

**Preliminary Draft List of Delta Species Currently Proposed
to be Included in the Conservation Strategy**

April 30, 1998

Preliminary Criteria for Inclusion on this List

This is a list of special-status species in the Delta Region. The list was developed using the criteria described below. Species shaded in gray are those special-status species that do not meet the preliminary criteria for inclusion and would likely not be addressed in the Conservation Strategy.

Special-Status Species

Special-status species are any species with some form of endangerment or concern status. Special-status species are species that are:

- federally listed as threatened or endangered under the Endangered Species Act (ESA),
- California listed as threatened or endangered under the California Endangered Species Act (CESA),
- proposed for federal listing under the ESA,
- California candidates under the CESA,
- federal candidates under the ESA,
- California fully protected species or specified birds,
- California species of special concern (CSC),
- California Native Plant Society (CNPS) List 1A, List 1B, List 2, List 3, or List 4, or
- other species of concern to CALFED.

The list includes all special-status species known to occur or with the potential to occur in the Delta Region (i.e., the legal Delta). The determination that a species has the potential to occur was based on the species' known range and the presence of suitable habitat in the Delta Region.

Species Addressed by the Conservation Strategy

Criteria for selection of species to potentially be covered in the Conservation Strategy are:

- the species is federally or California listed as rare, threatened, or endangered, or
- the species is a California fully protected species, or
- the species could become federally or California listed as threatened or endangered during the term of CALFED implementation, and
- the species could be affected by CALFED actions.

Species considered to have the potential to become federally or California listed as threatened or endangered during the term of CALFED implementation are those species that are:

- proposed for federal listing
- California candidates
- federal candidates
- California species of special concern (each species considered individually for inclusion - see decision criteria)
- specified birds (each species considered individually for inclusion - see decision criteria)
- CNPS List 1 and List 2 (each species considered individually for inclusion - see decision criteria)
- Other species of concern (each species considered individually for inclusion - see decision criteria).

Decision Criteria for CSC, Specified Birds, CNPS List 1-4, and Other Species of Concern

- ^a Included because CALFED actions could affect a substantial portion of the species range or important habitat.
- ^b Included because of the limited distribution or rarity of the species.

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Type	Common Name	Scientific Name	Status			Potential Effects on Delta Species in the Delta Region			Potential Effects outside the Delta Region
			Federal	State	Other	May Be Affected	Not Likely to be Affected	Not Enough Information on the Species	
Federally Listed as Endangered or Threatened									
I	Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	E			X			SC, SJ, B

Type	Common Name	Scientific Name	Status			Potential Effects on Delta Species in the Delta Region			Potential Effects outside the Delta Region
			Federal	State	Other	May Be Affected	Not Likely to be Affected	Not Enough Information on the Species	
I	Delta green ground beetle	<i>Elaphrus viridis</i>	T			X			None
I	Delta green ground beetle (critical habitat)		--			X			None
I	Lange's metalmark butterfly	<i>Apodemia mormo langei</i>	E			X			None
I	Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T			X			SC, SJ
I	Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T			X			SC, SJ
I	Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E			X			SC, SJ, B
F	Delta smelt (R)	<i>Hypomesus transpacificus</i>	T	CT		X			B
F	Delta smelt (critical habitat)		--			X			B
F	Winter-run chinook salmon (R)	<i>Oncorhynchus tshawytscha</i>	E	E		X			SC, B, SJ
F	Winter-run chinook salmon (critical habitat)		--			X			SC, B, SJ
F	Central Valley steelhead Evolutionarily Significant Unit (ESU) (R)	<i>Oncorhynchus mykiss</i>	T			X			SC, B, SJ
A	California red-legged frog	<i>Rana aurora draytonii</i>	T			X			SC, SJ
R	Giant garter snake	<i>Thamnophis gigas</i>	T	CT		X			SC, SJ
B	Aleutian Canada goose	<i>Branta canadensis leucopareia</i>	T				X1		SC, SJ
B	American peregrine falcon	<i>Falco peregrinus anatum</i>	E	CE/FP		X			SC, SJ, B
B	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	CE/FP		X			SC, SJ, B
B	California clapper rail	<i>Rallus longirostris obsoletus</i>	E	CE/FP		X			B
B	California least tern	<i>Sterna antillarum (=albifrons) browni</i>	E	CE/FP		X			B
M	Salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E	CE/FP		X			B
M	San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	E	CT		X			SJ
P	Antioch Dunes evening-primrose	<i>Oenothera deltoides ssp. howellii</i>	E	CE	1B	X			None
P	Antioch Dunes evening-primrose (critical habitat)		--			X			None
P	Colusa grass	<i>Neostapfia colusana</i>	T	CE	1B	X			SC, SJ
P	Contra Costa goldfields	<i>Lasthenia conjugens</i>	E		1B	X			SC
P	Contra Costa wallflower	<i>Erysimum capitatum ssp. angustatum</i>	E	CE	1B	X			None
P	Contra Costa wallflower (critical habitat)		--			X			None
P	Fleshy owl's clover	<i>Castilleja campestris ssp. succulenta</i>	T	CE	1B	X			SC

