City of West Sacramento
Great Valley Cottonwood Riparian Forest	Riparian Forest	CVP	Anderson-Cottonwood I.D.
			City of Redding
			City of Redding - 2871
			City of West Sacramento
			Eastside M.W.C.
			Glenn-Colusa I.D.
			Meridian Farms Water Company
			North Kern W.S.D.
			Pacific Realty Associates, L.P. (M & T Chico Ranch)
			R and J Anderson Properties, L.P.
			Shasta Co. W.A.
Spence, Ruthann			

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Great Valley Cottonwood Riparian Forest (contd.)	Riparian Forest (contd.)	CVP (contd.)	Sycamore Family Trust
		SWP	City of Yuba City W.S.A.
			Kern Co W.A. Improv.Dist. #4
			Rosedale-Rio Bravo W.S.D.
Great Valley Mesquite Scrub	Riparian Scrubs	CVP	City of Coalinga
			North Kern W.S.D.
			Westlands W.D.
		SWP	Kern Delta W.D.
			Rosedale-Rio Bravo W.S.D.
Great Valley Mixed Riparian Forest	Riparian Forest	CVP	Alta I.D.
			Anderson-Cottonwood I.D.
			Consolidated I.D.
			Driscoll Strawberry Associates, Inc.
			Driver, Gregory E.
			Eastside M.W.C.
			Exchange Bank (C/O Nature Conservancy)
			Feather W.D.
			Fresno I.D.
			Giovannetti, B.E.
			Glenn-Colusa I.D.
			Green Valley Corporation (5210)
			Griffin, Joseph, and Prater, Sharon
			J.B. Unlimited, Inc.
			Kings River W.D.
			Micke, Daniel and Nina
			Pacific Realty Associates, L.P. (M & T Chico Ranch)
			Reclamation District No. 108
			River Garden Farms Company
			Roberts Ditch Irrigation Company

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Great Valley Mixed Riparian Forest (contd.)	Riparian Forest (contd.)	CVP (contd.)	Shasta Co. W.A.
			Sutter M.W.C.
			Tenhunfeld, Fred, Wallace Jack, Et Al
Great Valley Valley Oak Riparian Forest	Riparian Forest	CVP	Anderson-Cottonwood I.D.
			City of Redding
			City of Redding - 2871
			Kaweah Delta W.C.D.
			Pacific Realty Associates, L.P. (M & T Chico Ranch)
			Shasta Co. W.A.
Great Valley Willow Scrub	Riparian Scrubs	CVP	Anderson-Cottonwood I.D.
			City of Redding
			City of Redding – 2871
			Glenn-Colusa I.D.
			Pacific Realty Associates, L.P. (M & T Chico Ranch)
			Shasta Co. W.A.
Ione Chaparral	Chaparral	CVP	Calaveras Co. W.D.
Maritime Succulent Scrub	Coastal Scrub	SWP	Metropolitan Water District
Mesquite Bosque	Riparian Forest	SWP	Desert Water Agency
Mojave Riparian Forest	Riparian Forest	SWP	Palmdale W.D.
Northern Claypan Vernal Pool	Vernal Pool	CVP	Alta I.D.
			Byron-Bethany I.D.
			City of Fresno Service Area
			City of Sacramento W.S.A.
			Exeter I.D.
			Fresno I.D.
			Kaweah Delta W.C.D.
			Pixley I.D.
			Solano I.D.

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Northern Claypan Vernal Pool	Vernal Pool	CVP	Tea Pot Dome W.D.
			Terra Bella I.D.
			Vandalia I.D.
			Westside W.D.
		SWP	Alameda Co Fc & Wcd Zone 7
Northern Coastal Salt Marsh	Wetland	CVP	Contra Costa W.D.
			East Bay M.U.D.
			Monterey Co. Recycling Project
			Pajaro Valley W.M.A.
			Santa Clara Valley W.D.
			Santa Ynez River W.C.D.
		SWP	Alameda County Water District
			Santa Clara Valley W.D.
Northern Hardpan Vernal Pool	Vernal Pool	CVP	Alta I.D.
			Chowchilla W.D.
			City of Roseville W.S.A.
			City of Sacramento W.S.A.
			Corning W.D.
			Garfield W.D.
			Madera I.D.
			Nevada I.D.
			Placer Co. Water Agency Zone 1
			Sacramento Co. Water Agency
			Sacramento M.U.D.
			San Juan W.D.
Northern Maritime Chaparral	Chaparral	CVP	East Bay M.U.D.
Northern Volcanic Mud Flow Vernal Pool	Vernal Pool	CVP	City of Roseville W.S.A.
			Placer Co. Water Agency Zone 1

