Species: *Eriogonum umbellatum* Torr. var. *glaberrimum* (Gand.) Reveal, Warner Mountains buckwheat

Photo Source: iNaturalist 2023

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Status

Table 1 summarizes the current status of this species or subspecies/variety by various ranking entities and defines the meaning of the status.

Table 1. Current status of Warner Mountains buckwheat

Entity	Status	Status Definition
NatureServe CA[a]	G5T2? S2	**G5**: Demonstrably Secure — Common; widespread and abundant. **T**: Subspecies and varieties receive a T-rank attached to the G-rank. **T2**: Imperiled — At high risk of extinction or collapse due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. **?**: Qualifier: Inexact or Uncertain — A question mark denotes an inexact or uncertain rank. **S2**: Imperiled — Imperiled in the state because of rarity due to very restricted range, very few

		populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
California Rare Plant Rank[b]	1B.3	**1B**: Plants rare, threatened, or endangered in California and elsewhere. **0.3**: Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known). This taxon was added to the *CNPS Inventory of Rare and Endangered Plants of California* List 3 in 1988 under the name *Eriogonum umbellatum* var. *aureum*, a taxon that does not occur in California. From 1994 onwards, it was treated as *Eriogonum umbellatum* var. *glaberrimum* and changed to List 2 in 1994 and then to List 1B in 2001 (CNPS 1988, 1994, 2001, 2023).
California State Listing[c]	Not listed	
USDA Forest Service[d]	S	Sensitive
USDI FWS[e]	Not listed	
USDI BLM[f]	S	Sensitive
NatureServe OR[g]	S1? HP_List 1	**S1**: Critically Imperiled — Critically imperiled in the state because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state. **?**: Qualifier: Inexact or Uncertain — A question mark denotes an inexact or uncertain rank. **HP_List 1**: Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.
Oregon State Listing[h]	Not listed	
NatureServe NV[i]	Not present	
Nevada State Listing[j]	Not present	

[a] California Natural Diversity Database, California Dept. of Fish & Wildlife [CNDDB 2023, 2023a]
[b] California Native Plant Society [CNPS 2023]
[c] California Department of Fish and Wildlife [CDFW 2023]
[d] US Forest Service Region 5 Forester's List [USDA 2013] and Pacific NW Survey and Manage [USDA & BLM 2014]
[e] US Department of Interior Fish and Wildlife Service [USFWS 2023a]
[f] US Department of Interior Bureau of Land Management [BLM 2022]
[g] Oregon Biodiversity Information Center [ORBIC 2023]
[h] Oregon Department of Agriculture [ODA 2018]
[i] Nevada Division of Natural Heritage [NDNH 2022]

[j] Nevada Division of Forestry [NDF 2012]
Note: Individual State Heritage Programs (CNDDB, ORBIC, NNHP) represent NatureServe and contain more up-to-date ranks for their state than NatureServe Explorer.

