Plant Species Evaluation Form

Hesperolinon adenophyllum (Gray) Small

GLANDULAR WESTERN FLAX

Family: Linaceae (CNPS 2018) | **PLANTS Symbol:** HEAD (USDA 2018) | **Calif. Endemic:** Yes (CNPS 2018)

Synonyms/Other Names: Originally described as *Linum adenophyllum* A. Gray in 1873. The name was later changed to *Hesperolinon adenophyllum* (Gray) Small in 1907 when contemporary members of *Hesperolinon* were segregated from *Linum* s.s. (Tropicos 2018).

Identification Issues: The glandular serrate leaf margins of *H. adenophyllum* are worth noting. Both *H. adenophyllum* and *H. drymarioides* have such glands. Glands on *H. adenophyllum* are more prominent and occur in one or two rows on leaf margin. Glands on *H. drymarioides* are smaller and occur in several rows. The leaves of *H. adenophyllum* are lanceolate, as opposed to the ovate-orbiculate leaves of *H. drymarioides* (Morin 2017).

Taxonomy:

Unless otherwise cited, the following description is taken directly from the *Jepson eFlora* and is used with permission from the Jepson Herbarium. Jepson Flora Project (eds.) 2018. *Jepson eFlora*, http://ucjeps.berkeley.edu/eflora/, accessed January 2018. Copyright © Regents of the University of California.

Species In Genus: 12--13 species: especially California, often on serpentine. Etymology: (Greek, Latin: western flax). Note: *Hesperolinon serpentinum*, used in TJM (1993), is not validly published.

Genus Description – Habit: Annual, erect, 3--50 cm, generally branched (at least in inflorescence). Leaf: generally alternate (occasionally opposite or whorled), generally sessile, 4--35 mm, 1--3(6) mm wide, thread-like or linear to ovate or obovate, margin gland-toothed or entire; stipular glands present or 0. Inflorescence: generally open or dense cyme, bracted; pedicel thread-like, generally ascending to erect. Flower: sepals lanceolate to ovate, acute or acuminate, glabrous or hairy, or margins glandular-ciliate; petals free, 1--12 mm, yellow, white, or pink, generally with small appendages near base; staminodes 0; carpels 2--3, stigmas linear (+- = style in width). Fruit: smooth. Seed: +- triangular in ×-section, acute.

Species Description – Habit: Plant 10--50 cm. Leaf: opposite or whorled proximally, lanceolate, keeled, clasping, margins with stalked, gland-tipped teeth in 1--3 rows. Inflorescence: bract margins with stalked, gland-tipped teeth in 1--3 rows; pedicels generally 5--15 mm. Flower: sepals 2--3 mm; petals 3--5 mm, yellow, often veined or tinged orange, fading white; stamens 4--5.5 mm, anthers yellow; ovary chambers 6, styles 3, 2.5--4 mm, yellow. eFlora Treatment Author: Joshua R. McDill.

Status:

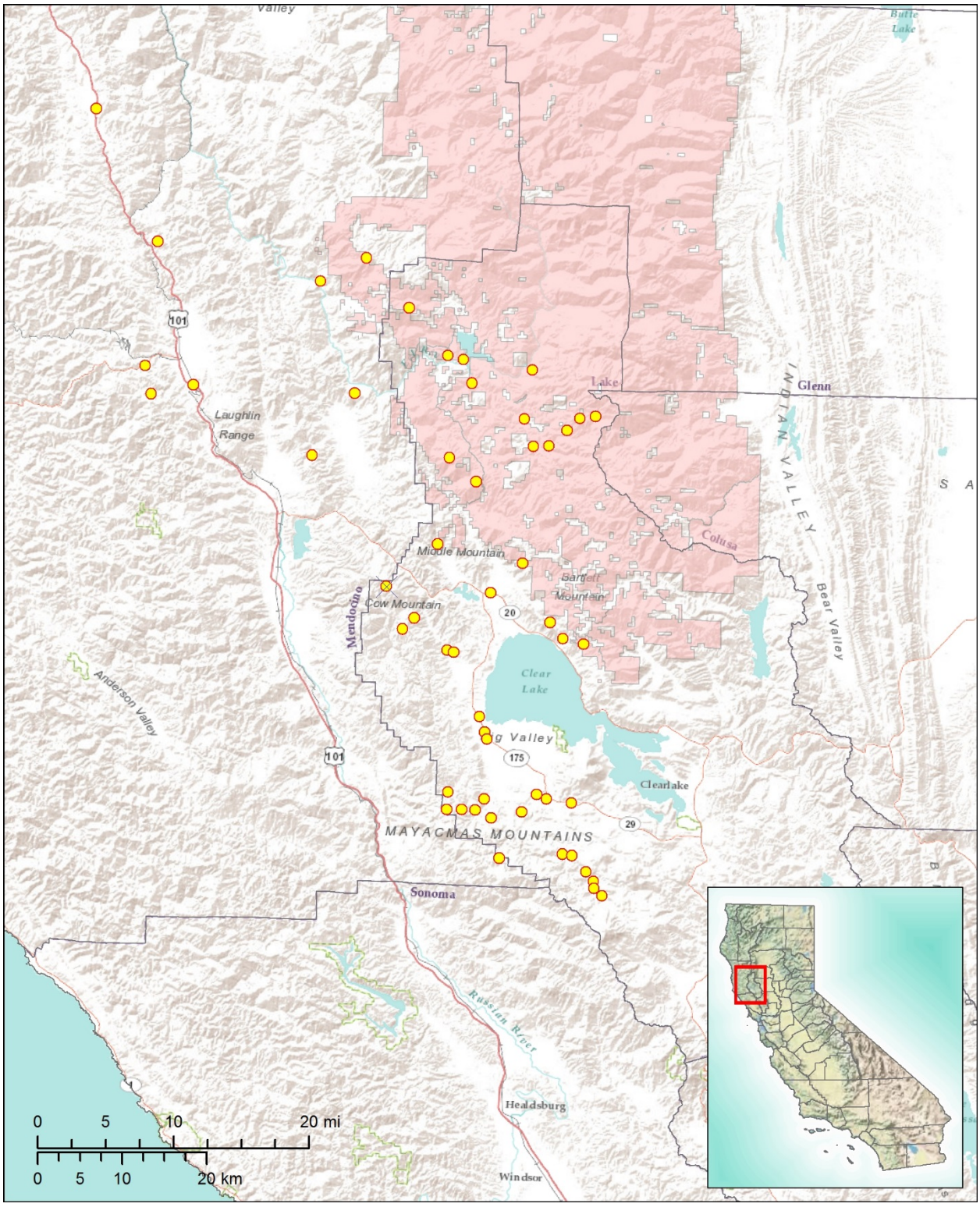
Note: Federally recognized Endangered, Threatened, Proposed, or Candidate species under the Endangered Species Act are omitted as they do not meet the definition of a Species of Conservation Concern (FSH 1909.12 § 12.52).

State Listing	G-rank	S-rank	CRPR	R5 FSS	NFP SM	CA BLM
CA: Not listed NV: Not listed OR: Not listed	G2G3	CA: S2S3 NV: Not listed OR: Not listed	1B.2	Not listed	Not listed	Sensitive

SWAP:	NNHP:	NNPS:	ORBIC:	OCS:	IUCN:
Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Expanded abbreviations and citations: State Listing=California Endangered Species Act Listing (CDFW 2018b), Nevada Division of Forestry Fully Protected Plant Species (NAC 527) (NDF 2012), Oregon Department of Agriculture Listed Plants (ODA 2014); G-rank=Global Conservation Status (CDFW 2018a; NatureServe 2018); S-rank=Subnational (state or province-level) Conservation Status (CDFW 2018a; NatureServe 2018; NNHP 2017; ORBIC 2016); CRPR=California Rare Plant Rank (CNPS 2018); R5 FSS=USDA Forest Service Region 5 Regional Forester Sensitive Plant Species List (USDA 2013); NFP SM=Forest Service and Bureau of Land Management Northwest Forest Plan Survey and Manage Species (USDA 2001); CA BLM=California Bureau of Land Management Designated Sensitive Species (BLM 2010); SWAP=California State Wildlife Action Plan Status (CDFW 2015); NNHP=Nevada Natural Heritage Program Status (NNHP 2017); NNPS=Nevada Native Plant Society Status (NNHP 2017); ORBIC=Oregon Biological Information Center Status (ORBIC 2016); OCS=Oregon Conservation Strategy Species (ODFW 2016); IUCN=International Union for Conservation of Nature Red List Status (IUCN 2017).

