Species: *Allium sanbornii* Alph. Wood var. *sanbornii*, Sanborn's onion

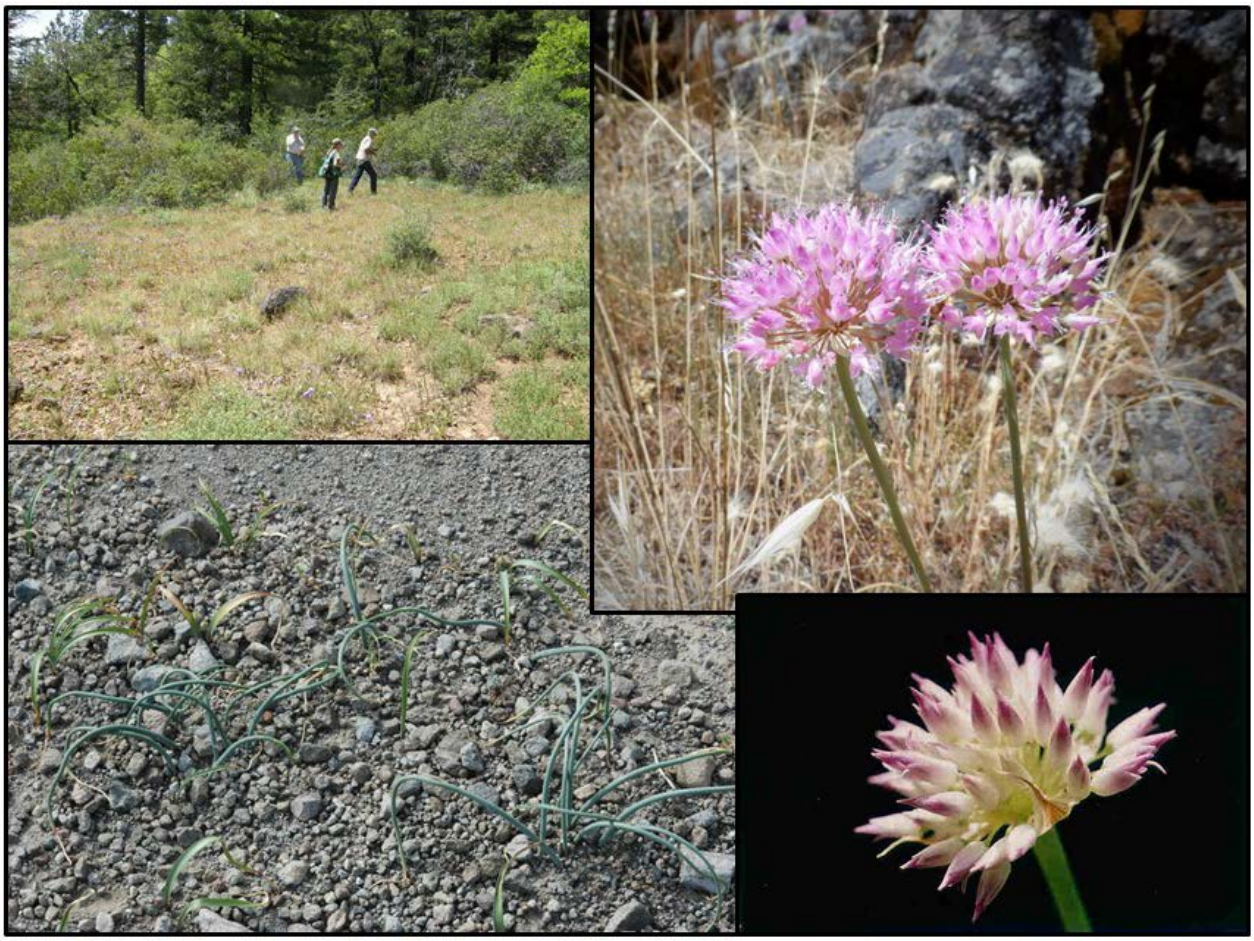


Photo Source: Calphotos 2022

Photo Credits: Top left and right: Sierra Pacific Industries (with permission); bottom left and right: Dean W. Taylor.

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 Sanborn's onion

Entity	Status	Status Definition
NatureServe CA[a]	G4T3T4 S3S4	G4: Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors. T: Subspecies and varieties receive a T-rank attached to the G-rank.

		T3: Vulnerable — At moderate risk of extinction or elimination due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors. T4: Apparently Secure — Uncommon but not rare; some cause for long-term concern due to declines or other factors. S3: Vulnerable — Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the nation or state/province. S4: Apparently Secure — Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors. Range Rank — A numeric range rank (i.e., T3T4, S3S4) is used to indicate the range of uncertainty about the exact status of this variety.
California Rare Plant Rank[b]	4.2	4: Plants of limited distribution – a watch list. 0.2: Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) This taxon was added to the *CNPS Inventory of Rare and Endangered Plants of California* in 1994 and has undergone no changes since 2001.
California State Listing[c]	Not listed	
USDA Forest Service[d]	Not listed	
USDI FWS[e]	Not listed	
USDI BLM[f]	Not listed	
NatureServe OR[g]	HP List 3 S: SNR	List 3: Species for which more information is needed before status can be determined, but that may be threatened or endangered in Oregon or throughout their range. SNR: State Rank not determined.
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 2022, 2022a]
[b] California Native Plant Society [CNPS 2022]
[c] California Department of Fish and Wildlife [CDFW 2022]
[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 2022]
[f] US Department of Interior Bureau of Land Management [BLM 2020]
[g] Oregon Biodiversity Information Center [ORBIC 2019]

[h] Oregon Department of Agriculture [ODA 2018]
[i] Nevada Natural Heritage Program [NNHP 2021]
[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.

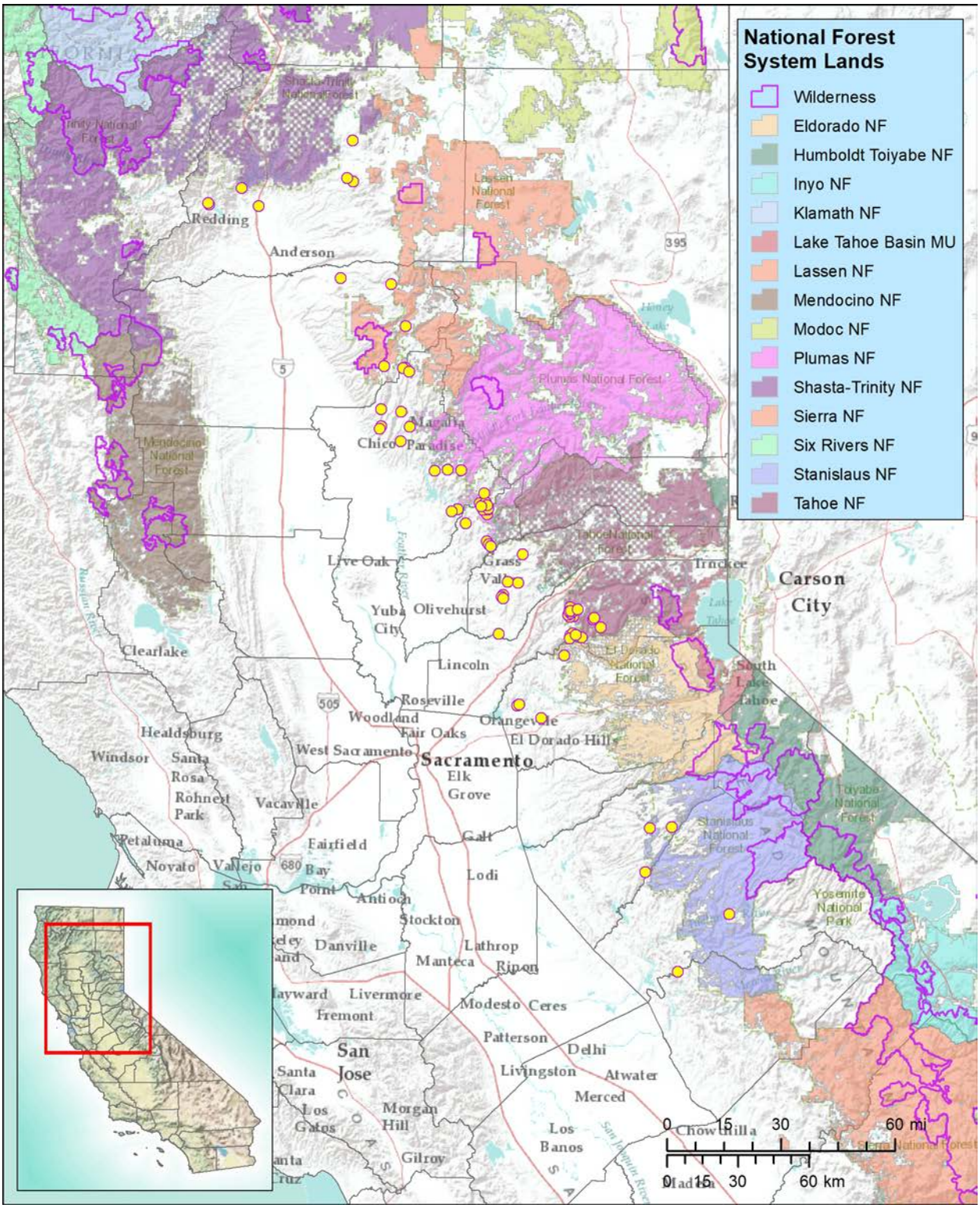
Distribution, abundance, and population trend on the planning unit[1]

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 Sanborn's onion 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
Lassen:	47	0	1	0	1	24-Jul-1997	1
Plumas:	1, 2, 7, 8, 52, 53, 54, 55, 56, 57, 58, 59, 60	0	13	11	2	9-May-2017	13
Tahoe:	27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 69	0	18	14	4	28-Jun-2019	18
Totals:	N/A	0	32	25	7	N/A	32

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



Sources: *Distribution*: NRIS 2020, Calflora 2022, CCH2 2022, Green 2022 pers. comm., Kierstead 2022 pers. comm. *Baselayers*: 2013 National Geographic Society, i-cubed, Esri, Garmin, NOAA, NPS, USGS.

Sanborn's onion is mainly confined to the Cascade/Sierra Nevada axis and southern Klamath Ranges of California with one disjunct location at Gold Hill in Jackson County, Oregon (CPNWH 2022). It is known from Butte, Calaveras, El Dorado, Mariposa, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne, and Yuba counties in the Klamath Ranges (KR), Cascade Range (CaRF, CaRH), and northern and central Sierra Nevada (n SNF, n SNH, c SNF, c SNH) bioregions (NRIS 2020, Calflora 2022, CCH2 2022, Green 2022 pers. comm., Kierstead 2022 pers. comm.). In California, Sanborn's onion likely has more than 100 distinct occurrences. We are including 73 location records in this distribution analysis (Table 4), which is largely based on data obtained from Calflora (2022), CCH2 (2022), and NRIS (2021). However, 143 unprocessed survey forms for Sanborn's onion have been submitted to the CNDDB (Green 2022 pers. comm.), some of which may report locations that duplicate those included in this analysis or be close enough geographically to be considered the same occurrence. As the emphasis of this account is to provide information on locations in California's northernmost National Forests, survey forms from Butte, Shasta, and Tehama counties were examined, and all of the locations reported were on private timberlands. If the locations from those counties were from quads not previously reported and based on flowering material that could be identified with certainty, we included them in this analysis.