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Open Engelmann Oak Woodland	Cismontane Woodland	SWP	Metropolitan Water District
Riversidian Alluvial Fan Sage Scrub	Coastal Scrub	SWP	Metropolitan Water District
			San Bernardino Valley M.W.D.
San Diego Mesa Claypan Vernal Pool	Vernal Pool	SWP	Metropolitan Water District
San Diego Mesa Hardpan Vernal Pool	Vernal Pool	SWP	Metropolitan Water District
Serpentine Bunchgrass	Valley and Foothill Grassland	CVP	East Bay M.U.D.
		SWP	Santa Clara Valley W.D.
Southern Coast Live Oak Riparian Forest	Riparian Forest	CVP	Casitas M.W.D.
			Santa Ynez R.W.C.D. Imp. District No. 1
			Santa Ynez River W.C.D.
			United W.C.D.
		SWP	Metropolitan Water District
			San Bernardino Valley M.W.D.
San Geronimo Pass Water Agency			
Southern Coastal Bluff Scrub	Coastal Bluff Scrub	SWP	Metropolitan Water District
Southern Coastal Salt Marsh	Wetland	CVP	Carpinteria Valley W.D.
			Casitas M.W.D.
			Goleta Co. W.D.
		United W.C.D.	
SWP	Metropolitan Water District		
Southern Cottonwood Willow Riparian Forest	Riparian Forest	CVP	Santa Ynez R.W.C.D. Imp. District No. 1
			Santa Ynez River W.C.D.
			United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
			Metropolitan Water District
San Bernardino Valley M.W.D.			

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Southern Cottonwood Willow Riparian Forest (contd.)	Riparian Forest (contd.)	SWP (contd.)	San Geronio Pass Water Agency
Southern Dune Scrub	Coastal Dunes	SWP	Metropolitan Water District
Southern Foredunes	Coastal Dunes	SWP	Metropolitan Water District
Southern Interior Basalt Flow Vernal Pool	Vernal Pool	SWP	Metropolitan Water District
Southern Interior Cypress Forest	Closed-Cone Coniferous Forest	SWP	Metropolitan Water District
Southern Maritime Chaparral	Chaparral	SWP	Metropolitan Water District
Southern Mixed Riparian Forest	Riparian Forest	CVP	United W.C.D.
		SWP	Metropolitan Water District
Southern Riparian Forest	Riparian Forest	SWP	Antelope Valley-East Kern W.A.
			Desert Water Agency
			Metropolitan Water District
			San Bernardino Valley M.W.D.
Southern Riparian Scrub	Riparian Scrubs	CVP	United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
			Metropolitan Water District
	San Bernardino Valley M.W.D.		
Southern Sycamore Alder Riparian Woodland	Riparian Woodlands	CVP	Casitas M.W.D.
			United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
			Crestline-Lake Arrowhead W.A.
			Metropolitan Water District
			Palmdale W.D.
	San Bernardino Valley M.W.D.		
	San Geronio Pass Water Agency		
Southern Willow Scrub	Riparian Scrubs	CVP	Santa Ynez R.W.C.D. Imp. District No. 1
			Santa Ynez River W.C.D.

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Southern Willow Scrub (contd.)	Riparian Scrubs (contd.)	CVP (contd.)	United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
			Metropolitan Water District
			San Bernardino Valley M.W.D.
Stabilized Interior Dunes	Interior Dunes	CVP	Arvin-Edison W.S.D.
			Contra Costa W.D.
Sycamore Alluvial Woodland	Riparian Woodlands	CVP	Del Puerto W.D.
			Santa Clara Valley W.D.
		SWP	Alameda Co FC & WCD Zone 7
			Santa Clara Valley W.D.
Torrey Pine Forest	Closed-Cone Coniferous Forest	SWP	Metropolitan Water District
Valley Needlegrass Grassland	Valley and Foothill Grassland	CVP	Contra Costa W.D.
			East Bay M.U.D.
			Maine Prairie W.D.
			Solano I.D.
			United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
Metropolitan Water District			
Tehachapi-Cummings Co. W.D.			
Valley Oak Woodland	Cismontane Woodland	CVP	Stockton-East W.D.
			United W.C.D.
		SWP	Antelope Valley-East Kern W.A.
			Metropolitan Water District
		Tejon-Castac W.D.	
Valley Sacaton Grassland	Valley and Foothill Grassland	CVP	Grasslands W.D.
			Gravelly Ford W.D.
			Kaweah Delta W.C.D.
			Pixley I.D.