Distribution: Western North America, where plants are found entirely in northern California within Lake and Mendocino counties. A majority of occurrences are found in the vicinity of Clear Lake. Almost one-third (16/50; 32%) of all occurrences are documented on NFS lands within Mendocino NF. An additional seven occurrences are found within five miles of the Mendocino NF boundary (CNDDB 2017; CCH 2017; Calflora 2017). Two additional records have location descriptions and coordinates that map to improbable locations within Humboldt and Butte counties (CCH 2017), and may represent mis-identified or improperly documented vouchers.



Sources: *Distribution*: Calflora 2017, CCH 2017, CNDDB 2017. *Layers*: USDA Forest Service, Pacific Southwest National Forests: CPAD 2016. California counties: CDF 2009. *Basemaps*: California inset map: © 2013 National Geographic Society, i-cubed (Esri 2017a). Main map: Esri, DeLorme, USGS, NPS (Esri 2012) and Esri, USGS, NOAA (Esri 2017b).

Locations within California:

Note: Record numbers indicate sites that contain an individual, population, or groups of populations located within ¼ mile of each other (per the California Natural Diversity Database (CNDDB) definition of Element Occurrences in California). Official Element Occurrence (EO) numbers for plants in California are determined solely by the CNDDB and are included within the Reference (Source) column for CNDDB data. Duplicate records from the same site are given the same record number and included in red. The Population Info column includes total number of individuals and total number and size of populations/sub-populations when provided. Elevations in meters from source were converted to feet. If not provided in original source, Land Manager information was obtained using the California Protected Areas Database (CPAD 2016) and Quad information was obtained using 24K Quads, SDE Feature Class (CDFG 2013). All other information is verbatim from the original Reference (Source) unless additional citation is given.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
1	EAST SIDE OF BASE OF POTATO HILL, ABOUT 0.5 MILE WEST OF CATFISH POND, MENDOCINO NATIONAL FOREST.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 1)	1987	MORE THAN 10,000 PLANTS IN 1979. 10,000 TO 15,000 PLANTS OBSERVED BETWEEN THIS OCCURRENCE AND OCCURRENCE #2 IN 1987.		Mendocino NF	4040
1	Near Potato Hill, close to the town of Stonyford	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29641)	15-Jun-1979				4039
2	SOUTHWEST SLOPE OF POTATO HILL, HEADWATERS OF BEAR CREEK ABOUT 0.8 MILE SOUTH OF BIG SPRING, MENDOCINO NATIONAL FOREST.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 2)	1987	3 COLONIES WITH FEWER THAN 10,000 PLANTS IN EACH IN 1979. 10,000 TO 15,000 PLANTS OBSERVED BETWEEN THIS OCCURRENCE AND OCCURRENCE #1 IN 1987. INCLUDES FORMER OCCURRENCE #3.		Mendocino NF	3050

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
2	on Big Spring Trail near Big Spring (w slope of mountain); Inner North Coast Ranges, Snow Mountain	Lake	Potato Hill (3912237)	CCH, Jan 2017 (UC1212229)	9-Jun-1959			Mendocino NF	3199
2	Near Bear Creek, close to the town of Stonyford. On the upper third of a ridge system	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29650)	11-Jul-1979			Mendocino NF	2900
2	Near Potato Hill, close to the town of Stonyford	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29644)	11-Jul-1979			Mendocino NF	3199
2	Near Potato Hill, close to the town of Stonyford	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29587)	11-Jul-1979			Mendocino NF	3041
3	BEAR CREEK ABOUT 0.7 MILE WEST OF BEAR CREEK STATION, AT JUNCTION OF FS ROADS 17N33 & 18N01, MENDOCINO NATIONAL FOREST.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 4)	12-Jul-1979	TWO DISJUNCT POPULATIONS. SOUTHEAST COLONY: FEWER THAN 10,000 PLANTS IN 1979. NORTHWEST COLONY: FEWER THAN 1000 PLANTS IN 1979.		Mendocino NF	2200

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
3	Near Bear Creek, close to the town of Stonyford. On the lower third of a ridge system	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29639)	11-Jul-1979			Mendocino NF	2201
3	Near Bear Creek, close to the town of Stonyford.	Lake	Potato Hill (3912237)	CCH, Jan 2017 (HSC86831)	11-Jul-1979			Mendocino NF	2201
3	Near Bear Creek, close to the town of Stonyford. On the middle third of a ridge system	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29649)	12-Jul-1979				2001
3	0.5 miles above Bear Creek on road to Long Ridge and Goat Mtn, Mendocino National Forest	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CAS435210)	30-Jun-1953			Mendocino NF	2100
3	Mendocino National Forest, 0.5 mi above Bear Creek on rd to Long Ridge and Goat Mt	Lake	Potato Hill (3912237)	CCH, Jan 2017 (LA47284)	30-Jun-1953			Mendocino NF	2100

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
3	0.5 mile above Bear Creek on road to Long Ridge and Goat Mountain, Mendocino National Forest.	Lake	Potato Hill (3912237)	CCH, Jan 2017 (SD51695)	30-Jun-1953			Mendocino NF	2100
3	0.5 mi above Bear Creek (on road to Long Ridge and Goat Mountain); Inner North Coast Ranges, Mendocino National Forest	Lake	Potato Hill (3912237)	CCH, Jan 2017 (UC1212219)	30-Jun-1953			Mendocino NF	2100
4	NORTH SIDE OF RICE CREEK, ABOUT 2.9 MILES WEST OF BIG SPRING, WEST END OF RICE VALLEY, MENDOCINO NATIONAL FOREST.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 5)	21-May-2014	FEWER THAN 1000 PLANTS OBSERVED IN 1979. BETWEEN 100 AND 1500 PLANTS OBSERVED SOMETIME BETWEEN 1986 AND 1988. UNKNOWN NUMBER OF PLANTS SEEN IN 2014.		Mendocino NF	2200
4	Near Rice Creek, close to the town of Stonyford	Lake	Potato Hill (3912237)	CCH, Jan 2017 (CHSC29746)	12-Jul-1979				2100

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
4	Along north side of Forest Road 18N01 (M10) accessed from Elk Mountain Road (M1) north of Upper Lake, just north of Rice Creek.	Lake	Potato Hill (3912237)	CCH, Jan 2017 (JEPS122817)	21-May-2014				2005
5	SOUTH END OF LAKE PILLSBURY, 0.6 MILE NW OF JUNCTION OF TRAIL 10W37 AND PACKSADDLE CREEK, SOUTH OF THE EEL RIVER.	Lake	Lake Pillsbury (3912248)	CNDDB, May 2017 (EO 6)	21-May-2014	FEWER THAN 10,000 PLANTS OBSERVED IN 1979. BETWEEN 100 AND 1500 PLANTS OBSERVED BETWEEN 1986 AND 1988. UNKNOWN NUMBER OF PLANTS SEEN IN 2014.		Mendocino NF	2300
5	Near Packsaddle Creek, close to the town of Potter Valley. Middle third of a ridge system	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (CHSC29640)	19-Jul-1979			Mendocino NF	2224
5	Along Packsaddle Trail access Forest Road 18N25, off of Elk Mountain Road (M1) out of Upper Lake.	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (JEPS122816)	21-May-2014			Mendocino NF	2625

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
6	WEST SIDE OF LAKE PILLSBURY, ABOUT 0.4 MILE NORTH OF SCOTT DAM, NORTH OF THE EEL RIVER.	Lake	Lake Pillsbury (3912248)	CNDDB, May 2017 (EO 7)	21-May-2014	NWPOLYGON: MORE THAN 10,000 PLANTS SEEN IN 1979 AND 1982, BETWEEN 100 AND 1500 PLANTS OBSERVED BETWEEN 1986 AND 1988. SE POLYGON: UNKNOWN NUMBER OF PLANTS OBSERVED IN 2014. A 1980 NELSON COLLECTION IS ALSO ATTRIBUTED TO THIS SITE.		Mendocino NF	2000
6	Near Lake Pillsbury, close to the town of Potter Valley. Upper third of a ridge system	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (CHSC29754)	19-Jul-1979				2001
6	From Upper Lake, Elk Mountain Road (M1) out to Lake Pillsbury, then on the service road past the dam.	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (JEPS122814)	21-May-2014				1919
6	Pillsbury Resort	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (HSC72206)	24-Jun-1980			Mendocino NF	2001

