

Proposed Changes to the BDCP Covered Species List

The following USFWS, DFG, and SAIC recommended changes to the BDCP covered species list is based on a review of SAIC's initial evaluation of 141 special-status species that occur or could occur in the Planning Area. Each species was evaluated for inclusion based on application of the following criteria:

- *Listing potential,*
- *Occurrence in the Planning Area,*
- *Potential to be adversely affected by proposed BDCP actions, and*
- *Sufficiency of information to evaluate BDCP effects and develop effective conservation measures.*

Proposed Additions to the BDCP Covered Species List

1. Western yellow-billed cuckoo (State listed endangered).

Western yellow-billed cuckoo was observed during the breeding season within the Planning Area in 2009. This species is a riparian obligate and the proposed restoration of 5,000 acres of riparian habitat would benefit the species and increase likelihood for its future establishment in the Planning Area. Potential for take is likely small and limited to possible future riparian habitat maintenance actions. No additional conservation measures would be required to contribute to recovery of the species.

2. Least Bell's vireo (Federal and State listed endangered). Least Bell's vireo is a riparian obligate whose range has been documented to be moving northward into its historical range, with a breeding population having established at the San Joaquin River NWR. The proposed restoration of 5,000 acres of riparian habitat would benefit the species and increase likelihood for its establishment in the Planning Area. Potential for take is likely small and limited to possible future riparian habitat maintenance actions. No additional conservation measures would be required to contribute to recovery of the species.

3. California linderiella (no status)

California linderiella is a vernal pool species that USFWS believes could be listed over the term of BDCP. This species is associated with vernal pools that support vernal pool species on the current covered species list. No additional conservation measures would be required to contribute to recovery of the species.

4. Dwarf downingia (CNPS List 2). Dwarf downingia is a vernal pool species that USFWS believes could be listed over the term of BDCP. This species is associated with vernal pools that support vernal pool species on the current covered species list. No additional conservation measures would be required to contribute to recovery of the species.

5. California least tern (Federal and State listed endangered; State Fully Protected).

DFG has indicated that least terns are now nesting at the Montezuma Wetlands project in Suisun Marsh. Nesting substrate was inadvertently created as a result of placing disposed dredge material to raise elevations to create marsh; an action that could be contemplated by BDCP where feasible.

Because this species is Fully Protected, direct take of individuals will be avoided through implementation of avoidance and minimization measures. Current BDCP tidal habitat restoration actions would benefit the species through creation of subtidal aquatic foraging habitat, but would not intentionally create nesting habitat.

Proposed Deletions from the Covered Species List

1. Lesser saltscale (CNPS List 1B).

This species is highly unlikely to occur in the Planning Area. Recent expert review (Rob Preston) of previous single reported Planning Area occurrence indicates that it was not lesser saltscale, but likely brittlescale. Nearest confirmed populations are in Butte County and well south of the Delta in the San Joaquin Valley. The species also was not detected during EIR/EIS surveys in potential habitat in the vicinity of Clifton Court Forebay.

Coverage under BDCP Still To Be Determined

1. Side-flowering skullcap (CNPS List 2 = “rare and endangered in California, but more common elsewhere”)

Side-flowering skullcap (*Scutellaria lateriflora*) is a widespread species of marshy areas in the central and eastern United States and is a well known medicinal herb. California Native Diversity Data Base (CNDDDB) and herbaria records record only four occurrences in California. Two occurrences are recorded in the Delta. One was recorded in 1892 on Bouldin Island and the other is a 1993 occurrence at Delta Meadows Park which is located adjacent to Locke. At Delta Meadows Park side-flowering skullcap is only found growing on old pilings and stumps in and along the channels. In 2009, DWR/DHCCP conducted a thorough botanical survey of the Delta waterways in the area for BDCP and found no other occurrences of this species.

Roxanne Bittman of DFG manages the California Natural Diversity Data Base and considers side-flowering skullcap to be a native until it is proved to be a non-native. Fred Hrusa who manages the Department of Food and Agriculture (DFA) weed and invasive plant species herbarium considers side-flowering skullcap to be a non-native based on its distribution and on other information described below.

There are a number of factors that support the conclusion that side-flowering skullcap is an introduced non-native species. A railroad ran near the Delta Meadows site and the pilings in the river indicate that Delta Meadows was a significant commercial landing that handled commerce which may have inadvertently introduced seed to the area. This species is also a well know medicinal herb and may be a garden escape either from the historic Chinese camp that existed adjacent to Delta Meadows Park or from a more recent garden in the area. Alternatively, this species may have been introduced as a weed seed in a crop grown in the immediate area. This hypothesis is supported by its introduction on a herb farm in Gilroy which was verified by Fred Hrusa. Mr. Hrusa conducted a field survey of Delta Meadows in the early 1990s and by the mid 1990s another weedy species native to the midwestern and eastern United States (false nettle or *Boehmeria cylindrical*) had invaded the area and is generally found on old pilings and stumps in the channels – the same habitat as side-flowering skullcap. The fourth occurrence location for side-flowering skullcap is in Saline Valley in Inyo County. No other information was reported in the occurrence data for that site. Saline Valley is a popular warm spring destination with visitors and locals and a number of improvements have been made by volunteers who could have introduced this species to the area which lies within a large, dry, saline lake bed in Death Valley National Monument.

Carl Wilcox of DFG offered the opinion that it is unlikely that side-flowering skullcap would be proposed for or become listed under the California Endangered Species Act within the next 20-30 years.