

Rationales for Plant Species Considered for Designation as Species of Conservation Concern

Inyo National Forest

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for:

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Contents

Rationales for Plant Species Considered for Species of Conservation Concern Inyo National Forest	1
Introduction	1
Species of Conservation Concern Compared to Forest Service Sensitive Species	1
Procedure for Evaluation of Botanical Species of Conservation Concern	2
Inyo National Forest Species of Conservation Concern	3
References	6
Chapter 1 – Rationale for Plant Species Determined to be Species of Conservation Concern...	8
<i>Abronia alpina</i> - Ramshaw Meadows abronia	8
<i>Agrostis humilis</i> - alpine bentgrass	9
<i>Allium atrorubens</i> var. <i>atrorubens</i> - Great Basin onion	10
<i>Astragalus cimae</i> var. <i>sufflatus</i> - inflated Cima milk-vetch	11
<i>Astragalus inyoensis</i> - Inyo milk-vetch	12
<i>Astragalus johannis-howellii</i> - Long Valley milk-vetch	13
<i>Astragalus kentrophyta</i> var. <i>elatus</i> - spiny-leaved milk-vetch	14
<i>Astragalus lemmonii</i> - Lemmon's milk-vetch	15
<i>Astragalus lentiginosus</i> var. <i>kernensis</i> - Kern milk-vetch	16
<i>Astragalus monoensis</i> - Mono milk-vetch	17
<i>Astragalus ravenii</i> - Raven's milk-vetch	18
<i>Astragalus serenoii</i> var. <i>shockleyi</i> - Shockley's milk-vetch	19
<i>Astragalus subvestitus</i> - Kern County milk-vetch	20
<i>Boechea bodiensis</i> (<i>Arabis b.</i>) – Bodie Hills rockcress	21
<i>Boechea pendulina</i> (<i>Arabis p.</i>) – rabbit-ear rockcress	22
<i>Boechea pinzliae</i> (<i>Arabis p.</i>) - Pinzl's rockcress	23
<i>Boechea shockleyi</i> (<i>Arabis s.</i>) - Shockley's rockcress	23
<i>Boechea tiehmii</i> (<i>Arabis t.</i>) - Tiehm's rockcress	24
<i>Boechea tularensis</i> - Tulare rockcress	25
<i>Botrychium ascendens</i> - upswept moonwort	26
<i>Botrychium crenulatum</i> - scalloped moonwort	27
<i>Botrychium lineare</i> - slender moonwort	28
<i>Botrychium manganense</i> - Mangan moonwort	29
<i>Bruchia bolanderi</i> - Bolander's bruchia	30
<i>Calochortus excavatus</i> - Inyo County star-tulip	31
<i>Calyptidium pygmaeum</i> (<i>Cistanthe pygmaea</i>) – Pygmy pussypaws	32
<i>Carex davyi</i> - Davy's sedge	33
<i>Carex duriuscula</i> - spikerush sedge	34
<i>Carex idahoa</i> (<i>C. parryana</i> var. <i>hallii</i>) - Idaho sedge	34
<i>Carex petasata</i> - Liddon's sedge	35
<i>Carex praticola</i> - northern meadow sedge	36
<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i> - western single-spiked sedge	37
<i>Carex stevenii</i> - Steven's sedge	38
<i>Carex tiogana</i> - Tioga Pass sedge	39
<i>Carex vallicola</i> - western valley sedge	40
<i>Chaetadelpha wheeleri</i> - Wheeler's dune-broom	41
<i>Claytonia megarhiza</i> - fell-fields claytonia	42
<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i> - Kern Plateau bird's-beak	42
<i>Crepis runcinata</i> (<i>C. r. ssp. hallii</i>) - Hall's meadow hawksbeard	43
<i>Cuniculotinus gramineus</i> (<i>Chrysothamnus g.</i>) - Panamint rock-goldenrod	44

<i>Cymopterus globosus</i> - globose cymopterus	45
<i>Dedeckera eurekaensis</i> - July gold	46
<i>Draba californica</i> - California draba	47
<i>Draba monoensis</i> – White Mountains Draba (Mono draba)	48
<i>Draba sharsmithii</i> - Mt. Whitney draba	49
<i>Dryopteris filix-mas</i> - male fern	50
<i>Ericameria gilmanii</i> - Gilman's goldenbush	51
<i>Erigeron compactus</i> - compact daisy	52
<i>Erigeron uncialis</i> var. <i>uncialis</i> - limestone daisy	53
<i>Eriogonum alexandrae</i> - Alexander's buckwheat	54
<i>Eriogonum mensicola</i> - Pinyon Mesa buckwheat	55
<i>Eriogonum wrightii</i> var. <i>olanchense</i> - Olancha Peak buckwheat	56
<i>Greeneocharis circumscissa</i> var. <i>rosulata</i> - rosette cushion cryptantha	57
<i>Goodmania luteola</i> - yellow spinecape	58
<i>Grusonia pulchella</i> (<i>Opuntia p.</i>) - beautiful club-cholla	58
<i>Hackelia brevicula</i> - Poison Canyon stickseed	59
<i>Hackelia sharsmithii</i> - Sharsmith's stickseed	60
<i>Helodium blandowii</i> - Blandow's bog moss	61
<i>Hesperidanthus jaegeri</i> (<i>Caulostramina j.</i>) - Jaeger's hesperidanthus	62
<i>Horkelia hispidula</i> - White Mountains horkelia	63
<i>Hulsea brevifolia</i> - short-leaved hulsea	64
<i>Hulsea vestita</i> ssp. <i>inyoensis</i> - Inyo hulsea	65
<i>Ivesia campestris</i> - field ivesia	66
<i>Ivesia kingii</i> var. <i>kingii</i> - alkali ivesia	67
<i>Jamesia americana</i> var. <i>rosea</i> - fivepetal cliffbush	68
<i>Kobresia myosuroides</i> (<i>K. bellardii</i>) - seep kobresia	68
<i>Ladeania lanceolata</i> (<i>Psoralidium lanceolatum</i>) - lance-leaved scurf-pea	69
<i>Lomatium foeniculaceum</i> ssp. <i>inyoense</i> - Inyo biscuitroot	70
<i>Lupinus duranii</i> - Mono Lake lupine	71
<i>Lupinus padre-crowleyi</i> - Father Crowley's lupine	72
<i>Mentzelia inyoensis</i> - Inyo blazing star	73
<i>Mentzelia torreyi</i> - Torrey's blazing star	74
<i>Monardella beneolens</i> - sweet-smelling monardella	75
<i>Oreocarya roosiorum</i> (<i>Cryptantha roosiorum</i>) - bristlecone cryptantha	76
<i>Oxytropis deflexa</i> var. <i>sericea</i> - blue pendant-pod oxytrope	77
<i>Penstemon calcareus</i> - limestone beardtongue	78
<i>Petrophytum caespitosum</i> ssp. <i>acuminatum</i> (<i>P. acuminatum</i>) - rockmat	79
<i>Phacelia inyoensis</i> - Inyo phacelia	80
<i>Phacelia monoensis</i> - Mono phacelia	81
<i>Phacelia nashiana</i> - Charlotte's phacelia	82
<i>Physaria ludoviciana</i> - silver bladderpod	83
<i>Physocarpus alternans</i> - Nevada ninebark	84
<i>Plagiobothrys parishii</i> - Parish's popcornflower	85
<i>Polemonium chartaceum</i> - Mason's sky pilot	86
<i>Polycytenium williamsiae</i> - Williams' combleaf	86
<i>Populus angustifolia</i> - narrow-leaved cottonwood	87
<i>Potentilla morefieldii</i> - Morefield's cinquefoil	88
<i>Potentilla pulcherrima</i> - beautiful cinquefoil	89
<i>Ranunculus hydrocharoides</i> - frog's-bit buttercup	90
<i>Sclerocactus polyancistrus</i> - redspined fishhook cactus	91
<i>Solorina spongiosa</i> - fringed chocolate chip lichen	92

<i>Sphaeromeria potentilloides</i> var. <i>nitrophila</i> – fivefinger chickensage	93
<i>Sphenopholis obtusata</i> - prairie wedge grass	94
<i>Stipa divaricata</i> - small-flowered ricegrass.....	95
<i>Streptanthus gracilis</i> - alpine jewelflower.....	96
<i>Streptanthus oliganthus</i> - Masonic mountain jewelflower.....	97
<i>Taraxacum ceratophorum</i> - horned dandelion.....	98
<i>Tetradymia tetrameres</i> - dune horsebrush.....	99
<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i> - foxtail thelypodium.....	100
<i>Thelypodium milleflorum</i> - many-flowered thelypodium.....	100
<i>Townsendia leptotes</i> - slender townsendia	101
<i>Transberingia bursifolia</i> ssp. <i>virgata</i> (<i>Halimolobos</i> v.) - virgate halimolobos	102
<i>Trichophorum pumilum</i> (<i>Scirpus pumilis</i>) - little bulrush	103
<i>Trifolium dedeckerae</i> (<i>T. kingii</i> ssp. <i>dedeckerae</i>) - Dedecker's clover.....	104
<i>Viola purpurea</i> ssp. <i>aurea</i> (<i>V. aurea</i>) - golden violet	105
Chapter 2 – Rationale for Plant Species Determined Not to be Species of Conservation Concern	107
<i>Abronia nana</i> ssp. <i>covillei</i> - Coville's dwarf sand verbena.....	107
<i>Aliciella ripleyi</i> (<i>Gilia</i> r.) - Ripley's aliciella.....	109
<i>Aliciella triodon</i> (<i>Gilia</i> t.) - coyote gilias	109
<i>Allium atrorubens</i> var. <i>cristatum</i> - darkred onion.....	110
<i>Antennaria pulchella</i> - Sierra pusstyoos.....	111
<i>Astragalus kentrophyta</i> var. <i>danaus</i> - spiny milk-vetch.....	112
<i>Astragalus kentrophyta</i> var. <i>ungulatus</i> - spiny milk-vetch	113
<i>Astragalus lentiginosus</i> var. <i>sierrae</i> - Sierra milk-vetch.....	114
<i>Astragalus oophorus</i> var. <i>oophorus</i> - egg milk-vetch	114
<i>Astragalus platytropis</i> - broadkeel milk-vetch	115
<i>Astragalus serenoii</i> var. <i>sordescens</i> - naked milk-vetch	116
<i>Atriplex pusilla</i> - smooth saltbush	117
<i>Boechera cobrensis</i> - sagebrush rockcress	117
<i>Boechera dispar</i> (<i>Arabis</i> d.) - pinyon rockcress.....	118
<i>Boechera evadens</i> (<i>Arabis fernaldiana</i> var. <i>stylosa</i>) - hidden rockcress.....	119
<i>Boechera lincolniensis</i> (<i>B. pulchra</i> , <i>Arabis</i> p. var. <i>munciensis</i>) - Lincoln rockcress.....	120
<i>Boechera pygmaea</i> - Tulare County rockcress	121
<i>Botrychium lunaria</i> - common moonwort	122
<i>Carex congdonii</i> - Congdon's sedge	123
<i>Carex tahoensis</i> - Tahoe sedge.....	124
<i>Ceanothus pinetorum</i> - Kern ceanothus	125
<i>Cladium californicum</i> - California sawgrass	126
<i>Clarkia xantiana</i> ssp. <i>parviflora</i> - Kern Canyon clarkia	126
<i>Claytonia palustris</i> - marsh claytonia.....	127
<i>Cryptantha fendleri</i> - sand dune cryptantha	128
<i>Cryptantha glomeriflora</i> - clustered-flowered cryptantha.....	129
<i>Cryptantha howellii</i> - Howell's cryptantha.....	129
<i>Cryptantha incana</i> - Tulare cryptantha	130
<i>Cymopterus cinerarius</i> - cymopterus	132
<i>Draba asterophora</i> var. <i>asterophora</i> - Lake Tahoe draba	132
<i>Draba cana</i> - canescent draba	133
<i>Draba cruciata</i> - Mineral King draba.....	134
<i>Draba incrassata</i> - Sweetwater Mountains draba	136
<i>Draba lonchocarpa</i> - spear-fruited draba.....	137
<i>Draba praealta</i> - tall draba.....	138