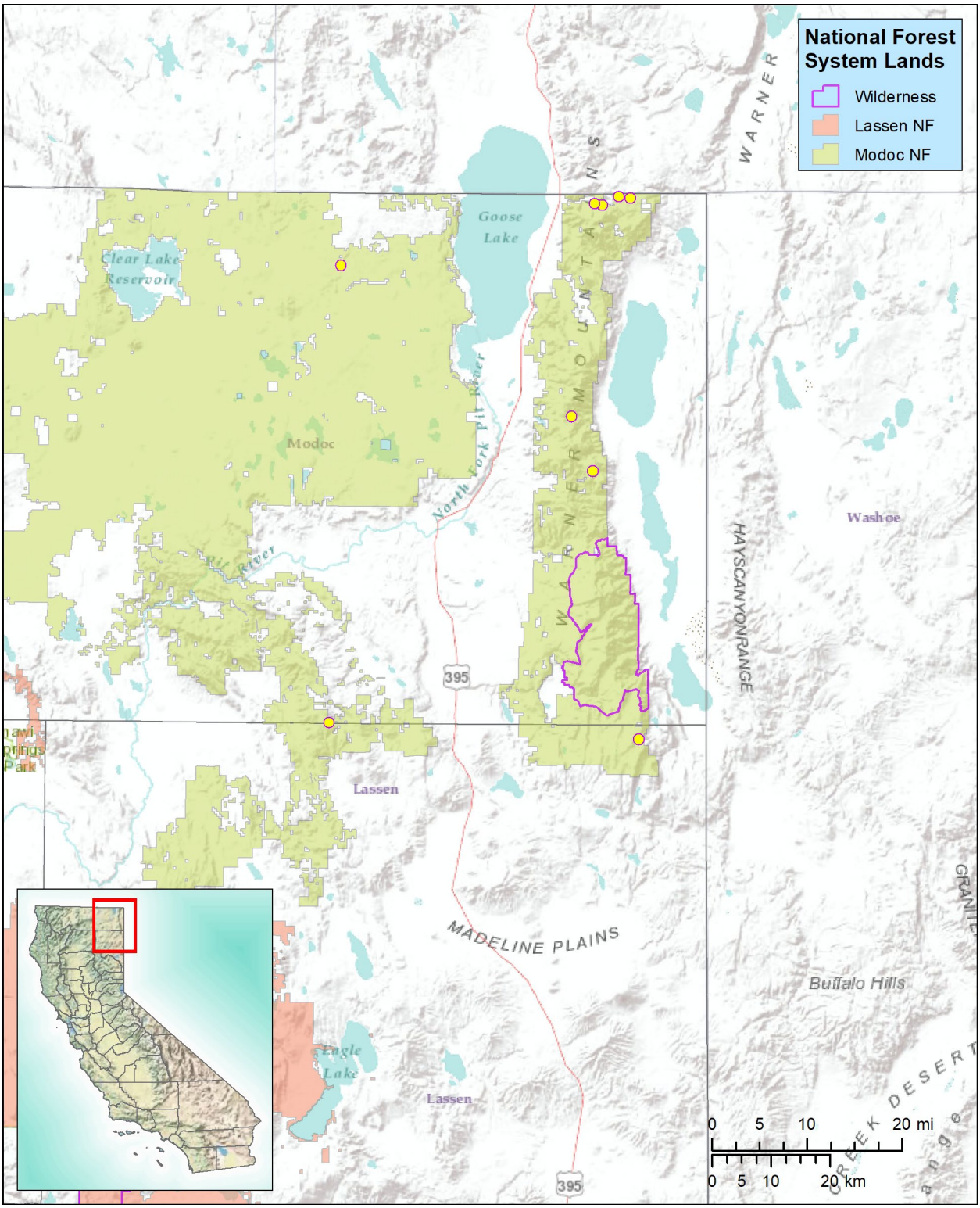
Distribution, abundance, and population trend on the planning unit[1]

Table 2 summarizes the distribution and frequency of this species or subspecies/variety within National Forest System Lands in California. Table 4 in Appendix 1 lists all known occurrences of this species or subspecies/variety within California. Individual occurrences are defined as sites that contain an individual, population, or groups of populations of the plant that are located more than 1/4 (0.25) of a mile apart from each other as defined by the CNDDB.

Table 2. Known occurrence frequency of Warner Mountains buckwheat within the planning area (NRIS, CNDDB, Calflora/CCH databases)

National Forest System (NFS) lands in California	Record #s (from Table 4)	CNDDB EOs	Non-CNDDB Records	Recent (seen in past 20 years)	Historical (not seen in past 20 years)	Most Recent Obs. Date	Total Records on NFS lands
Modoc:	1, 2, 3, 4, 5, 6, 7, 8, 9	7	2	8	1	12-Jul-2021	9
Totals:	N/A	7	2	8	1	N/A	9

[1] 1909.12 Chapter 10, Section 12.53, components 2, 3, and 4.



Sources: *Distribution*: NRIS 2022, Calflora 2023, CCH2 2023, CNDDB 2023, Green 2023 pers. comm., iNaturalist 2023. *Baselayers*: 2013 National Geographic Society, i-cubed, Esri, Garmin, NOAA, NPS, USGS.

Warner Mountains buckwheat was last updated in the CNDDB on 27 October 2009 (CNDDB 2023), and therefore all Calflora, CCH, and/or NRIS records prior to this date are assumed to have already been reviewed and entered into the CNDDB for this plant. Accordingly, only records from Calflora, CCH, and/or NRIS reported after this date have been reviewed for potential new or updated occurrence information and are included in Table 4 in Appendix 1 as applicable.