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
6	Pillsbury Resort; (Lake Pillsbury quad.) T18N R10W S14	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (RSA293092)	24-Jun-1980			Mendocino NF	2001
7	SOUTHWEST OF SNOW MOUNTAIN ALONG USFS ROAD 24N02, <0.1 MILE SOUTHEAST OF JUNCTION WITH BEAR CREEK.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 8)	Jun-1967	MORE THAN 1000 PLANTS SEEN IN 1979.	CATTLE GRAZING.	Mendocino NF	4320
8	BIG VALLEY, 0.2 MILE SOUTH OF JUNCTION OF HIGHWAY 175 AND HIGHWAY 29, EAST OF HIGHWAY 175, SOUTH OF LAKEPORT.	Lake	Lakeport (3912218)	CNDDB, May 2017 (EO 9)	9-Jun-2011	FEWER THAN 1000 PLANTS OBSERVED IN 1978 BETWEEN THIS OCCURRENCE AND OCCURRENCE #10. MORE THAN 10,000 PLANTS OBSERVED HERE IN 2011. INCLUDES COLLECTIONS FROM 1933, 1952, 1985, AND 1998.	VEHICLE TRACKS AND TRASH DUMPING. URBAN DEVELOP-MENT.	PVT	1400
8	Junction Hill, Lakeport.	Lake	Lakeport (3912218)	CCH, Jan 2017 (DS327091)	19-Jun-1933				1401

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
8	Lakeport Junction Hill.	Lake	Lakeport (3912218)	CCH, Jan 2017 (POM268798)	19-Jun-1933				1601
8	Junction Hill; Mayacamas Mountain range, Clear Lake watershed, Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (UC549119)	19-Jun-1933				1401
8	Junction Hill; Mayacamas Mountain range, Clear Lake watershed, Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (JEPS22783)	19-Jun-1933				1401
8	"Y" junction of U.s. Route 101 and state Hwy 29, ca. 1.5 miles SE of Lakeport.	Lake	Lakeport (3912218)	CCH, Jan 2017 (CAS435214)	5-Jul-1952				1381
8	"Y" junction of U.s. Route 101 and state Hwy 29, ca. 1.5 miles SE of Lakeport.	Lake	Lakeport (3912218)	CCH, Jan 2017 (DS461078)	5-Jul-1952				1381

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
8	Isolated serpentine ridge in "Y" junction of U.S. Route 101 and State Highway 29, ca. 1.5 miles southeast of Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (GH364890)	5-Jul-1952				
8	Isolated serpentine ridge in ├'Yí jct. of Hwy 101 and Hwy 29, 1.5 miles SE of Lakeport	Lake	Highland Springs (3812288)	CCH, Jan 2017 (RSA151538)	5-Jul-1952				1381
8	isolated ridge in "Y" junction of U. S. Route 101 and State Highway 29 (ca 1.5 mi se of Lakeport); Inner North Coast Ranges	Lake	Lakeport (3912218)	CCH, Jan 2017 (UC1212221)	5-Jul-1952				1381
8	serpentine hill just S of junction of Highway 175 and Highway 29, ca. 2 mi S Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (JEPS96891)	18-Jun-1998				1401

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
8	serpentine hill just S of junction of Highway 175 and Highway 29, ca. 2 mi S Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (UC1736418)	18-Jun-1998				
9	BIG VALLEY, 0.7 MILE SOUTH OF JUNCTION OF HIGHWAY 175 AND HIGHWAY 29, 0.15 MILE EAST OF CEMETERY, SOUTH OF LAKEPORT.	Lake	Lakeport (3912218)	CNDDB, May 2017 (EO 10)	18-Jul-1978	FEWER THAN 1000 PLANTS OBSERVED IN 1978 BETWEEN THIS OCCURRENCE AND OCCURRENCE #9.		Unknown	1400
10	BARTLETT SPRINGS ROAD, NORTH SIDE OF ROAD ABOUT 1 TO 1.5 ROAD MILE EAST OF HIGHWAY 20, NORTH SHORE OF CLEAR LAKE.	Lake	Lucerne (3912217)	CNDDB, May 2017 (EO 11)	6-Jun-1995	FEWER THAN 100 PLANTS SEEN IN 1978 AT CENTRAL COLONY. NO PLANTS FOUND IN VICINITY IN 1979. IN 1995, 150-200 PLANTS OBSERVED AT WESTERN COLONY AND 500 PLANTS OBSERVED AT EASTERN COLONY. INCLUDES COLLECTIONS FROM 1956 & 1969.		Unknown	1900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
10	Steep roadside cut, 1 mile from State Hwy 20 on Bartlett Springs Rd.	Lake	Lucerne (3912217)	CCH, Jan 2017 (DS519534)	19-Jun-1956				
10	Steep roadside cut, 1 mile from State Hwy 20 on Bartlett Springs Rd.	Lake	Lucerne (3912217)	CCH, Jan 2017 (DS595074)	19-Jun-1956				
10	Lake County: ca. 1.5 mi nw of Lucerne, along Bartlett Springs Rd., ca. 0.9 mi from Hwy 20	Lake	Lucerne (3912217)	CCH, Jan 2017 (UCD110472)	6-Jun-1995				1699
10	1 mi e junction of Highway 20 and Bartlett Springs Road	Lake	Lucerne (3912217)	CCH, Jan 2017 (UC1509750)	21-Jun-1969				
11	NORTH OF GLENBROOK, NORTHEAST OF JUNCTION OF BOTTLE ROCK ROAD AND SULPHUR CREEK ROAD.	Lake	The Geysers (3812277)	CNDDB, May 2017 (EO 12)	1987	MORE THAN 1000 PLANTS SEEN IN 1978 IN EO #12 AND #20 COMBINED; FEWER THAN 1000 PLANTS OBSERVED AT EO #12 IN 1987. INCLUDES SEVERAL HISTORIC COLLECTIONS FROM THE VICINITY OF GLENBROOK.	HOUSING AND ROAD DEVELOP-MENT.	Unknown	2500

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11	in marshy spot near Glenbrook; Inner North Coast Ranges, Cobb Valley	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212230)	2-Jul-1940				
11	near Glenbrook; Inner North Coast Ranges	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212231)	31-May-1947				
11	near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (GH364893)	31-May-1947				
11	near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (GH364878)	31-May-1947				
11	Near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (HSC15796)	31-May-1947				
11	Near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (RSA73975)	31-May-1947				
11	Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (DS33882)	1-Jul-1911				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
11	Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (GH364882)	1-Jul-1911				
11	Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (POM127721)	1-Jul-1911				
11	Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (POM869553)	1-Jul-1911				
11	3 miles north of Cobb Mountain, Bottle Rock Road	Lake	The Geysers (3812277)	CCH, Jan 2017 (UCR121140)	8-Jun-1954				
11	hill n Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC762265)	8-Jun-1941				
11	Near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (CAS326426)	18-Jun-1945				
11	Near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (GH364884)	18-Jun-1945				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
11	Near Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (RSA325111)	18-Jun-1943				
11	Between Cobb Mtn and Adams Springs on the Brinkley Ranch	Lake	The Geysers (3812277)	CCH, Jan 2017 (CAS213154)	30-Jun-1933				
11	Between Cobb Mountain and Adam Springs on the Binkley Ranch.	Lake	The Geysers (3812277)	CCH, Jan 2017 (RSA8550)	30-Jun-1933				
11	between Adams Spring and Binkley Ranch ((old road, not highway))	Lake	Whispering Pines (3812276)	CCH, Jan 2017 (UC519545)	30-Jun-1933				
11	Lake County: Mayacmas Mountains; Sulphur Creek within 300 yards of Bottle Rock Road. (Exact location unknown. Coordinates estimated by label maker.)	Lake	The Geysers (3812277)	CCH, Jan 2017 (UCD161880)	19-Jul-1977				
11	North of Glenbrook and Cobb Mountain	Lake	The Geysers (3812277)	CCH, Jan 2017 (RSA151585)	31-May-1947				2500

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
11	North of Glenbrook and Cobb Mtn.	Lake	The Geysers (3812277)	CCH, Jan 2017 (CAS435213)	31-May-1947				2500
11	North of Glenbrook and Cobb Mtn.	Lake	The Geysers (3812277)	CCH, Jan 2017 (DS461079)	31-May-1947				2500
11	North of Glenbrook and Cobb Mountain	Lake	The Geysers (3812277)	CCH, Jan 2017 (GH364889)	31-May-1947				
11	Cobb Mountain, N of Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (LA47283)	31-May-1947				2500
11	n Glenn brook and Cobb Mountain; Inner North Coast Ranges	Lake	Whispering Pines (3812276)	CCH, Jan 2017 (UC1212216)	31-May-1947				2500
11	1 mi n Glenbrook; Inner North Coast Ranges	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212218)	18-Jun-1957				2500
11	Cobb Valley road 3.5 mi nw Cobb Post Office (ca 1 mi n of Glenbrook); Inner North Coast Ranges	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212217)	2-Nov-1958				2500