<i>Draba sierrae</i> - Sierra draba.....	139
<i>Draba subumbellata</i> - mound draba.....	140
<i>Elymus scribneri</i> - Scribner's wheat grass	140
<i>Epilobium howellii</i> - subalpine fireweed.....	141
<i>Eremothera boothii</i> ssp. <i>boothii</i> - Booth's evening primrose	142
<i>Eremothera boothii</i> ssp. <i>intermedia</i> - Booth's hairy evening-primrose.....	143
<i>Erigeron aequifolius</i> - Hall's daisy	144
<i>Erigeron inornatus</i> var. <i>keilii</i> - Keil's daisy	145
<i>Erigeron multiceps</i> - Kern River daisy	146
<i>Eriogonum ampullaceum</i> - Mono wild buckwheat	148
<i>Eriogonum microthecum</i> var. <i>alpinum</i> – alpine slender buckwheat.....	148
<i>Eriogonum microthecum</i> var. <i>lapidicola</i> - Inyo Mountains buckwheat.....	149
<i>Eriogonum microthecum</i> var. <i>panamintense</i> - Panamint Mountains buckwheat	150
<i>Eriogonum nutans</i> var. <i>nutans</i> - Dugway wild buckwheat	151
<i>Eriogonum polypodium</i> - Tulare County buckwheat.....	152
<i>Erythranthe calicicola</i> - limestone monkeyflower	153
<i>Euphrosyne nevadensis</i> (<i>Iva n.</i>) - Nevada wormwood	153
<i>Festuca minutiflora</i> - small-flowered fescue.....	154
<i>Gentiana prostrata</i> - pygmy gentian	155
<i>Hulsea vestita</i> ssp. <i>pygmaea</i> - pygmy hulsea	156
<i>Hymenopappus filifolius</i> var. <i>nanus</i> - little cutleaf.....	157
<i>Jaffueliobryum wrightii</i> - Wright's jaffueliobryum moss	158
<i>Juncus nodosus</i> - knotted rush.....	159
<i>Leptosiphon oblanceolatus</i> - Sierra nevada leptosiphon	159
<i>Lomatium rigidum</i> - stiff lomatium	160
<i>Lupinus gracilentus</i> - slender lupine	161
<i>Lupinus lepidus</i> var. <i>culbertsonii</i> - Hockett Meadows lupine.....	162
<i>Lupinus magnificus</i> var. <i>glarecola</i> - Coso Mountains lupine.....	163
<i>Lupinus magnificus</i> var. <i>hesperius</i> - Panamint Mountains lupine.....	164
<i>Lupinus pusillus</i> ssp. <i>intermontanus</i> - intermountain lupine	165
<i>Meesia longiseta</i> - long seta hump moss	166
<i>Micromonolepis pusilla</i> - dwarf monolepis.....	167
<i>Mimulus glabratus</i> var. <i>utahensis</i> - Utah monkeyflower	167
<i>Mimulus parryi</i> - Parry's monkeyflower.....	168
<i>Minuartia stricta</i> - bog sandwort.....	169
<i>Myurella julacea</i> - myurella moss.....	170
<i>Oenothera caespitosa</i> ssp. <i>crinita</i> - caespitose evening-primrose	171
<i>Oenothera californica</i> ssp. <i>californica</i> - California evening-primrose	171
<i>Oenothera longissima</i> - long-stem evening-primrose	172
<i>Parnassia parviflora</i> - small-flowered grass-of-parnassus.....	173
<i>Peltigera gowardii</i> - net-veined water lichen.....	174
<i>Penstemon barnebyi</i> - Barneby's beardtongue	175
<i>Penstemon papillatus</i> - Inyo beardtongue	176
<i>Penstemon scapoides</i> - naked-stem beardtongue	177
<i>Phacelia barnebyana</i> - Barneby's phacelia	177
<i>Phacelia gymnoclada</i> - naked-stemmed phacelia	178
<i>Phacelia peirsoniana</i> - Peirson's phacelia.....	179
<i>Phlox dispersa</i> - High Sierra phlox	180
<i>Poa abbreviata</i> ssp. <i>marshii</i> - Marsh's blue grass	181
<i>Poa abbreviata</i> ssp. <i>pattersonii</i> - Patterson's blue grass	181
<i>Poa lettermanii</i> - Letterman's blue grass	182

<i>Poa nemoralis</i> - wood blue grass	183
<i>Podistera nevadensis</i> - Sierra podistera.....	184
<i>Pohlia tundrae</i> - tundra pohlia moss	185
<i>Polygala intermontana</i> - intermountain milkwort.....	185
<i>Potamogeton robbinsii</i> - Robbin's pondweed.....	186
<i>Potentilla concinna</i> var. <i>proxima</i> - early cinquefoil.....	187
<i>Salix brachycarpa</i> var. <i>brachycarpa</i> - dwarf willow	188
<i>Salix nivalis</i> - snowfield willow	189
<i>Sedum pinetorum</i> - stonecrop	189
<i>Senecio pattersonensis</i> - Patterson's groundsel	190
<i>Sidalcea multifida</i> - cut-leaf checkerbloom.....	192
<i>Silene aperta</i> - naked catchfly	192
<i>Silene oregana</i> - Oregon campion.....	193
<i>Stipa arida</i> (<i>Achnatherum a.</i>) - Mormon needle grass	194
<i>Stuckenia filiformis</i> spp. <i>alpina</i> - slender-leaved pondweed	195
<i>Tonestus eximius</i> - Lake Tahoe serpentweed	196
<i>Tonestus peirsonii</i> - Peirson's tonestus	197
<i>Townsendia condensata</i> - cushion townsendia.....	197
<i>Triglochin palustris</i> - marsh arrow-grass	198
<i>Viola pinetorum</i> var. <i>grisea</i> - gray-leaved violet	199
Appendix.....	201

Tables

Table 1. List of plant species of conservation concern for the Inyo National Forest, March 2018. 4	
Table 2. Summary of changes to list of botanical species of conservation concern for the Inyo National Forest.	201
Table 3. Sensitive species not included in rationales due to known lack of occurrence in plan area.	204

Rationales for Plant Species Considered for Species of Conservation Concern Inyo National Forest

Introduction

In coordination with the Inyo National Forest, and pursuant to responsibilities and authority under the 2012 Planning Rule (36 CFR 219.7(c)(3)), the Regional Forester determined the terrestrial wildlife, aquatic wildlife, and plant species meeting the criteria for species of conservation concern (SCC) for the Inyo National Forests' Land Management Plan and Final Environment Impact Statement (FEIS). This document presents the rationales of plant (botanical) species considered for species of conservation concern.

The definition of SCC is found at 36 CFR 219.9(c), and criteria for identifying them are outlined in the Forest Service Handbook FSH 1909.12 Chapter 10, Section 12.52c. A species of conservation concern is a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area (36 CFR 219.9).

Species of Conservation Concern Compared to Forest Service Sensitive Species

Under the current forest plans, rare plants are provided for according to the direction for Region 5 sensitive species. Of the 67 sensitive plant species that occur in the Inyo National Forest planning area, 46 were carried forward as species of conservation concern. In addition, 59 species not previously categorized as Region 5 sensitive species were added as species of conservation concern. The species of conservation concern lists are specific to each national forest, so each species of conservation concern designated on a national forest must occur in the plan area. For that reason, some sensitive species may be identified as species of conservation concern on one Forest, but not another. If sensitive species were not carried forward as species of conservation concern, it was for one or more of the following reasons, as documented in the project record, including this document:

1. It is a candidate species for listing under US Fish and Wildlife Endangered Species Act (i.e., white bark pine, *Pinus albicaulis*)
2. The species does not occur on the national forest.
3. Previous occurrence records were determined to be incorrect identifications of the species and/or could not be re-located.
4. Natureserve, California Natural Diversity Database, CA Native Plant Society Rare plant inventory, or other local data sources indicated the threats to the species were not substantial.
5. Recent surveys indicated the species is more common than originally thought.
6. There was no information about threats to the species. This was a relatively uncommon circumstance, because information about threats could be inferred from threats to the ecosystems upon which the species depend. Lack of information generally only limited species inclusion on the list if the species had not been observed for decades or more, leading to uncertainty about the condition of its specific habitat.

Procedure for Evaluation of Botanical Species of Conservation Concern

Plant species are evaluated by following a process outlined in a national directive (FSH 1909.12 § 12.52c-d). Species are considered using databases, scientific studies, local information and expert knowledge. Initially, we included all known or potential rare plants within or near the administrative boundaries of the forest, providing a comprehensive list for evaluation of other criteria. The list was based on a compilation of all California Natural Diversity Database polygons from the February 2016 dataset that intersect the Forest boundaries. Some of the species included from this step were based upon over-estimated delineations of map areas, particularly from the California Natural Diversity Database dataset. Herbarium records and Forest rare plant data files were then used to identify which species have positive documentation within Forest administrative boundaries. Only species with reliable documentation for presence within the plan area, such as specimen vouchers, were carried forward for further consideration. More recent California Natural Diversity Database datasets, and other datasets, were reviewed for the updated rationales in this document as referenced.