Warner Mountains buckwheat is a narrowly distributed taxon found in Harney, Jackson, and Lake counties, Oregon, and Modoc and Lassen counties, California (FNA 1993+, CCH2 2023, CPNWH 2023). Within California, it occurs in the Modoc Plateau (MP) bioregion with all but two of the records in the Warner Mountains (Wrn) subregion (NRIS 2022, Calflora 2023, CCH2 2023, CNDDB 2023, Green 2023 pers. comm., iNaturalist 2023). All nine location records included in Table 4 are located at least partially on U.S. National Forest lands (Table 2), all of which are on the Modoc National Forest. None of the records are in Wilderness Areas. Eight of the records are recent (observed during the past 20 years), and one is considered historical. While seven of the location records included population size estimates, census methods were not reported; as a result, the following population totals and trends should be interpreted cautiously. Two locations had between 1 and 10 plants, two had between 11 and 100 plants, two had between 101 and 500 plants, and one location had a total of 515 plants. Six of the locations have been visited more than once over periods of six to 69 years, indicating that these populations are somewhat stable. Two locations with census data spanning multiple years had apparently stable populations. A third location record with multiple years of census data had 515 plants in six colonies in 1997 and only 84 plants from four colonies in 2002 (CNDDB 2023). No mention was made of ‘missing’ colonies in 2002, and the occurrence was ranked Good, so the lower total was likely the result of an incomplete survey.

Of the nine location records treated in this analysis, seven are already included in the CNDDB. The two non-CNDDB records are based on NRIS data and associated unprocessed CNDDB forms (NRIS 2022, Green 2023 pers. comm.). These two records are located at least 28 miles from an existing CNDDB occurrence and should be evaluated for inclusion in the CNDDB.

Location information for one herbarium record (*Gilman 601*) was too vague to assign to existing or new records. The specimen cited for CNDDB EO 2 (*Clifton 14002*) is not online and was apparently never deposited in an herbarium (CNDDB 2023). The coordinates for this occurrence came from a secondary source rather than the original collection (CNDDB 2023). As mapped in the CNDDB, the record is approximately 120 miles from other Warner Mountains buckwheat occurrences and in a bioregion (KR) and county (Siskiyou) from which the taxon has not otherwise been reported (Reveal 1968, 1970, 1989; FNA 1993+, NRIS 2022, Calflora 2023, CCH2 2023, CNDDB 2023, CPNWH 2023, Green 2023 pers. comm., iNaturalist 2023, JEPS 2023). These two location records were excluded from this analysis and are highlighted in pink at the end of Table 4.

Brief description of natural history and key ecological functions[2]

Warner Mountains buckwheat is a perennial herb that forms mats 3–8 dm in diameter and has flowering stems 1–2 dm high (FNA 1993+, JEPS 2023). Flowering occurs from July to September (FNA 1993+, CCH2 2023, CNDDB 2023, CNPS 2023, JEPS 2023). Plants are found growing on volcanic outcrops or occasionally on volcanic talus, gravel, or sand in Great Basin scrub, lower montane coniferous forest, or upper montane coniferous forest from 1525 to 2410 m in elevation (CDC 2010, NRIS 2022, Calflora 2023, CCH2 2023, CNDDB 2023, CNPS 2023, iNaturalist 2023). Common associates include *Abies concolor, Artemisia tridentata, Berberis aquifolium* var. *repens, Bromus* spp., *Cercocarpus ledifolius, Ericameria* spp., other *Eriogonum umbellatum* vars., *Juniperus occidentalis, Pinus ponderosa, Poa secunda, Prunus* spp., *Purshia tridentata* var. *tridentata,* and *Ribes* spp. (Calflora 2023, CCH2 2023, CNDDB 2023).

Warner Mountains buckwheat was originally described as a species, *Eriogonum glaberrimum*, but has more recently been treated as either a subspecies or variety of *E. umbellatum* (Gandoger 1906, Reveal 1968, 1970, 1989; FNA 1993+, JEPS 2023). While Reveal treated *E. umbellatum* and its varieties as members of *Eriogonum* subgenus *Oligogonum* (FNA 1993+), more recent work has shown that *Oligogonum* is not a natural group (Pearman et al. 2021). Additionally, while most members of the *Eriogonum umbellatum* complex do form a natural group, Warner Mountains buckwheat and two other *E. umbellatum* varieties are more closely related to a group including *E. libertini*, *E. nervulosum*, and *E. ursinum* (Pearman et al. 2021). This work suggests that Warner Mountains buckwheat may in the future be treated as a species or other taxonomic rank outside of the *E. umbellatum* complex (Pearman et al. 2021).