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Valley Saltbush Scrub	Chenopod Scrub	CVP	Buena Vista W.S.D.
			North Kern W.S.D.
			Southern San Joaquin M.U.D.
		SWP	Belridge W.S.D.
			Buena Vista W.S.D.
			Buttonwillow Improvement Dist.
			Dudley Ridge W.D.
			Hacienda W.D.
			Henry Miller W.D.
			Kern Delta W.D.
			Lost Hills W.D.
			Rosedale-Rio Bravo W.S.D.
			Semitropic W.S.D.
			West Kern W.D.
Wheeler Ridge-Maricopa W.S.D.			
Valley Sink Scrub	Chenopod Scrub	CVP	Buena Vista W.S.D.
			Byron-Bethany I.D.
			Central California I.D.
			Grasslands W.D.
			Heinlen M.W.C.
			San Luis Canal Co.
			San Luis W.D.
			Southern San Joaquin M.U.D.
		SWP	Alameda Co FC & WCD Zone 7
			Buena Vista W.S.D.
			Buttonwillow Improvement Dist.
			Henry Miller W.D.
			Kern Delta W.D.
			Lost Hills W.D.
Rosedale-Rio Bravo W.S.D.			

Table A4-2. Sensitive Natural Communities Known to Occur in the CVP/SWP Service Areas (contd.)

Common Name	Community Type	Project Area	Water District
Valley Sink Scrub (contd.)	Chenopod Scrub (contd.)	SWP (contd.)	Semitropic W.S.D.
			Wheeler Ridge-Maricopa W.S.D.
Walnut Forest	Broadleaved Upland Forest	CVP	United W.C.D.
		SWP	Metropolitan Water District
Wildflower Field	Valley and Foothill Grassland	CVP	Lake Berryessa Resort Imp Dist
		SWP	Antelope Valley-East Kern W.A.
			Napa Co. F.C.W.C.D.

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Attachment 5 Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread

Botanical Resources and Wetlands Technical Report

Shasta Lake Water Resources Investigation, California

Prepared by:

