

inundated during winter rains, but are dry during the summer and do not necessarily fill with water every year; and

(ii) The associated watershed(s) and hydrologic features, including the pool basin, swales, and surrounding uplands (which may vary in extent depending on pool size and depth, soil type and depth, hardpan or claypan type and extent, topography, and climate) that contribute to the filling and drying of the vernal pool or ephemeral wetland, and that maintain suitable periods of pool inundation, water quality, and soil moisture for *Lasthenia conjugens* germination, growth and reproduction, and dispersal, but not necessarily every year.

*Unit 1, Manchester Unit, Mendocino County (2,637 ac (1,067 ha))*

This unit for *Lasthenia conjugens* contains the habitat essential for the species and is geographically noteworthy (criterion 1) for its location at the northern and western limit of the species' range (CNDDDB 2002). It represents the only occurrence of *L. conjugens* in the Mendocino coast area, and is over 87 mi (140 km) from the closest *L. conjugens* unit to the south. The unit is also ecologically important (criterion 2) because it is the only location where *L. conjugens* has been found on Crispin loam soils. Some of the vernal pool habitats on this site were last surveyed in 1987, and *L. conjugens* was not observed at that time (CNDDDB 2002). However, the essential habitat requirements for the species still remain and represent an example of the varying habitat types on which the species occurs.

This unit is on private land and is located in the vicinity of the town of Manchester just north of the Garcia River and east of the Pacific Ocean. State Highway 1 bisects this unit and Brushy Creek forms the northern and northeastern boundary.

*Unit 2, Berryessa Unit, Napa County (1,016 ac (411 ha))*

This unit is ecologically noteworthy for its rock outcrop pools on soils derived from Rhyolite lava flows, within chaparral ecosystems (Holland 1998; USDA 2001; CNDDDB 2002). This is also the only unit where *Lasthenia conjugens* occurs on Northern Basalt Flow vernal pools, making the area important to maintain the range of habitats in which the species is known to occur (criterion 2). The unit is geographically important (criterion 1) because it represents some of the last remaining vernal pool habitats in the north bay foothills, and is the only unit

for *L. conjugens* in this area. This unit is over 15 mi (25 km) from the nearest *L. conjugens* unit.

This unit is located south of Lake Berryessa and lies in the Milliken Canyon area east of the City of Yountville and northeast of the City of Napa. All the lands within this unit are privately owned.

*Unit 3, Napa River Unit, Napa County (678 ac (275 ha))*

Vernal pools in which *Lasthenia conjugens* are found in this unit occur on Hambright rock-outcrop complex soils. This is the only location where *L. conjugens* is found on this soil type (criterion 2). This unit is located on private land and is located near the Napa River east of the intersection of State Route 121 and 29. All the land within this unit are privately owned.

*Unit 6, Rodeo Creek Unit, Contra Costa County (399 ac (162 ha))*

This unit is ecologically noteworthy (criterion 2) because it supports occurrences of the species within vernal pool habitats formed on Conejo clay loam soils (USDA 2001; CNDDDB 2002). It is geographically important (criterion 1) in that it is the only area where the species occurs in the vicinity of the Sacramento-San Joaquin delta (criterion 1). This unit is over 16 mi (25 km) from the closest unit to the north, and almost 32 mi (50 km) from the closest unit to the south.

The unit is situated along Rodeo Creek and adjacent to State Highway 4, southeast of the City of Rodeo and northeast of the City of Hercules. It contains a 10 ac (4 ha) conservation easement area established in 1999 to protect three known locations of *Lasthenia conjugens* along Rodeo Creek from highway construction activities along State Route 4 (criterion 4). All the lands within this unit are privately owned.

*Unit 7, Byron Hot Springs Unit, Contra Costa County (3,284 ac (1,329 ha))*

This unit is geographically noteworthy (criterion 1) because it contains the only remaining extant occurrence of *Lasthenia conjugens* in southeastern Contra Costa County (CNDDDB 2001). This occurrence is located in vernal pools formed on Linne clay loam soils, and has been characterized as alkaline meadow, a unique habitat type for the species (criterion 2) (USDA 2001; CNDDDB 2002). This unit is over 22 mi (35 km) from the closest unit to the north, and almost 32 mi (50 km) from the closest unit to the south.

This unit is in the vicinity of Byron Hot Springs and Byron Airport and lies directly west of Clifton Court Forebay. This unit includes habitat in low-lying areas east of the Altamont Hills, but also includes habitat within a small portion of Altamont Hills. Approximately 99 ac (40 ha) within this unit are owned by the State and the rest is privately owned.

*Unit 8, Southeastern San Francisco Bay Unit, Alameda and Santa Clara Counties (802 ac (325 ha))*

This unit contains occurrences of this species within vernal pools, swales, moist flats, and other ephemeral wetlands in saline alkaline transition zones with tidal marsh habitats, an ecologically unusual habitat for the species (criterion 2) (Holland 1998; CNDDDB 2002). The southern and western boundaries of the unit were delineated to exclude estuarine habitats and urban areas visible on SPOT imagery.

The unit includes a 450-ac (180-ha) preserve established specifically to contribute to the recovery of *Lasthenia conjugens* (Wetland Research Associates 1999; Service 2000b). Additionally, 425 ac (172 ha) of this unit is on the San Francisco Bay National Wildlife Refuge, and is therefore more likely to persist over time (criterion 4). The unit is relatively isolated geographically (criterion 1), being over 31 mi (50 km) from the nearest units to the north, and almost 62 mi (100 km) from the nearest *L. conjugens* unit to the south.

The unit occurs in southeastern San Francisco Bay and also represents Unit 14 for vernal pool tadpole shrimp. It lies between the northernmost and southernmost subunits and is situated south of the cities of Fremont and Newark and north of Mud Slough. Portions of this unit are found within the boundaries of San Francisco Bay National Wildlife Refuge and the rest is privately owned.

*Unit 9, Fort Ord Unit, Monterey County (6,878 ac (2,784 ha))*

The Fort Ord Unit encompasses the southernmost remaining occurrence of the species, located 62 mi (100 km) from its next closest neighbor to the north (criterion 1). It contains seasonally flooded pool habitat and mima mound grassland areas within the former Fort Ord army base. These lands are currently owned and managed by the Army and BLM. The Army will eventually divest itself of all of the land it manages. It is likely BLM will receive the majority of the land that is scheduled for transfer; all or a major portion of this land will be managed as