In addition to research conducted by Forest Service specialists, the national directive requires use of threat status rankings, determined in large part through NatureServe, a non-profit organization that provides proprietary wildlife and plant conservation-related data, tools, and services. The conservation status rank of a species is represented by a letter and a number. The letter represents one of two distinct geographic scales: global (G) and state (S). The status rank number is on a scale of one to five, where a ranking of one indicates a species at the highest level of risk and a ranking of five indicates the lowest level of risk. The status rank number is preceded by the letter reflecting the appropriate geographic scale of the assessment. For example, a status rank of G5 represents a species that has an extensive range of distribution and has a low risk of extinction. Intraspecific taxa refer to subspecies, varieties, and other designations below the level of species. The status rank of intraspecific taxa (subspecies or varieties) is indicated by a supplementary T-rank, following the species' global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1.

We also consider species listed as threatened or endangered by relevant governments (e.g. states or federally recognized Tribes) or identified as a high priority for conservation; consider species petitioned for Federal ESA listing and for which a positive "90-day finding" has been made; and consider other species as outlined in the national directive (FSH 1909.12 § 12.52c-d).

Evaluating Botanical Species

For plants, we include plant ranks of California Native Plant Society's California Rare Plant Rank program. This program operates under a Memorandum of Understanding with the California Department of Fish and Game (DFG). The program ranks both the rarity and threat of a species. Rarity is ranked in two manners. First, '1', '2', '3' or '4' are qualifiers of the geographic extent of rarity: 1 = rare in California and elsewhere; 2 = rare in California, but common elsewhere; 3 = more information is needed and typically taxonomically problematic; and 4 = plants of limited distribution and status should be monitored regularly. Second, 'A' and 'B' are qualifiers of extirpation and/or rarity: A = Presumed extirpated or extinct; and B = Rare, threatened, or endangered. Threat are ranked as: 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat); 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat); 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known). For example, a California Rare Plant Rank of 1B.3 represents plants with a California Rare Plant Rank of 1B that are "rare throughout their range", and a threat rank of 0.3 that are "not very threatened in California" (i.e., less than 20% of occurrences threatened with low degree and immediacy of threat or no current threats known).

All species with a California Native Plant Society (CNPS 2015) 1B rare plant rank (rare, threatened, or endangered in California and elsewhere), or with a California Native Plants Society threat rank 0.1 (seriously threatened) were carried forward. Since species with these ranks were categorized by botanical experts, using all available field observations and scientific literature on these species, this information was considered to be evidence for concern for these species persistence, and was thus the reasoning for carrying them forward for further consideration.

Some species that did not meet the above criteria for having substantial concern for persistence within the planning area were still brought forward based on other best available scientific information available indicating a threat for those species. These species were brought forward due to the following:

1. specific threats documented by other sources in the list above;
2. a determination that the identified threat affects the species within the planning area; and
3. a determination that the threat constitutes a substantial concern for species persistence within the planning area.

The existence of one or more of the threats did not necessarily constitute a substantial concern for species persistence. Rather, the context in which each species occurs was considered to determine if damage to individuals or to reproduction caused by the threat constitutes a substantial concern for the loss of viability for one or more populations. This determination, or viability evaluation, was a judgement, and not based on a specific threshold (e.g. X percent of the population would be damaged by the threat).

The number of populations of each species within the planning area and extent of habitat (broad ecosystems or ecosystem types as defined in the forest plan) were important information that contributed to the judgement of whether a substantial concern existed for the persistence of a given taxon. Similar to the determinations for threats, no set number was used as a threshold, but rather the context in which each species occurs was considered. Fundamental principles of conservation biology related to minimum population sizes to maintain viable populations and on causes of rarity were considered in these determinations (e.g. Rabinowitz 1981; Shaffer 1981; Fiedler and Ahouse 1992, Wiens and Slaton 2012). Extensive literature was evaluated if and how extrinsic and intrinsic factors contribute to species rarity. Species carried forward to the list of species of conservation concern are those for which the identified threats were considered to at least in part affect species viability, thus contributing to the substantial concern for species persistence.

If no information on threats or concern for persistence in the planning area was available, the species was determined to have insufficient information available to conclude there is a substantial concern about the species capability to persist in the plan area over the long term, and the species was not carried forward for further consideration.

Additional detail on the process used for evaluating potential plant species of conservation concern can be found in the Final Inyo National Forest assessment (USDA 2013) and accompanying topic papers completed as the first phase of plan revision. This information was considered to be evidence for concern for these species persistence, and was thus the reasoning for carrying them forward for further consideration.

Inyo National Forest Species of Conservation Concern

In all, 216 plant species were considered that are known to occur in the Inyo NF plan area and meet other criteria of the directives. Of those, 105 met the criteria of species of conservation concern for the Inyo NF (table 1), comprising 97 flowering plants, 5 ferns, 2 mosses and 1 lichen. This document is divided into two major sections: chapter 1 provides the rationale for all species determined to be species of

conservation concern; chapter 2 provides the rationale for those species considered but determined not to be species of conservation concern. The Regional Forester released the first species of conservation concern list in June 2016. There were also 105 species on that list, but there were several changes made to the list, with some species removed and other species added to the list. The table 2 in the appendix provides a summary of the changes in the Regional Forester's SCC plant list for the Inyo National Forest between 2016 and 2018. The rationales from most sensitive species are found in chapters 1 and 2; table 3 in the appendix provides information on the species not included in the chapters.

Table 1. List of plant species of conservation concern for the Inyo National Forest, August 2018

Common Name (Species)
Ramshaw Meadows abronia (<i>Abronia alpina</i>)
Alpine bentgrass (<i>Agrostis humilis</i>)
Great Basin onion (<i>Allium atrorubens</i> var. <i>atrorubens</i>)
Inflated Cima milk-vetch (<i>Astragalus cimae</i> var. <i>sufflatus</i>)
Inyo milk-vetch (<i>Astragalus inyoensis</i>)
Long Valley milk-vetch (<i>Astragalus johannis-howellii</i>)
Spiny-leaved milk-vetch (<i>Astragalus kentrophyta</i> var. <i>elatus</i>)
Lemmon's milk-vetch (<i>Astragalus lemmonii</i>)
Kern Plateau milk-vetch (<i>Astragalus lentiginosus</i> var. <i>kernensis</i>)
Mono milk-vetch (<i>Astragalus monoensis</i>)
Raven's milk-vetch (<i>Astragalus ravenii</i>)
Shockley's milk-vetch (<i>Astragalus serenoii</i> var. <i>shockleyi</i>)
Kern County milk-vetch (<i>Astragalus subvestitus</i>)
Bodie Hills rockcress (<i>Boechera bodiensis</i> (<i>Arabis</i> b.))
Rabbit-ear rockcress (<i>Boechera pendulina</i> (<i>Arabis</i> p.))
Pinzl's rockcress (<i>Boechera pinzliae</i>)
Shockley's rockcress (<i>Boechera shockleyi</i> (<i>Arabis</i> s.))
Tiehm's rockcress (<i>Boechera tiehmii</i> (<i>Arabis</i> t.))
Tulare rockcress (<i>Boechera tularensis</i>)
Upswept moonwort (<i>Botrychium ascendens</i>)
Scalloped moonwort (<i>Botrychium crenulatum</i>)
Slender moonwort (<i>Botrychium lineare</i>)
Mingan moonwort (<i>Botrychium minganense</i>)
Bolander's bruchia (<i>Bruchia bolanderi</i>)
Inyo County star-tulip (<i>Calochortus excavates</i>)
Pygmy pussypaws (<i>Calyptridium pygmaeum</i>)
Davy's sedge (<i>Carex davyi</i>)
Spikerush sedge (<i>Carex duriuscula</i>)
Idaho sedge (<i>Carex idahoensis</i>)
Liddon's sedge (<i>Carex petasata</i>)
Northern meadow sedge (<i>Carex praticola</i>)
Western single-spiked sedge (<i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i>)
Steven's sedge (<i>Carex stevenii</i>)
Tioga Pass sedge (<i>Carex tiogana</i>)
Western valley sedge (<i>Carex vallicola</i>)
Wheeler's dune-broom (<i>Chaetadelphe wheeleri</i>)

Common Name (Species)
Fell-fields claytonia (<i>Claytonia megarhiza</i>)
Kern Plateau bird's-beak (<i>Cordylanthus eremicus</i> ssp. <i>kernensis</i>)
Hall's meadow hawksbeard (<i>Crepis runcinata</i> ssp. <i>hallii</i>)
Panamint rock-goldenrod (<i>Cuniculotinus gramineus</i> (<i>Chrysothamnus</i> g.))
Globose cymopterus (<i>Cymopterus globosus</i>)
July gold (<i>Dedeckera eurekaensis</i>)
California draba (<i>Draba californica</i>)
White Mountains draba (<i>Draba monoensis</i>)
Mt. Whitney draba (<i>Draba sharsmithii</i>)
Male fern (<i>Dryopteris filix-mas</i>)
Gilman's goldenbush (<i>Ericameria gilmanii</i>)
Compact daisy (<i>Erigeron compactus</i>)
Limestone daisy (<i>Erigeron uncialis</i> var. <i>uncialis</i>)
Alexander's buckwheat (<i>Eriogonum alexandrae</i> (<i>E. ochrocephalum</i> var. <i>ochrocephalum</i>))
Pinyon Mesa buckwheat (<i>Eriogonum mensicola</i>)
Olancho Peak buckwheat (<i>Eriogonum wrightii</i> var. <i>olanchense</i>)
Yellow spinecane (<i>Goodmania luteola</i>)
Rosette cushion cryptantha (<i>Greeneocharis circumscissa</i> var. <i>rosulata</i> (<i>Cryptantha circumscissa</i> var. <i>rosulata</i>))
Beautiful cholla (<i>Grusonia pulchella</i>)
Poison Canyon stickseed (<i>Hackelia brevicula</i>)
Sharsmith's stickseed (<i>Hackelia sharsmithii</i>)
Blandow's bog moss (<i>Helodium blandowii</i>)
Jaeger's hesperidanthus (<i>Hesperidanthus jaegeri</i>)
White Mountains horkelia (<i>Horkelia hispidula</i>)
Short-leaved hulsea (<i>Hulsea brevifolia</i>)
Inyo hulsea (<i>Hulsea vestita</i> ssp. <i>inyoensis</i>)
Field ivesia (<i>Ivesia campestris</i>)
Alkali ivesia (<i>Ivesia kingii</i> var. <i>kingie</i>)
Fivepetal cliffbush (<i>Jamesia americana</i> var. <i>rosea</i>)
Seep kobresia (<i>Kobresia myosuroides</i> (<i>K. bellardii</i>))
Lance-leaved scurf-pea (<i>Ladeania lanceolata</i> (<i>Psoralidium lanceolatum</i>))
Inyo biscuitroot (<i>Lomatium foeniculaceum</i> ssp. <i>inyoense</i>)
Mono Lake lupine (<i>Lupinus duranii</i>)
Father Crowley's lupine (<i>Lupinus padre-crowleyi</i>)
Inyo blazing star (<i>Mentzelia inyoensis</i>)
Torrey's blazing star (<i>Mentzelia torreyi</i>)
Sweet-smelling monardella (<i>Monardella beneolens</i>)
Bristlecone cryptantha (<i>Oreocarya roosiorum</i> (<i>Cryptantha roosiorum</i>))
Blue pendant-pod oxytrope (<i>Oxytropis deflexa</i> var. <i>sericea</i>)
Limestone beardtongue (<i>Penstemon calcareus</i>)
Marble rockmat (<i>Petrophyton caespitosum</i> ssp. <i>acuminatum</i>)
Inyo phacelia (<i>Phacelia inyoensis</i>)
Mono phacelia (<i>Phacelia monoensis</i>)
Charlotte's phacelia (<i>Phacelia nashiana</i>)