Warner Mountains buckwheat differs from similar members of *Eriogonum* subgenus *Oligogonum* by the presence of whorled bracts on inflorescence stems, cream-colored to whitish flowers that are 4–7 mm long, glabrous leaves, and its range in and adjacent to the Warner Mountains (Reveal 1989, FNA 1993+, JEPS 2023).

While no studies were found that focused on Warner Mountains buckwheat, confirmed pollinators of other varieties of *Eriogonum umbellatum* include bees and butterflies (CPC 2023). In agricultural settings (seed production for restoration), the presence of honeybee hives increased *Eriogonum umbellatum* seed yield (Parris et al. 2010), which suggests that insect pollen vectors are also important in wild populations. *Eriogonum umbellatum* produces small (2–7 mm long) light brown achenes that are glabrous except for sparse beak hairs (FNA 1993+). Most seeds probably fall close to parent plants and most likely disperse short distances by water or wind. The seeds of some *Eriogonum* species are dispersed by ants (Whitford et al. 1981, Dunwiddie et al. 2001). Under controlled conditions, seeds of other varieties of *Eriogonum umbellatum* showed the highest germination rates when temperatures fluctuated widely, suggesting that seeds are adapted to germinate at the soil surface (Young 1989).

[2] Basis for other 1909.12 Chapter 10, Section 12.53 components.

Fire is a significant threat to Umtanum desert buckwheat (*E. codium*), a morphologically similar (low-growing perennial) species in Washington state, and could be a threat to Warner Mountains buckwheat. In 1996, a fire killed approximately 15% of the total population of Umtanum desert buckwheat, and neither post-fire growth from adults nor a large flush of post-fire seedlings were observed (Dunwiddie et al. 2001, Caplow et al. 2007). Most visibly singed plants that survived the fire died the following year (Caplow et al. 2007).

Overview of ecological conditions for recovery, conservation, and viability[3] including Threats and Risk Factors

Eight of the nine Warner Mountains buckwheat location records in California have occurrence ranks of Good (7) or Fair (1) (CNDDB 2023, Green 2023 pers. comm.). The quality of the remaining site is unknown. In Oregon, Warner Mountains buckwheat is considered critically imperiled (S1?) (NatureServe 2023) and a USFWS Species of Concern, defined as "Taxa whose conservation status is of concern to the U.S. Fish and Wildlife Service … but for which further information is still needed" (USFWS 2023b). Threats to Warner Mountains buckwheat include roads, OHV use, grazing, trampling by cattle, timber harvest activities, trail maintenance, erosion, non-native plants, and small population sizes (Bainbridge 2017, CNDDB 2023, Green 2023 pers. comm.). While fuel-poor volcanic substrates may provide fire protection to some populations, plants near heavier fuels could be threatened by high intensity wildfires. Long-term threats to Warner Mountains buckwheat include anthropogenic climate change which may lead to increased fire severity and frequency, and changes in the timing of flowering, pollination, and seed germination (Fried et al. 2004, Hülber et al. 2010, Mondoni et al. 2012, Brown et al. 2016, Gremer et al. 2020). Changes in average temperature and precipitation patterns could adversely affect Warner Mountains buckwheat, and there may be little available habitat for migration to new sites. *Ex situ* conservation efforts to date include living collections at the East Bay Regional Parks Botanic Garden and seed banking at the University of California, Santa Cruz (CaPR 2023).

Taxonomy[4]

Table 3 summarizes this species or subspecies/variety's name status in key literature.

Table 3. Name status of Warner Mountains buckwheat

Entity	Name Status
CNDDB and CNPS	*Eriogonum umbellatum* Torr. var. *glaberrimum* (Gand.) Rev.
Jepson eFlora	*Eriogonum umbellatum* Torr. var. *glaberrimum* (Gand.) Reveal
Jepson Manual (1993)	*Eriogonum umbellatum* Torr. var. *glaberrimum* (Gand.) Reveal
Flora of North America	*Eriogonum umbellatum* Torrey var. *glaberrimum* (Gandoger) Reveal
USDA NRCS[a] PLANTS	*Eriogonum umbellatum* Torr. var. *glaberrimum* (Gandog.) Reveal

[a] Natural Resources Conservation Service [NRCS 2023]

Synonymy: *Eriogonum glaberrimum* Gand. (IPNI 2023, POWO 2023, Tropicos 2023).