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
11	Inner North Coast Ranges V formed by Bottlerock Road and Sulphur Creek Road, just north of Glenbrook	Lake	The Geysers (3812277)	CCH, Jan 2017 (UCR71530)	24-Jun-1965				2306
11	North side of Cobb Valley, near Glenbrook.	Lake	Whispering Pines (3812276)	CCH, Jan 2017 (DS461068)	4-Jul-1935				2700
11	Cobb Mountain, N side of Cobb Valeey, near Glenbrook	Lake	Whispering Pines (3812276)	CCH, Jan 2017 (LA47302)	4-Jul-1935				
11	near Glenbrook (n side of Cobb Valley); Cobb Mountain	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212226)	4-Jul-1935				2700
11	near Glenbrook; Northern Coast Ranges, Mt. Hannah	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC1212220)	12-Jul-1905				2999
11	Lake County, 3 miles north of Cobb Mountain, Bottle Rock Road	Lake	The Geysers (3812277)	CCH, Jan 2017 (UCD32581)	8-Jun-1954				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
12	EAST SLOPE OF COBB VALLEY, ABOUT 1.5 MILES NORTHWEST OF PINE GROVE.	Lake	Whispering Pines (3812276)	CNDDB, May 2017 (EO 13)	18-May-2014	MORE THAN 10,000 PLANTS OBSERVED IN 1983. A 2014 FREYMAN COLLECTION FROM "EAST SIDE OF BOTTLE ROCK ROAD JUST NORTH OF JUNCTION WITH SPRING HILL ROAD" IS ALSO ATTRIBUTED TO THIS SITE.		PVT	2400
12	East side of Bottle Rock Road just north of junction with Spring Hill Road.	Lake	Whispering Pines (3812276)	CCH, Jan 2017 (JEPS122830)	18-May-2014				1398
12	Cobb Valley, SW facing slope east of Kelsey Cr. and Bottle Rock Rd., ca. 1.5 mi. NW of Pine Grove.	Lake	The Geysers (3812277)	CCH, Jan 2017 (CAS1079978)	7-Jun-1983				2431
13	ABOUT 1 MILE EAST OF BOGGS LAKE, ON CREST OF LONG RIDGE OVERLOOKING KELSEY CREEK.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 14)	11-Jun-1982	1000+ PLANTS OBSERVED IN SEVERAL SCATTERED COLONIES IN 1982.	PROPOSED ROAD AND WELL PAD SITE FOR GEOTHERM-AL DEVELOP-MENT.	BLM-Clear Lake RA	2800

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
14	BEAR CREEK CAMPGROUND, DRY OPEN SPOT ON HILLSIDE.	Lake	Potato Hill (3912237)	CNDDB, May 2017 (EO 15)	2-Jul-1928	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1928 BAKER COLLECTION. NEEDS FIELDWORK.		Mendocino NF	2200
14	dry open spot on hillside Bear Cr. Camp	Lake	Potato Hill (3912237)	CCH, Jan 2017 (UC353858)	2-Jul-1928			Mendocino NF	
15	SOUTH END OF ELK CANYON, ABOUT 0.8 MILE EAST OF HELLS PEAK, BASE OF MIDDLE MOUNTAIN, NORTHWEST OF UPPER LAKE.	Lake	Upper Lake (3912228)	CNDDB, May 2017 (EO 16)	17-Jun-1971	PLANTS FEW AND SCATTERED IN 1971.		PVT	1820

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
16	HIGHLAND SPRINGS ROAD ABOUT 3.5 - 4.5 MILES WEST OF HIGHLAND SPRINGS, MAYACAMAS MOUNTAINS.	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 17)	18-Jun-1999	1995: 30-40 PLANTS AT E COLONY. 1999: 3 PLANTS AT E COLONY, 1 PLANT AT W COLONY. 1931 COLLECTION BY HILDEBRAND FROM 3 MI W OF HIGHLAND SPRINGS ON TOLL ROAD ATTRIBUTED TO THIS SITE. THE RARE CALYSTEGIA COLLINA SSP. OXYPHYLLA OCCURS NEARBY.	ROAD MAINTEN-ANCE, GRADING, SUSCEPTIBLE TO EROSION. PLANTS COULD BE DESTROYED BY HERBICIDE MISUSE.	Unknown	1920
16	Toll Road, about 3 miles W of Highland Springs	Lake	Highland Springs (3812288)	CCH, Jan 2017 (DS254268)	20-Jul-1931				
16	Toll Road, about three miles west of Highland Springs	Lake	Highland Springs (3812288)	CCH, Jan 2017 (GH364925)	20-Jul-1931				
16	Toll Road about 3 mi w Highland Springs	Lake	Highland Springs (3812288)	CCH, Jan 2017 (UC571120)	20-Jul-1931				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
17	ABOUT 6 MILES NW OF LAKEPORT, IN HILLS ABOUT SCOTTS VALLEY.	Lake	Lakeport (3912218)	CNDDB, May 2017 (EO 18)	15-Jul-1905	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1905 TRACY COLLECTION. NEEDS FIELDWORK.		Unknown	1400
17	6 mi nw Lakeport (hills about Scotts Valley)	Lake	Lakeport (3912218)	CCH, Jan 2017 (UC1212227)	15-Jul-1905				
18	WEST OF SODA CREEK, ABOUT 0.3 MILE NORTH OF EEL RIVER, WEST OF LAKE PILLSBURY.	Lake	Lake Pillsbury (3912248)	CNDDB, May 2017 (EO 19)	16-May-2016	MORE THAN 120 PLANTS OBSERVED IN 2016. INCLUDES SHARSMITH COLLECTIONS FROM 1952 & 1953 AND A 1993 ISLE COLLECTION. VICINITY OF RANGER STATION SEARCHED IN 1979, NO PLANTS FOUND.		Mendocino NF	1900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
18	Mendocino National Forest - North Coast Ranges, Soda Creek watershed. N 17 degrees of Kiosk & jct of Lake Pillsbury Resort Rd 18N21 & Soda Creek Rd 20N01. 1993 Ecol. Unit Inven. Plot 8. Opening: QULO & PISA, OS/ARCA, CECU, AICA, BRMI	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (CHSC106380)	29-Jun-1993			Mendocino NF	1870
18	edge of Soda Creek near confluence with Eel River (vicinity of Lake Pillsbury); Inner North Coast Ranges, Mendocino National Forest, Gravell	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (UC1212223)	5-Jul-1952				2001
18	Edge of Soda Creek near confluence with Eel River, Gravelly Valley, vicinity of Lake Pillsbury, Mendocino National Forest	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (GH364891)	5-Jul-1952				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
18	edge of Soda Creek near Soda Creek Ranger Station (vicinity of Lake Pillsbury); Inner North Coast Ranges, Mendocino National Forest	Lake	Lake Pillsbury (3912248)	CCH, Jan 2017 (UC1212224)	29-Jun-1953			Mendocino NF	
18	Mendocino NF	Lake	Lake Pillsbury (3912248)	Calflora, May 2017 (po17003)	16-May-2016	101 - 1000 individuals		Mendocino NF	
18	Mendocino NF	Lake	Lake Pillsbury (3912248)	Calflora, May 2017 (po17004)	16-May-2016	11 - 50 individuals		Mendocino NF	
18	Mendocino NF	Lake	Lake Pillsbury (3912248)	Calflora, May 2017 (po17005)	16-May-2016	11 - 50 individuals		Mendocino NF	
19	NORTH OF GLENBROOK, ABOUT 1 MILE NORTH OF THE JUNCTION OF BOTTLEROCK ROAD AND SULPHUR CREEK ROAD, MAYACAMAS MOUNTAINS.	Lake	The Geysers (3812277)	CNDDB, May 2017 (EO 20)	18-May-2014	MORE THAN 1,000 PLANTS SEEN IN 1978 AT THIS SITE AND OCCURRENCE #12 COMBINED. UNKNOWN NUMBER OF PLANTS SEEN IN 2014. INCLUDES AN 1897 JEPSON COLLECTION AND 1905 TRACY COLLECTION FROM MT HANNAH.		BLM, Unknown	2500