Common Name (Species)
Silver bladderpod (<i>Physaria ludoviciana</i>)
Nevada ninebark (<i>Physocarpus alternans</i>)
Parish's popcornflower (<i>Plagiobothrys parishii</i>)
Mason's sky pilot (<i>Polemonium chartaceum</i>)
Williams' combleaf (<i>Polycytenium williamsiae</i>)
Narrow-leaved cottonwood (<i>Populus angustifolia</i>)
Morefield's cinquefoil (<i>Potentilla morefieldii</i>)
Beautiful cinquefoil (<i>Potentilla pulcherrima</i>)
Frog's-bit buttercup (<i>Ranunculus hydrocharoides</i>)
Redspined fishhook cactus (<i>Sclerocactus polyancistrus</i>)
Fringed chocolate chip lichen (<i>Solorina spongiosa</i>)
Fivefinger chickensage (<i>Sphaeromeria potentilloides</i> var. <i>nitrophila</i>)
Prairie wedge grass (<i>Sphenopholis obtusata</i>)
Small-flowered ricegrass (<i>Stipa divaricate</i>)
Alpine jewelflower (<i>Streptanthus gracilis</i>)
Masonic mountain jewelflower (<i>Streptanthus oliganthus</i>)
Horned dandelion (<i>Taraxacum ceratophorum</i>)
Dune horsebrush (<i>Tetradymia tetrameres</i>)
Foxtail thelypodium (<i>Thelypodium integrifolium</i> ssp. <i>complanatum</i>)
Many-flowered thelypodium (<i>Thelypodium milleflorum</i>)
Slender townsendia (<i>Townsendia leptotes</i>)
Virgate halimolobos (<i>Transberingia bursifolia</i> ssp. <i>virgata</i> (<i>Halimolobos</i> v.))
Little bulrush (<i>Trichophorum pumilum</i>)
Dedecker's clover (<i>Trifolium dedeckerae</i> (<i>T. kingii</i> ssp. <i>dedeckerae</i>))
Golden violet (<i>Viola purpurea</i> ssp. <i>aurea</i>)

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Chapter 1 – Rationale for Plant Species Determined to be Species of Conservation Concern

***Abronia alpina* - Ramshaw Meadows abronia**

Type of plant: flowering plant, perennial

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern:

Yes

Relevant threats to species:

Conifer encroachment, hydrologic alteration (water table lowering), and climate change have been identified as threats. In addition, herbivory and inadequacy of regulatory mechanisms (prior to the implementation of the Conservation Agreement) were identified as threats (USDA and USFWS, 2015).

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 1B.1

CA State Status: Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: R5 RF Sensitive

A single population occurrence of this species exists, in the Ramshaw Meadows area of the Kern Plateau within the Golden Trout Wilderness, Tulare County (CNDDDB, 2016). The population occupies approximately 15 acres. Ramshaw Meadows abronia (*Abronia alpina*) has a global rank of G2 (Imperiled, at high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors), and a State Rank of S2 (Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state) (CNDDDB 2016). These ranks were updated in 2015. In addition it has a California Rare Plant Rank of 1B.1: Plants Rare, Threatened, or Endangered in California and Elsewhere; and Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat). The species is currently on the Forest Service Region 5 Sensitive Species list.

This species was originally included as a Candidate species under the Endangered Species Act in the DEIS. When the species was removed from Candidacy (Fed. Reg. 10/8/2015), following the implementation of a Conservation Agreement between the USFS and USFWS, Planning Directives indicated that this species now meets the definition of an SCC.

Ramshaw Meadows abronia is an herbaceous perennial occupying a small area between Mt. Whitney and Kern Peak in the Golden Trout Wilderness of the southern Sierra Nevada. It occurs mostly along the

edges of Ramshaw Meadows but also at the northwest edge of Templeton Meadows, where it occupies loose granitic gravel and sand with other herbaceous plants. The species is confined to meadow borders in subalpine conifer forest at 2,650 meters (8,700 feet) elevation (USDA and USFWS, 2015) at the one location where it is known to occur. There are 23 collections of Ramshaw Meadows abronia documented in the Consortium of CA Herbaria (Baxter et al. 2016), beginning in the late 1800s (e.g. Purpus 1877, DeDecker 4183, André 244). It is documented from a single extended element occurrence in CNDDDB Rarefind (CDFW 2017); this occurrence record was last updated in 2013. All known plants are on national forest lands in Inyo National Forest.

The Ramshaw Meadows Abronia Conservation Agreement addresses the threats to this species and includes plans for monitoring and research, the latter aimed especially at potential restoration opportunities. *Abronia alpina* has been monitored by forest service personnel and partners at least every three years since 1985, with monitoring reports developed for each visit, in accordance with the 1992 species management guide and conservation agreement. The population shows approximate 10 year cycles in population size fluctuation, with 2015 marking the second lowest population estimate over the last 30 years (USDA, 2015), most likely due to the multiple year drought. There is a substantial concern about the species' capability to persist over the long term in the plan area because only a single population, an extremely limited in extent, is known. Based upon the evidence and supporting best available science, *Abronia alpina* meets the established criteria at CFR 1909.12 chp. 10, 12.52 (c-d) as a species of conservation concern in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 11 Apr 2016].

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USDA Forest Service, Inyo National Forest. 1992. Species Management Guide for *Abronia alpina* Bdg. Bishop, CA. 32 pp.

USDA Forest Service. 2015. FS RF Sensitive plant and invasive species monitoring overview. Inyo National Forest.

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***Agrostis humilis* - alpine bentgrass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change and related hydrologic alteration; social trails in meadows; packstock; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4Q

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Agrostis humilis occurs in alpine meadows. California Native Plant Society recently updated the rank of *A. humilis* from 1B to 2B.3. Six of the twenty total occurrences in CNDDDB occur on the Inyo NF. This species was recently relocated on Inyo National Forest in a meadow fed by Palisade Glacier. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Allium atrorubens* var. *atorrubens* - Great Basin onion**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; mining; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Three of nineteen CNDDDB records are from the Inyo NF. This species occurs in mountain mahogany, subalpine, and pinyon-juniper habitats. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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***Astragalus cimae* var. *sufflatus* - inflated Cima milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasives; one occurrence with declining numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3T3

State Rank: S3 (CA); S2 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Occurring in pinyon-juniper habitats. One of the seven CNDDDB records is from the Inyo NF; others in Death Valley National Park and nonfederal lands. CNPS says species may be present in other areas where conditions are favorable. Belt transect monitoring had shown decline from 43 plants in 1977 to 18 plants in 2008. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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***Astragalus inyoensis* - Inyo milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Species grows directly adjacent to roads and direct impacts from vehicles (crushing) have been observed during field surveys; restricted geographic range; mining is listed as potential threat.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: No

Astragalus inyoensis occurs in pinyon-juniper habitat. It is native to the Great Basin desert mountains and flats of western Nevada, and the White and Inyo Mountains of eastern California. It is locally abundant within its restricted geographic range. There are no records for this species in CNDDDB, as CNDDDB does not track plants with a California Rare Plant Rank of 4. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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***Astragalus johannis-howellii* - Long Valley milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; small occurrence numbers.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S1 (CA); S2 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: State Rare, Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive; California BLM Sensitive

Astragalus johannis-howellii grows in sandy, volcanic ash or pumice within sagebrush scrub at 2040-2530 m elevation, often in swales with current or former hot spring activity. The California state rank recently changed from S2 to S1. There are very few populations of *Astragalus johannis-howellii* on the Inyo NF, where six of the nineteen CNDDDB records are located. There is concern for the persistence of this species due to the limited distribution and immediate direct threat.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus kentrophyta* var. *elatus* - spiny-leaved milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; recreation; small populations; soil degradation

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Astragalus kentrophyta var. *elatus* occurs in eight western states. In California, it is only found in subalpine forests in the White Mountains. All six CNDDDB records are from the Inyo Natinoal Forest. Species occurs in mountain mahogany, subalpine, and pinyon-juniper habitats. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus lemmonii* - Lemmon's milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrologic alterations; few populations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Astragalus lemmonii occurs in sagebrush and alkali flats; occupies moist alkaline meadows or lakeshores from 1300-2900 m elevation, primarily in the Long Valley area of the Inyo NF. The 2005 census at Hot Creek was planned for remeasure in 2016. Appears to require light disturbance. Five of thirteen CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus lentiginosus* var. *kernensis* - Kern milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; drought; unauthorized OHV travel; grazing

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2?