Of the 73 location records included here, 31 are on National Forest lands: 13 on the Plumas NF, one on the Lassen NF, and 17 on the Tahoe NF. None of these locations are within Wilderness Areas. Of the remaining locations, five are on BLM lands, two are within the Whiskeytown-Shasta-Trinity National Recreation Area, one is on US Bureau of Reclamation land, one is within Bidwell Park (City of Chico), and one is managed by the Placer Land Trust. The remaining 32 locations are on private timberlands or on lands of unknown ownership. Twenty-four of the records are historical (not seen for over 20 years), while 49 are recent. Eighteen of the locations have been visited over a series of years, sometimes over as many as 40 years, indicating that the populations are persisting through time, and 38 locations have had their populations censused at least once. Two of the locations (record #s 26 and 30) were found to occupy a large area with many subpopulations that in total had between 5,000 and 10,000 plants, four locations (#s 2, 7, 28, and 57) had populations estimated at 10,000 or more plants, and four (#s 1, 27, 55, and 56) had between 1001 and 5000 plants. Populations at the other censused locations had 1000 or fewer plants, but only five had fewer than 50 individuals. Of the eight populations that have been censused over time, four appear to be stable or increasing in numbers, three are decreasing, and one could not be relocated during a second visit (record # 40). From these observations, it is difficult to make conclusions about long-term population trends.

At the bottom of Table 4, five location records are highlighted in pink and are not included in this distribution analysis. Three of these records could not be georeferenced and mapped with certainty. The other two are most likely *A. sanbornii* var. *congdonii*, either because the collection is cited as such in a taxonomic treatment (Denison and McNeal 1989) or because the location is very close to known and well-documented populations of var. *congdonii* (Denison and McNeal 1989, NRIS 2020, CCH2 2022).

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

Sanborn's onion is a perennial herb with a single flowering stem to 60 cm tall and one cylindric basal leaf approximately the same length as the stem; plants emerge during the growing season from underground bulbs. It flowers from (May–) June–August (–September) (FNA 1993+, NRIS 2020, CNPS 2022, CCH2 2022, JEPS 2022). Sanborn's onion occurs in gravelly openings in chaparral, cismontane woodland, and lower montane coniferous forest at 748–5,000 ft (CNPS 2022, CCH2 2022). Although some publications indicate that Sanborn's onion is mostly confined to or a strong indicator of serpentine soils (FNA 1993+, Safford and Miller 2020, JEPS 2022), botanists have observed this plant growing off serpentine soils on granitic, volcanic (breccia, andesite), and shale substrates, sometimes in deep clay (Taylor 2017 pers. comm., NRIS 2020, CCH2 2022, Green 2022 pers. comm., Kierstead 2022 pers. comm.). Associated species include: *Pinus ponderosa*, *P. sabiniana*, *Calocedrus decurrens*, *Hesperocyparis macnabiana*, *Quercus* spp., *Arctostaphylos* spp., *Ceanothus* spp., *Triteleia* spp., and other *Allium* spp. (NRIS 2020, CCH2 2022).

Allium is a genus of ca. 850 species found worldwide; Sanborn's onion belongs to the large subgenus *Amerallium*, which contains 120–140 species, with about two-thirds native to North America (Wheeler et al. 2013). Sanborn's onion has been placed in the *Allium sanbornii* alliance which contains approximately 20 taxa that have an ovary with six prominent crests and produce one single leaf per bulb that is terete in cross section (Wheeler et al. 2013). *Allium sanbornii* itself is divided into two varieties, var. *sanbornii* and var. *congdonii* (Congdon's onion, CRPR 4.3) (CNPS 2022, JEPS 2022). Sanborn's onion is separated from Congdon's onion based on the shape of the tepal tip (acute in Sanborn's vs acuminate/attenuate in Congdon's), anther color (usually yellow vs usually purple), and stigma (head-like to obscurely 3-lobed vs deeply 3-lobed) (FNA 1993+, Denison and McNeal 1989, JEPS 2022). Therefore, in areas where the two varieties overlap (Nevada County and south), accurate identification requires flowering material (Denison and McNeal 1989, NRIS 2020, CCH2 2022). However, even to the north of Nevada County, flowering material must be examined to ensure that plants with single, terete leaves are not *A. jepsonii*, another member of the *A. sanbornii* alliance which differs in always having white flowers with a deep pink midrib (vs white to pink flowers with darker midrib), all tepals of identical length (vs. inner tepals about 1.3 times longer than outer tepals), and stamens and style included in the perianth (vs exserted from the perianth) (Denison and McNeal 1989, Nakamura and Nelson 2001, FNA 1993+, JEPS 2022). In *Allium*, species identification often relies on characteristics of the underground structures and bulb coat cell patterns. In Sanborn's onion, the outer bulb coat is a closed membranous sheath, which is thought to have moisture retaining qualities (Wheeler et al. 2013). The inner bulb coat has indistinct quadrate cells in rows (Denison 1986, Denison and McNeal 1989).

Like all onions, Sanborn's onion bears its flowers in an umbellate inflorescence. The pollinators of Sanborn's onion are unknown. However, onions are known to be pollinated by bees, flies, and butterflies (CPC 2022). The fruits are capsules with small seeds that likely fall close to the parent

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

plant (FNA 1993+). Sanborn's onion also can reproduce asexually due to bulb fragmentation. This onion is thought to be a poor competitor and is found in locations where the vegetation is sparse (Denison 1986). In the greenhouse, Sanborn's onion grows well on a mixture of potting soil and sand, indicating it does not require specialized soil to thrive (Denison 1986). The terete leaf of Sanborn's onion is thought to be a drought adaptation, having a low surface-area-to-volume ratio compared to leaves of other shapes; in addition, terete onion leaves have a thick cuticle on the entire surface which reduces water loss (Mashayekhi and Columbus 2014). Bulb dormancy in Sanborn's onion is brought on by drought (Wheeler et al. 2013, Mashayekhi and Columbus 2014), and dormancy release is most likely brought on by initiation of late fall or winter rain (Phillips 2010). The leaves begin to wither at anthesis, and extreme drought could lead to reproductive failure; populations occurring on soils with higher clay content and water capacity may have a greater chance of successfully completing their growth cycle when water is scarce (Mashayekhi and Columbus 2014). The effects of fire on Sanborn's onion have not been studied, but this species was found post-fire at three locations (record #s 19, 26, and 42). Sanborn's onion may not recover from deep soil disturbance, such as road construction (NRIS 2020).

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

Sanborn's onion is a relatively well-documented California taxon, with population estimates available for over half of the locations included in this analysis (ten of which had more than 1000 individuals). In addition, two-thirds of the location records included here are recent, and there are many more recent occurrences documented in unprocessed survey forms (mostly from private timberlands). Only three of the records included here have an occurrence ranking, with two ranked Excellent, and one ranked Good (Green 2022 pers. comm.). Sanborn's onion occurs in areas with high human use and disturbance (Bainbridge 2017). Threats listed for Sanborn's onion include mining, timber harvest, road construction and maintenance, recreational trail use, target shooting, OHV use, non-native species, vegetation mastication, and residential development (NRIS 2020, Green 2022 pers. comm., Kierstead 2022 pers. comm.). In addition, its habitat is sometimes used for parking, staging vehicles and materials, and stacking of cut logs (Kierstead 2022 pers. comm.). The location record that occupies the largest area with numerous subpopulations (record #30 in Placer County) was surveyed in 2017 due to OHV trail work, and from the survey comments, many plants were near or within OHV trails (NRIS 2020).

Climate change and associated changes in temperature, precipitation patterns, and fire frequency may affect this species. Changes in temperature and rainfall patterns could affect seed germination and plant longevity and have adverse affects on pollinator services (Scaven and Rafferty 2013, Gremer et al. 2020). Because Sanborn's onion is a perennial geophyte that can reproduce asexually by bulb fragmentation, occurs at mid-elevations, has some adaptations to drought, and sometimes occurs on water-rich clay soils, it may be able to survive increasing temperatures and lower water availability in some parts of its range. There is evidence that the

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

underground bulbs can withstand moderate fire. However, wildfire activities and management could negatively affect this species, because firebreaks are often constructed by dozer lines in the open, rocky habitats favored by this plant (Kierstead 2022 pers. comm.). In addition to deep soil disturbance, this can lead to the introduction of non-native species which could out-compete Sanborn's onion. The seeds of Sanborn's onion have not yet been collected for *ex situ* conservation (CPC 2022).

Taxonomy[4]

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

Table 3. Name status of Sanborn's onion

Entity	Name Status
CNDDB and CNPS	*Allium sanbornii* A.W. Wood var. *sanbornii*
Jepson eFlora	*Allium sanbornii* Alph. Wood var. *sanbornii*
Jepson Manual (1993)	*Allium sanbornii* A.W. Wood var. *sanbornii*
Flora of North America	*Allium sanbornii* Alph. Wood var. *sanbornii*
USDA NRCS[a] PLANTS	*Allium sanbornii* Alph. Wood var. *sanbornii*

[a] Natural Resources Conservation Service [NRCS 2022]

Synonymy: There are no synonyms listed for this name (Tropicos 2022).

Jepson eFlora link (JEPS 2022): https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=53823

Type locality: California. Yuba County: Near Foster's Bar (*Sanborn s.n.*, NY) (Wood 1868, JSTOR 2022).

Key literature

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Phillips, N. 2010. Seed and bulb dormancy characteristics in New World *Allium* L. (Amaryllidaceae): A Review. *International Journal of Botany* 6: 228–234.

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Author(s) and Date:

Ellen A. Dean, California Native Plant Society, Associate Rare Plant Botanist, 12 April 2022

Reviewer(s) and Date:

Molly Wiebush, California Native Plant Society, Rare Plant Botanist Coordinator, 11 April 2022; Julie Ann Kierstead, USDA Forest Service Region 5, Ecosystem Planning, 11 April 2022; R. Douglas Stone, California Native Plant Society, Associate Rare Plant Botanist, 12 April 2022.

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 Sanborn's onion 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	Northern High Sierra Nevada. Plumas National Forest; east slope of Bloomer Hill, 1.0 km east-southeast of the top. T21N R05E S30 SE1/4 of NE1/4 USGS Quadrangle: Berry Creek 1:24,000	Butte	Berry Creek (3912164)	CCH2, Mar. 2022 (CHSC10 8168)	17-Aug-2011	Rock-garden-like opening in Ponderosa pine dominated mixed conifer forest, with old white-leaf manzanita, scattered blue oak, lots of open space around the manzanita; rocky soil, metamorphic substrate; gentle east-southeast facing slope. Common here; flow		Plumas NF	2335
1	Berry Creek DFPZ	Butte	Berry Creek (3912164)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 10)	17-Aug-2011	2715 individuals		Plumas NF	2335

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.)**
2	Northern High Sierra Nevada. Plumas National Forest; top edge of large northwest-facing granite outcrop near ridge top, overlooking Martin Creek; 1.6 air km northeast of Madrone Lake. T21N R05E S26 NE1/4 of NW1/4 USGS Quadrangle: Berry Creek 1:24,000	Butte	Berry Creek (3912164)	CCH2, Mar. 2022 (CHSC10 7294)	3-Aug-2011	Top edge of large northwest-facing granite outcrop near ridge top. Scattered groups of these plants on small flats of decomposed granite, almost mineral, soil; small and large openings in white-leaf manzanita scrub with scattered Ponderosa pine, incense cedar.		Plumas NF	2539
2	Berry Creek DFPZ	Butte	Berry Creek (3912164)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 09)	20-Jun-2011	13792 individuals		Plumas NF	2515
3	Maps to SE slope of Little Bald Rock	Butte	Brush Creek (3912163)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 03)	28-Jul-1994	100 individuals		Unknown	
3	NE of Oroville and S of Brush Creek; E of Little Bald Rock. T21N R06E S27	Butte	Brush Creek (3912163)	CCH2, Mar. 2022 (CHSC03 9056)	6-Aug-1983	On granite rock in openings of sparse forest of Pinus ponderosa; with Perideridia.		Unknown	3380