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
19	Mt. Hanna	Lake	Clearlake Highlands (3812286)	CCH, Jan 2017 (JEPS32329)	14-Jul-1897				
19	East side of Bottle Rock Rd. just north of junction with Kahms Ln	Lake	The Geysers (3812277)	CCH, Jan 2017 (JEPS122875)	18-May-2014				2605
19	near Glenbrook; Northern Coast Ranges, Mt. Hannah	Lake	The Geysers (3812277)	CCH, Jan 2017 (UC146126)	12-Jul-1905				2999
20	INTERSECTION OF LIVE OAK DRIVE AND COLE CREEK ROAD, ABOUT 1.7 MILES WEST OF SHAUL VALLEY, SOUTH OF KELSEYVILLE.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 21)	18-Jun-1999	200 PLANTS OBSERVED IN 1999.	ROADSIDE VEGETATION CLEARING/HERBICIDE USE.	PVT	1700
21	BETWEEN WIGHT WAY AND KELSEY CREEK ROAD, ABOUT 4 MILES NORTHWEST OF POISON SMITH SPRING, SSW OF KELSEYVILLE.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 22)	3-Jun-1995	5000 PLANTS OBSERVED IN 1995 IN 2 COLONIES. OWNER IS PROTECTING SITE, IS INTERESTED IN CONSERVATION EASEMENT.	UNDISTURB-ED OTHER THAN ROADWAY.	PVT	1520

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
21	Kelsey Creek Rd Kelseyville (Evelyn Allen's)	Lake	Kelseyville (3812287)	CCH, Jan 2017 (JEPS95197)	3-Jun-1995				
21	Kelsey Creek Road, Kelseyville. Evelyn Allen's	Lake	Kelseyville (3812287)	CCH, Jan 2017 (JEPS122774)	3-Jun-1995				
22	HILLS AT SOUTH BASE OF MOUNT KONOCTI.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 23)	8-Jun-1941	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1941 COLLECTION BY HOOVER. NEEDS FIELDWORK.		Unknown	
22	hills near base Mt. Konocti	Lake	Kelseyville (3812287)	CCH, Jan 2017 (UC762264)	8-Jun-1941				
22	serpentine hills in chaparral area near south base of Mount Konocti; Inner North Coast Ranges	Lake	Kelseyville (3812287)	CCH, Jan 2017 (UC1212228)	8-Jun-1941				
22	Near S base of Mt Konocti	Lake	Kelseyville (3812287)	CCH, Jan 2017 (OBI22901)	8-Jun-1941				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
22	Lake County: Near south base of Mount Konocti	Lake	Kelseyville (3812287)	CCH, Jan 2017 (UCD110468)	8-Jun-1941				
23	HIGHLAND SPRINGS ROAD, ALONG WEST SIDE OF HIGHLAND SPRINGS RESERVOIR, EAST OF THE MAYACAMAS MOUNTAINS.	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 24)	18-Jun-1999	1500-2000 PLANTS OBSERVED IN 1995. 100 PLANTS OBSERVED ON BLM CLEAR LAKE RESOURCE AREA PARCEL 117-L IN 1997. MORE THAN 5000 PLANTS OBSERVED IN 1999. THE RARE CALYSTEGIA COLLINA SSP. OXYPHYLLA OCCURS NEARBY.	POSSIBLE THREATS INCLUDE ROAD MAINTEN-ANCE, HERBICIDES. BLM PORTION OF THIS SITE UNDER CONSIDERAT-ION FOR LAND EXCHANGE.	LAK County	1460
23	Highland Springs Reservoir (ca. 10 miles S of Lakeport); west shore of reservoir E of Highland Springs Rd	Lake	Highland Springs (3812288)	CCH, Jan 2017 (JEPS101974)	8-Jul-1997			Highland Springs Rec. Area	1650
23	Highland Springs Reservoir (ca. 10 miles S of Lakeport); west shore of reservoir E of Highland Springs Rd	Lake	Highland Springs (3812288)	Calflora, May 2017 (xr167954)	8-Jul-1997	1+ individuals		Highland Springs Rec. Area	1539

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
24	HILLSLOPE ABOVE HIGHLAND CREEK, ABOUT 1.3 MILES NORTHEAST OF HIGH VALLEY RANCH, WEST OF HIGHLAND SPRINGS RESERVOIR.	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 25)	7-May-1997	1000 PLANTS OBSERVED IN 1997.	PARCEL UNDER CONSIDERAT-ION FOR SALE TO PRIVATE OWNER (LAND EXCHANGE).	BLM	2360
25	NORTH SLOPE OF HIGH VALLEY, SLOPES ON EAST SIDE OF ADOBE CREEK ROAD, ABOUT 3 MILES WSW OF HIGHLAND SPRINGS RESERVOIR.	Lake | Mendocino	Highland Springs (3812288)	CNDDB, May 2017 (EO 26)	24-Jun-1998	5,000 PLANTS OBSERVED IN 1997, AND UNKNOWN NUMBER IN 1998.	PARCEL UNDER CONSIDERAT-ION FOR SALE TO PRIVATE OWNER (LAND EXCHANGE).	BLM	2640
25	Adobe Creek Road 0.5 air miles N High Valley (10 miles SW of Lakeport	Lake	Highland Springs (3812288)	CCH, Jan 2017 (JEPS96892)	24-Jun-1998				
25	Adobe Creek Road 0.5 air miles N High Valley (10 miles SW of Lakeport)	Mendocino	Highland Springs (3812288)	CCH, Jan 2017 (JEPS101971)	24-Jun-1998				2451

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
25	Adobe Creek Road 0.5 air miles N High Valley (10 miles SW of Lakeport	Lake	Highland Springs (3812288)	CCH, Jan 2017 (UC1736416)	24-Jun-1998				2451
25	Adobe Creek Road 0.5 air miles N High Valley (10 miles SW of Lakeport)	Mendocino	Highland Springs (3812288)	Calflora, May 2017 (gr6248)	24-Jun-1998	1+ individuals			2917
25	Adobe Creek Road 0.5 air miles N High Valley (10 miles SW of Lakeport	Mendocino	Highland Springs (3812288)	Calflora, May 2017 (xr168455)	24-Jun-1998	1+ individuals			2917
26	EASTERN END OF PINE MOUNTAIN ROAD, AT BOUNDARY OF MENDOCINO AND LAKE COUNTIES.	Lake | Mendocino	Highland Springs (3812288)	CNDDB, May 2017 (EO 27)	8-Jun-1986	SITE IS BASED ON A 1984 RAICHE COLLECTION AND A 1986 KNIGHT COLLECTION. NEEDS FIELDWORK.		Unknown	2550
26	Mendo/ Lake Co at boundary, end of Pine Mt Rd, 9.7 miles from its beginning at the Geysers Rd	Lake	Asti (3812278)	CCH, Jan 2017 (CAS727548)	10-Jun-1984				2549

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
27	1 MILE NORTHEAST OF CLEAR LAKE LODGE, WEST END OF HOGBACK RIDGE, NORTH OF CLEAR LAKE.	Lake	Bartlett Mtn. (3912227)	CNDDB, May 2017 (EO 28)	23-Jun-1937	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1937 COLLECTION BY JOHANNSEN. DIBBLE AND GRIGGS VISITED THE SECTION IN 1979 BUT DID NOT FIND HESPEROLINON ADENOPHYLLUM.		Unknown	1450
27	1 mi ne Clear Lake Lodge; Lakeport Quadrangle	Lake	Upper Lake (3912228)	CCH, Jan 2017 (UC1130222)	23-Jun-1937				1450
28	SLOPE ABOVE TOWHEAD FLAT, ABOUT 2 KILOMETERS EAST OF MENDOCINO COUNTY LINE, MENDOCINO NATIONAL FOREST.	Lake	Van Arsdale Reservoir (3912341)	CNDDB, May 2017 (EO 29)	22-Jun-1981	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1981 COLLECTION BY SMITH. NEEDS FIELDWORK.		Mendocino NF	4000
28	Above Towhead Flat, 2.0 km. E of Mendocino Co. line and 6.0 km. N of Soda Spring Ranger Station	Lake	Van Arsdale Reservoir (3912341)	CCH, Jan 2017 (HSC87799)	22-Jun-1981			Mendocino NF	3999