[3] 1909.12 Chapter 10, Section 12.53, components 7, 9, 10, 11 and 12, as appropriate.
[4] 1909.12, Chapter 10, Section 12.53, component 1.

Jepson eFlora link (JEPS 2023): https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=58765

Type locality: "margin of Cycan Valley", unknown county, Oregon (*Cusick 2745*, LY) (Gandoger 1906, Reveal 1968, CPNWH 2023, LY 2023).

Key literature

Bainbridge, S. 2017. Species Evaluation Form: *Eriogonum umbellatum* var. *glaberrimum*. NatureServe, Arlington, Virginia.

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Persons Contacted

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Author(s) and Date:

Adam J. Searcy, California Native Plant Society, Rare Plant Scientific Coordinator, 2 May 2023

Reviewer(s) and Date:

Ellen A. Dean, California Native Plant Society, Rare Plant Botanist, 24 April 2023; R. Douglas Stone, California Native Plant Society, Associate Rare Plant Botanist, 01 May 2023

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.

Appendix 1: Known Occurrences

Table 4. Known Occurrences of Warner Mountains buckwheat within California (NRIS, CNDDB, Calflora/CCH databases).

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.

Rec. #	Locality	County	Quad	Ref. (Source)	Date Last Obs'd	Population Info	Threats	Land Mgr.	Elev. (ft.)
1	NORTH AND WEST SIDES OF LILY LAKE, 4 MILES EAST OF NEW PINE CREEK, WARNER MOUNTAINS.	Modoc	Mt. Bidwell (4112082)	CNDDB, Mar. 2023 (EO 1)	27-Aug-2003	275 PLANTS OBSERVED IN 1999. 300 PLANTS OBSERVED IN 2003. TWO EDWARDS COLLECTIONS FROM 1981 AND 1986 ARE ALSO ATTRIBUTED TO THIS OCCURRENCE. TALUS/SCREE SLOPE AT 45% WITH W/SW ASPECT. ASSOCIATED WITH RIBES VELUTINUM, PRUNUS SUBCORDATA, BERBERIS, PHLOX, HIERACIUM, ABIES CONCOLOR, PINUS PONDEROSA, APOCYNUM, SYMPHORICARPOS, ARTEMISIA TRIDENTATA, PENSTEMON DEUSTUS, POA SECUNDA, ETC.	TIMBER HARVEST, RECREATION, AND TRAIL MAINTENANCE.	Modoc NF	6680

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
1		Modoc	Mount Bidwell (4112082)	NRIS polys, Aug. 2022 (050900E_ERUMG004_53)	27-Aug-2003	300 individuals		Modoc NF	
1	North Warner Mountains west of Lily Lake	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (ELH00950), Calflora 2023	18-Jul-2000	Rocky site/soil. Forb; flower color cream. Associated with mountain big sage, tobaccobrush, currant. Blooming; Roots, Stem, Leaves, Flowers/Inflorescences	`	Modoc NF	
1		Modoc	Mount Bidwell (4112082)	NRIS polys, Aug. 2022 (050900E_ERUMG004_53)	5-Aug-1999	300 individuals		Modoc NF	
1	Lily Lake, N Warner Mts.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CAS211334)	1-Jun-1986			Modoc NF	
2	ABOUT 1.5 AIR MILES EAST OF BEAR MOUNTAIN, NEAR USFS ROAD 43N57.	Modoc	Cedarville (4112052)	CNDDB, Mar. 2023 (EO 3)	26-Sep-2004	~200 PLANTS OBSERVED IN 2004. NEEDS REVISIT FOR MAPPING.	OHV USE AND GRAZING.	Modoc NF	6600
2	mdf-erumg-007	Modoc	Cedarville (4112052)	NRIS polys, Aug. 2022 (050900E_ERUMG007_53)	26-Sep-2004	200 individuals		Modoc NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3	LAKE CITY CANYON, ALONG COUNTY ROAD 11 FROM 0 TO 0.9 ROAD MILE NORTH OF MILL CREEK.	Modoc	Davis Creek (4112063)	CNDDB, Mar. 2023 (EO 4)	24-Jul-2002	1997 POPULATION NUMBERS: 15 PLANTS OBSERVED IN THE 2 SOUTWESTERN COLONIES, 500 SEEN IN REMAINING 4 COLONIES IN SEC 28. 2002: 13 PLANTS OBSERVED IN NORTHWESTERN COLONY AND 71 OBSERVED IN 3 SOUTHWESTERN COLONIES. E/SE-FACING OPEN SLOPES. ASSOC W/ ARTEMISIA TRIDENTATA, JUNIPERUS OCCIDENTALIS, PINUS PONDEROSA, SAMBUCUS MEXICANA, PRUNUS EMARGINATA, P. SUBCORDATA, SYMPHORICARPOS, POA SECUNDA, SEDUM STENOPETALUM, ERIOGONUM ELATUM, MONARDELLA, ETC.	HEAVY CATTLE GRAZING OCCURS IN AREA, THOUGH IT SEEMS UNLIKELY THEY COULD REACH PLANTS DUE TO THE STEEP SLOPE.	Modoc NF	6100