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Astragalus lentiginosus var. *kernensis* occurs in subalpine, lodgepole, dry forb types, found in gravelly or sandy slopes and flats, primarily in and around the large meadows of the upper Kern Plateau at 2350-2750 m elevation. Inyo NF monitoring in Monache Meadow was initiated in 2001 and resampled in 2015; a decline occurred that is likely due to drought. Thirty-three of forty-four CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus monoensis* - Mono milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Drought; unauthorized OHV travel; grazing; limited distribution

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: State Rare, Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive; California BLM Sensitive

Astragalus monoensis occurs in Jeffrey pine, sagebrush, dry forb forest types; grows in pumice sand/gravel, in open areas such as sand flats from 2100 to 3400 m in elevation. Many occurrences in the Glass Mountain area; all 22 CNDDB records are entirely or partly on the Inyo National Forest in Mono County. Sampling at multiple sites on Inyo National Forest initiated in 1980s found large fluctuation between years; Long Valley site was entirely absent of plants in 2015, possibly due to drought. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus ravenii* - Raven's milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; very small occurrence numbers; fragile habitat

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Astragalus ravenii grows in gravelly soil from 3400 to 3450 m elevation, in subalpine or alpine environments with sparse shrub and/or tree cover. The three CNDDB records are from the Inyo NF. Recent collection in Glass Mountains. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus serenoii* var. *shockleyi* - Shockley's milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Mining, grazing, invasives, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T3

State Rank: S2 (CA); S2S3 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Astragalus serenoii var. *shockleyi* occurs in pinyon-juniper and xeric shrub/blackbrush habitats. Ten of seventeen CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus subvestitus* - Kern County milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing and unauthorized OHV travel documented in Monache Meadows.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Astragalus subvestitus on the Inyo NF occurs in subalpine and dry forb habitats, on loose soils adjacent to meadows. There are many consortium records and other records, including recent records for Inyo NF. There are 49 occurrences in the NRM-TESP-IS database for the Inyo (USDA 2017). CNDDDB doesn't track species ranked as CRPR 4. Forest staff observed extensive trampling by livestock and unauthorized OHV travel in the Monache Meadows area. Due to the Inyo population representing the northern extent of distribution and extensive impacts, there is substantial concern for the persistence of this species in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

USDA, Forest Service. 2017. Natural Resources Manager – Threatened, Endangered, and Sensitive Plants Database. Geospatial Interface Stand Alone Query, Visualization: EO Publish Current to Local RSW Inyo National Forest Connection set, Accessed 10/10/2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera bodiensis* (*Arabis b.*) – Bodie Hills rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; few occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S2 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; California BLM Sensitive

Boechera bodiensis occurs on dry, open, rocky, high or north-facing slopes or exposed summits of granitic or rhyolitic material, on moisture-accumulating microsites in sagebrush and pinyon-juniper zones. Four of twenty CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera pendulina* (Arabis p.) – rabbit-ear rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change;

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

Boechera pendulina occurs in the states of Arizona, Colorado, Nevada, Utah and Wyoming. occurs in rock outcrops, in open gravelly flats and hillsides in sagebrush, pinyon-juniper, mountain mahogany, open conifer forests at elevations above 10,000. In California, the species has nine known element occurrences of *Boechera pendulina* (CNPS 2017) on the Inyo National Forest, in the White Mountains. CNDDDB has one record; a 2015 record says 50 plants in population. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera pinzliae* (Arabis p.) - Pinzl's rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S1 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Boechera pinzliae grows in gravelly granitic soil in alpine and subalpine areas from 3000 to 3400 m elevation in the White and Inyo Mountains. There are two CNDDDB records and both are on the Inyo NF. There is substantial concern for the persistence of this species due to limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera shockleyi* (Arabis s.) - Shockley's rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Mining; unauthorized OHV travel; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S2 (CA); S3 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: FS RF Sensitive

Boechera shockleyi grows in xeric shrub/blackbrush; rock outcrops; gravelly soil (generally dolomite) from 1200 to 2500 m elevation in the White and Inyo Mountains. Twelve of fifty-eight CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera tiehmii* (*Arabis t.*) - Tiehm's rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate Change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Boechera tiehmii grows in rock outcrops and gravelly soil from 3000 to 3600 m elevation in the central High Sierra Nevada and NV. Eight of nine CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera tularensis* - Tulare rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Boechea tularensis occurs on rocky slopes in subalpine or upper montane coniferous forest, with some reports from meadows. Nine of twenty-eight CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Botrychium ascendens* - upswept moonwort**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; trampling; unauthorized OHV travel; severe soil disturbance; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: FS RF Sensitive

Botrychium ascendens grows in moist meadows or open woodland near streams or seeps from 1500 to 3200 m elevation in the central High Sierra Nevada. Four of nineteen CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Botrychium crenulatum* - scalloped moonwort**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; trampling; unauthorized OHV travel; severe soil disturbance

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3 (CA); S1? (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: FS RF Sensitive

Botrychium crenulatum lives on saturated hard water seeps and stream margins, 1500-3600 m elevation in the high Sierra Nevada, eastern Sierra Nevada, and White Mountains. Ten of seventy-four CNDDDB

records are from the Inyo NF. There is substantial concern for the persistence of this species due to the immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Botrychium lineare* - slender moonwort**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; trampling; unauthorized OHV travel; severe soil disturbance; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 1B.1

CA State Status: None

Other Designations: FS RF Sensitive

Also known as narrowleaf grapefern, *Botrychium lineare* grows in moist meadows from 2500 to 4000 m elevation in the central and southern High Sierra Nevada. This species is very rare with a few records in California, including on the Inyo, Toiyabe, Sierra and Sequoia National Forests. There is one CNDDB record that is on the Inyo NF, consisting of a single plant last seen in 2006, growing with other *Botrychium* species. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Botrychium minganense* - Mingan moonwort**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; trampling; unauthorized OHV travel; severe soil disturbance; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: FS RF Sensitive

Botrychium minganense grows in meadows and open forest along streams or around seeps from 1500 to 3100 m elevation in the High Sierra Nevada. Two of fifty-seven CNDDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Bruchia bolanderi* - Bolander's bruchia**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; recreation impacts in meadows; few occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: FS RF Sensitive

Bruchia bolanderi is a rare bryophyte, a moss found in Oregon, California, and Nevada. *B. bolanderi* colonizes organic or mineral soil along stream banks, in and around meadows, springs, and fens, 3800 to 8200 ft. elevation. The species is opportunistic, taking advantage of disturbed sites where there is minimal competition from other vegetation. Two of twenty-eight CNDDB records are on the Inyo NF; these two sites are also documented in the Forest Service's rare plant database (Engelhardt 2017). There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

- California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].
- California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.
- Engelhardt, B. 2017. Personal communication, via email, between Julie Kierstead Nelson, US Forest Service, and Blake Engelhardt, US Forest Service, Sept. 21, 2017.
- Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Calochortus excavatus* - Inyo County star-tulip**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrological alteration; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.1

CA State Status: Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive, California BLM Sensitive

Calochortus excavatus occurs in sagebrush, xeric shrub/blackbrush, meadow habitats; it is limited to somewhat moist alkaline soils of the Owens Valley in Inyo County to Black Lake in Mono County, at 1300-2000 m elevation. The majority of occurrences are on Los Angeles Department of Water and Power lands. Two of seventy CNDDB records are from the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Calyptridium pygmaeum* (*Cistanthe pygmaea*) – Pygmy pussypaws**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; trampling; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Calyptridium pygmaeum grows in sandy to gravelly soils, usually dry, on flats or slopes, 6500-10200 ft elevation in the central and southern High Sierra Nevada. Three of eleven CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex davyi* - Davy's sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; grazing; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

Carex davyi occurs in subalpine meadows. One of nineteen CNDDDB records is on the Inyo NF at Mono Pass. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex duriuscula* - spikerush sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Potential grazing and hydrologic alterations; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Carex duriuscula occurs in the western and north mid-west states. All four CNDDDB records are on the Inyo NF in sagebrush and subalpine forest meadows. There is substantial concern for the persistence of this species due to the limited distribution in California and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex idaho* (*C. parryana* var. *hallii*) - Idaho sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing, climate change, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2G3

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Carex idahoensis occurs in sagebrush, subalpine forest and meadows. The two CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex petasata* - Liddon's sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing, climate change, small number of occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Carex petasata occurs in pinyon-juniper woodland, subalpine forest and meadows. Two of the 59 CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species on the Inyo due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

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Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex praticola* - northern meadow sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing, climate change, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Carex praticola occurs in subalpine forest and meadows. One of 11 CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex scirpoidea* ssp. *pseudoscirpoidea* - western single-spiked sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing, climate change, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Carex scirpoidea ssp. *pseudoscirpoidea* occurs in sagebrush and subalpine forest. Nine of 11 CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

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California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex stevenii* - Steven's sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers; hydrologic alterations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4?

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Carex stevenii occurs in alpine habitat. The two CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex tiogana* - Tioga Pass sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; recreation; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G1

State Rank: S1 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Carex tiogana occurs on coarse, wet, limey soil in subalpine and alpine zones of the central High Sierra. Three of the four CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex vallicola* - western valley sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alteration; climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Carex vallicola occurs in sagebrush and subalpine habitat. Three of fourteen CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Chaetadelpa wheeleri* - Wheeler's dune-broom**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Soil degradation from unauthorized OHV travel and solar energy development; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Chaetadelpa wheeleri occurs in sagebrush/sand dune habitat. Dependent on disturbance. Three of twenty-five CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Claytonia megarhiza* - fell-fields claytonia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Claytonia megarhiza occurs in alpine habitat. Three of fourteen CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cordylanthus eremicus* ssp. *kernensis* - Kern Plateau bird's-beak**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; recreation; climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3?T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Cordylanthus eremicus ssp. *kernensis* occurs in alpine and subalpine habitat. Eight of fourteen CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Crepis runcinata* (*C. r. ssp. hallii*) - Hall's meadow hawksbeard**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrologic alteration; unauthorized OHV travel; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Note: *Crepis runcinata* ssp. *hallii*, i.e., the subspecies, is still recognized in The Jepson eFlora (Jepson Flora Project 2017) but is no longer recognized by CNDDDB or CNPS.

Crepis runcinata occurs in sagebrush alkali flat habitat. Alkali flat degradation due to drying and soil loss. Restricted habitat type on the Inyo NF. Two of thirty-two CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Jepson Flora Project (eds.) 2017. Jepson eFlora, <http://ucjeps.berkeley.edu/eflora/> [accessed on Aug 01, 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Cuniculotinus gramineus (Chrysothamnus g.) - Panamint rock-goldenrod

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers and limited distribution

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4?