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
28	Above Towhead Flat, 2.0 km E of Mendocino Co. line and 6.0 km N of Soda Spring Ranger Station	Lake	Van Arsdale Reservoir (3912341)	CCH, Jan 2017 (CAS910688)	22-Jun-1981			Mendocino NF	3999
28	Exposed sunny rocky slope above Towhead Flat, 2.0 km. E. of Mendocino Co. line and 6.0 km. n. of Soda Spring Ranger Station	Lake	Van Arsdale Reservoir (3912341)	CCH, Jan 2017 (GH364879)	22-Jun-1981			Mendocino NF	
28	Above Towhear Flat, 2.0 km E of Mendocino Co. line and 6.0 km N of Soda Spring Ranger Station	Lake	Van Arsdale Reservoir (3912341)	CCH, Jan 2017 (RSA491249)	22-Jun-1981			Mendocino NF	3999
29	ABOVE SUMMIT OF ROAD BETWEEN POTTER VALLEY AND THE SOUTH FORK OF THE EEL RIVER, ON ROAD TO PILLSBURY LAKE.	Mendocino	Potter Valley (3912331)	CNDDB, May 2017 (EO 30)	23-Jun-1954	MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1954 BACIGALUPI COLLECTION. A 1902 HELLER COLLECTION FROM "NEAR JOHN DAY'S" IS ALSO ATTRIBUTED TO THIS SITE. NEEDS FIELDWORK.		Unknown	1950

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
29	above summit of road between Potter Valley and South Fork of the Eel River (on road to Pillsbury Lake)	Mendocino	Potter Valley (3912331)	CCH, Jan 2017 (JEPS102033)	23-Jun-1954				1949
29	Above summit of road between Potter Road and the South Fork of the Eel River, on road to Pillbury Lake.	Mendocino	Potter Valley (3912331)	CCH, Jan 2017 (CAS398528)	23-Jun-1954				1949
29	Above summit of road between Potter Valley and the South fork of the Eel River, on road to Pillsbury lake	Mendocino	Potter Valley (3912331)	CCH, Jan 2017 (OBI12555)	23-Jun-1954				1949

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
30	BIG HORSE MOUNTAIN.	Lake	Elk Mountain (3912238)	CNDDB, May 2017 (EO 31)	Aug-1892	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1892 COLLECTION BY JEPSON. DIBBLE AND GRIGGS INVESTIGATED THE AREA AROUND HORSE MOUNTAIN IN 1979 AND DID NOT FIND HESPEROLINON ADENOPHYLLUM. A TREE PLANTATION IS NOW IN OPERATION AT THIS SITE.	TREE PLANTATION.	Mendocino NF	4400
30	Big Horse Mt. South Fork of the Eel River	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (JEPS32330)	31-Aug-1892			Mendocino NF	
30	Big Horse Mt. mountain region of Clear Lake	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (UC17246)	31-Aug-1892			Mendocino NF	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
31	ELK MOUNTAIN.	Lake	Elk Mountain (3912238)	CNDDB, May 2017 (EO 32)	6-Jul-1951	SITE IS BASED ON COLLECTIONS FROM 1905, 1937, AND 1951. DIBBLE AND GRIGGS SEARCHED THIS AREA IN 1979 INCLUDING THE ROAD FROM ELK MTN TO LONE PINE WATER TROUGH AND DID NOT FIND HESPEROLINON ADENOPHYLLUM.		Mendocino NF	4000
31	Elk Mt.	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (CAS248681)	19-Jul-1937			Mendocino NF	
31	Elk Mountain	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (GH364892)	19-Jul-1937			Mendocino NF	
31	Elk Mountain	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (RSA91376)	19-Jul-1937			Mendocino NF	
31	Elk Mountain Northern Coast Ranges (northern Lake Co.)	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (UC1212222)	16-Aug-1905			Mendocino NF	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
31	Elk Mountain Northern Coast Ranges (northern Lake Co.)	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (UC146125)	16-Aug-1905			Mendocino NF	
31	Elk Mountain, northern Lake County	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (GH364881)	16-Aug-1905			Mendocino NF	
31	at saddle between Elk Mountain and Pine Mountain; Northern Coast Ranges	Lake	Elk Mountain (3912238)	CCH, Jan 2017 (UC1222146)	6-Jul-1951			Mendocino NF	3599
31	At the saddle between Elk Mountain and Pine Mountain	Lake	Bartlett Mtn. (3912227)	CCH, Jan 2017 (RSA178544)	6-Jul-1951			Mendocino NF	
32	SUMMIT OF COW MOUNTAIN.	Lake | Mendocino	Cow Mountain (3912321)	CNDDB, May 2017 (EO 33)	Unknown	ONLY SOURCE OF INFORMATION FOR THIS SITE IS UNDATED COLLECTION BY SPRECHT CITED IN A FLORA OF THE VASCULAR PLANTS OF MENDOCINO COUNTY. NEEDS FIELDWORK.		BLM	3900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
33	WILLIAMS RANCH ROAD, 0.5 MILE FROM JUNCTION WITH MUIR MILL ROAD, SOUTH OF WILLITS, 2 MILES SOUTHWEST OF ROUTE 101.	Mendocino	Greenough Ridge (3912334)	CNDDB, May 2017 (EO 34)	8-Jul-1982	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1982 SMITH COLLECTION. NEEDS FIELDWORK.		Unknown	2200
33	Williams Ranch Road, 0.5 miles from junction with Muir Mill Road, S of Willits, 2.0 miles SW of Rte 101	Mendocino	Laughlin Range (3912333)	CCH, Jan 2017 (CAS910689)	8-Jul-1982				2201
34	SOUTH OF WILLITS, ALONG HIGHWAY 101 AT OVERHEAD RAILROAD CROSSING.	Mendocino	Willits (3912343)	CNDDB, May 2017 (EO 35)	17-Jun-1946	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1946 COLLECTION BY BAKER. NEEDS FIELDWORK.		Unknown	1440
34	Highway south of Willits at overhead RR Crossing.	Mendocino	Willits (3912343)	CCH, Jan 2017 (CAS377045)	17-Jun-1946				
34	Hwy south of Willits at overhead RR crossing	Mendocino	Willits (3912343)	CCH, Jan 2017 (RSA63668)	17-Jun-1946				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
35	3 MILES FROM WILLITS TO FORT BRAGG ALONG HIGHWAY 20.	Mendocino	Burbeck (3912344)	CNDDB, May 2017 (EO 36)	1-Jul-1920	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1920 COLLECTION BY ABRAMS. NEEDS FIELDWORK.		Unknown	1500
35	3 mi from Willits (Willits to Fort Bragg)	Mendocino	Burbeck (3912344)	CCH, Jan 2017 (UC867726)	1-Jul-1920				
36	NEAR SUMMIT OF MOUNT SANHEDRIN AND ON HULLVILLE ROAD, MOUNT SANHEDRIN.	Mendocino	Sanhedrin Mtn. (3912351)	CNDDB, May 2017 (EO 37)	19-Jul-1913	ONLY SOURCES FOR THIS SITE ARE COLLECTIONS FROM 1902 BY HELLER AND 1913 BY HALL. DIBBLE AND GRIGGS (1979) SEARCHED THE SUMMIT OF MT SANHEDRIN AND DID NOT FIND HESPEROLINON ADENOPHYLLUM.		Mendocino NF	
36	Near the summit of Mt. Sanhedrin	Lake	Sanhedrin Mtn. (3912351)	CCH, Jan 2017 (DS115150)	20-Jul-1902			Mendocino NF	
36	Near the summit of Mt. Sanhedrin	Lake	Sanhedrin Mtn. (3912351)	CCH, Jan 2017 (GH364885)	20-Jul-1902			Mendocino NF	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
36	Near the summit of Mt. Sanhedrin	Lake	Sanhedrin Mtn. (3912351)	CCH, Jan 2017 (POM138870)	20-Jul-1902			Mendocino NF	
36	near summit Mt. Sanhedrin	Mendocino	Sanhedrin Mtn. (3912351)	CCH, Jan 2017 (UC66140)	24-Jul-1902			Mendocino NF	
37	ABOUT 1 MILE EAST OF EMANDAL RESORT ON SLOPES ON THE NORTH SIDE OF EEL RIVER.	Mendocino	Foster Mtn. (3912342)	CNDDB, May 2017 (EO 38)	29-May-2002	300+ PLANTS SEEN IN 2002.	EROSION, GRAZING, LOGGING. PART OF A NON-INDUSTRIAL TIMBER MANAGE-MENT PLAN.	PVT	1550
37	Near Hearst.	Mendocino	Foster Mtn. (3912342)	CCH, Jan 2017 (JEPS102272)	29-May-2002				
38	ALONG FOREST ROUTE M3 (18N04), 2.7 MILES NORTH OF DEER CREEK, JUST SOUTH OF HUMMINGBIRD CREEK.	Lake	Crockett Peak (3912247)	CNDDB, May 2017 (EO 39)	20-Jun-1994	CONSIDERED "LOCALLY ABUNDANT" IN 1994. PETALS YELLOW WITH DARK VEINS; ANTHERS YELLOW.		Mendocino NF	2500