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P	Green's tuctoria	<i>Tuctoria greenei</i>	E	R	1B	X			SC
P	Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>	E	CE	1B	X			B, SJ
P	Palmate-bracted bird's-beak	<i>Cordylanthus palmatus</i>	E	CE	1B	X			B, SC, SJ
P	Sacramento Orcutt grass	<i>Orcuttia viscida</i>	E	CE	1B	X			SC
P	Slender Orcutt grass	<i>Orcuttia tenuis</i>	T	CE	1B	X			SC
P	Soft bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>mollis</i>	E	Rare	1B	X			B
P	Solano grass	<i>Tuctoria mucronata</i>	E	CE	1B	X			SC
P	Suisun thistle	<i>Cirsium hydrophilum</i> var. <i>hydrophilum</i>	E		1B	X			B
California Listed as Endangered, Threatened, Rare, or Fully Protected									
B	California black rail	<i>Laterallus jamaicensis coturniculus</i>		CT/FP		X			B, SC
B	Greater sandhill crane	<i>Grus canadensis tabida</i>		CT/FP		X			SC, SJ
B	Little willow flycatcher	<i>Empidonax traillii brewsteri</i>		CE		X			SC, SJ
B	Swainson's hawk	<i>Buteo swainsoni</i>		CT		X			SC, SJ
B	White-tailed kite	<i>Elanus leucurus</i>		FP		X			B, SC, SJ
B	Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>		CE		X			SC, SJ
M	Riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>	PE	CE		X			SJ
P	Boggs lake hedge-hyssop	<i>Gratiola heterosepala</i>		CE	1B	X			SC, SJ
P	Delta button-celery	<i>Eryngium racemosum</i>		CE	1B	X			SJ
P	Mason's lilaeopsis	<i>Lilaeopsis masonii</i>		Rare	1B	X			B
Federally Proposed									
F	Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	PT	CSC		X			SC, B, SJ
F	Central Valley spring-run chinook salmon ESU (R)	<i>Oncorhynchus tshawytscha</i>	PE	CCT		X			SC, B
F	Central Valley fall-run chinook salmon ESU (R)	<i>Oncorhynchus tshawytscha</i>	PT	CSC		X			B, SJ
M	San Joaquin Valley woodrat	<i>Neotoma fuscipes riparia</i>	PE	CSC		X			SJ
Federal Candidate									
A	California tiger salamander	<i>Ambystoma californiense</i>	C			X			SC, SJ

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			Federal	State	Other	May Be Affected	Not Likely to be Affected	Not Enough Information on the Species	
B	Mountain plover	<i>Charadrius montanus</i>	C	CSC		X			SC, SJ
California Species of Special Concern, or CNPS List 1 or 2									
F	Green sturgeon ^a (R)	<i>Acipenser medirostris</i>		CSC		X			SC, B
F	Kern brook lamprey	<i>Lampetra hubbsi</i>		CSC			X2		SJ
F	Longfin smelt ^a	<i>Spirinchus thaleichthys</i>		CSC		X			B
F	River lamprey	<i>Lampetra cyresi</i>		CSC				X	--
F	Sacramento perch ^b	<i>Archoplites interruptus</i>		CSC		X			None
F	San Joaquin roach	<i>Lavinia symmetricus</i> ssp. (San Joaquin)		CSC			X2		SJ
R	California horned lizard	<i>Phrynosoma coronatum frontale</i>		CSC			X2		SC, SJ
R	Silvery legless lizard	<i>Amniella pulchra pulchra</i>		CSC			X2		SJ
R	Western pond turtle ^a	<i>Clemmys marmorata</i>		CSC		X			B, SC, SJ
R	San Joaquin whipsnake ^b	<i>Masticophis flagellum ruddocki</i>		CSC		X			B, SC, SJ
B	American white pelican	<i>Pelecanus erythrorhynchos</i>		CSC		X			B, SC, SJ
B	Bell's sage sparrow	<i>Amphispiza belli belli</i>		CSC			X1		B
B	Black tern ^a	<i>Chelidonias niger</i>		CSC		X			SC, SJ
B	California gull ^a	<i>Larus californicus</i>		CSC		X			B, SC, SJ
B	California yellow warbler ^a	<i>Dendroica petechia brewsteri</i>		CSC		X			B, SC, SJ
B	Cooper's hawk	<i>Accipiter cooperii</i>		CSC		X			B, SC, SJ
B	Double crested cormorant (rookery site) ^a	<i>Phalacrocorax auritus</i>		CSC		X			B, SC, SJ
B	Ferruginous hawk	<i>Buteo regalis</i>		CSC			X1		None
B	Loggerhead shrike	<i>Lanius ludovicianus</i>		CSC		X			B, SC, SJ
B	Long-billed curlew	<i>Numenius americanus</i>		CSC		X			B, SC, SJ
B	Merlin	<i>Falco columbarius</i>		CSC			X1		None
B	Northern harrier ^a	<i>Circus cyaneus</i>		CSC		X			B
B	Osprey	<i>Pandion haliaetus</i>		SB/CSC		X			B
B	Prairie falcon	<i>Falco mexicanus</i>		CSC			X1		None
B	Saltmarsh common yellowthroat ^a	<i>Geothlypis trichas sinuosa</i>		CSC		X			B

