

SOLANO GRASS

Tuctoria mucronata

USFWS: Endangered

CDFG: Endangered

CNPS: List 1B

Species Account

Status and Description. Solano grass (*Tuctoria mucronata*), also known as Crampton's tuctoria was federally-listed as endangered on September 28, 1978 (USFWS 1978) and state-listed as endangered in July, 1979. It is a CNPS List 1B species. Critical habitat was designated for this species on August 6, 2003 (USFWS 2003a), but Solano County is excluded. Solano grass, a member of the Orcutt tribe (Orcuttieae) of the grass family (Poaceae), is an annual grass with decumbent stems that are less than 12 cm long. The 1 to 6 cm long flowering spike is partially enclosed by the upper leaves (sheaths). The lemma is terminated by one sharp tooth. The plant is sticky from glandular secretions and turns brown with age (Baldwin 2012, USFWS 2003b).



Tim Lacy

Range and Distribution. Solano grass is endemic to Solano and Yolo counties. The species is presently known from only two locations (CNPS 2011, CNDDDB 2011). In pre-agricultural time, Solano grass may have been widely distributed in flooded areas behind low, natural levees along the watercourses draining the west side of Sacramento Valley. Most of these areas were converted to agriculture long before the species' discovery (USFWS 2003b). In addition to the population in Solano County, a population was discovered in 1993 on a former U.S. Air Force Base communications facility south of Davis in Yolo County. Approximately ten thousand plants were seen at this site in 1993, and the number has declined steadily in subsequent years to 1403 in 2004, and an unknown number in 2005 (CNDDDB 2011, CNPS 2011, USFWS 2003b).

Habitat and Ecology. Solano grass only occurs in the Northern Claypan vernal pool type (Sawyer and Keeler-Wolf 1995) within annual grassland (CNDDDB 2011). The occupied pools in Solano County are more properly described as alkaline playas or intermittent lakes, due to their large surface area (Crampton 1959, USFWS 1985). Olcott lake, where the original populations was found, is a large saline-alkaline playa pool within annual grassland. Soils underlying known Solano grass sites are saline-alkaline clay or silty clay in the Pescadero series (Crampton 1959, CNDDDB 2011). Known occurrences are at elevations of about 5 to 11 meters (CNDDDB 2011). Solano grass blooms April through July (CNDDDB 2011, CNPS 2011). It is most commonly associated with alkali heath (*Frankenia salina*), California erylgo (*Eryngium aristulatum*), and the endangered Colusa grass (*Neostapfia colusna*).

Population Levels and Occurrence in Plan Area. San Joaquin Valley orcutt grass is found growing within the deeper vernal pools of the Plan Area's Valley Grasslands and Vernal Pools Natural Community. All three known populations of Solano grass are located within the Plan Area. The historic population at Olcott Lake on the Jepson Prairie Preserve was finally presumed extirpated from this site in 2005 (CNDDDB 2011). Solano grass was last seen at this location in 1993, when only four plants were observed. A population located on private land about 2.5 miles southwest of Olcott Lake (CNDDDB 2011), is presumed to still be extant. This population has fluctuated wildly and the plants are rarely observed in the same location within the pool from year to year (CNDDDB 2011). The population on the former U.S. Air Force Base communications facility south of Davis in Yolo County appears to be the most stable (CNDDDB 2011) (See Species Occurrences map). The large vernal lakes on Pescadero clay located between Jepson Prairie Preserve and Travis Air Force Base are still considered to be potential habitat for Solano grass (USFWS 2003b).

Threats to the Species. Solano grass is primarily threatened by the invasion of non-native plants into its habitat (CNDDDB 2011, CNPS 2011) and potentially by grazing. Other threats include small population size and overcollection (USFWS 2005). One of the two remaining populations in California is on protected land (U.S. Department of Defense (Yolo County) and the historic location in Olcott Lake is preserved by the Solano Land Trust. Conservation efforts have included fencing to exclude grazing, control of invasive plants, and volunteer surveys for suitable habitat (USFWS 2005).

Literature Cited

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