**United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Region**



Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Aegilops triuncialis</i> (Barbed goatgrass)	None identified		Perennial bunch grass with abundant seed production. Rapid rate of spread; can move long distance along roadsides.	
<i>Ailanthus altissima</i> (Tree of heaven)	Big Backbone Arm, Big Backbone Creek, Jones Valley Boat Ramp, Packer's Bay, Shasta Dam, Lakeshore, Riverview-Sacramento Arm		Prolific seed production; Seed dispersal by wind; sprouts vigorously from stumps and laterals, can quickly establish and dominate natural succession regimes. Used as ornamental, escaped cultivation.	
<i>Andropogon virginicus</i> (Broomsedge)	Big Backbone Creek, Squaw Creek		Perennial bunch grass promoted by fire. Seed dispersal by wind, adhering to clothing and animal fur, mud on shoes, vehicles, and road or farm equipment.	
<i>Arundo donax</i> (Giant reed, arundo)	None identified		Riparian species with rhizomes; roots at nodes; fragments will root as well. Spreads along stream channels. Flooding may transport fragments which can colonize other locations.	
<i>Avena fatua</i> (Common wild oats); <i>Avena barbata</i> (Slender wild oats)	Potem Creek, Squaw Creek, Big Backbone Arm, Mainstem, McCloud Arm, Pit Arm, Sacramento Arm, Squaw Creek Arm.		Seed dispersal through mud on shoes, vehicles, and road or farm equipment; contaminated hay.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Brassica nigra</i> (Black mustard)	Big Backbone Creek, Upper Sacramento River, McCloud Arm, Squaw Arm.		Seeds are small and sticky when wet, sticking to equipment and movement through saltation.	
<i>Brassica tournefortii</i> (Asian mustard)	None identified		Seeds dispersed by hay contamination, mud on shoes, vehicles, and road or farm equipment; wind (tumbleweed). Establishes rapidly along roadsides.	
<i>Briza maxima</i> (Rattlesnake grass)	None identified		Seed dispersed by mud on shoes, vehicles, and road or farm equipment.	
<i>Bromus diandrus</i> (Ripgut brome)	Lake wide		Sharp seeds adhere to clothes, and animal fur; dispersed further by mud on shoes, vehicles, and road or farm equipment.	
<i>Bromus hordeaceus</i> (Soft brome)	Lake wide		Seeds dispersal by attachment to clothing and animal fur; contaminated seed mixes, hay/straw; mud on shoes, vehicles, and road or farm equipment.	
<i>Bromus madritensis ssp. rubens</i> (Red brome)	Big Backbone Creek, Squaw Creek, Big Backbone Arm, McCloud Arm, Pit Arm, Sacramento Arm.		Dispersal by attachment to clothing and animal fur; contaminated seed mixes, hay/straw; mud on shoes, vehicles, and road or farm equipment.	
<i>Bromus tectorum</i> (Cheatgrass)	Salt Creek, Squaw Creek, Big Backbone Arm, Main, McCloud Arm, Pit Arm, Sacramento Arm.		Seed dispersal by wind, attachment to clothing and animal fur; contaminated seed mixes, hay/straw; mud on shoes, vehicles, and road or farm equipment.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Cardaria chalapensis</i> (Lenspod whitetop)	USFS		Prolific seed production, rhizomes, and readily re-sprouts, propagates from fragments. Dispersal by contaminated seed mixes, hay/straw; mud on shoes, vehicles, and road or farm equipment.	
<i>Cardaria draba</i> (Hoary cress)	None identified		Prolific seed production, rhizomes, and readily re-sprouts, propagates from fragments. Dispersal by contaminated seed mixes, hay/straw; mud on shoes, vehicles, and road or farm equipment.	
<i>Cardaria pubescens</i> (Hairy whitetop)	None identified		Spreads primarily by rhizomes and root fragments; wind and waterways. Not likely to be spread by humans.	
<i>Carduus acanthoides</i> (Spiny plumeless thistle)	None identified		Uncommon in California. Competes poorly with established grasses. Promoted by fire, overgrazing, disturbance. Achenes dispersed by wind rarely greater than 100m.	
<i>Carduus nutans</i> (Nodding plumeless thistle)	None identified		Competes poorly with grasses. Spreads slowly. Seeds disperse through wind water and small mammals.	
<i>Carduus pycnocephalus</i> (Italian thistle)	None identified		Seeds disperse mainly by wind, seeds sticky when wet; humans, animals vehicles, contaminated hay/straw. Germinates in drier conditions.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Centaurea diffusa</i> (White knapweed)	Lakehead, Salt Creek		Prolific seed producer. Spreads in alfalfa hay production, water, and wind; mud on shoes, vehicles, and road or farm equipment.	
<i>Centaurea maculosa</i> (Spotted knapweed)	Shasta Dam		Prolific seed producer. Spreads by human activity, vehicles, logging equipment, trains, aircraft (infested landing strips), hay, florist use in floral arrangements.	