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B	Sharp-shinned hawk	<i>Accipiter striatus</i>		CSC			X		B, SC, SJ	
B	Short-eared owl ^a	<i>Asio flammeus</i>		CSC			X		B, SC, SJ	
B	Suisun song sparrow ^b	<i>Melospiza melodia maxillaris</i>		CSC			X		B	
B	Western burrowing owl ^a	<i>Athene cunicularia hypugea</i>		CSC			X		B, SC, SJ	
B	Western least bittern ^a	<i>Ixobrychus exilis hesperis</i>		CSC			X		B, SC, SJ	
B	White-faced ibis ^a	<i>Plegadis chihi</i>		CSC			X		SC, SJ	
M	Hoary bat	<i>Lasiurus cinereus</i>		CSC				X1	None	
M	Western big-eared bat	<i>Plecotus townsendii</i>		CSC				X1	None	
M	San Francisco dusky-footed woodrat	<i>Neotoma fuscipes arnectens</i>		CSC					X	B
M	Silver-haired bat	<i>Lasiurus noctivagus</i>		CSC				X1	None	
M	Suisun ornate shrew ^b	<i>Sorex ornatus sinuosus</i>		CSC			X		B	
P	Alkali milk-vetch ^b	<i>Astragalus tener</i> var. <i>tener</i>				1B	X			SC, SJ
P	Bearded popcorn-flower	<i>Plagiobothrys hystericulus</i>				1A			X	—
P	Big tarplant	<i>Blepharizonia plumosa</i> ssp. <i>plumosa</i>				1B		X2		SJ
P	Bristly sedge ^b	<i>Carex comosa</i>				2	X			SC, SJ
P	Brittlescale ^a	<i>Atriplex depressa</i>				1B	X			SC, SJ
P	Caper-fruited tropidocarpum	<i>Tropidocarpum caparideum</i>				1A			X	—
P	Carquinez goldenbush	<i>Isocoma arguta</i>				1B	X			B
P	Contra Costa buckwheat	<i>Eriogonum truncatum</i>				1A		X2		None
P	Delta mudwort ^b	<i>Limosella subulata</i>				2	X			B
P	Delta tule-pea ^a	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>				1B	X			B, SC, SJ
P	Diamond-petaled poppy	<i>Eschscholzia rhombipetala</i>				1B		X2		SC, SJ
P	Dwarf downingia	<i>Downingia pusilla</i>				2	X			SC, SJ
P	Eel-grass pondweed ^a	<i>Potamogeton zosteriformis</i>				2	X			SC
P	Fragrant fritillary	<i>Fritillaria liliacea</i>				1B	X			B
P	Heartscale ^a	<i>Atriplex cordulata</i>				1B	X			B, SC, SJ
P	Heckard's pepper-grass ^b	<i>Lepidium latipes</i> var. <i>heckardii</i>				1B	X			SC
P	Hispid bird's-beak ^b	<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>				1B	X			B, SC, SJ