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3	On the south side of Bean Creek Road, about _ mile south-east of Little Bald Rock. T21N R06E S29 NE1/4	Butte	Brush Creek (3912163)	CCH2, Mar. 2022 (CHSC06 3486)	28-Jul-1994	Normal size plants, on dry open bare granite soil, around shrubs and trees. Uncommon, scattered. Flowers dark pink. Yellow Pine Forest.		Unknown	3000
3	ca. 1/2 mi. s.e. Little Bald Rock (s. side of Bean Creek Rd.)	Butte	Brush Creek (3912163)	CCH2, Mar. 2022 (JEPS878 58)	28-Jul-1994	on dry open bare granite soil; around shrubs & trees; Yellow Pine Forest. fls. dark pink.		Unknown	3000
3	ca. 1/2 mi. s.e. Little Bald Rock (s. side of Bean Creek Rd.)	Butte	Brush Creek (3912163)	CCH2, Mar. 2022 (JEPS878 57)	28-Jul-1994	on dry open bare granite soil; around shrubs & trees; Yellow Pine Forest. fls. dark pink.		Unknown	3000
4	Humboldt Rd. 0.6 miles east of Lomo.	Butte	Butte Meadows (4012115)	CCH2, Mar. 2022 (RSA 770549)	11-Jul-2009	Small population up to 40 individuals		Unknown	
4	Humboldt Rd. 0.6 mi e of Lomo. T25N R03E S11 center	Butte	Butte Meadows (4012115)	CCH2, Mar. 2022 (CHSC04 9479)	29-Jul-1987	Yellow Pine Forest. Scattered plants in loose, dry, rocky soil on an outcrop of Tuscan volcanics.		Unknown	4000
4	0.25 mi S of Tehama County line on Hwy 32. T25N R03E S11 [original georeferencing is in Section 11 in National Forest]	Butte	Butte Meadows (4012115)	CCH2, Mar. 2022 (CHSC03 3261)	11-Sep-1980	On mudflow/andesite bluffs, with Epilobium canum, E. brachycarpum, Eriogonum nudum, Potentilla glandulosa, in area of coniferous forest.		Unknown	3680

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5	NW part of county near Lomo (several miles NE of jct Hwy 32 and Humboldt Road to Butte Meadows). T25N R03E S01 [needs to be regeorefernced to 40.054851 -121.594806]	Butte	Butte Meadows (4012115)	CCH2, Mar. 2022 (CHSC03 6912)	24-Jul-1981	Andesitic outcrop of Carpenter Ridge in region of Montane forest; with Brickellia greenei, Monardella villosa sheltonii, Sitanion hystrix.		Unknown	4400
6	1 1/2 mi n Junction of Butte and Secret Creeks; Paynes Creek Quadrangle	Butte	Butte Meadows (4012115)	CCH2, Mar. 2022 (UC11338 34)	29-Jul-1936	e 60% slope; Veg Type: C Ap (SB). fls. very pink.		Unknown	4100
7	Approx 2.5 air miles northeast of Forbestown. From the intersection of Forbestown Road and the Challenge Cutoff Road take Forbestown Road east for approx 1.5 miles to Forest Road 20N29. take 20N29 northeast for approx 1.5 miles and park.	Butte	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 04)	14-Jun-2004	10000 individuals. Opening in dense brush on dry gravel serpentine soil. All plants were in vegetative stage. Flower buds were present, but none were open. Site is an opening in dense brush. The opening appears to be a man made clearing. A second visit was made on 12 July 26, 2004. The flowers were open on approx. 25% of the plants.		Plumas NF	2960

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8	From Challenge, continue on La Porte Rd. through Woodleaf, then in approximately 1 road mile, turn north on road 19N27. This road goes through private and there is a locked gate at the bottom which you are likely to need a PG&E or Soper-Wheeler key for in	Butte	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 13)	9-May-2017	130 individuals. Plants growing in open, rocky area surrounded by patchy white leaf manzanita dominated chaparral and mixed conifer-hardwood forest. A small, rocky, ephemeral drainage runs through this opening. Growing with Ahart buckwheat. 130 plants in approximately 400 square feet. Leaves only seen on first visit 5/9, revisited and seen in flower & fruit 7/25, ID confirmed by ED.		Plumas NF	2762
9	Fields Ridge, northerly rim South Fork Feather River canyon (ca. 3 air miles SE of Feather Falls mill site, ca. 19 miles E of Oroville)	Butte	Clipper Mills (3912152)	Calflora, Mar. 2022 (wb2209-20697)	3-Jul-2002	serpentine substrate, moderately closed chaparral of Arctostaphylos viscida, very stunted Quercus chrysolepis. plants were not yet in flower on this date; were collected and brought into flower ex situ.		Unknown	3229
9	Fields Ridge, northerly rim South Fork Feather River canyon (ca. 3 air miles SE of Feather Falls mill site, ca. 19 miles E of Oroville)	Butte	Clipper Mills (3912152)	Calflora, Mar. 2022 (wb2209-5244)	3-Jul-2002	serpentine substrate, moderately closed chaparral of Arctostaphylos viscida, very stunted Quercus chrysolepis. plants were not yet in flower on this date; were collected and brought into flower ex situ.		Unknown	3229

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
9	Fields Ridge, northerly rim South Fork Feather River canyon (ca. 3 air miles SE of Feather Falls mill site, ca. 19 miles E of Oroville)	Butte	Clipper Mills (3912152)	CCH2, Mar. 2022 (JEPS100231)	3-Jul-2002	serpentine substrate, moderately closed chaparral of Arctostaphylos viscida, very stunted Quercus chrysolepis. coords cont.: NE1/4 Section 29; USGS quad: Clipper Mills; plants were not yet in flower on this date; were collected and brought into flower ex situ.		Unknown	3200
10	[Maps to Musty Buck Ridge]	Butte	Cohasset (3912186)	CCH2, Mar. 2022 (BLMRD0014)	14-Jul-1995			Unknown	
11	On the west side of Forbestown Road, about 1/10 mile north of Black Bart Road, about 11 miles east of Oroville. T19N R06E S18 SE1/4	Butte	Forbestown (3912153)	CCH2, Mar. 2022 (CHSC106176)	27-Jul-2010	Foothill Woodland. Normal size plants, on dry rocky red soil. Common. Flowers pink.		Unknown	2434
11	West side of Forbestown Road, about 1/10 mile north of Black Bart Road, about 11 miles east of Oroville	Butte	Forbestown (3912153)	CCH2, Mar. 2022 (RSA767686)	27-Jul-2010	Foothill woodland. Normal sized plants on dry rocky red soil. Common, flowers pink..		Unknown	2434

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11	On the west side of Forbestown Road, about 1/10 mile north of Black Bart Road, about 11 miles east of Oroville	Butte	Forbestown (3912153)	CCH2, Mar. 2022 (JEPS117692)	27-Jul-2010	Foothill Woodland. Normal size plants, on dry rocky red soil. Common. Flowers pink.		Unknown	2434
12	[Maps on slopes on east side of Butte Creek drainage, along road to Indian Springs Mine, W of Paradise Lake, NW of Magalia.]	Butte	Paradise East (3912175)	Calflora, Mar 2022 (mg142204)	2-Jul-2021	11 to 50 plants		Unknown	
12	[Maps on slopes on east side of Butte Creek drainage, along road to Indian Springs Mine, W of Paradise Lake, NW of Magalia.]	Butte	Paradise East (3912175)	Calflora, Mar. 2022 (po3151)	8-Jul-2015	serpentine chaparral/rock outcrop		Unknown	2247
13	Magalia, just off the Skyway.	Butte	Paradise East (3912175)	CCH2, Mar. 2022 (CHSC025543)	20-Jul-1977	On serpentine rock and soil; assoc. with Brodiaea californica, Calycadenia polygoloides, Cupressus macnabiana, Pinus sabiniana.		Unknown	2200

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14	Sierra Nevada foothills, Big Chico Creek Ecological Reserve. On the east side flood plain of Big Chico Creek at southern end of reserve, approx. 300 ft north of Bidwell Park boundary. T23N R02E S26 NW1/4 of SE1/4 USGS Quadrangle: Paradise West 1:24,000	Butte	Paradise West (3912176)	CCH2, Mar. 2022 (CHSC08 4890)	3-Aug-2003	A narrow population approx 150 ft long, with widths ranging between 5 and 20 ft. On the east side of the flood plain of [creek]. Corolla color: light to dark pink.		Unknown	800
15	Sierra Nevada Range, west of Hwy 32 between Chico and Forest Ranch within Big Chico Creek Ecological Reserve (BCCER). Located along Big Chico Creek, E side, at S end of BCCER. 400 ft N of gated end of Bidwell Park. USGS Quadrangle: Paradise West 1:24,000	Butte	Paradise West (3912176)	CCH2, Mar. 2022 (CHSC08 9465)	18-Jul-2004	Growing on open sunny flood zone in sandy soil and old creek rocks.		Bidwell Park	748

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16	Near the edge of Forbestown Rd, ca. 1 mi e of Hurleton.	Butte	Rackerby (3912143)	CCH2, Mar. 2022 (CHSC03 1426)	29-Jul-1980	On bare dry rocky soil. Common. Corolla pink to dark pink.		Unknown	2297
16	Along the edge of Forbestown Road	Butte	Rackerby (3912143)	CCH2, Mar. 2022 (CAS:BO T:875375)	1980-07-00	Foothill Woodland. Perennial, scape 1-5 dm. tall. Normal size plants. Flowers pink to dark pink.		Unknown	
17	Table Mountain, ca. 3 air miles ESE of Murphys, on steep, northwest facing slopes at head Coyote Creek	Calaveras	Murphys (3812024)	Calflora, Mar. 2022 (xr167972)	5-Aug-1999	1+ individuals, very rare this site; few plants flower		Unknown	2697
17	Table Mountain, ca. 3 air miles ESE of Murphys, on steep, northwest facing slopes at head Coyote Creek	Calaveras	Murphys (3812024)	CCH2, Mar. 2022 (JEPS968 01)	5-Aug-1999	steep scree over gray tuff deposits, in sparse grassy sites in mixed woodland of Qurecus douglasii and patches of Adeonstoma chaparral. USGS quad: Murphys; very rare this site; few plants flower.		Unknown	2650
18	Summit Level Ridge (ca. 3 miles Northwest of White Pines)	Calaveras	Fort Mountain (3812034)	CCH2, Mar. 2022 (UC17551 91)	11-Jul-2002	open dry mud-flow breccia flat with sparse annual cover, bordered by conifer forest		Unknown	4200
18	Summit Level Ridge (ca. 3 miles Northwest of White Pines)	Calaveras	Fort Mountain (3812034)	Calflora, Mar. 2022 (xr167983)	11-Jul-2002	1+ individuals		Unknown	4278