State Rank: S2.3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Cuniculotinus gramineus is known from the Inyo and Panamint Mountains, occurring in mountain mahogany, subalpine and carbonate habitat. Four of ten CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cymopterus globosus* - globose cymopterus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrologic alterations; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Cymopterus globosus occurs in sagebrush habitat. One of four CNDDDB records is on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Dedekera eurekensis* - July gold**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Mining; recreation; invasives; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: State Rare, Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive; CA BLM Sensitive

Dedeckera eurekaensis is known from small, disjunct populations along the western slope of the White Mountains from southern Mono County southward into the Last Chance Mountains of Inyo County.

Dedeckera eurekaensis occurs on limestone slopes, 1200-2200 m elevation, in xeric shrub/blackbrush and lower pinyon-juniper (carbonate) habitats. Nine of twenty-nine CNDDB records are on the Inyo NF. July gold is considered an evolutionary relict of the Mojave desert with extremely low means of reproduction from seed and no means of vegetative reproduction (Wiens et al. 1989). There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Wiens, D., D.L. Nickerent, C.I. Davern, C.L. Calvin, and N.J. Vivrette. 1989. Developmental failure and loss of reproductive capacity in the rare palaeoendemic shrub *Dedeckera eurekaensis*. *Nature* 338; 65-67.

***Draba californica* - California draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; grazing and road construction.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: No

Draba californica occurs in sagebrush and alpine habitat. Majority of Inyo NF occurrences are at high elevations in White Mts, but there are two occurrences in high Sierra Nevada. There are no records of this species in CNDDDB because CNDDDB does not track species with a CRPR of 4. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba monoensis* – White Mountains Draba (Mono draba)**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; few occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Draba monoensis grows in moist gravel and rock crevices, 3600-4000 m elevation in the White Mts. All of the seven CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba sharsmithii* - Mt. Whitney draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers; recreation—trail construction and maintenance, trampling by hikers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Draba sharsmithii occurs in rock crevices and on slopes, 3300-3800 m elevation in the southern High Sierra Nevada. Six of eight CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Dryopteris filix-mas* - male fern**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Very few populations; climate change; possible drying of springs.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Dryopteris filix-mas occurs in subalpine habitat in crevices of granite cliffs. Single, small population relocated in White Mts. in 2014. Four of six CNDDB records are on the Inyo NF. Threatened by possible drying springs. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Ericameria gilmanii* - Gilman's goldenbush**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasives, mining, few populations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Ericameria gilmanii status rank has recently been updated from a Natureserve G1 to a G2 species, and a CA state rank from an S1 to an S2; the 1B.3 California Rare Plant rank is the same. The species is endemic to California, with a total of seven occurrences. One of seven CNDDDB records is on the Inyo NF, from a single population in the Inyo Mountains. It occurs at the interface of pinyon-juniper and subalpine forests, in a location where the invasive annual grass, cheatgrass, occurs in low levels. This population occurs in a climatic refugium, with no evidence of recent reproduction (Slaton 2015). Historic mining was common in the vicinity of the single population, including a historic road at the lower edge of the population. In addition to threats from invasive species, a single stochastic event, either natural or human-caused, such as a flood or fire has the potential to eliminate the population, and thus constitutes a substantial concern for the persistence of this species.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erigeron compactus* - compact daisy**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasives; climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S2S3 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Erigeron compactus occurs in sagebrush, pinyon-juniper, carbonate, and alkali flat habitat. Twelve of thirteen CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erigeron uncialis* var. *uncialis* - limestone daisy**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; few occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4T2

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Erigeron uncialis var. *uncialis* grows in limestone crevices, sagebrush scrub, and subalpine forest, from 2100 – 2900 meters elevation. Two of eight CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum alexandrae* - Alexander's buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Trampling (cattle and/or wild horses); invasive plant species; unauthorized OHV travel; small number of occurrences.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2T3

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 1B.1

CA State Status: Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: CA BLM Sensitive

Eriogonum alexandrae is known only from Nevada and from Mono County, CA occurring on clay soils in sagebrush and pinyon-juniper zones, 1300-1700 m elevation. There are 5 collections in the Consortium (Baxter et al., 2016), with four from the same location in the plan area (Howald 3476, 3534, 3491, 3492), all from July 2015 in East Mono Basin. Sue Weis, Inyo NF botanist, reported a survey of the population in July 2015, which included an infestation of *Halogeton glomeratus*.

Due to recent changes in taxonomic classification in this species, and to recent documentation of the species in California, there are apparent discrepancies in ranks. There is a substantial concern about the capability of *Eriogonum alexandrae* to persist over the long term in the plan area because of the recently documented threats of invasive plants and trampling in this extremely small population.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum mensicola* - Pinyon Mesa buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Mining; recreation; invasives; small occurrences numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: CA BLM Sensitive

Eriogonum mensicola occurs in pinyon-juniper and sagebrush scrub habitat (USDA 2017). Two of sixteen CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

USDA Forest Service. 2017. Natural Resource Information System; Threatened, Endangered and Sensitive Plants—Invasive Plants. [accessed 26 August 2017].

***Eriogonum wrightii* var. *olanchense* - Olancha Peak buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Eriogonum wrightii var. *olanchense* occurs in alpine to subalpine areas, usually near or above timberline, 3500-3600 m elevation. Specific habitats include steep west and southwest facing slopes, granitic, in gravels, or flat open gravels with <10% slope. The two CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Greeneocharis circumscissa* var. *rosulata* (*Cryptantha* c. var. *r.*) - rosette cushion cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing, livestock trampling, climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Greeneocharis circumscissa var. *rosulata* occurs in alpine to subalpine areas. Seven of eight CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Goodmania luteola* - yellow spinecape**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

CNPS lists non-native plants, groundwater lowering, livestock trampling, and development as threats. Very small occurrence numbers on the forest.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: No

Goodmania luteola occurs in restricted habitat type in sagebrush, limited to two known populations on the Inyo NF. CNDDDB has no records for this species, because CNDDDB does not track species with CRPR of 4. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Grusonia pulchella* (*Opuntia p.*) - beautiful club-cholla**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

CNPS lists grazing impacts; few populations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); S2S3 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None; NV State Status: CY=protected as cactus

Other Designations: No

Grusonia pulchella occur in sagebrush and xeric shrub/blackbrush on the Inyo NF. There are very few populations; two of nine CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hackelia brevicula* - Poison Canyon stickseed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing impacts concentrated in limited habitat; climate change, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 3.3

CA State Status: None

Other Designations: No

Hackelia brevicula occurs in sagebrush and subalpine habitat. All eight CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hackelia sharsmithii* - Sharsmith's stickseed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Recreation impacts along trails; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S2 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: CA BLM Sensitive

Hackelia brevicula occurs in sagebrush and subalpine habitat. Eighteen of twenty-six CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Helodium blandowii* - Blandow's bog moss**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Threats include hydrologic alteration; grazing; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: FS RF Sensitive

Helodium blandowii (Blandow's bog moss) grows between 2000 and 3200 m elevation in wet montane meadows, fens, and seeps, especially under willows in areas of leaf litter, and also in subalpine coniferous forests and near alpine lakes. Four of sixteen CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hesperidanthus jaegeri* (Caulostramina j.) - Jaeger's hesperidanthus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Few occurrences; climate change; limited habitat because of its restriction to specific soils; competition from invasives

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Hesperidanthus jaegeri (Jaeger's hesperidanthus) grows in rocky crevices, cliffs and limestone cliffs from 1500 to 2800 m elevation, in the White and Inyo Mountains. For the plan area, there are several Consortium of California Herbaria and CNPS records for the Inyo Mountains for this species. There are also several recent records on non-government lands and one of seven CNDDDB records is on the Inyo

NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Horkelia hispidula* - White Mountains horkelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; climate change; limited distribution

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Horkelia hispidula (White Mountains horkelia) grows in high elevation sagebrush scrub, sometimes in disturbed habitats next to or in roads, over 3000 m elevation.. All fourteen CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hulsea brevifolia* - short-leaved hulsea**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Trampling, altered fire regimes, small occurrence numbers.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Hulsea brevifolia (short-leaved hulsea) occurs in gravelly soils in mixed conifer and subalpine, and appears to benefit from fire. Three of sixty-four CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hulsea vestita* ssp. *inyoensis* - Inyo hulsea**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Mining; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2T3

State Rank: S1S2 (CA); S2 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: None

Hulsea vestita ssp. *inyoensis* occurs in pinyon-juniper woodland and sagebrush scrub. Several consortium records from the Inyo Mountains (Baxter et al. 2016). Three of eleven CNDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Ivesia campestris* - field ivesia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: No

Endemic to Kern Plateau. Thirty-seven of fifty-six CNDDDB records are on the Inyo NF. There is concern for the persistence of this species due to immediate direct threat.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Ivesia kingii* var. *kingii* - alkali ivesia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; unauthorized OHV travel; hydrologic alterations; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T3Q

State Rank: S2 (CA); S3 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Note: NatureServe rank is for species and not this specific taxon.

One of fifteen CNDDDB records is on the Inyo NF; most occurrences are not on federal land. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Jamesia americana* var. *rosea* - fivepetal cliffbush**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; dispersed recreational impacts; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium of California Herbaria records from Sierra Nevada and Inyo Mountains and Death Valley. There are four occurrences in the NRM-TESP-IS database for the Inyo. There are no records for this species in CNDDDB, because CNDDDB does not track plants with a CRPR of 4. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natural Resources Manager – Threatened, Endangered, and Sensitive Plants Database. Geospatial Interface Stand Alone Query, Visualization: EO Publish Current to Local RSW Inyo National Forest Connection set, Accessed 10/10/2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Kobresia myosuroides* (*K. bellardii*) - seep kobresia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Historic mining and pack stock activities; small occurrence numbers.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Three of ten CNDDDB records are on the Inyo NF. *Kobresia myosuroides* occurs only in the calcium carbonate rich soils of extreme rich fens meadows in subalpine forests. This perennial Cyperaceae is known only from Mono County in the state, but outside of California it has a circumboreal distribution (Hickman 1993). There are two occurrences in the Mildred Lake area of the Convict Basin. At present the meadow complex is in good condition, although historically there have been mining and pack stock activities. Recreational activity threatens this species' persistence (CNPS 2009). There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Hickman, J.C. (ed.). 1993. The Jepson manual. University of California Press, Berkeley, CA.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Ladeania lanceolata (Psoralidium lanceolatum) - lance-leaved scurf-pea

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Wild horse; grazing

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Ladeania lanceolata is locally common to abundant on the dunes in the northeastern part of the Mono Basin, and in dense, scattered patches along Hwy 167 from 10 miles east of Hwy 395. It flowers vigorously along roadsides in wet years, but rarely flowers on the dunes, so would be rare to collect there. One of twelve CNDDDB records are on the Inyo NF. More recently, it was observed on the plan area near Hwy 167 in the vicinity of Sulphur Pond (Howard 2017). There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded October 2017.