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG003B_53)	23-Jul-2002	11 individuals		Modoc NF	
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG003A_53)	27-Jun-2002	60 individuals		Modoc NF	
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG005_53)	24-Jul-2002	13 individuals		Modoc NF	
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG003A_53)	11-Aug-1997	60 individuals		Modoc NF	
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG003B_53)	11-Aug-1997	11 individuals		Modoc NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3		Modoc	Davis Creek (4112063)	NRIS polys, Aug. 2022 (050900E_ERUMG003C_53)	11-Aug-1997	2 individuals		Modoc NF	
3	N Warner Mtns., 6 mi. from Lake City, on Rd. to Plum Valley Campground	Modoc	Lake City (4112062)	CCH2, Mar. 2023 (HSC-12278)	22-Jul-1970	Open dry slopes		Modoc NF	
4	NORTHWEST END OF DISMAL SWAMP, APPROXIMATELY 2 MILES NORTHEAST OF COUNTY ROAD 2.	Modoc	Mount Bidwell (4112082)	CNDDB, Mar. 2023 (EO 5)	9-Jul-1994	SCATTERED PLANTS OBSERVED IN 1994. ONLY SOURCES OF INFORMATION FOR THIS OCCURRENCE ARE A 1978 COLLECTION BY REVEAL AND A 1994 COLLECTION BY OSWALD ET AL. NEEDS FIELDWORK. PLANTS ON DRY VOLCANIC LAVA OUTCROPS ABOVE A LARGE MEADOW. ASSOCIATED WITH ARTEMISIA.		Modoc NF	7300

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
4		Modoc	Mount Bidwell (4112082)	iNaturalist, Mar. 2023 (86947251)	12-Jul-2021	Flowers pale yellow to nearly white, umbellate branches with whorl of bracts midlength, leaves glabrous on both surfaces. Very distinct plant! Growing with Eriogonum umbellatum var. dichrocephalum and Eriogonum heracleoides var. heracleoides.		Modoc NF	7200
4	Dismal Swamp ca. 6 mi (air) E of Hwy. 395, just S of the Oregon border. Scattered plants on a dry outcrop above a large meadow along Dismal Creek. T48N R16E S31	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CHSC063413)	9-Jul-1994	Scattered plants on a dry outcrop above a large meadow along Dismal Creek. Perianth whitish to light cream.		Modoc NF	7280
4	Warner Mts., Dismal Swamp, ca. 2 mi. N of Modoc Co. Rd. 2, at NW end of Dismal Swamp S of Dismal Creek.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CAS211332)	11-Aug-1978	Flowering. On volcanic lava outcrops associated with Artemisia.		Modoc NF	7300