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19	El Dorado County: BLM Pine Hill Preserve, Salmon Falls Unit.	El Dorado	Pilot Hill (3812171)	CCH2, Mar. 2022 (DAV182 783)	14-Jun-2005	It is in a more open area surrounded by dense chamise stands. The stand is dominated by Ceanothus roderickii with abundant Wyethia bolanderi. It was burned relatively recently.		BLM	1119
20	El Dorado County: BLM Pine Hill Preserve, Salmon Falls Unit, between the DFG and BLM Salmon Falls parcels.	El Dorado	Pilot Hill (3812171)	CCH2, Mar. 2022 (DAV182 782)	16-Jun-2005	The stand is located on the north side of an old dirt road.		BLM	902
21	El Dorado County: [Maps to slopes above Dry Creek, east of the town of Rescue]	El Dorado	Shingle Springs (3812068)	CCH2, Mar. 2022 (DAV175 138)	23-May-2007	Sandy/gravelly loose soil weathered from serpentine rock in sparse chaparral/foothill pine woodland. Also growing nearby on serpentine rock outcrop. Found only on north facing slopes at this location.		Unknown	1245
22	Hwy 49, 5.4 km north of bridge 40-7 over the Merced River. Upper road side	Mariposa	Groveland (3712072)	CCH2, Mar. 2022 (RSA7705 50)	18-May-2007	Associates: Allium amplectens, Allium sanbornii, Allium peninsulare		BLM	2175
22	6.3 mi from division of Hwy 120 and 49 (South 49), on west slope along the road, Mariposa/Tuolumne Co line	Mariposa	Groveland (3712072)	CCH2, Mar. 2022 (CAS:BOT-BC:132119)	25-May-2009	Associate species: Allium amplectens, Allium peninsulare.		BLM	

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22	6.3 miles from division of Hwy 120 and 49 (South 49), on west slope along the road.Mariposa/Tuolumne Co. line.	Mariposa	Groveland (3712072)	CCH2, Mar. 2022 (RSA770551)	25-May-2009	Associates: Allium peninsulare, Allium sanbornii		BLM	
23	Hells Half Acre just west of Grass Valley on Highway 20 at Ridge Rd.	Nevada	Grass Valley (3912121)	CCH2, Mar 2022 (CAS:BOT:875276, CAS:BOT:875327)	24-Jul-1971	Locally abundant in dry, rocky openings in chaparral.		Unknown	2600
23	Hell's Half Acre, junction of Marysville Highway and Ridge Road	Nevada	Grass Valley (3912121)	CCH2, Mar 2022 (CAS:BOT:917794)	16-Jul-1962			Unknown	2400
23	Nevada County: Hell's Half Acre, R and R Hwy and Ridge, GV.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (DAV184266)	22-Jul-1995	Vegetative Type: Chaparral. Soil: Iron Mountain.		Unknown	2600
23	Nevada County: Hell's Half Acre, R and R Hwy and Ridge, GV.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (DAV184265)	22-Jul-1995	Vegetative Type: Chaparral. Soil: Iron Mountain.		Unknown	2600
24	Sierra Nevada; Northern Sierra Nevada region, below McCourtney Road, 3.1 miles with its junction of Hwy 20 along the road.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (RSA770546)	11-Jul-2009	Associates: Allium sanbornii and Allium spp.		Unknown	2123

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24	Below McCourtney Road, 3 miles WSW of its jct with hwy 20 west in Grass Valley.	Nevada	Grass Valley (3912121)	CCH2, Mar 2022 (RSA 413108)	18-Jul-1985	Serpentine soil.		Unknown	
25	Bald Mountain; San Juan Ridge, northern Sierra Nevada	Nevada		CCH2, Mar 2022 (JEPS129 366)	12-Jul-2017	Flower color ranging from pale-pink to fuschia, apparently a function of age; fading with age. growing in understory of McNab cypress grove in gabbro soils on ridgetop.		BLM	3106
26	Forbes Creek. From ARRD drive 9.3 miles NE. Left (W) on SugarPine Road (NF-24), follow signs for Big Reservoir. Continue past Parker Flat Staging Area (2.3 miles). Continue till the junction road that goes to Big Reservoir, take the North Road (NF-24). Drive 800 feet,	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19HW)	24-May-2017	560 individuals. thick arvi stand in area that appears to have been burned. a few scattered trees. classic red rocky soil. Roadside population amongst ARVI	Along OHV trail	Tahoe NF	3944

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
26	Shirttail Creek. From ARRD drive NE on Foresthill Rd for 10.6 miles. Turn west on Sugar Pine Res Rd and continue 3.5 miles. Bear north on 24 Rd and continue 2.6 miles; turn southwest onto road 26-9. Continue for approx. 1 mile and look for a parking spot. EO is 500 feet t	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF02DW)	11-Jun-2019	50 individuals. SMC forest hillside fully covered in plant litter growing in serpentine soils. USGS soil type: RDE. 2019- Not flowering at time of survey. ID based on nearby occurrence and single cylindrical leaf.		Tahoe NF	3670
26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF02BW)	8-Jul-1993	500 individuals. Soil RDE, PIPO-HW. Ceanothus, Pines, Pseudotsuga, Clarkia, Scutellaria, Dichelostemma. 500+ plants, occasional to extremely dense, small patches, very healthy, all blooming.		Tahoe NF	3800

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26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSASTNF02AW)	28-Jul-2016	5000 individuals. Scattered and dried/seeded population amongst exposed serpentine outcrops. Sparse Pinus jeffreyi and Calocedrus decurrens overstory (there was previous thinning treatments). Allium sanbornii also found amongst Tritileia hycinthina. Soil RDE. Prior to 2016, this was part of multipart polygon for ALSASTNF02W; split into sub-EO in 2016 because separated from southern sub-EO by shirttail creek & a wide riparian area.	HC: sugar pine resevoir radial gate installation would inundate portion of EO RC: Trampling related to Joshua M. Hardt Memorial Trail and nearby campgrounds.	Tahoe NF	3700

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26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSASTNF02BW)	28-Jul-2016	1900 individuals. Soil RDE. 2016: split from ALSASTNF02W into ALSASTNF02BW b/c separated from other sub-EO by riparian area. Sub-EO data collated from two 2016 surveys: 6/20 for sunny south 7/28 for Sugar Pine reservoir. 2016:Allium sanbornii also found amongst Tritileia hycinthina- note they are easily confused. Species is extremely common in this portion of the Study Area; several subpopulations continue beyond Study Area. Likely several thousand individuals occur outside.	HC: Sugar pine resevoir radial gate installation may indiretly impact TH: adjacent to proposed units for sunny south	Tahoe NF	3800
26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSASTNF02CW)	22-Sep-2016	237 individuals. Soil type: RUE	TH: adjacent to Sunny South proposed thinning units	Tahoe NF	3860
26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSASTNF02AW)	15-Jun-1996	15 individuals		Tahoe NF	

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26	Shirttail Creek	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF02AW)	18-May-1998	115 individuals. Soil RDE. low density, scattered distribution, fair vigor.		Tahoe NF	3600
26	Forbes Creek. Main subpopulation occurs adjacent to Sugar Pine Reservoir at westernmost point of eastern shore. Smaller subpopulation is immediately east of Joshua M. Hardt Memorial Trail approximately 47m to the northeast of the main subpopulation. UTM: 10S 691058, 43	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19BW)	28-Jul-2016	215 individuals. Montane chaparral (MCP). Occurs in canopy openings in serpentine outcrops. Soil type: DUE--Dubakella very stony loam. 2016: 2 polygons; Northeastern poly 15 plts, SE poly 200 plts.	RC: rampling related to Joshua M. Hardt Memorial Trail. hc: majority of this EO will be subject to inundationdurin g sugar pine resevoir project	Tahoe NF	3720

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
26	Forbes Creek. From ARRD, head east on Forest hill Road. Left on Sugar Pine Road, continue for 3.6 miles. Take left on Hollow Logging road stay on for 1.3 miles. Hollow logging road intersects with an unnamed dirt road, the polygon is 500 ft north of the intersection,	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19GW)	21-Jun-2016	1000 individuals. 2016: This unevenly distributed population is shriveled and dry but otherwise appears healthy. south facing serpentine slope, it is close to Forbes creek and has mixed riparian influences. Soil type: DUE CHWR type: MHC (montane Hardwood-Conifer)	TH: Adjacent to sunny south thinning unit SP-13	Tahoe NF	3625
26	Forbes Creek. Sub-EO is approximately 100m upstream of bridge on north bank of Forbes Creek, on flat adjacent to creek and rocky slope above creek.	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19FW)	28-Jul-2016	Soil Type: Dubakella-Dubakella variant-Rock outcrop complex Sierran Mixed Conifer (SMC). Occurs in canopy openings. 2016: no plnt count b/c aggregated across several polys.	HC: subject to inundation during Sugar Pine Radial gate installation	Tahoe NF	3720

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
26	Forbes Creek. From the Nevada City SO. Head south on 49 towards Auburn for 24 miles. Take left on Bell road, follow for 2 miles. Take 80W onramp, continue for 0.2 miles. Exit Auburn Ravine road, continue on for 26 miles towards Forest Hill. Left on Sugar Pine Road, con	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19AW)	22-Jun-2016	South facing riparian openings in serpentine. All leaves dried out, stem seems healthy.		Tahoe NF	3625
26	Forbes Creek. UTM: 10S 692036, 4333620	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19DW)	22-Jun-2016	100 individuals. 2016: almost all in bud stage		Tahoe NF	

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26	Forbes Creek. EO begins at southeast corner of Sugar Pine Reservoir boat launch/day use parking lot just north of Sugar Pine Road. Subpopulations are scattered to northeast along unsanctioned trail and openings in canopy. Northernmost subpopulation occurs immediately s	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19EW)	27-Jul-2016	395 individuals. Soil type: Dubakella very stony loam Ponderosa Pine (PPN). Occurs in openings in canopy in gravelly serpentinite soil with little other groundcover. 2016: Species is vigorous and well-distributed in all subpopulations. Southeastern subpopulation co-occurs with Calystegia vanzuukiae.	RC: potential for trampling from foot traffic associated with apparently unsanctioned trail. HC: N poly may be inundated in sugar pine radial gate installation project	Tahoe NF	3800
26	Forbes Creek. 88) Directions to Site adjacent to the Joshua M. Hardt Memorial trail, beginning approximately 95m northwest of bridge over Forbes Creek (following trail). UTM 10S Easting: 691644 Northing: 4333860	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF19CW)	28-Jul-2016	Soil type: Dubakella-Dubakella variant-Rock outcrop complex. 2016: no plnt count b/c aggreated from polygons of 2 field visits. co-occures with PALA41 & CAVA	RC: Potential for trampling related to Joshua M. Hardt Memorial Trail.	Tahoe NF	

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26	Sugar Pine Biomass. park @ large trailhead on E/left side of road. Population begins at large gravel parking lot and extends west up ridge. Easting: 693100 Northing: 4333358 UTM Location Description: photo point	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF01BW)	11-Jun-2018	5000 individuals. Sparse PIPO overstory with ARVI dominated shrub fields. Many openings in shrubs. Soil: RDE. 2018- Not in flower. ID based on nearby occurrence. Plants continuous throughout polygon. Mostly found in openings between ARVI. Occurrence likely extends in suitable habitat to south and north not surveyed.	Borders OHV trail to the south and AETR found.	Tahoe NF	3850
26	Sugar Pine Biomass	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF01AW)	6-Jul-1993	100 individuals. Soil RDE, PIPO-HW veg. Moderate density, locally dense, excellent vigor.		Tahoe NF	3900
26	Parker Flat Loop 1 South	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF13W)	11-Jul-2011	100 individuals. Soil DUF. 100s of plants in bud and flower found near Forbes Creek. Scattered and clumped.		Tahoe NF	4000