<i>Centaurea melitensis</i> (Maltese star-thistle)	None identified		Seeds spread by wind (short distances), animal fur, seed/soil contamination, human activity; mud on shoes, vehicles, and road or farm equipment.	
<i>Centaurea solstitialis</i> (Yellow star-thistle)	Lakewide		Prolific seed producer. Spread by wind, contaminated hay/seed, mud on shoes, vehicles, and road or farm equipment.	
<i>Centaurea virgata</i> <i>var. squarrosa</i> (Squarrose knapweed)	None identified		Spread by wind water, animals, mud on shoes, vehicles, and road or farm equipment, trains, and sheep.	
<i>Chondrilla juncea</i> (Rush skeleton weed)	Antlers Bridge, Lakeshore, Lakehead, Riverview		Generates from roots and root parts. Spread by wind, animal fur, and contaminated hay.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Chorispora tenella</i> (Crossflower)	None identified		Reproduction: Annual seed Spreads when wet seeds stick to clothing or animals; mud on shoes, vehicles, and road or farm equipment; and use of contaminated seed, hay, and straw.	
<i>Cirsium arvense</i> (Canada thistle)	USFS		Prolific seed producer, viable for up to 20 years. Spread through cattle and horse droppings, contaminated hay, water.	
<i>Cirsium vulgare</i> (Bull thistle)	Lakewide		Prolific seed production and can re-sprout if cut. Dispersal by contaminated hay/straw, mud on shoes, vehicles, and road or farm equipment.	
<i>Conium maculatum</i> (Poison hemlock)	Upper Sacramento River		Seeds dispersal by mud on shoes, vehicles, and road or farm equipment.	
<i>Convolvulus arvensis</i> (Field bindweed)	None identified		Prolific seed producer, viable for 20 years, roots from cuttings and fragments. Dispersal by mud on shoes, vehicles, and road or farm equipment; contaminated nursery stock.	
<i>Cortaderia selloana</i> (Pampas grass)	None identified		Prolific seed producer. Dispersal by wind, animal fur, nursery trade, ornamental.	
<i>Cynodon dactylon</i> (Bermudagrass)	Upper Sacramento River, McCloud Arm		Mainly reproduces by stolons and rhizomes. Dispersed by contaminated hay, seed or soil; vegetative parts transported in mud on shoes, vehicles, and road or farm equipment.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Cynoglossum officinale</i> (Gypsyflower)	None identified		Prolific seed producer. Disperses by animal fur and hair.	
<i>Cynosurus echinatus</i> (Hedgehog dogtailgrass)	Lake wide		Disperses in water and mud on shoes, vehicles, and road or farm equipment.	
<i>Cystis scoparius</i> (Scotchbroom)	Upper Sacramento River, Salt Creek, Sacramento Arm, Ellery Creek Campground, Hirz Bay Boat Ramp, McCloud Bridge Campground, Antlers Resort, Lakehead Campground, Packers Bay Boat Ramp, Gilman Road, Obrien Road, Shasta Dam, Lakeshore Drive		Prolific seed producer. Dispersal by nursery stock and mud on shoes, vehicles, and road or farm equipment.	
<i>Dactylis glomerata</i> (Orchardgrass)	Salt Creek		Spreads by rhizomes. Transported along roadways. Common forage plant.	
<i>Descurainia sophia</i> (Herb sophia)	None identified		Prolific seed producer. Contaminated hay; mud on shoes, vehicles, and road or farm equipment.	
<i>Digitaria ischaemum</i> (Smooth crabgrass)	None identified		Seed disperse by mud on shoes, vehicles, and road or farm equipment.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Dipsacus fullonum</i> (common teasel)	None identified		Prolific seed producer. Dispersed by mud on shoes, vehicles, and road or farm equipment; road construction /maintenance; horticulture/nursery; floral arrangements.	
<i>Dipsacus sativus</i> (Fuller's teasel)	None identified		Prolific seed producer. Dispersed by mud on shoes, vehicles, and road or farm equipment; road construction/maintenance; horticulture/nursery; floral arrangements.	
<i>Echinochloa crus-galli</i> (Barnyardgrass)	Squaw Creek		Seeds are dispersed by mud on mud on shoes, vehicles, and road or farm equipment; contaminated hay and straw. Commonly found in gardens and disturbed areas.	
<i>Elytrigia repens</i> (Quackgrass)	None identified		Reproduces by seed or rhizomes, fragments produce new plants. Disperses by water, agricultural activities.	
<i>Erodium botrys</i> (Longbeak stork's bill)	Lake wide		Dispersed by cattle forage. Seeds stick to animal fur, clothing, etc.	
<i>Erodium cicutarium</i> (Redstem stork's bill)	Ripgut Creek		Dispersed by cattle forage. Seeds stick to animal fur, clothing, etc.	
<i>Euphorbia esula</i> (Leafy spurge)	None identified		Prolific seed producer. Roots spread vigorously and sprout from root nodes.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Festuca arundinacea</i> (Tall fescue)	None identified		Can reproduce by vegetative fragments. Widely used as pasture and hay. Dispersal by contaminated hay and manure.	
<i>Ficus carica</i> (Fig)	Big Backbone Creek, Squaw Creek, Mainstem, Shasta Dam		Spreads by seed and sprouts from cuttings. Commercial crop and ornamental.	