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P	Interior California larkspur ^b	<i>Delphinium californicum</i> ssp. <i>interius</i>			1B	X			B, SJ
P	Legenere	<i>Legenere limosa</i>			1B	X			B, SC, SJ
P	Mad-dog skullcap ^b	<i>Scutellaria lateriflora</i>			2	X			SJ
P	Most beautiful jewelflower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>			1B		X2		None
P	Mt. Diablo fairy-lantern	<i>Calochortus pulchellus</i>			1B	X			B
P	Mt. Diablo jewelflower	<i>Streptanthus hispidus</i>			1B		X2		None
P	Mt. Diablo manzanita	<i>Arctostaphylos auriculata</i>			1B		X2		None
P	Mt. Diablo phacelia	<i>Phacelia phacelioides</i>			1B		X2		SJ
P	Northern California black walnut (Native stands) ^b	<i>Juglans californica</i> var. <i>hindsii</i>			1B	X			SC
P	Pincushion navarretia ^b	<i>Navarretia myersii</i>			1B	X			SC, SJ
P	Rayless ragwort	<i>Senecio aphanactis</i>			2		X2		SJ
P	Recurved larkspur	<i>Delphinium recurvatum</i>			1B	X			SC, SJ
P	Rose-mallow ^a	<i>Hibiscus lasiocarpus</i>			2	X			B, SC, SJ
P	Showy madia ^b	<i>Madia radiata</i>			1B	X			B, SJ
P	Slough thistle ^b	<i>Cirsium crassicaule</i>			1B	X			SJ
P	Suisun marsh aster ^a	<i>Aster lentus</i>			1B	X			B, SC, SJ
P	Valley sagittaria ^a	<i>Sagittaria sanfordii</i>			1B	X			B, SC, SJ
P	Valley spearscale ^a	<i>Atriplex joaquiniana</i>			1B	X			B, SC, SJ
P	Wright's trichocoronis	<i>Trichocoronis wrightii</i> var. <i>wrightii</i>			2		X2		SC, SJ

Other Species of Concern, or CNPS List 3 and 4

I	Antioch andrenid bee	<i>Perdita scitula antiochensis</i>			SC	X			
I	Antioch cophuran robberfly	<i>Cophura hurdi</i>			SC	X			
I	Antioch Dunes anthicid beetle	<i>Anthicus antiochensis</i>			SC	X			
I	Antioch efferian robberfly	<i>Efferia antiochi</i>			SC	X			
I	Antioch mutillid wasp	<i>Myrmosula pacifica</i>			SC	X			
I	Antioch sphecid wasp	<i>Philanthus rostris</i>			SC	X			

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			Federal	State	Other	May Be Affected	Not Likely to be Affected	Not Enough Information on the Species	
I	Bridges' Coast Range shoulderband snail	<i>Helminthoglypta mckimiana bridgesi</i>			SC		X2		
I	Curved-foot hygrotus diving beetle	<i>Hygrotus curvipes</i>			SC	X		B	
I	Hurd's metapogon robberfly	<i>Metapogon hurdi</i>			SC			X	
I	Sacramento tiger beetle	<i>Cicindela horticollis abrupta</i>			SC	X		SC	
I	San Joaquin tiger beetle	<i>Cicindela tranquebarica</i> ssp.			SC	X		SI	
I	Middlekauff's shieldback katydid	<i>Idiostatus middlekauffi</i>			SC	X			
I	Moestan blister beetle	<i>Lytta moesta</i>			SC		X2	SC, SI	
I	Molestan blister beetle	<i>Lytta molesta</i>			SC		X2	SC, SI	
I	Ricksecker's water scavenger beetle	<i>Hydrochara rickseckeri</i>			SC	X		SC, B	
I	Sacramento anthicid beetle	<i>Anthicus sacramento</i>			SC	X		SC, SI	
I	San Joaquin dune beetle	<i>Coelus gracilis</i>			SC		X2	SI	
I	Yellow-banded andrenid bee	<i>Perdita hirticeps luteocincta</i>			SC	X			
F	Pacific lamprey	<i>Lampetra tridentata</i>			SC			X	
A	Western spadefoot toad ^a	<i>Scaphiopus hammondi</i>			SC	X		B, SC, SI	
B	California horned lark	<i>Eremophila alpestris actia</i>			SC	X		B, SC, SI	
B	Tricolored blackbird ^a	<i>Agelaius tricolor</i>			SC	X		B, SC, SI	
B	Black-crowned night heron (rookery) ^a	<i>Nycticorax nycticorax</i>			SC	X		B, SC, SI	
B	Great blue heron (rookery) ^a	<i>Ardea herodias</i>			SC	X		B, SC, SI	
B	Great egret (rookery) ^a	<i>Casmerodius albus</i>		SB	SC	X		B, SC, SI	
B	Snowy egret (rookery) ^a	<i>Egretta thula</i>		SB	SC	X		B, SC, SI	
M	American badger	<i>Taxidea taxus</i>			SC	X		SC, SI	
M	Fringed myotis bat	<i>Myotis thysanodes</i>			SC		X1	None	
M	Long-eared myotis bat	<i>Myotis evotis</i>			SC		X1	None	
M	Long-legged myotis bat	<i>Myotis volans</i>			SC		X1	None	
M	Red bat	<i>Lasturus borealis</i>			SC	X		B, SC, SI	
M	San Joaquin pocket mouse	<i>Perognathus inornatus</i>			SC		X2	SI	
M	Small-footed myotis bat	<i>Myotis ciliolabrum</i>			SC		X1	None	