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
26	Parker Flat Loop 1 South. From ARRD: Head east on Foresthill road, left on Sugar Pine Road. Continue for 5 miles. north fork of forbs creek.750ft N of confluence. The stand is an open generally south facing rocky slope. The two polygons are 400ft NW/SE from each other. UTM: 1	Placer	Dutch Flat (3912027)	NRIS polys, Nov. 2020 (ALSAST NF13W)	22-Jun-2016	1000 individuals. Soil DUF. Sierran Mixed Conifer surrounding thins out around serpentine outcroppings on the south side on an open sunny slope. 2016: did not revisit east polygon, only added new west poly; west poly in bud stage with desiccated leaves, only about 10% are in flower.	OV: OHV trails criss cross the slope	Tahoe NF	3688
26		Placer	Dutch Flat (3912027)	Calflora, Mar. 2022 (wb981-86)	11-Jul-2011	1+ individuals. 100s of plants found near Forbes Creek.		Tahoe NF	3813
26		Placer	Dutch Flat (3912027)	Calflora, Mar. 2022 (wb982-122)	6-Jul-1993	1+ individuals		Tahoe NF	3918
26		Placer	Dutch Flat (3912027)	Calflora, Mar. 2022 (wb981-65)	15-Jun-1996	1+ individuals		Tahoe NF	3616
26		Placer	Dutch Flat (3912027)	Calflora, Mar. 2022 (wb982-123)	8-Jul-1993	1+ individuals		Tahoe NF	3819

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
26		Placer	Dutch Flat (3912027)	Calflora, Mar. 2022 (wb983-53)	-	1+ individuals		Tahoe NF	3635
27		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb983-18)	6-Jul-2011	2011-Hundreds of widely scattered clumped and individuals.		Tahoe NF	3192
27	Sage Hill. Take Foresthill Divide Road to the Michigan Bluff Road. Follow the Michigan Bluff road for 1.3 miles and turn right (sharp turn) onto Gonnan Ranch road. Tum right at sign to Western States Trail. Follow trail until you see the flagging.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05DW)	6-Jul-2011	461 individuals. Veg CB-MB, soil ISF. Hundreds of widely scattered clumps and individuals. 2011-Hundreds of widely scattered clumped and individuals. Record imported from multipart polygon ALSASTNF05W to ALSASTNF05DW on 11/29/2018. Plant count reduced proportionately to acres reduced.	1.Illegal side spurs from road creating ruts - see picture. 2.The entire area was masticated, pile burned, and planted to conifers in 206-2008 under the Mad Skunk or Gorman Ranch decision memos. 3.Weed infestation is a threat. About 5 immature yellow star	Tahoe NF	3100
27	Sage Hill	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05DW)	17-Jun-2013	1000 individuals. Veg CB-MB, DB-MX, soil DUE, DUF, ISF.		Tahoe NF	3125

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
27	Sage Hill. From ARRD: drive NE on Foresthill Divide Rd for 5.75 mi. Turn SE/right on Michigan Bluff Rd, continue for 1.35mi. Turn W/right onto 3004-6 rd, continue for 0.87 mi. Turn SW/right onto 3001-8 Rd, continue for 0.12 mi, then park in large space on south side	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05DW)	28-Jun-2018	1500 individuals. Scrub oak and ARVI dominated midstory sparse PIAT and PIPO plantation overstory. Rocky gravelly slope with small open areas. Serpentine chaparal. Plants in dense patches and scattered throughout area. Found in open area of past hand cut/pile treatment. 2018-1500 estimated plants. Plants ID by stigma entire and stamens exserted. Visited on 5/7, 5/16, 6/21, 6/28, 7/9, 7/10 2013-1000 estimated plants. 2011- 500 estimated plants; Hundreds of widely scattered clumps and individuals. 2010-1000 estimated plants.	In Buckeye timber/fuels unit, WST & general OHV use in general area.	Tahoe NF	3205
27	Sage Hill	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05DW)	23-May-2000	1000 individuals. Veg CB-MB, DB-MX, soil DUE, DUF, ISF. Thousands of plants, very dense to scattered, in open serpentine, vigor moderate.		Tahoe NF	3125

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
27	Sage Hill	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05DW)	12-Jul-2010	1000 individuals. Veg CB-MB, DB-MX, soil DUE, DUF, ISF. 2010-1,000 plus plants found. good vigor, medium density, widely distributed in loose clumps	Some occurrences in road.	Tahoe NF	3125
27		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb980-26)	12-Jul-2010	2010-1,000 plus plants found.		Tahoe NF	2946
27		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb982-111)	23-May-2000	1+ individuals		Tahoe NF	3124
28	Sage Hill. From ARRD: drive NE on Foresthill Divide Rd for 5.75 mi. Turn SE/right on Michigan Bluff Rd, continue for 1.35 mi. Turn W/right onto 3004-6 rd, continue for 0.87 mi. Turn SW/right onto 3001-8 Rd, continue for 0.12 mi, then park in large space on south si	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05AW)	28-Jun-2018	12000 individuals. Scrub oak and ARVI dominated midstory sparse PIAT and PIPO plantation overstory. Rocky gravelly slope with small open areas. Serpentine chaparal. Plants in dense patches. 2018-estimated 12,000 plants; Plants ID by stigma entire and stamens exserted Visited on 5/7, 5/16, 6/21, 6/28, 7/9, 7/10 2013-1000 estimated plants. 2011- 500 estimated plants; Hundreds of widely scattered clumps and individuals. 2010-1000 estimated plants and scattered throughout area. Found in open area of handcut/pile treatment.	In buckeye timber/fuels unit. Active mining in area. Active mining claim through EO, including shafts, access route & test digs within EO; OHV use along road 3001-08; non-motorized use along nearby WST. EO is fenced along W edge.	Tahoe NF	3300

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
28	Sage Hill. From ARRD: drive NE on Foresthill Divide Rd for 5.75 mi. Turn SE/right on Michigan Bluff Rd, continue for 1.35 mi. Turn W/right onto 3004-6 rd, continue for 0.87 mi. Turn SW/right onto 3001-8 Rd, continue for 0.12 mi, then park in large space on south sid	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05BW)	9-Jul-2018	390 individuals. Ultramafic soils and exposed rocky soils in sparse mixed pine (PIAT & PIPO) and ARVI. Plants in multiple small patches. 2018-390 actual plants.	ELCA13 <2000 ft N of EO, but none in EO; CHJU in vicinity but none in EO	Tahoe NF	3370
28	Sage Hill. From ARRD: drive NE on Foresthill Divide Rd for 5.75 mi. Turn SE/right on Michigan Bluff Rd, continue for 1.35 mi. Turn W/right onto 3004-6 rd, continue for 0.87 mi. Turn SW/right onto 3001-8 Rd, continue 0.12 mi, then park in large space on south side o	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05CW)	7-May-2018	4000 individuals. Serpentine dominated by PIAT QUDU ARVI. Growing in seepy wet rocky opening. 2018-400 estimated plants. Plants ID by stigma entire and stamens exserted. Visited on 5/7, 5/16, 6/21, 6/28, 7/9, 7/10 2013-1000 estimated plants. 2011- 500 estimated plants; Hundreds of widely scattered clumps and individuals. 2010-1000 estimated plants.	Non-native species, see next section. Evidence of shooting range, and car tracks to site.	Tahoe NF	3375

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
28	Sage Hill	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF05AW)	6-Jul-2011	39 individuals. Veg CB-MB, soil ISF. 2011-Hundreds of widely scattered clumped and individuals.		Tahoe NF	3100
29	[Maps to Lady's Canyon]	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb982-55)	27-Jun-1996	1+ individuals		Tahoe NF	2569
29	Lady's Canyon	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF04W)	27-Jun-1996	20 individuals. Edge of road.		Tahoe NF	
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for about 2 miles. We parked where Finning Mill meets NF-1	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11DW)	15-May-2017	137 individuals. MCP with scattered PIPO. Occurrence on flat open break between thick ARVI stand. Survey contained to OHV trail, there is probably more in surrounding areas. On reroute. Flagged. This particular pop inhabits an area of 4X6 ft 2017: 137	On reroute. flagged	Tahoe NF	3800

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 2 mi. OHV Trail 4 begins approx. 0.45 mi S of the NF-	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11JW)	15-May-2017	130 individuals. Plants are in open SMC. Canopy is of sparse (20%) CADE27, PSME, and PIPO. Shrub layer is fairly dense ARVI4. Plants are on clay soil with scattered serpentine rocks, in a thin layer of conifer duff. 2017: Plts are not flowering, but are identifiable by onion smell and circular stem. Plants were only mapped within & adjacent to the survey area; EO could extent N.	Disturbance from OHV use is occurring directly adjacent to the EO, but there is no direct apparent/visible impact to the plants	Tahoe NF	3479
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 2 mi. OHV Trail 4 begins approx. 0.45 mi S of the NF-	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11IW)	15-May-2017	2000 individuals. Plants are in open SMC, although canopy cover is more dense in streamside habitat. Canopy is of sparse (10%) CADE27, PSME, and PIPO; it looks as though there may have been a past clearcut. Shrub layer is patchy dense ARVI4. Plants are on clay soil. Plts are not flowering, but are identifiable by circular leaves an onion smell. Plants are in open, sunny areas of bare soil. Some plants have a flowering stalk developing	Disturbance from OHV use is occurring directly adjacent to the EO, but there is no direct apparent/visible impact to the plants	Tahoe NF	3479

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for about 2 miles until NF-10 road splits (692917, 4329616)	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11GW)	15-May-2017	20 individuals. 10 plants on each side of trail		Tahoe NF	3560
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for about 2 miles until the road splits splits (692917, 43	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11QW)	11-May-2017	32 individuals. smc with adjacent water stream.	None	Tahoe NF	3800

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for about 2 miles until NF-10 road splits (692917, 4329616)	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11HW)	11-May-2017	623 individuals. Riparian influenced SMC. Both found on OHV trailside and in a flat, open, break from ARVI stand. ALSAS is well dispersed in direct sunlight and intermittent with shrub cover. It is not yet flowering.		Tahoe NF	3800

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 2 mi. OHV Trail 4 begins approx. 0.45 mi S of the NF-	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11FW)	15-May-2017	415 individuals. Plants are in open SMC approx 20 ft E of a stream. There is no riparian veg along the stream at this location. Canopy is of sparse (10%) CADE27, PSME, and PIPO; it looks as though there may have been a past clearcut. Shrub layer is fairly dense ARVI4. S poly: Plts are between the trail (E) and the creek (W), along a small area of previous soil disturbance. NW poly: 258 plants on the slope above E side of trail, flagged, UTM 693213 4329863. Plants were vegetative, but identifiable by circular stem.	An OHV trail is immediately adjacent, but there's no apparent direct disturbance from OHV travel. At the S poly there was once an old trail down to creek, since closed. Occurrence was flagged. Buffer from UTM provided. Plants were only mapped around OHV trail, occurrence may extend into surrounding habitat	Tahoe NF	3479

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 2 miles. OHV Trail 4 begins approx. 0.45 mi S of the	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11EW)	16-May-2017	126 individuals. Plants are in open SMC. Canopy is of sparse (10%) CADE27, PSME, and PIPO. Shrub layer patchy. Plants are on clay soil with scattered serpentine rocks. At the EO there is a thin layer of conifer duff and pieces of wood. N poly: Plts are in an open area. Plants are directly east of the OHV trail. Most plants (75) are in the linear polygon along the road, a few are in the open are to the north. Plants were vegetative, but identifiable by circular stem and onion smell. Easter poly n=75; SE poly n=34.	An OHV trail is immediately adjacent, but no apparent direct disturbance from OHV travel is occurring to the plants. 2017: Occurrence was flagged. Plants were only mapped within the survey area; population was not mapped in its entirety	Tahoe NF	3590

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 2 miles. OHV Trail 4 begins approx. 0.45 mi S of the	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11CW)	16-May-2017	1660 individuals. Plants were only mapped within the survey area; eg population was not mapped in its entirety. Plants are within open, uneven-aged SMC, 0-20 ft west of the OHV trail. Canopy is patchy (10-30% PIPO, PSME, CADE27) and the S poly is in an open, seasonally moist area. Shrub layer is sparse to dense (ARVI4). Plants are on clay soil. N poly: cover <1%. 250 plts. N middle: 300 plts at 693163, 4330283. S middle: 110 plants at 693172 4330269, flagged, plts are N of a small crk, both sides of trail. S poly: Approx 1000 plants observed. Plants were vegetative, but identifiable by circular leaf.	An OHV trail is immediately adjacent, but no apparent direct disturbance from OHV travel is occurring to the plants. Occurrence was flagged.	Tahoe NF	3562