<i>Foeniculum vulgare</i> (Fennel)	USFS		Prolific seed producer. Garden crop. Dispersed by mud on shoes, vehicles, and road or farm equipment; animals, and human activity.	
<i>Genista mospessulana</i> (French broom)	Silverthorn, Turntable Bay, Shasta Dam, Sugarloaf Creek.		Prolific seed producer. Resprouts after being cut. Dispersal by contaminated soil, vehicles, lumber operations, ornamentals.	
<i>Geranium dissectum</i> (Cutleaf geranium)	Pit Arm		Dispersed by animal fur; clothing and machinery; contaminated hay and grain.	
<i>Geranium molle</i> (Dove geranium)	None identified		Dispersed by animal fur; clothing and machinery; contaminated hay and grain.	
<i>Hedera helix</i> (English ivy)	None identified		Seeds dispersed by birds. Resprouts when vegetation removed; ornamental ground cover.	
<i>Holcus lanatus</i> (Common velvetgrass)	Squaw Creek		Prolific seed producer. Dispersal by wind.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Hordeum marinum</i> , <i>H. murinum</i> (Mediterranean barley, foxtail)	McCloud Arm		Dispersal by wind, animals, contaminated hay, mud on shoes, vehicles, and road or farm equipment.	
<i>Hydrilla verticillata</i> (Waterthyme)	None identified		Vegetative parts readily produce an independent plant. Dispersal by human boating activities; popular in use for aquariums.	
<i>Hypericum perforatum</i> (Common St. Johnswort)	Lake wide		Prolific seed producer. Grown in home gardens. Dispersed by human activities, vehicles.	
<i>Hypochaeris radicata</i> (Rough cat's ear)	Lake wide		Prolific seed producer. Dispersal by attaching to clothing, animal fur, and vehicles.	
<i>Iris pseudacorus</i> (Paleyellow iris)	Salt Creek		Escaped from cultivation. Dispersal through waterways.	
<i>Isatis tinctoria</i> (Dyer's woad, Marlahan mustard)	I-5 corridor at O'Brien		Prolific seed producer. Dispersal by vehicles; contaminated seed and hay; farm equipment.	
<i>Kochia scoparia</i> (Mexican fireweed)	None identified		Prolific seed producer. Was planted as forage. Dispersal by wind (tumbleweed action).	
<i>Lactuca serriola</i> (Prickly lettuce)	Squaw Creek, Sugarloaf Creek, McCloud Arm		Prolific seed producer. Dispersal by wind, farm equipment, and human activities.	
<i>Lathyrus latifolius</i> (Perennial sweetpea)	Cambell Creek, Salt Creek, Upper Sacramento River, Sacramento Arm		Perennial forb reproduces by seed and rhizomes. Introduced as an ornamental.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Lepidium latifolium</i> (Broadleaved pepperweed)	None identified		Spreads by seeds, rhizomes and fragments. Dispersal by wind, water, soil, waterfowl; contaminated hay/straw, floral arrangements	
<i>Leucanthemum vulgare</i> Ox-eye daisy	None identified		Prolific seed producer and spreads through rhizomes. Dispersal by mud on shoes, vehicles, and road or farm equipment, commercial wildflower seed packets.	
<i>Linaria dalmatica</i> (Dalmatian toadflax)	USFS		Prolific seed producers and spreads through rhizomes. Dispersal by vehicles, equipment human activities.	
<i>Lolium multiflorum</i> (Italian ryegrass)	None identified		Widely distributed as hay and seed.	
<i>Lotus corniculatus</i> (Birdfoot deervetch)	None identified		Seeds and vegetative parts dispersed by vehicles, farm equipment, seed and feed contaminant. Was used for forage and along erosion.	
<i>Lythrum hyssopifolia</i> (Hyssop loosestrife)	None identified		Prolific seed producer. Seed dispersed by mud on vehicles, shoes, animal and bird feet.	
<i>Lythrum salicaria</i> (Purple loosestrife)	None identified		Prolific seed producer. Dispersed by mud on vehicles, shoes, animal and bird feet.	
<i>Marrubium vulgare</i> (Horehound)	None identified		Prolific seed producer. Fruits cling to shoes, vehicles; seeds in mud transported by human activity.	
<i>Medicago lupulina</i> (Black medic)	Pit Arm		Prolific seed producer. Dispersal through mud on shoes, vehicles, and road or farm equipment.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Medicago polymorpha</i> (Burclover)	Big Backbone Arm		Seed dispersal through attachment to animal hair; contaminated seed.	
<i>Melilotus officinalis</i> (Yellow sweetclover)	None identified		Prolific seed producer. Dispersal by contaminants in weed and seed and other human activities.	
<i>Mentha pulegium</i> (Pennyroyal)	Lake wide		Dispersal through seeds, stolons, and rhizomes. Sold horticulturally.	
<i>Nerium oleander</i> (Oleander)	Mainstem, Packer's Bay, Shasta Dam		Widely planted as ornamental. Seed and vegetative dispersal mainly by waterways.	
<i>Onopordum acanthium</i> (Scotch cottonthistle)	None identified		Seed dispersal by wind, water, animals and human activities.	