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
38	T18N R9W NW1/4 Sec. 22, 2500 ft, Chaparral. Forest Route M3 (18N04) 2.7 mi N of Deer Creek, W edge of Snow Mtn. Wilderness, W of Stonyford	Lake	Crockett Peak (3912247)	CCH, Jan 2017 (JEPS95469)	20-Jun-1994			Mendocino NF	2500
38	Forest Route M3 (18N04) 2.7 mi N of Deer Creek, W edge of Snow Mtn. Wilderness, W of Stonyford. At roadside	Lake	Crockett Peak (3912247)	CCH, Jan 2017 (CHSC63740)	20-Jun-1994			Mendocino NF	2500
38	Forest Rout M3 (18N04) 2.7 miles north of Deer Creek, west edge of Snow Mountain Wilderness, west of Stonyford	Lake	Crockett Peak (3912247)	CCH, Jan 2017 (UCR263622)	20-Jun-1994			Mendocino NF	2500
39	RINCON SCHOOL HOUSE, KELSEYVILLE.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 40)	30-Jun-1928	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1928 BENSON COLLECTION. NEEDS FIELDWORK.		Unknown	1400

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
39	Kelseyville, Rincon School House.	Lake	Kelseyville (3812287)	CCH, Jan 2017 (POM268797)	30-Jun-1928				1801
40	ALONG UNNAMED ROAD ABOUT 1.1 ROAD MILES UPHILL FROM GATE AT HIGHLAND SPRINGS ROAD, SOUTH OF HIGHLAND SPRINGS RESERVOIR.	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 41)	3-Jun-1999	SITE IS BASED ON A 1999 TAYLOR COLLECTION.		Unknown	1800
40	unnamed dirt road, about 1.1 road miles uphill from gate at Highland Springs Road (ca. 3 air miles South of Highland Springs Reservoir)	Lake	Highland Springs (3812288)	CCH, Jan 2017 (JEPS96894)	3-Jun-1999				1801
40	unnamed dirt road, about 1.1 road miles uphill from gate at Highland Springs Road (ca. 3 air miles South of Highwland Springs Reservoir)	Lake	Highland Springs (3812288)	Calflora, May 2017 (xr168434)	3-Jun-1999	1+ individuals			1880

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
41	1 1/2 MI ABOVE WOOD'S RANCH (H.S. FIRE).	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 42)	20-May-1950	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1950 SWEENEY COLLECTION. NEEDS FIELDWORK.		Lake, County of	1525
42	PRAYER HILL; BETWEEN HWY 29 AND SOUTH MAIN ST ABOUT 0.25 MI ESE OF THE LAKEPORT BLVD/HWY 29 INTERSECTION.	Lake	Lakeport (3912218)	CNDDB, May 2017 (EO 43)	9-Jun-2011	25,000 PLANTS ESTIMATED IN 2011. SEVERAL HISTORIC COLLECTIONS AND A 2002 OBSERVATION FROM LAKEPORT ARE ALSO ATTRIBUTED TO THIS SITE.	POTENTIAL FOR URBAN DEVELOP-MENT.	PVT	1400
42	Lakeport	Lake	Lakeport (3912218)	Calflora, May 2017 (jgr19473)	12-May-2002	1+ individuals			1371
42	Near Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (SDSU8160)	24-May-1968				
42	Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (GH364880)	18-Jun-1925				
42	Near Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (CAS414256)	31-May-1885				

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
42	Near Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (RSA135384)	31-Jun-1885				
42	Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (DS10873)	30-Jun-1885				
42	Lakeport	Lake	Lakeport (3912218)	CCH, Jan 2017 (POM727756)	18-Jun-1925				
43	SAM ALLEY RIDGE, 2.1 AND 2.9 MILES ABOVE PITNEY LANE, UPPER LAKE WATERSHED.	Lake	Bartlett Mtn. (3912227)	CNDDB, May 2017 (EO 44)	31-Jul-1997	SITE IS BASED ON THREE 1997 ISLE COLLECTIONS.		Mendocino NF	2500
43	Mendocino National Forest--North Coast Ranges. Upper Lake Watershed. 2.1 mi. up Sam Alley Ridge from jct. w. Pitney Lane	Lake	Bartlett Mtn. (3912227)	CCH, Jan 2017 (CHSC91054)	1-Jun-1997				2402

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
43	Mendocino National Forest--North Coast Ranges. Upper Lake Watershed. (2.9 miles above Pitney Lane Jct.) Sam Alley Ridge, Fork Fire Line/Road edge	Lake	Bartlett Mtn. (3912227)	CCH, Jan 2017 (CHSC90527)	1-Jul-1997			Mendocino NF	
43	Mendocino National Forest-North Coast Ranges. Upper Lake Watershed. (2.9 miles above Pitney Lane Jct.) Sam Alley Ridge, Fork Fire Line/Road edge	Lake	Bartlett Mtn. (3912227)	CCH, Jan 2017 (RSA716556)	1-Jul-1997				
43	Mendocino National Forest--North Coast Ranges. Upper Lake Watershed	Lake	Bartlett Mtn. (3912227)	CCH, Jan 2017 (CHSC91147)	31-Jul-1997				2680
44	NEAR UPPER LAKE.	Lake	Upper Lake (3912228)	CNDDB, May 2017 (EO 45)	Jul-1884	ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN 1884 CURRAN COLLECTION. NEEDS FIELDWORK.		Unknown	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
44	"near Upper Lake"	Lake	Upper Lake (3912228)	CCH, Jan 2017 (DS81127)	31-Jul-1884				
45	ON CREST OF LITTLE COW MOUNTAIN.	Lake	Cow Mountain (3912321)	CNDDB, May 2017 (EO 46)	28-Jun-1977	ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1977 SPECHT COLLECTION. NEEDS FIELDWORK.		BLM?	
45	On crest of Little Cow Mtn.	Lake	Purdys Gardens (3912311)	CCH, Jan 2017 (HSC47878)	28-Jun-1977			BLM	
46	ABOUT 9 MILES NORTH OF WILLITS NEAR TOP OF SHIMMINS RIDGE ROAD.	Mendocino	Longvale (3912354)	CNDDB, May 2017 (EO 47)	17-Jul-2005	SITE IS BASED ON 2005 HEISE PHOTOS IN CALPHOTOS.		Unknown	2100
47	LONG VALLEY.	Mendocino	Laytonville (3912364)	CNDDB, May 2017 (EO 48)	Jun-1882	ONLY SOURCES OF INFORMATION FOR THIS SITE ARE A KELLOGG COLLECTION FROM 1868-9 AND A RATTAN COLLECTION FROM 1882. NEEDS FIELDWORK.		Unknown	
47	Long Valley	Mendocino	Laytonville (3912364)	CCH, Jan 2017 (CAS57535)					

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
47	Long Valley	Mendocino	Laytonville (3912364)	CCH, Jan 2017 (GH364888)	01-Jul-1882				
47	Long Valley	Mendocino	Laytonville (3912364)	CCH, Jan 2017 (JEPS22968)	01-Jun-1882				
	Long Valley	Mendocino	Laytonville (3912364)	CCH, Jan 2017 (DS9976)	30-Jun-1882				
48	HILL BETWEEN BOTTLE ROCK ROAD AND UPPER SWEETWATER CREEK, ABOUT 0.5 MILE WEST OF BOGGS LAKE, NORTH OF GLENBROOK.	Lake	Kelseyville (3812287)	CNDDB, May 2017 (EO 49)	16-Jun-1982	100+ PLANTS AT THIS SITE IN 1982; THIS POPULATION IS PART OF A MUCH LARGER CONTIGUOUS GROUP OF POPULATIONS COVERING AN AREA ABOUT 1 MILE X 1/4 MILE ALONG THIS HILLSIDE, ESTIMATE IN EXCESS OF 50,000 PLANTS. MAP DETAIL NEEDED FOR THIS AREA.	PROPOSED ROADWAY FOR GEOTHERM-AL DEVELOP-MENT.	PVT	2900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
48	Lake County: Mayacmas Mountains; about 2 1/2 miles north of Glenbrook. (Exact location unknown. Coordinates estimated by label maker.)	Lake	Kelseyville (3812287)	CCH, Jan 2017 (UCD162969)	16-Jun-1982				
48	Lake County: Mayacmas Mountains; about 2 1/2 miles north of Glenbrook. (Exact location unknown. Coordinates estimated by label maker.)	Lake	Kelseyville (3812287)	CCH, Jan 2017 (UCD162970)	16-Jun-1982				
49	Lake County	Lake	Lucerne (3912217)	CCH, Jan 2017 (RSA102174)	30-Jun-1884			Mendocino NF	
49		Lake	Lucerne (3912217)	CCH, Jan 2017 (UC191377)	31-Dec-1884				
50	on trail to Redwood Valley; Potter Valley	Mendocino	Redwood Valley (3912332)	CCH, Jan 2017 (UC402836)	7-Jul-1921				

Distribution on National Forest System (NFS) Lands:

(Please see Reference column of Locations table above for references pertaining to Record Numbers indicated on NFS lands.)