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for 1.5 miles until it splits to the NE, park and walk NE o	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11KW)	11-May-2017	500 individuals. red rocky soil outcrop in clearing of thick ARVI stand interspersed with UMCA. Scattered vegetative population in an open pipo/arvi/eriodictyon stand with rocky soil.	directly on ohv reroute fagging	Tahoe NF	4000
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for about 2 miles. We parked where Finning Mill meets NF-1	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11BW)	16-May-2017	339 individuals. ALSAS is present throughout the openings. Population found in flat open break between thick ARVI stand. This population is likely larger than mapped, survey contained to OHV trail. 2017: Southern poly n=82; northern poly n=257		Tahoe NF	3700

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for 1.5 miles until it splits to the NE, park and walk NE	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11RW)	11-May-2017	52 individuals. red rocky soil outcrop in clearing of thick ARVI stand interspersed with UMCA. In opening of arvi stand. Patch: 50 SE X 25 NE		Tahoe NF	4000
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for about 2 miles. We parked where Finning Mill meets NF-10	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11OW)	16-May-2017	32 individuals. mcp with scattered pipo. on flat open break between thick ARVI stand. i am keeping mostly to ohv trail, there is probably more alsas. it might be a good revisit place. This particular pop inhabits an area of 20x10 ft. Patch size: 40 x 40ft		Tahoe NF	3700

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for 1.5 miles until it splits to the NE, park and walk NE o	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSASTNF11MW)	11-May-2017	red rocky soil outcrop on border of very tnhick avi stand. area mu ch smaller regrowth of arvi with much dead growth around. young pipos and lots of eriodictyon. Scattered vegetative population in an open pipo/arvi/eriodictyon stand with rocky soil. Patch size: 15' X 15'		Tahoe NF	3932

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for 2 mi. OHV Trail 4 begins approx 0.45 mi S of the NF-10	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11NW)	11-May-2017	280 individuals. Plts are in an open area adjacent to an OHV trail and the road. The EO is on the edge of SMC forest with a canopy of CADE27, PSME, and PIPO. Understory and shrub layer is medium, with PIPO and ARVI4. Plants are on clay soil with scattered serpentine. Per RMD, this is the only circular stemmed Allium possible in this area. W poly: 10 by 10 ft, 200 plts. E poly: 5 ft by 20 ft, 80 plts. Plants are not flowering, but are identifiable by onion smell and circular stem. Cover is less than one percent.	Signs of recent disturbance from road maintenance at W poly; a tree stump was uprooted and put at the edge of the patch	Tahoe NF	3640

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road for about 2 miles. We parked where Finning Mill meets NF-1	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11PW)	16-May-2017	28 individuals. historic arvi stand, lots of litter. younger looking smc. red soil. on flat open break between thick ARVI stand. Survey kept mostly to ohv trail, there is probably more ALSAS. This particular pop inhabits an area of 20x10 ft.	On OHV trail	Tahoe NF	3700
30	Brimstone Road. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10), continue on NF-10 road for 1.5 miles until it splits to the NE, park and walk NE o	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11LW)	11-May-2017	131 individuals. red rocky soil outcrop in clearing of thick ARVI stand interspersed with UMCA. Vegetative population found in open breaks in ARVI thicket.	Near proposed OHV route	Tahoe NF	4000

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
30	Brimstone Road	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11AW)	26-Jul-2011	100 individuals. Veg MX-CB, soil DUE. 100s located in masticated unit and area heavily used by the public, scattered and clumped		Tahoe NF	3700
30	Brimstone Road. From ARRD, drive N on Foresthill Road 11 mi, turn west (left) on Sugarpine Road for 2.5 miles to junction with road 10-12. Turn right onto Road 24. Polygon is 750' north on Road 24, along east edge of road.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF11AW)	16-Aug-2016	500 individuals. Veg MX-CB soil: DUE. 2016: only partial revisit of south poly; north poly 100 plts.		Tahoe NF	3700
30		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb982-96)	26-Jul-2011	100s of plants found in masticated unit and heavily used area by public.		Tahoe NF	3839

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
31	Finning Mill Rd & Cottage Home Ck. From the ARRD, travel northeast on Foresthill Divide Rd. for 5.1 mi; turn north (left) on Finning Mill Rd., travel for 4.7 mi to the intersection with 3127-8 (Cottage Home Creek), plants are on both sides of rd.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF20W)	9-Aug-2018	60 individuals. roadside opening in open smc forest on red serpentine soil. 2018- 60 plants. ID based on single cylindrical leaf that is persistent with flower, sub-id determined from nearby EOs, too late to determine. Plants continue east on PVT property.	popular ohv recreation area, some plants on road bank	Tahoe NF	3645
32	Italian Bowl	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF09W)	11-Jun-2009	500 individuals. Veg MX-CB, soil ISE, DUE. 2009-500+ plants found along road. All plants were in bud, not full flower, each appeared to stem from single bulb, with some clumps more dense than others indicating reproduction by bulbs. Sparse, random in rocky areas.		Tahoe NF	3610
32		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb981-116)	11-Jun-2009	2009-500+ plants found along road.		Tahoe NF	3586
33	Near Finning Mill Road and Marall Chrome Mine.	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb982-100)	11-Jun-2009	100s of plants		Tahoe NF	3685

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
33	Finning Mill	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF12AW)	11-Jun-2009	100 individuals. Soil RDG. 100s of plants in bud and flower, scattered and clumped. 100s of plants near Finning Mill Road and Marall Chrome Mine.		Tahoe NF	4000
33	[maps to along Finning Mill Road, E of Shirttail Canyon]	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (gp16854)	20-Jun-2019	11 - 50 individuals Growing on serpentine outcrops.		Tahoe NF	3665
33	[maps to along Finning Mill Road, E of Shirttail Canyon]	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (gp16856)	20-Jun-2019	51 - 100 individuals. Growing on serpentine outcrops.		Tahoe NF	3662
33	Finning Mill. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road to Finning Mill Rd (CR 3127). Turn W onto 3127 and contin	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF12BW)	17-May-2017	53 individuals. Gently sloping SMC with prominent serpentine outcrops. lots of young cedar. intermittent ARVI shrub layers. Population running along road 25 ft, spans both sides: 5 ft to the NE, 45 to the SW. ALSAS grows in denser clusters without litter layer.		Tahoe NF	3625
34		Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb981-24)	13-Jun-2001	1+ individuals		Tahoe NF	3458

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
34	Loop 4	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF06AW)	13-Jun-2001	950 individuals. Veg MZ-B, MX-CB, soil RDE. Medium to high density, in rocky openings in low brush, good vigor.		Tahoe NF	3700
34	Loop 4. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road. Turn S onto Finning Mill Rd and continue for 0.25 miles.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF06BW)	17-May-2017	83 individuals. This is a very rocky area with scattered PIPO and ARVI, There are thin soils with diminutive herb layer. This is just uphill from ephemeral stream. Soil Type (USGS): RDE. Scattered plants in three suboccurrences. Northern poly is a discrete population on slope just rising from OHV trail loop 4. The most S poly is growing out of a prominent rock outcrop. Northern poly, n=56; Middle poly, n=10; southern poly n=7	EO is along a route proposed for decomission	Tahoe NF	3499
34	Road 4140-006. From ARRD: head east on Foresthill Road & turn left on Finning rd., continue for 2.6 miles left on unnamed road. Site is 0.1 miles after taking a slight left after crossing a creek.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF18W)	6-Jul-2016	346 individuals. Soil: ISF (Forbes-Dubakella complex, 30-50% slope) Sierran Mixed conifer forest thins into an Arctostaphylos viscida shrubland alliance, the ALSA is more likely found in sunny spots. All leaves dried out, most past flowering		Tahoe NF	3520

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
34	Loop 4. From ARRD drive NE on Foresthill road for 9 miles. Take left (w)on to Sugarpine road, follow for 3.6 miles. At intersection take left (SW) to stay on Sugar Pine Rd (NF-10)), continue on NF-10 road. Turn S onto Finning Mill Rd and continue for 0.25 miles.	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF06CW)	17-May-2017	112 individuals. Characteristic serpentine area with younger PIPO and more robust ARVI cover. Thriving herbaceous cover lots of ELEL5. There is also more needle litter than usual for an ALSAS occurrence. Soil Type (USGS): RDE. Population growing in very rocky classic serpentine	EO is along a proposed route that may or may not be constructed	Tahoe NF	3587
34	Growing on serpentine outcrops.	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (gp16861)	20-Jun-2019	11 - 50 individuals		Tahoe NF	3563
35	Brimstone Staging Area	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF07AW)	15-Jun-2001	700 individuals. Veg MZ-B, PL-MZ, MX-CR, soil DUE, RDE, ISE. Patchy, widespread and vigorous.		Tahoe NF	3800
35	[maps to just south of Sugar Pine OHV staging area]	Placer	Foresthill (3912017)	Calflora, Mar. 2022 (wb980-7)	15-Jun-2001	1+ individuals		Tahoe NF	3724

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
36	Brimstone Staging Area. From ARRD, drive 10.7 miles NE on Foresthill Divide Rd. Turn W onto Sugar Pine Rd (FS-10) and drive 3.6 miles. Park in the vicinity of UTM E 692411, N 4333005 on Sugar Pine Rd (FS-10) and walk 1093 ft SSW to the occurrence. This EO is along a proposed r	Placer	Foresthill (3912017)	NRIS polys, Nov. 2020 (ALSAST NF07BW)	17-May-2017	110 individuals. The EO is within an uneven aged PIPO plantation (approx 5 to 20 in DBH), with scattered CADE. Shrub layer has about 20% cover and is dominated by RHCAT and ERCA. The EO is in an opening with serpentine outcrops. The area appears to have been masticated. Plants are distributed evenly throughout the polygon, but density is low. Plants occur in bare soil or a thin layer of duff. Cover is less than 1%. Approx 50% of stems have buds developing S poly: Patch at UTM 692393, 4332633, 10 ft N of flagline.	The stand has been masticated within the last 5 to 10 years, but there are no apparent/visible signs of current direct disturbance at the EO	Tahoe NF	3682
37	Placer County: Placer Land Trust Shutamul Parcel, along the Bear River.	Placer	Lake Combie (3912111)	CCH2, Mar. 2022 (DAV182 784)	27-Jun-2006	This stand is growing on a relatively-flat rocky outcrop. High river levels probably flood this area with fair frequency. The vegetation is dominated by sparse cover of Cercocarpus betuloides with a diverse herbaceous layer containing many native grasses		Placer Land Trust, Bear River Watershed	1001

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38	[Maps to Mosquito Ridge Rd just south of bridge]	Placer	Michigan Bluff (3912016)	Calflora, Mar. 2022 (wb982-141)	2-Jun-2011	2011-About 200 plants found.		Tahoe NF	1404
38	Circle Bridge	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF10W)	2-Jun-2011	200 individuals. Veg=LO-G, Soil=DEG. Vigor good, clumbed distribution. 2011-About 200 plants found.		Tahoe NF	2600
38	Circle Bridge	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF10W)	14-May-2014	150 individuals. Veg=LO-G, Soil=DEG.		Tahoe NF	2600