<i>Paspalum dilatatum</i> (Dallisgrass)	None identified		Reproduces by seed. Common in pastures. Dispersal by mud on shoes, vehicles, and road or farm equipment; contaminated hay and straw.	
<i>Phleum pratense</i> (Timothy)	None identified		Seed dispersal in hay, vehicle and equipment mud. Used commonly in pastures.	
<i>Phytolacca americana</i> (Pokeweed)	Dekkas Creek, Nasoni Creek, Salt Creek, Squaw Creek Arm, Bailey Cove		Seeds primarily dispersed by birds.	
<i>Plantago lanceolata</i> (Narrowleaf plantain)	Lake wide		Seeds dispersed by mud on shoes, vehicles, and road or farm equipment, animals or other human activity.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Poa pratensis</i> (Kentucky bluegrass)	None identified		Common turf and pasture planting. Rhizomes and seeds disperse by watercourses and human activities.	
<i>Polygonum cuspidatum</i> (Japanese knotweed)	None identified		Rhizome fragments develop into new plants that grow and spread rapidly. Fragments dispersed by vehicles and contaminated soil.	
<i>Polygonum sachalinense</i> (Giant knotweed)	None identified		Dispersal by seed and plant fragments. Fragments dispersed by vehicles and contaminated soil.	
<i>Polypogon monspeliensis</i> (Annual rabbitsfoot grass)	Big backbone		Dispersal by sticking to feet, fur or feathers of animals, and agricultural activities.	
<i>Potamogeton crispus</i> (Curly pondweed)	None identified		Disperses through water courses and transfer of boats between water features.	
<i>Raphanus sativus</i> (Wild radish)	None identified		Seeds are dispersed by agricultural activities and contaminated hay and crops.	
+0000 (black locust)	USFS, Billiboka Club, McCloud River, Lakehead		Seed dispersal is unlikely. Spreads by suckers. Common landscaping and cultivation tree. Used for paneling, construction, fence posts, livestock forage, and honey bee production.	
<i>Rubus discolor</i> (Himalayan blackberry)	Lake wide		Seed and vegetative fragments are dispersal by cultivation, bird droppings, water courses. Roots at nodes touching the ground.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Rubus laciniatus</i> (cutleaf blackberry)	Upper Sacramento River, Sacramento Arm		Seed and vegetative dispersal by cultivation, bird droppings, water courses.	
<i>Rumex acetosella</i> (Common sheep sorrel)	Cambell Creek, Nasoni Creek, Mainstem, Salt Creek, Sacramento Arm, Squaw Creek Arm		Seed and rhizomes are dispersed by wind, water, mud, animals, vehicles, farm operations, and seed and hay contaminants.	
<i>Rumex crispus</i> (Curly dock)	Lake wide		Prolific seed producer. Dispersed by mud on vehicles and animal; contaminated hay and straw and animal droppings.	
<i>Salvia aethiopsis</i> (Mediterranean sage)	None identified		Prolific seed producer. Dispersed by vehicles, equipment, wind (tumbleweed), contaminated hay and straw.	
<i>Saponaria officinalis</i> (Bouncingbet)	None identified		Seeds, rhizomes and fragments are dispersed by cultivation and water courses.	
<i>Senecio jacobaea</i> (Tansy ragwort)	Mainstem, Pit Squaw Arm		Prolific seed producer and can regenerate from fragments. Dispersal by water courses; animal fur and feathers; farm equipment, vehicles and clothing; contaminated seed and hay; manure; and fire fighting activities.	
<i>Senecio vulgaris</i> (Old-man-in-the-spig)	None identified		Seed (achenes) dispersed by wind, water, mud on shoes, vehicles, and road or farm equipment. Common in disturbed sites.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Sesbania punicea</i> (Rattlebox, scarlet wisteria)	None identified		Seed dispersed by water courses; commonly planted as ornamental.	
<i>Sonchus arvensis</i> (Field sowthistle)	None identified		Prolific seed producer. Perennial forb produces from rhizomes. Common in moist disturbed areas. "Haired" seeds are dispersed by wind, water, mud on shoes, vehicles, and road or farm equipment; clothing and animal fur.	
<i>Sorghum halepense</i> (Johnsongrass)	Antlers Boat Ramp, Jones Valley, Shasta Dam		Reproduces by seeds or rhizomes. Dispersed by mud on shoes, vehicles, and road or farm equipment.	
<i>Spartium junceum</i> (Spanish broom)	Shasta Dam, Riverview – Sacramento Arm		Prolific seed producer; mud, water, roadside maintenance.	
<i>Symphytum asperum</i> (Prickly comfrey)	None identified		Reproduces by seed and vegetative fragments. Escaped cultivation. Common in disturbed areas, gardens and cultivated crops. Dispersed by mud on shoes, vehicles, and farm equipment.	
<i>Taeniatherum caput-medusae</i> (Medusa-head)	Salt Creek, USFS		Prolific seed producer. Dispersal by mud on shoes, vehicles, and road or farm equipment, contaminated hay or straw.	
<i>Tamarix ramosissima</i> (Saltcedar)	None identified		Prolific seed producer and high germination rate. Disperses by wind, water, stem and root fragments floating downstream can regenerate, resprouts if burnt.	