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M	Yuma myotis bat	<i>Myotis yumanensis</i>			SC		X1		None
P	California sycamore	<i>Platanus racemosa</i>				X			B, SC, SJ
P	Little moustail	<i>Myosurus minimus</i> ssp. <i>apus</i>			3	X			B, SC, SJ
P	Stinkbells	<i>Fritillaria agrestis</i>			4		X2		SC, SJ
P	Woolly-headed lessingia	<i>Lessingia hololeuca</i>			3		X2		SC
P	Crownscale	<i>Atriplex coronata</i> var. <i>coronata</i>			4	X			B, SJ
P	Small-flowered morning-glory	<i>Convolvulus simulans</i>			4		X2		SJ
P	Hoover's cryptantha	<i>Cryptantha hooveri</i>			4	X			B, SJ
P	Gypsum-loving larkspur	<i>Delphinium gypsophilum</i> ssp. <i>gypsophilum</i>			4	X			SJ
P	Small spikerush	<i>Eleocharis parvula</i>			4	X			B
P	Tuolumne button-celery	<i>Eryngium pinnatisectum</i>			4	X			SJ
P	Marsh gumplant	<i>Grindelia stricta</i> var. <i>angustifolia</i>			4	X			B
P	Serpentine linanthus	<i>Linanthus ambiguus</i>			4		X2		SJ
P	Gardner's yampah	<i>Perideridia gardneri</i> ssp. <i>gardneri</i>			4	X			B, SC, SJ
P	Delta woolly-marbles	<i>Psiloeorhpus brevissimus</i> var. <i>multiflorus</i>			4	X			B, SC, SJ
P	Lobb's aquatic buttercup	<i>Ranunculus lobbia</i>			4	X			B

Notes:

Type: A = Amphibian, B = Bird, F = Fish, I = Invertebrate, M = Mammal, P = Plant, R = Reptile

 Species not likely to be addressed in the Conservation Strategy

Federal Status:

- E = Listed as endangered under federal ESA
- T = Listed as threatened under federal ESA
- PE = Proposed for listing as endangered under ESA
- PT = Proposed for listing as threatened under ESA
- C = Candidate for listing under ESA

State Status:

- CE = Listed as endangered under CESA
- CT = Listed as threatened under CESA
- CCE = Candidate for listing as endangered under CESA
- CCT = Candidate for listing as threatened under CESA
- R = Listed as rare under California Native Plant Protection Act
- CSC = California species of special concern
- FP = Fully protected under California Fish and Game Code
- SB = Specified birds under California Fish and Game Code

Other Status:

- 1A = California Native Plant Society List 1A
- 1B = California Native Plant Society List 1B
- 2 = California Native Plant Society List 2
- 3 = California Native Plant Society List 3
- 4 = California Native Plant Society List 4
- SC = other species of concern identified by CALFED

Not Likely to be Affected:

- X1 = CALFED actions do not affect the species because habitat is not limiting and the species is mobile
- X2 = Species occurs in areas that would not be affected by CALFED actions

Not Enough Information on the Species:

- X = Not enough information on the species' biology or distribution to make a determination on effects

May be Affected:

- X = CALFED actions may result in take of federal or California protected species, species are associated with habitat types or occur at specific locations that may be adversely or beneficially affected by CALFED depending on where CALFED actions would be implemented, or species that are rare or transient in the Delta Region and may be affected by CALFED depending on when or where CALFED actions would be implemented.

- R = Species for which recovery is a CALFED objective.
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Potential Effects outside the Delta Region:

Species that are likely to be affected or that may be affected by CALFED actions implemented in other CALFED solution area regions. Solution area region codes are:

- SC = Sacramento River Region
- SJ = San Joaquin River Region
- B = Bay Region
- None = No effects outside of Delta region