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
5	ABOUT 0.5 MILE EAST OF DISMAL SWAMP ALONG ROAD LEADING TO TWELVEMILE CREEK.	Modoc	Mount Bidwell (4112082)	CNDDB, Mar. 2023 (EO 6)	31-Jul-1997	<100 PLANTS OBSERVED IN 1997. OPEN AREA ON SMALL MTN CREST/FLAT. ASSOC W/ ARTEMISIA TRIDENTATA, A. ARBUSCULA, CHRYSOTHAMNUS VISCIDIFLORUS, ERIOGONUM UMBELLATUM VAR. NEVADENSE, ORTHOCARPUS CUSPIDATUS, PHOENICAULIS CHEIRANTHOIDES, COLLOMIA GRANDIFLORA, & BROMUS CARINATUS.	GRAZING IN SURROUNDIN G AREA. ROAD RUNS THROUGH POPULATION.	Modoc NF	7360
5	Warner Mountains. Low broad ridge 1.1 km east of Dismal Swamp. T48N R16E S32 SW1/4 of Nw1/4 USGS Quadrangle: Mount Bidwell 1:24,000	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CHSC109 511)	25-Jul-2012	Open rocky shrubland (Artemisia tridentata, Purshia tridentata, Ericameria nauseosa); lots of Eriogonum umbellatum var. modocense, occasional Chrysothamnus viscidiflorus. Plants forming scattered large cushions <1-1/2 dm high not counting the inflorescenc		Modoc NF	7382

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
5	Warner Mountains. Low broad dridge 1.1 km east of Dismal Swamp.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (JEPS120514)	25-Jul-2012	Open rocky shrubland (Artemisia tridentata, Purshia tridentata, Ericamerica nauseosa); lots of Eriogonum umbellatum var. modocense, occasional Chrysothamnus viscidiflorus.		Modoc NF	7382
5		Modoc	Mount Bidwell (4112082)	NRIS polys, Aug. 2022 (050900E_ERUMG002_53)	31-Jul-1997	80 individuals		Modoc NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
6	0.2 MILE WEST OF POISON LAKE TURNOFF ALONG COUNTY ROAD 2, ABOUT 1 AIR MILE WEST OF LILY LAKE.	Modoc	Mount Bidwell (4112082)	CNDDB, Mar. 2023 (EO 7)	27-Aug-2003	20 PLANTS OBSERVED IN 2005. 1935 WHEELER COLLECTION FROM "PINE CREEK" AND 1978 REVEAL COLLECTION FROM "CO RD 2, 0.3 MI W OF POISON LAKE TURNOFF" ALSO ATTRIBUTED TO THIS OCCURRENCE. AMONG ROCKS ON SCREE SLOPE, SOUTH ASPECT. ASSOCIATED WITH PINUS, ABIES, CERCOCARPUS LEDIFOLIUS, PRUNUS EMARGINATA, BERBERIS, BROMUS TECTORUM, EPILOBIUM, AND ERIOGONUM UMBELLATUM.	TIMBER HARVEST AND ROCKS FALLING FROM ROAD COULD THREATEN.	Modoc NF	6400
6		Modoc	Mount Bidwell (4112082)	NRIS polys, Aug. 2022 (050900E_ERUMG006_53)	27-Aug-2003	20 individuals		Modoc NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
6	Warner Mts., along Modoc Co. Rd. 2 from near New Pine Creek to Fort Bidwell, 0.3 mi. W of Poison Lake turnoff.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CAS211331)	11-Aug-1978	on volcanic lava boulder strewn slope with Pinus and Abies.		Modoc NF	6300
6	Pine Creek, Warner Mts.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CAS211333)	Aug-1935	Flowering. Hot south rock slope.		Modoc NF	6400
6	Pine Creek, Warner Mts.	Modoc	Mount Bidwell (4112082)	CCH2, Mar. 2023 (CAS211330)	Aug-1935	Flowering. Hot south rock slope.		Modoc NF	6400
7	USFS ROAD 181 AT WILLOW CREEK, ABOUT 1 AIR MILE EAST OF JANES RESERVOIR.	Modoc	Beaver Mountain (4112086)	CNDDB, Mar. 2023 (EO 8)	15-Jul-2003	9 PLANTS OBSERVED IN 1997. 10 PLANTS OBSERVED IN 2003. ROCKY NW-FACING SLOPE ABOVE RIPARIAN AREA. ASSOCIATED W/ JUNIPERUS OCCIDENTALIS, CERCOCARPUS LEDIFOLIUS, AMELANCHIER UTAHENSIS, PRUNUS VIRGINIANA, PURSHIA TRIDENTATA, RIBES CERCEUM, POTENTILLA GRACILIS, LUPINUS ARGENTEUS, CAREX ROSSII, ETC.	GRAZING, TRAMPLING, AND TIMBER HARVEST.	Modoc NF	5000