Table A5-1. Known Weed Source Locations, Potential Mode of Spread, and Risk of Spread (contd)

Invasive Weed Species	General weed source location	Proximity to potential construction activity or other mode of transportation	Mode of spread	Risk of spread
<i>Tribulus terrestris</i> (Puncturevine)	None identified		Stout spines on seed; disperses by adhering to tires, clothing, shoes, animal fur and feathers.	
<i>Torilis arvensis</i> (Spreading hedgeparsley)	Lake wide		Burs stick to clothing, animal fur, vehicles and equipment. Also in contaminated hay and straw.	
<i>Trifolium hirtum</i> (Rose clover)	Big Backbone, Squaw Creek, Salt Creek, Upper Sacramento River, McCloud Arm, Pit Arm, Sacramento Arm		Used as rangeland forage. Dispersed by manure, clothing, farm activities, seed contaminant.	
<i>Trifolium repens</i> (White clover)	None identified		Reproduces from seed and roots at nodes. Important forage crop. Disperses by mud on shoes, vehicles, and road or farm equipment.	
<i>Verbascum blattaria</i> (Moth mullein)	Salt Creek, Upper Sacramento River, Pit Arn, Sacramento Arm, Squaw Arm		Reproduces by seed. Found in disturbed areas. Disperses by mud on shoes, vehicles, and road or farm equipment.	
<i>Verbascum thapsus</i> (Common mullein)	Big Backbone, Salt Creek, Squaw Creek, Big Backbone Arm, Mainstem, McCloud Arm, Pit Arm, Sacramento Arm, Squaw Arm		Prolific seed producer. Road maintenance activities. Favors disturbance.	
<i>Vinca major/Vinca minor</i> (Periwinkle)	Squaw Creek, Bully Mine, McCloud Bridge Campground, Lakehead, Shasta Marina, Shasta Dam, Lakeshore Drive.		Disperses by fragments and rhizomes. Used as a ground cover, spreads rapidly in riparian environments.	
<i>Vulpia myuros</i> (Rat-tail fescue)	Big Backbone, Squaw Creek, Big Backbone Arm, Mainstem, Sacramento Arm		Prolific seed banks. Dispersed by human activities, sticks to animal fur.	

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