Howard, A. 2017. Personal communication between Blake Engelhardt and Ann Howard in 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lomatium foeniculaceum* ssp. *inyoense* - Inyo biscuitroot**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Soil degradation; climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Most occurrences of *Lomatium foeniculaceum* ssp. *inyoense* are in the Bristlecone Pine Forest in the Inyo Mountains, but there are some occurrences in the White Mountains. Found in the subalpine zone, 9,400 to 11,000 feet elevation. There are no records for this plant in CNDDDB, because CNDDDB does not track plants with a CRPR of 4. NRM-TESP-IS has one occurrence on the Inyo with 5 plants recorded. Populations are well documented in the Consortium records, including from 2009. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats (USDA 2017.)

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natural Resources Manager – Threatened, Endangered, and Sensitive Plants Database. Geospatial Interface Stand Alone Query, Visualization: EO Publish Current to Local RSW Inyo National Forest Connection set, Accessed 10/10/2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

USDA Forest Service. 2017. Natural Resource Information System; Threatened, Endangered and Sensitive Plants—Invasive Plants. [accessed 26 August 2017].

***Lupinus duranii* - Mono Lake lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Direct damage from unauthorized OHV travel; grazing; competition from invasive plants; road maintenance and expansion (CNDDDB 2017)

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Forty-one of 42 CNDDDB records are on the Inyo NF. There is concern for the persistence of this species due to limited distribution and direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lupinus padre-crowleyi* - Father Crowley's lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Livestock trampling; departure of fire regimes from the natural range of variation; limited occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: State Rare, Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive

Lupinus padre-crowleyi (Father Crowley's lupine) is endemic to the Inyo National Forest, where all fifteen CNDDDB occurrences occur. It grows in sagebrush shrublands and clearings in Jeffrey pine forests. Livestock trampling has been identified as a threat, though only one population occurs in an active grazing allotment. Forest Service records document that the species benefits from light to moderate disturbances, such as avalanches or fire. In 2005-2007, the Forest Service conducted habitat restoration using prescribed fire in habitat on the White Mt. Ranger District of the Inyo National Forest. A 2015 monitoring report indicated that these treatments provided some benefit to species viability in these areas. The departure of fire regimes from the natural range of variation in most of the species habitat, limited population numbers and potential compounding of changes to fire regime caused by climate change constitutes a substantial concern for *Lupinus padre-crowleyi* persistence in the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Mentzelia inyoensis* - Inyo blazing star**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasives; very small occurrence numbers and limited distribution.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Mentzelia inyoensis occurs in Mazourka Canyon and San Lucas Canyon in the Inyo Mountains; Silver Canyon and McAfee Creek in the White Mountains; near Kings Mtn. Road in the Last Chance Mountains; on Lippincott grade within Death Valley NP; and near Andrews Camp, Four Jeffrey Campground, to the west of Bishop in the Owens Valley. *Mentzelia inyoensis* occurs in Great Basin scrublands and pinyon-juniper woodlands, on rocky sites, washes, calcareous pumice sand, clayey hillsides, from 1150 m – 1980 m elevation. Two of the eight CNDDDB records are known from the Inyo NF, with the remainder all from Inyo County. The two Inyo National Forest records are herbarium specimens. No population trend information is available. (USDA 2012). There is concern for the persistence of this species due to limited distribution and direct threat.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

USDA Forest Service. 2012. Sensitive Species Documentation Form, Region 5.

***Mentzelia torreyi* - Torrey's blazing star**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Several field surveys by forest botany personnel between 2009 and 2015 show infestations of Russian thistle (*Salsola* sp.), cheatgrass (*Bromus tectorum*), and salt-lover (*Halogeton glomeratus*) in the northern Mono Basin. These invasive plants may compete with *Mentzelia torreyi* for space, water, and nutrients. Also threatened by unauthorized OHV travel, grazing, and trampling (CNPS 2017.).

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2.2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Occurs in sandy to alkaline fine-textured soils, slopes, scrub, pinyon woodland, at 900-2100 m elevation. There are at least 10 collections in the Consortium from the Inyo plan area. Eight of 17 CNDDDB records are on the Inyo NF. Inyo NF botanist Sue Weis included the population recorded by Howald 3532 in the Forest Service NRIS database in 2015, and Michèle Slaton recorded 1% cover for *M. torreyi* in a forest ecology plot on the shore of Mono Lake at Black Point in 2011. There is substantial concern about capability of *Mentzelia torreyi* to persist over the long term in the plan area due to limited distribution and identified threats, including invasive plant species.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded October 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Monardella beneolens* - sweet-smelling monardella**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Monardella beneolens (sweet-smelling monardella) is found on metamorphic or granitic scree slopes, in subalpine mixed conifer forest; grows in clumped prostrate mats, growing up and over boulders. Four of six CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Oreocarya roosiorum* (*Cryptantha roosiorum*) - bristlecone cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change, small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: State Rare, Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive; CA BLM Sensitive

Note: *Cryptantha roosiorum* name change to *Oreocarya roosiorum*.

Oreocarya roosiorum (bristlecone cryptantha) is endemic to the Inyo National Forest, occurring in the Inyo Mountains. It grows in dry, rocky meadows on carbonate substrates in open bristlecone pine-limber pine forest, at 2570 to 3230 meters elevation. All six CNDDDB records are on the Inyo NF. Monitoring plots were installed for all known populations; 2015 data show low numbers likely due to drought. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Oxytropis deflexa* var. *sericea* - blue pendant-pod oxytrope**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T5

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

All five CNDDDB records are on the Inyo NF. Habitat is meadows and seeps; upper montane coniferous forest. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Penstemon calcareus* - limestone beardtongue**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasives; burros; very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3?

State Rank: S3? (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

Occurs in xeric shrub/blackbrush, carbonate, habitats. The species is documented on the Inyo NF by a 2014 Slaton and Weis collection (Slaton 319) in Lead Canyon in Inyo County. This occurrence was submitted to CNDDDB in 2016 but has not yet been entered into CNDDDB (Lazar 2017.). None of the 22 CNDDDB records is on the Inyo NF; most records are from Death Valley National Park. There is substantial concern for the persistence of this species due to the limited distribution on the Inyo and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Lazar, Kristi, August 2, 2017. Personal communication (email) with Julie K. Nelson. "Michelle Slaton submitted data to CNDDDB in 2016. Within her dataset is a 2014 record for *Penstemon calcareus* (Slaton #319) from Lead Canyon in Inyo County."

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Petrophytum caespitosum* ssp. *acuminatum* (*P. acuminatum*) - rockmat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Competition by invasives; very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Petrophyton caespitosum ssp. *acuminatum* (marble rockmat) grows on limestone or granite cliffs, in carbonate and rocky areas, and in lower and upper montane coniferous forests at 900-2350 m elevation. Single known population on Inyo NF (one of three CNDDDB records), on granite at Symmes Creek, west of Independence, at 6800 ft. elevation. There is substantial concern for the persistence of this species due to its extremely limited distribution on Inyo NF.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia inyoensis* - Inyo phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; unauthorized OHV travel; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Phacelia inyoensis (Inyo phacelia) grows in meadows and alkaline seeps, at 915-3200 m elevation. Nine of twenty-five CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia monoensis* - Mono phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic events; climate change; restrictive habitat and limited distribution.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S2 (CA); S3 (NV)

CA Rare Plant Rank: 1B.1

CA State Status: Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive; CA BLM Sensitive

Phacelia monoensis (Mono County phacelia) grows on shrink-swell volcanic clay soils derived from rhyolite, at 1900-2900 m elevation, in the White Mts. and Adobe Hills. None of the fourteen CNDDDB records are on the Inyo NF, however, there are 24 occurrences recorded in the NRM-TESP-IS database. During 2015 monitoring in White Mts. a flooding event on roads affected population stability. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natural Resources Manager – Threatened, Endangered, and Sensitive Plants Database. Geospatial Interface Stand Alone Query, Visualization: EO Publish Current to Local RSW Inyo National Forest Connection set, Accessed 10/17/2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia nashiana* - Charlotte's phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasive plant species; very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: CA BLM Sensitive

Occurs in xeric shrub/blackbrush. Extremely rare on the Inyo NF. Two of 68 CNDDDB records are on the Inyo NF. Observations in 2015 indicate high threat from non-native annual grasses. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Physaria ludoviciana* - silver bladderpod**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Wild horses

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

There are two Consortium of California Herbaria records of *Physaria ludoviciana* in California, both on the Inyo National Forest in eastern Mono Basin near the state line. The species is found on caliche-covered clay soil mounds in sagebrush ecosystems. The only CNDDDB record is on the Inyo National Forest. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Physocarpus alternans* - Nevada ninebark**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Potential in plan area are invasives and climate change; very small occurrence numbers.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Physocarpus alternans is a rare species in Inyo County, occurring on the Inyo National Forest, Death Valley National Park and private lands. On the Inyo, the species is found in the southern White Mountains and northern Inyo Mountains. The CNPS inventory database includes several records from 2016. Five of nine CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Plagiobothrys parishii* - Parish's popcornflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; restricted habitat due to its preference for specific soils; hydrological alteration; grazing; very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G1

State Rank: S1 (CA)

CA Rare Plant Rank: 1B.1

CA State Status: Plant Species of Greatest Conservation Need (State Wildlife Action Plan 2015)

Other Designations: FS RF Sensitive

Occurs in xeric shrub/blackbrush and moist meadows. This plant mostly occurs outside national forest lands where it is threatened by groundwater pumping. One of sixteen CNDDDB records is on the Inyo NF, from Upper Pizona Spring in Mono County, in a moist meadow with *Poa* sp., *Carex simulata*, and *Iris missouriensis*. There are two Consortium of California Herbaria records for this site and a 2016 CNPS Inventory Database record for an occurrence a few miles west. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Polemonium chartaceum* - Mason's sky pilot**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; grazing; recreation; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Six of twelve CNDDDB records are on the Inyo NF, all from the White Mountains at elevations above 13,000 feet.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Polyctenium williamsiae* - Williams' combleaf**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change, limited habitat, grazing, unauthorized OHV travel

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None; NV State Status: Critically Endangered

Other Designations: FS RF Sensitive

One of six CNDDDB records of *P. williamsiae* is on the Inyo NF, with a reported population size of 5 individuals occurring in sagebrush. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

In the current taxonomic treatment by *The Jepson eFlora* (Al-Shehbaz 2017), *P. williamsiae* is treated as a synonym of *P. fremontii*, which is a more common, though still rare, species ; ranked as of G4, S4, for CA, with a California Rare Plant Rank of 4.3.