National Forest System (NFS) lands	Record #s (from Locations table above)	CNDDB EOs	Non-CNDDB Records	Recent (seen in past 20 yrs.)	Historic (not seen in past 20 yrs.)	Most Recent Obs.	EOs/ Recs. (5 mile buffer)	Total Records on NFS lands
Angeles:	-	-	-	-	-	-	-	0
Cleveland:	-	-	-	-	-	-	-	0
Eldorado:	-	-	-	-	-	-	-	0
Inyo:	-	-	-	-	-	-	-	0
Klamath:	-	-	-	-	-	-	-	0
Lake Tahoe Basin MU:	-	-	-	-	-	-	-	0
Lassen:	-	-	-	-	-	-	-	0
Los Padres:	-	-	-	-	-	-	-	0
Mendocino:	1,2,3,4,5, 6,7,14, 18,28,30, 31,36,38, 43,49	15	1	5	11	21-May-2014	7	16
Modoc:	-	-	-	-	-	-	-	0
Plumas:	-	-	-	-	-	-	-	0
San Bernardino:	-	-	-	-	-	-	-	0
Sequoia:	-	-	-	-	-	-	-	0
Shasta-Trinity:	-	-	-	-	-	-	-	0
Sierra:	-	-	-	-	-	-	-	0
Six Rivers:	-	-	-	-	-	-	-	0
Stanislaus:	-	-	-	-	-	-	-	0
Tahoe:	-	-	-	-	-	-	-	0
Totals:	N/A	15	1	5	11	N/A	7	16

Demographic and Population Trends: Under half of all occurrences (21/50; 42%) have population count and size estimate information. Of these, most occurrences range in observed size between 40 and 10,000 plants each, with a median value of 5,000 and a mean of approximately 7,600. Roughly 1,000 individuals were estimated at the sites of six (6/21; ~29%) occurrences. Two occurrences were estimated to have as many as 25,000 and 50,000 plants each (CNDDB 2018). As many as 90,000 plants have been documented from individual observations

(NatureServe 2018). Of all CNDDB element occurrences, two (2/48; ~4%) are ranked in Excellent (A) condition. Another ten (10/48; ~21%) are ranked in Good (B) condition. A single occurrence is documented in Fair (C) condition and the remaining (35/48; ~73%) are documented as Unknown (U) (CNDDB 2018). Annual flowering plants exhibit considerable fluctuations in population size between years. Population sizes of plants like *H. adenophyllum* are correlated with seasonal precipitation patterns (Garcia et al. 2008; Levine et al. 2008).

Life History: *Hesperolinon adenophyllum* is an annual flowering plant that is known to bloom from May through August (CNPS 2018). Most taxa are winter annuals that bloom late season after many co-occurring taxa are in fruit. Many *Hesperolinon* taxa produce flowers that are pseudocleistogamous, with anthers that dehisce while flowers are still in bud. Uniformity of local populations may be a function of such developmental autogamy. Differences in phenology are often observed when two or more taxa occur in sympatry. Differences in microhabitat are reported among co-occurring taxa (Morin 2017). Plants in the genus *Hesperolinon* are noteworthy examples of serpentine endemism (Schneider et al. 2016).

Diversity: The genus *Hesperolinon* is a young group of serpentine endemic taxa with narrow and overlapping distributions largely in the Coast Ranges of California. Lake and Napa counties are the center of diversity for the entire genus (Morin 2017). Morphological and distributional overlap resulted in early claims of *Hesperolinon* as a group of "extreme serpentine endemics" and a "rapidly evolving complex" (Raven and Axelrod 1978). The group itself was later estimated to have emerged within the last approximately 3.8 Ma, with many lineages having formed in the past 1-2 Ma, thus confirming earlier hypothesis about its recent origin.

The genus *Hesperolinon* is nested alongside *Sclerolinon* within paraphyletic *Linum* (Schneider et al. 2016). Molecular phylogenetic analyses of ribosomal DNA (ETS+ITS) demonstrate *H. drymarioides* as a strongly supported entity occupying a position sister to the rest of *Hesperolinon*. The lack of phylogenetic resolution among most taxa may be a function of incomplete lineage sorting and a reliance on plesiomorphic or homoplastic characters for defining taxonomic boundaries (Schneider et al. 2016).

Habitat: Serpentine soils in chaparral, cismontane woodland, and both valley and foothill grassland (CNPS 2018). Occurrences are found in association with *Acmispon brachycarpus*, *Adenostoma fasciculata*, *Aira caryophyllea, Allophyllum gilioides, Arctostaphylos stanfordiana, A. viscida, Avena barbata, Bromus hordeaceus, Bromus madritensis, Calochortus vestae, Calycadenia pauciflora, C. multiglandulosa, Calyptridium quadripetalum, Castilleja rubicunda, Ceanothus cuneatus, C. jepsonii, Centaurium muehlenbergii, Cordylanthus tenuis, Elymus multisetus, Eriodictyon californicum, Eriogonum nudum, E. vimineum, Eriophyllum lanatum, Festuca eastwoodiae, Gilia leptalea, Hemizonia congesta* subsp. *clevelandii, Hesperocyparis sargentii, Heteromeles arbutifolia, Madia exigua, M. gracilis, Medicago polymorpha, Minuartia douglasii, Monardella villosa, Pinus sabiniana, Quercus berberidifolia, Q. durata, Rigiopappus leptocladus, Perideridia lemmonii, Stipa lemmonii, Streptanthus barbiger, Trichostema* sp., *Triteleia laxa*, and *Umbellularia californica* (CNDDB 2018).

Habitat Status or Trend: Large and frequent wildfire events, development, and recreation activity is associated with habitat preferred by *H. adenophyllum* (Barro and Conard 1991; McKenzie et al. 2004; Westerling and Bryant 2008et al. 2007; CNDDB 2018); it is unknown whether these have had significant effects on the range and distribution of habitat this species prefers.

Capacity for the Species to Disperse: Dispersal capacity of *Hesperolinon* taxa remains unknown. Most taxa (12/13; ~93%) overlap within a region of California smaller than the state of Delaware. A single species, *H. micranthum*, extends beyond the California Floristic Province. Restricted ranges are considered a function of habitat specificity (Schneider et al. 2017; Morin 2017).

Threats: Development or roadway construction and maintenance is the most frequently cited threat to *H. adenophyllum* (9/48; ~19%). At least two occurrences are indicated to be threatened by grazing. Another two occurrences are reported to be threatened by logging. Two element occurrences (EO 25 and EO 26) are located within a parcel that was up for sale during the time of last observation in 1997 and 1998 (CNDDB 2018). Additional threats to *H. adenophyllum* include OHV activity, herbicides, trash dumping, recreation, and geothermal development (NatureServe 2017).

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Reviewer(s) and Date:

David Magney, Rare Plant Program Manager, California Native Plant Society, (916) 447-2677 ext. 205, dmagney@cnps.org. March 22, 2018.

Formatting: Form is set up as 508 compliant. Please use the "styles" if further formatting is necessary.

Purpose: This is to maintain the best available science on a species that could be used by the Forest Service in a variety of functions. Specifically, there would be additional steps and

evaluations to determine whether or not this species would be considered a Species of Conservation Concern under the 2012 Planning Rule or a Sensitive Species under the 1982 Planning Rule.

Additional Considerations at the Forest Level: Habitat amount and juxtaposition of both the species and habitat locations.