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
39	Washburn Mine. From ARRD drive NE on Foresthill Rd for 5.7 miles; turn S (right) onto Michigan Bluff Rd. After 2.13 miles, turn right (W) onto Chicken Hawk Rd.; after 1.3 miles turn south (right) onto Gorman Ranch Rd (road 3002). Park at a pullout in roughly 0.6 miles,	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF21W)	23-May-2019	100 individuals. From ARRD drive NE on Foresthill Rd for 5.7 miles; turn S (right) onto Michigan Bluff Rd. After 2.13 miles, turn right (W) onto Chicken Hawk Rd.; after 1.3 miles turn south (right) onto Gorman Ranch Rd (road 3002). Park at a pullout in roughly 0.6 miles. 2019- Identified by single cylindrical leaf, growing in shallow soils. EO found in granitic rocky forest openings of gabbro soils in between moist meadow-like areas.No photos taken of plants and comments regarding identification of variety not given.		Tahoe NF	3146

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40	FH Manual Release. From the ARRD office, travel northeast on Foresthill Rd. for 1.2 mi., turn right (east) on Mosquito Ridge Rd. and travel for ~ 21 mi. Park and hike east ~ 0.14 mi. to reach site.	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF08W)	17-Jun-2019	Veg MZ-B0, soil HUG5. 2019-Original data were collected on 6/4/2002; 2002 data form does not have images of area. 2019 revisit indicates that spatial data from 2002 is most likely inaccurate because examiners did not detect habitat for ALSAS at this site. More suitable habitat. 2019- Not suitable habitat for ALSAS, likely spatial data is inaccurate or plants were identified incorrectly from the 2002 survey. 2002- 2 plants.		Tahoe NF	4400
40	FH Manual Release	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF08W)	4-Jun-2002	2 individuals. Veg MZ-B0, soil HUG5. sparse, random, medium vigor.		Tahoe NF	4400
40		Placer	Michigan Bluff (3912016)	Calflora, Mar. 2022 (wb983-16)	4-Jun-2002	1+ individuals		Tahoe NF	4518
41	Codfish Loop 6	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF17W)	15-Jun-2014	1000 individuals		Tahoe NF	

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42	Devils Thumb. From ARRD, head northeast on Foresthill Rd for 17.74 miles. Turn south onto Deadwood Rd and continue 6 miles .Turn east on 6149-26 Rd Deadwood cutoff following signs for Devils Basin and Western States Trail. Park at Western States Trailhead. Walk east on	Placer	Michigan Bluff (3912016)	NRIS polys, Nov. 2020 (ALSAST NF22W)	28-Jun-2019	1000 individuals. Forest previously burned. Dominated by mixed conifer, live oak, Ceanothus sp., Arctostaphylos sp.Soil CTG. 2019: ID characteristics: Single cylindrical leaf and pink flowered Allium. Potential suitable habitat surrounding occurrence was surveyed, no plants found.	Western States Trail occurs along the north and east sides of the EO, but no disturbance to the plants can be seen by the trail.	Tahoe NF	3906
43	Big Reservoir	Placer	Westville (3912026)	NRIS polys, Nov. 2020 (ALSAST NF03W)	20-May-1994	100 individuals. Veg PL-DB, Soil CSE-5. Low density, scattered, good vigor.		Tahoe NF	4200
43	[Maps along Forbes Creek near Snow Bird Mine]	Placer	Westville (3912026)	Calflora, Mar. 2022 (wb981-7)	20-May-1994	1+ individuals		Tahoe NF	4036
44	South Shore Drive, just west of the Boulder Creek Trail	Shasta	Whiskeytown (4012265)	Calflora, Mar. 2022 (po3114)	10-Jul-2015	20 individuals. Dry chaparral (whiteleaf manzanita, chamise, and creeping sage).		Whiskeytown-Shasta-Trinity NRA	1293
45	Next to NPS offices and along a utility road off of Bull Gulch.	Shasta	Whiskeytown (4012265)	Calflora, Mar. 2022 (po3115)	10-Jul-2015	101 - 1000 individuals		Whiskeytown-Shasta-Trinity NRA	1352

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46	Deer Creek watershed, along Ponderosa Way 0.2 road miles N of Lassen National Forest boundary sign; Lassen National Forest	Tehama	Devils Parade Ground (4012116)	Calflora, Mar. 2022 (xr168718)	24-Jul-1997	1+ individuals		Lassen NF	3419
46	Deer Creek watershed, along Ponderosa Way 0.2 road miles N of Lassen National Forest boundary sign; Lassen National Forest	Tehama	Devils Parade Ground (4012116)	CCH2, Mar. 2022 (JEPS96563)	24-Jul-1997	breccia rock outcrop lacking dense woody vegetation, in shallow soil with patches of Eriogonum umbellatum.		Lassen NF	3350
47	south canyon wall of South Fork Battle Creek; about 2 air miles N of Highway 36	Tehama	Lyonsville (4012136)	Calflora, Mar. 2022 (xr168693)	1-Aug-1997	1+ individuals		BLM	4108
47	south canyon wall of South Fork Battle Creek	Tehama	Lyonsville (4012136)	Calflora, Mar. 2022 (xr168694)	24-Jul-1997	1+ individuals		BLM	4131
47	south canyon wall of South Fork Battle Creek; about 2 air miles N of Highway 36;	Tehama	Lyonsville (4012136)	Calflora, Mar. 2022 (xr168742)	25-Jun-1997	1+ individuals		BLM	4380

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47	south canyon wall of South Fork Battle Creek; 2 air mi N of Hwy 36	Tehama	Lyonsville (4012136)	CCH2, Mar. 2022 (JEPS96553)	25-Jun-1997	steep, unstable 45-degree rocky slope of gray andesite, bordered by dense forest; with sparse Chrysothamnus nauseosus, Selaginella hansenii		BLM	4300
47	south canyon wall of South Fork Battle Creek	Tehama	Lyonsville (4012136)	CCH2, Mar. 2022 (UC1731205)	24-Jul-1997	steep, unstable 45-degree rocky slope of gray andesite, with sparse Chrysothamnus nauseosus, Selaginella hansenii		BLM	4300
47	south canyon wall of South Fork Battle Creek	Tehama	Lyonsville (4012136)	CCH2, Mar. 2022 (JEPS96564)	24-Jul-1997	steep, unstable 45-degree rocky slope of gray andesite, with sparse Chrysothamnus nauseosus, Selaginella hansenii		BLM	4300
47	south canyon wall of South Fork Battle Creek; about 2 air miles N of Highway 36	Tehama	Lyonsville (4012136)	CCH2, Mar. 2022 (UC1731206)	1-Aug-1997	steep, unstable 45 degree rocky slope of gray andesite, with sparse Chrysothamnus nauseosus, Selaginella hansenii bordered by dense forest		BLM	4300

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48	Northern Sierra Nevada. Off hwy. 32 between the Butte Meadows turn-off and Potato Patch. 13.0 miles north of hwy. 32 on rd. 27N08 (K-Line) or 7.5 miles north from single lane bridge over Deer Cr. Located around a pull-out/landing overlooking Deer Creek. 1	Tehama	Onion Butte (4012125)	CCH2, Mar. 2022 (CHSC08 4891)	9-Aug-2003	Around a pull-out/landing. Soil and rocks are of shale. Corolla color: light to dark pink.		Unknown	4950
49	Lane Valley Road, 3.3 miles north of Hwy 36, north of Paynes Creek	Tehama	Shingletown (4012148)	CCH2, Mar. 2022 (RSA7705 47)	11-Jul-2009	Rocky edge of road with volcanic rocks		Unknown	1467
49	Cascade Range Foothills. Lane Valley Rd. 3.3 mi N of Hwy. 36, N of Paynes Creek. T29N R01W S11 SE1/4 of SE1/4	Tehama	Shingletown (4012148)	CCH2, Mar. 2022 (CHSC06 5165)	31-Jul-1995	Chaparral. Localized population on the brushy and rocky edge of the road.		Unknown	1500
50	headwaters Skunk Creek (ca. 5 air miles WSW of Cherry Lake Dam), Tuolumne River watershed	Tuolumne	Cherry Lake South (3711988)	Calflora, Mar. 2022 (wb2209-23742)	20-Jun-2003	open mud-flow breccia ridge with sparse woody plant cover of Penstemon heterophyllus and Eriogonum umbellatum, and mixed conifer forest. plants in bud collected on this date; flowered in vitro and pressed on 8/1/2003		Unknown	4912

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50	headwaters Skunk Creek (ca. 5 air miles WSW of Cherry Lake Dam), Tuolumne River watershed	Tuolumne	Cherry Lake South (3711988)	Calflora, Mar. 2022 (wb2209-8289)	20-Jun-2003	open mud-flow breccia ridge with sparse woody plant cover of Penstemon heterophyllus and Eriogonum umbellatum, and mixed conifer forest. plants in bud collected on this date; flowered in vitro and pressed on 8/1/2003		Unknown	4912
50	headwaters Skunk Creek (ca. 5 air miles WSW of Cherry Lake Dam), Tuolumne River watershed	Tuolumne	Cherry Lake South (3711988)	Calflora, Mar. 2022 (xr167110)	20-Jun-2003	plants in bud collected on this date; flowered in vitro and pressed on 8/1/2003		Unknown	4931
50	headwaters Skunk Creek (ca. 5 air miles WSW of Cherry Lake Dam), Tuolumne River watershed	Tuolumne	Cherry Lake South (3711988)	CCH2, Mar. 2022 (UC1755157)	20-Jun-2003	open mud-flow breccia ridge with sparse woody plant cover of Penstemon heterophyllus and Eriognum umbellatum, and mixed conifer forest. plants in bud collected on this date; flowered in vitro and pressed on 8/1/2003		Unknown	4950
51	Pendola	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ALSAS_008)	7-Jun-2010	70 individuals		Plumas NF	

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52	SLAPJACK DFPZ	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 07B)	30-Sep-2004	25 individuals. Humus-Duff: 0.1 inch.		Plumas NF	
52	SLAPJACK DFPZ	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 07C)	1-Oct-2004	20 individuals		Plumas NF	
52	SLAPJACK DFPZ	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 07E)	1-Oct-2004	100 individuals		Plumas NF	
52	SLAPJACK DFPZ	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 07D)	5-Oct-2004	10 individuals. Humus-Duff: 0.1 inch.		Plumas NF	
52	SLAPJACK DFPZ	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 07A)	23-Jul-2004	30 individuals. IN FORMERLY DISTURBED AREA		Plumas NF	

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53	From Challenge, drive northeast onLa Porte Road approximately 1.8 miles to the occurrence. The plants occur on the east side of the Road in an area of forested serpentine.	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 12)	9-Jul-2013	190 individuals. Growing on an area of serpentine substrate within mixed conifer forest dominated by Pinus ponderosa. The area of serpentine is dominated by shrubs such as Ceanothus lemmonii and Arctostaphylos viscida. ALSAS is growing in openings with Brodiaea sierrae. In full flower. Scattered through serpentine openings.	A temporary logging road was graded through the southern edge of this area of serpentine in 2010 or 2011 and destroyed a portion of the rare plants at this site.	Plumas NF	3050
54	Northwest of the bridge across Indian Creek, about 3 miles (air) east of Challenge. T19N R07E S21 SE1/4	Yuba	Challenge (3912142)	CCH2, Mar. 2022 (CHSC06 9157)	7-Aug-1997	Normal size plants, on dry red rocky serpentine soil, on the north side of the dirt road. Common. Flowers dark pink. Yellow Pine Forest.		Plumas NF	2500
54	Northwest of the bridge across Indian Creek, about 3 miles (air) east of Challenge.	Yuba	Challenge (3912142)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 02)	7-Aug-1997	2 individuals. Disturbed soil of road cut. Probably a lot more there up the natural open slope above the road (LJ comment 3/8/18).		Plumas NF	2500