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
7		Modoc	Beaver Mountain (4112086)	NRIS polys, Aug. 2022 (050900E_ERUMG001_55)	15-Jul-2003	10 individuals		Modoc NF	
7		Modoc	Beaver Mountain (4112086)	NRIS polys, Aug. 2022 (050900E_ERUMG001_55)	17-Jul-1997	10 individuals		Modoc NF	
8		Modoc	Ambrose Valley (4112027)	Green 2023 pers. comm.	30-Jun-2010	1 individual. Vegetative. Balsamorhiza sagitatta very common in meadow and a large plant overshadowed specimen.	Nonnative plants (Taeniatherum caput-medusae nearby)	Modoc NF	6300
8	MDF-ERUMG-008	Modoc	Ambrose Valley (4112027)	NRIS polys, Aug. 2022 (050900E_ERUMG008_54)	30-Jun-2010	1 individuals. Meadow; lots of Balsamorhiza sagittata (one overhanging plant).	Single plant looked fine.	Modoc NF	6300
9		Lassen	Emerson Peak (4112022)	Green 2023 pers. comm.	13-Oct-2010	Three individuals, all vegetative. Rocky slope coming off ridgeline dominated by Cercocarpus ledifolius.	Grazing and recreation	Modoc NF	7900
9	050900E_ERUMG009_53	Lassen	Emerson Peak (4112022)	NRIS polys, Aug. 2022 (050900E_ERUMG009_53)	13-Oct-2010	4 individuals. Rocky slope coming off ridgeline dominated by Cercocarpus ledifolius.	No disturbance evident in immediate vicinity of E.O.	Modoc NF	7900

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
	SNIKTAW CREEK WEST OF QUARTZ VALLEY, NORTHEAST OF BOULDER PEAK.	Siskiyou	Boulder Peak (4112351)	CNDDB, Mar. 2023 (EO 2)	1979	ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1979 COLLECTION BY CLIFTON (#14002 UNKNOWN HERB). SOURCE DOCUMENT GAVE LAT/LONG, WHICH WAS PRIMARY WAY THAT CNDDB MAPPED THIS OCCURRENCE.		Unknown	5700
	Modoc County	Modoc	Unknown	CCH2, Mar. 2023 (UC412866)	June/July				5500ft

Appendix 2: Additional Considerations at the Forest Level

<This section, including the next 5 subheadings, would be filled out by **Forest Service botanists**.>

<Forest Name>

Geographic distribution within the Forest

A. Scarce or isolated
B. Patchy or gaps
C. Contiguous

<Select a geographic distribution rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Abundance of the species on the Forest

A. Rare – current abundance is low enough that stochastic and other factors could lead to potential imperilment.
B. Uncommon – current abundance is large enough that demographic stochasticity is not likely to lead to rapid local extinction, but, in combination with highly variable environmental factors, could pose a threat.
C. Common – current abundance is large enough that species persistence is not threatened by demographic stochasticity in combination with environmental variation.
D. Insufficient information to draw inferences about criterion.

<Select a species abundance rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Population trend on the Forest

A. Significant downward or suspected downward population trend.
B. Stable population.
C. Upward population trend.
D. Insufficient information to draw inferences about criterion.

<Select a population trend rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Habitat trend on the Forest

A. Decline in habitat quality or quantity.
B. Stable amounts of suitable or potential habitat, relatively unchanged habitat quality.
C. Improving habitat quality or increasing amounts of suitable or potential habitat.
D. Insufficient information to draw inferences about criterion.

<Select a habitat trend rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Vulnerability of habitat on the Forest

A. Substantial modification of habitat has occurred or is anticipated with conditions departing from expectations based on NRV, and/or habitat is impacted by modern stressors such as drought, climate change, high intensity wildfire and wildfire suppression disturbances, loss of natural openings due to historical wildfire suppression, nonnative invasive species, water impoundments and diversions, and recreation, etc.
B. Habitat modification is likely to result in ecological patterns similar to the range of historical conditions, but is being impacted by modern stressors.
C. Habitat resilient, changes are similar in frequency and intensity to those expected from NRV, and modern stressors not significant.
D. Insufficient information to draw inferences about criterion.

<Select a habitat vulnerability rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Additional Forest specific information related to the SCC determination

<This section is provided for Forest botanists to add additional Forest specific information that is not captured in the section above, if necessary. Provide a narrative description here of the additional relevant information. State "No additional information" if this section is not used.>