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55	Plants are just east of FS road 19N03, approx. 1 mile (air) south-southeast of Woodleaf off of LaPorte Road. Plants are within 300 ft. east of the road.	Yuba	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 06B)	30-Aug-2016	1300 individuals. Sanborn's onion is growing in large open area on serpentine soils, with Ahart Buckwheat, Bacigalupi's perideridia. Surrounding nearby areas are mixed conifer forest dominated by Ponderosa pine, Doug fir, and California incense cedar. Approx. 1300 plants, scattered over about 3 acres. Re-mapped from small point mapped in 2004. In flower & fruit. This site was originally mapped as only a spot in 2004 by Glenn Clifton, Roy Buck, Bill Davilla. More correctly mapped now as a larger polygon, 2016.		Plumas NF	3162

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
56	From Challenge, take La Porte Road approx 1.4 mles and turn left at Road 19N04. travel approx 0.8 miles, parking carefully to avoid ALSAS and FREA plants. Population reaches this road, but continues mainly up the skid road and to the north of that road.	Yuba	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 05)	21-Jun-2010	1500 individuals. Serpentine substrate. Opening of Acctostaphylos shrub-land in lower-elevation mixed conifer forest dominated by Pinus ponderosa. Quercus kelloggii and Chrysolepis sempervirens are alson prominent in the lanndscape. Plants were not yet in flower. Originally found 8/5/2004 by Matt Brown, Halli Gaddis, Mike Friend, but only mapped with a single dot at the beginning of the former temp road. Resulted in the massive disturbance along this temp road when it was used again before the more complete mapping.		Plumas NF	3375

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
56	Northern High Sierra Nevada. Plumas National Forest; serpentine slope on southeast side of Road 19N04 1.3 km north of Challenge-La Porte Road; 2.2 air km northeast of Challenge. T19N R07E S17 NW1/4 of SE1/4 USGS Quadrangle: Clipper Mills 1:24,000	Yuba	Clipper Mills (3912152)	CCH2, Mar. 2022 (CHSC10 7278)	10-Aug-2011	Rocky serpentine northwest-facing slope dominated by white-leaf manzanita and surrounded by mixed conifer forest. Mostly on open ground around the manzanita, with Frangula rubra, Eriogonum umbellatum var. ahartii, Ceanothus lemmonii. Flowers dark/bright p		Plumas NF	3356

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
57	Plants are along and nearby FS road 19N34, approx. 0.07 to 0.25 mile (air) west of its intersection with FS rd 19N03, approx. 0.8 mile (air) south-southeast of Woodleaf off of LaPorte Road.	Yuba	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 06A)	13-Jul-2016	11000 individuals. Sanborn's onion is growing in openings amongst white-leaf manzanita mixed chaparral on serpentine soils. Surrounding nearby areas are mixed conifer forest dominated by Ponderosa pine and California incense cedar. Approx 11,000 plants, scattered over about 6 acres, remapped from small point mapped in 2004. Bud and early flower. Original mapping in 2004 by Glenn Clifton, Roy Buck, Bill Davilla was only a spot. Remapped much larger, with new data, here in 2016.		Plumas NF	3080
58	Approx 0.25 mi NE of Woodleaf, on S side of the La Porte Road in the middle of the bend at its jcn with USFS Rd 19N27.	Yuba	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 01A)	17-Aug-1994	19 individuals. Open strip at side of road, with a backdrop of Arctostaphylos viscida, with scattered herbaceous associates: Zygadenus paniculatus (dried out), Cordylanthus sp. (probably tenuis), Hypericum concinnum, Polygala cornuta, Chrysothamnus sp., in the open. 19 plants, pink color, in mid to late flower.		Plumas NF	3200

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
58	[Maps north of Woodleaf in Yuba County]	Yuba	Clipper Mills (3912152)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 01B)	17-Aug-1994			Plumas NF	3180
59	Northern High Sierra Nevada. Plumas National Forest; 2.1 air km east of Dobbins, 1.8 air km south-southwest of Oregon Peak, 0.5 km north of Marysville Road. Southwest edge of meadow area, where seasonal drainage occurs and in sheetlfow parts of the meadow	Yuba	French Corral (3912132)	CCH2, Mar. 2022 (CHSC10 8164)	15-Aug-2011	Southwest edge of meadow area, where seasonal drainage occurs and in sheetlfow parts of the meadow; partial shade from sugar pine, ponderosa pine, black oak, incense cedar, plus young Cercis occidentalis, Heteromeles arbutifolia, Frangula californica ssp.		Plumas NF	2500
59	Pendola	Yuba	French Corral (3912132)	NRIS polys, Nov. 2020 (051103_ ALSAS_0 11)	15-Aug-2011	200 individuals		Plumas NF	
60	Yuba County: along road from Dobbins to Camptonville. About 1 mile past Dobbins.	Yuba	French Corral (3912132)	CCH2, Mar. 2022 (DAV101 609;)	19-Apr-1957	Origin: Collected in the wild. Specimen: grown at Willowbank, Davis (9 Jul 1985).		Unknown	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
61	On the south side of La Porte Road, about 200 yards west of the Brownsville Grange, about 1 mile south-west of La Porte Road and Willow Glen Road intersection. T18N R06E S04 NE1/4 east border	Yuba	Rackerby (3912143)	CCH2, Mar. 2022 (CHSC06 1355)	8-Aug-1993	Normal size plants, on dry bare red rocky poor soil. Uncommon. Flowers bright pink. Foothill Woodland.		Unknown	2000
61	about 200 yards w Brownsville Grange (on s side of La Porte Road, about 1 mi sw of La Porte Road and Willow Glen Road intersection); La Porte Road	Yuba	Rackerby (3912143)	CCH2, Mar. 2022 (UC16093 86)	8-Aug-1993	on dry bare red rocky poor soil; Foothill Woodland. flowers bright pink		Unknown	2000
62	Near Dorrington	Calaveras	Dorrington (3812033)	CCH2, Mar 2022 (CAS:BO T:876094)	26-Jun-1978	Ridgetop on volcanic agglomerate.		Unknown	5000
63	Paradise	Plumas	Paradise West (3912176)	CCH2, Mar 2022 (CAS:BO T:376175)	18-Jul-1940			Unknown	1150
64	Bank of River, Coram	Shasta	Shasta Dam (4012264)	CCH2, Mar 2022 (CAS:BO T:281170)	27-Jun-1914			United States Bureau of Reclamatio n	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
65	About 1 1/2 miles east of Woodleaf	Yuba	Clipper Mills (3912152)	CCH2, Mar 2022 (CAS:DS: 19584)	12-Aug-1980	Perennial, scapes 1 1/2 - 4 dm. tall. Normal size plants. Yellow Pine Forest.		Unknown	
66	American Ranch Hill, 6 mi. south west of Grass Valley	Nevada	Grass Valley (3912121)	CCH2, Mar 2022 (CAS:BOT:875275)	14-Jul-1961			Unknown	2250
67	Wolf Mt. Road ca. 0.5 miles south of American Ranch Hill	Nevada	Grass Valley (3912121)	CCH2, Mar 2022 (CAS:BOT:875376, CAS:BOT:875278)	23-Jul-1971	Occasional. on open dry, rocky slope		Unknown	
68	Grass Valley, along Sutton Way, 0.2 miles north of its junction with Idaho-Maryland.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (RSA770548)	11-Jul-2009			Unknown	1158
68	Grass Valley, along Sutton Way 0.2 miles north of junction of Idaho-Maryland Road, near junction Golden Gate Terrace	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (JEPS109804)	29-Jul-2005	remnant of serpentine chaparral in a developed area		Unknown	2500
68	Nevada County: Dorsey Road and Sutton Way, Grass Valley.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (DAV184262)	21-Jul-1995	Vegetative Type: Chaparral. Soil: Dubakella/Serpentine.		Unknown	2600
68	Nevada County: Dorsey Road and Sutton Way, Grass Valley.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (DAV184264)	21-Jul-1995	Vegetative Type: Chaparral. Soil: Dubakella/Serpentine.		Unknown	2600

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
68	Nevada County: Dorsey Road and Sutton Way, Grass Valley.	Nevada	Grass Valley (3912121)	CCH2, Mar. 2022 (DAV184263)	21-Jul-1995	Vegetative Type: Chaparral. Soil: Dubakella/Serpentine.		Unknown	2600
69	El Dorado County: 3.5 mi NE of Georgetown, on E slope of Little Bald Mtn.	El Dorado	Georgetown (3812087)	CCH2, Mar. 2022 (DAV214822)	11-Jun-2014	Open area in serpentine chaparral, with Monardella sheltonii, Eriophyllum lanatum var. achilleoides, Castilleja applegatei, Calochortus superbus, Packera layneae, Chlorogalum pomeridianum.		Unknown	2963
70	from big Bend Road, up RRC's R-line road approx. 1.6 miles to site	Shasta	Roaring Creek (4012188)	CNDDB unprocessed survey form (Green 2022 pers. comm.)	12-Aug-2010	715 plants. On a rocky, south facing ridge top with Quercus chrysolepis, Arctostaphylos patula, Arctostaphylos viscida, Toxicodendron diversiloba, Quercus kelloggii, Pinus ponderosa. Occurrence rank excellent.	Road maintenance. Surrounding area is timberland.	Private - Roseburg Resources Co.	3112
71	ca. 2.0 air miles, 205° true from Lookout Mountain	Shasta	Whitmore (4012168)	CNDDB unprocessed survey form (Green 2022 pers. comm.)	13-Aug-2010	400 plants. Seasonally wet, open gravelly/rocky soil on south aspect with Pinus ponderosa, Calocedrus decurrens, Arctostaphylos patula, Arctostaphylos viscida and Cuscuta californica. Occurrence rank Excellent.	Dirt road through site. Surrounding area is timberland.	Private - Roseburg Resources Co.	3592

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
72	ca. 2.642 air miles, 248° true from Lookout Mountain	Shasta	Montgomery Creek (4012178)	CNDDB unprocessed survey form (Green 2022 pers. comm.)	13-Aug-2010	2 plants. Open gravelly/rocky soil on west aspect with Pinus sabiniana, Quercus douglasii, Arctostaphylos patula, Arctostaphylos viscida. Occurrence rank Good.	Surrounding area is timberland.	Private - Roseburg Resources Co.	2749
73	Within city limits of Redding, on east side of I-5. Intersection of Oasis Road and Gold Hills Drive in Gold Hills subdivision.	Shasta	Project City (4012263)	Kierstead 2022 pers. comm.	1992	Approximately 100 plants. Growing with Lasthenia, Astragalus pauperculus and Eriogonum tripodum. Gravelly non-serpentine soil in open blue oak woodland.	The Gold Hills subdivision was built partly on it, and there are roads built through it.	Private	
	Little [Chico-creek] Chico Creek	Butte		CCH2, Mar 2022 (CAS:DS:53271)	May 1897				
	Near Deer Creek.	Butte		CCH2, Mar 2022 (CAS:DS:106068)	24-Jul-1920	Chaparral.			
	Between Gardner and Big Tree Grove	Calaveras		CCH2, Mar 2022 (CCAS:DS:53306)	7-Aug-1906	Stony ridge.			
	South side of South Yuba River ca. 1 mile below Washington	Nevada	Washington (3912037)	CCH2, Mar 2022 (CAS:BOT:917793)	23-May-1974			Tahoe NF	2600

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
	Placer County: Southeast bank of American River, 1/2 mile northeast of bridge on Colfax-Iowa Hill road.	Placer	Colfax (3912018)	CCH2, Mar. 2022 (DAV19608, CAS:BOT:376175)	22-Jun-1952	Crevices in metamorphic rocks.		BLM	1152

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.>