Best Available Scientific Information Considered

Al-Shehbaz 2017. *Polycytenium fremontii*, in Jepson Flora Project (eds.) *Jepson eFlora*, http://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=39029, accessed on August 03, 2017.

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Populus angustifolia* - narrow-leaved cottonwood**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Altered fire flood/tidal/hydrologic regime; few occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

One of two CNDDDB records of *P. angustifolia* is on the Inyo NF, with a reported population size of 100 individuals. This occurrence is east of Upper Division Creek near confluence with Spook Canyon, northwest of Independence. Habitat is riparian, in a stream canyon in pinyon-juniper woodland with willows (*Salix*), western birch (*Betula occidentalis*), oaks (*Quercus kelloggii* and *Q. X morehus*) and *Rhamnus* spp. About half of the population burned in 1999 and resprouted vigorously afterward. Only a few reproductive individuals were seen in 2005, all of them male. The area downstream of Inyo occurrence is diverted/dewatered. This species also occurs along Wyman Creek in the White Mountains as documented in Consortium of California Herbaria and by others (Lloyd and Mitchell 1973). There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Lloyd, R. M. and R. S. Mitchell. 1973. A flora of the White Mountains of California. University of California Press. Berkeley, CA.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Potentilla morefieldii - Morefield's cinquefoil

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; grazing; recreation

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Potentilla morefieldii (Morefield's cinquefoil) grows in rocky alpine barrens and is associated with carbonate substrate, occurring over 3300 m elevation, in the central High Sierra Nevada and White Mts (Coyote). In at least one case on the margin of a small spring and meadow. Fifteen of 17 CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Potentilla pulcherrima* - beautiful cinquefoil**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; erosion; one occurrence

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

The only known occurrence of *Potentilla pulcherrima* in California, is on the Inyo NF, in Mono County, half a mile up the south fork of Crooked Creek. It occurs in high elevation sagebrush on moist soil over granite. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Ranunculus hydrocharoides* - frog's-bit buttercup**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Drought, diversions, channel clearing off plan area; in plan area, water management and horse trampling identified as potential threats; small occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

Ranunculus hydrocharoides has three occurrences on the forest; one of four CNDDDB occurrences is on the Inyo NF. One of the three occurrences is in the streambed of Mill Creek downstream from Lundy Lake, the other two are in the Pizona area. There is substantial concern for the persistence of this species due to the limited distribution.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Sclerocactus polyancistrus* - redspined fishhook cactus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Horticultural collection; unauthorized OHV travel; grazing; insect herbivory

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3.2 (CA); S2S3 (NV)

CA Rare Plant Rank: 4.2

CA State Status: CA Desert Native Plants Act- includes all species in cactus family – collection prohibited without permit; NV State Status: CY – Protected as cactus, yucca, or Christmas tree

This species occurs in sagebrush and xeric shrub/blackbrush. There are 35 occurrences record for the Inyo NF in the NRM-TESP-IS database. There are no occurrence records for this species in CNDDDB, as CNDDDB does not track occurrences of California Rare Plant Rank 4 species. Several collections are documented from the Inyo Mountains in Inyo County; the species is also reported from the plan area in Mono County (Calflora 2017). There is substantial concern for the persistence of this species due to identified threats.

Best Available Scientific Information Considered

- Calflora: Information on California plants for education, research and conservation, with data contributed by public and private institutions and individuals, including the Consortium of California Herbaria. [web application]. 2017. Berkeley, California: The Calflora Database [a non-profit organization]. Available: <http://www.calflora.org/> (Accessed: Aug 09, 2017).
- California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].
- California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].
- Natural Resources Manager – Threatened, Endangered, and Sensitive Plants Database. Geospatial Interface Stand Alone Query, Visualization: EO Publish Current to Local RSW Inyo National Forest Connection set, Accessed 10/17/2017.
- Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Solorina spongiosa* - fringed chocolate chip lichen**

Type of plant: lichen

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Threats cited in CNDDDB are grazing, foot traffic/trampling, and recreational use (non-ORV).

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S1 (CA); S1 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

The only occurrence in CNDDDB is on Inyo NF, on a damp roadside seep in lodgepole pine forest in the Bishop Creek watershed. Single record for NV. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Nevada data source?

***Sphaeromeria potentilloides* var. *nitrophila* (*Vesicarpa* p. var. n.) – fivefinger chickensage**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Unauthorized OHV travel and grazing

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4?

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Typically found in wetlands. Many records from the Consortium of California Herbaria but no CNDDDB records on Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Sphenopholis obtusata* - prairie wedge grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrologic alterations; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Two of nineteen CNDDDB records are on the Inyo NF, on alluvial soil associated with riparian birch vegetation or with drier scrub habitat. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Stipa divaricata* (*Piptatherum micranthum*; *Piptatheropsis m.*) - small-flowered ricegrass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; climate change; very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Occurs in the pinyon-juniper woodland. Several Consortium of California Herbaria and CNPS records from Inyo NF; White Mountains, including from 2014 and 2016. Three of seven CNDDDB records are on the Inyo NF; the records are from 1926, 1952, and 1987. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Streptanthus gracilis* - alpine jewelflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Climate change; recreation trampling; hydrologic alteration; limited distribution

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive Species

Streptanthus gracilis is endemic to California, where it is known only from the Kings-Kern Divide region in the Sierra Nevada, at 2600 to 3600 m elevation, near the intersection of Tulare, Fresno, and Inyo Counties. Found in granitic, rocky habitat such as talus; in subalpine coniferous forest and upper montane coniferous forest. Three of 29 CNDDDB occurrences are from Inyo NF. There are several records in the California Consortium of Herbaria database and more recent observations in CNPS inventory database on the plan area, including from 2016. There is substantial concern for the persistence of this species due to the limited distribution and direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Streptanthus oliganthus* - Masonic mountain jewelflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; gold mining (not in White Mts); erosion; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S2 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive Species; CA BLM Sensitive

Streptanthus oliganthus occurs on Sweetwater, Masonic and White Mountains; in dry, open pinyon woodland, pine forest, rocky subalpine forest, and sagebrush scrub; 2000 to 3050 m elevation. It also occurs in west-central Nevada. Two of 18 CNDDDB occurrences are on Inyo NF. Several Consortium of CA Herbaria records on Calflora along with several 2016 CNPS observations, including "Lundy" quad. There is substantial concern for the persistence of this species due to the limited distribution and direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Taraxacum ceratophorum - horned dandelion

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; hydrologic alteration; small occurrence numbers and distribution

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

There are three records of *Taraxacum ceratophorum* on the Inyo National Forest. All three are in the White Mountains and two are very recent, 2015 (Consortium of California Herbaria) and 2016 (CNPS Inventory Database). The third occurrence is both from Consortium of California Herbaria and is also the only CNDDDB record on the Inyo NF; it is from Cottonwood Creek in the White Mountains in 1926. This location was re-detected on Inyo National Forest in Cottonwood Creek 2014. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Tetradymia tetrameres* - dune horsebrush**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Threats include invasive species; unauthorized OHV travel; climate change; very small occurrence numbers and very limited distribution.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); S4 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

This species occurs in sand dunes and xeric shrub. The distribution of *T. tetrameres* in California is limited. Three of ten CNDDDB occurrences are from Inyo NF. The Consortium of California Herbaria lists 14 collection records for this species, all from Mono County, and most from the dunes along the ancient Mono Lake shorelines on the north side of the lake. Some of these sand dunes with *T. tetrameres* are located on the Inyo NF. In 2015, new infestations of the invasive *Salsola* sp. were observed on dunes with populations of *T. tetrameres*, including dunes on the Inyo NF (Suba 2016). There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Suba, G. 2016. Supplemental Comments on the Draft Environmental Impact Statement for Revision of the Inyo National Forest Land Management Plan from the California Native Plant Society. 7 pp.

***Thelypodium integrifolium* ssp. *complanatum* - foxtail thelypodium**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing and hydrologic alteration; few occurrence numbers.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4T5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Thelypodium integrifolium ssp. *complanatum* occurs in wetlands and Great Basin scrub. Very small populations. Three of thirteen CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Thelypodium milleflorum* - many-flowered thelypodium**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Invasive species, wild horse browsing, unauthorized OHV travel, vegetation management, climate change, very small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3? (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

This species occurs in sagebrush, xeric shrub/blackbrush, and caliche-covered clay soil mounds. None of the thirty CNDDDB occurrences is from the Inyo NF. A location of this species was found and documented with a voucher (Howald 3744) on Inyo NF in 2016 in the eastern Mono Basin, on caliche-covered clay mounds that support at least five SCC species and other special status plants (Suba 2016). Two colonies were found, one consisting of 4 individuals, and the other of 11 individuals. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Suba, G. 2016. Supplemental Comments on the Draft Environmental Impact Statement for Revision of the Inyo National Forest Land Management Plan from the California Native Plant Society. 7 pp.

***Townsendia leptotes* - slender townsendia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Extremely restricted range in California; climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

This is a high elevation species and the only CA occurrences are in White and Inyo Mountains at >11000 ft. All six CNDDDB records are on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Transberingia bursifolia* ssp. *virgata* (*Halimolobos* v.) - virgate halimolobos**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing and hydrologic alteration was documented during 2016 field season; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T4

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

CNDDDB has only two occurrence records for this taxon, and both are from the Inyo NF. *Transberingia bursifolia* ssp. *virgata* status ranks were recently updated from NatureServe G4 to G4T4, CA S1? to S1, and CNPS 2B.2 to 2B.3. Known only from Inyo and Mono counties in California, in the White and Inyo Mountains. Due to limited distribution and threats there is substantial concern for the persistence of this species.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Trichophorum pumilum (Scirpus pumilis) - little bulrush

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Hydrologic alterations; grazing; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: Watch

This is a high elevation wetland species of calcareous soils, with five CNDDDB records, all are on the Inyo NF with some in wilderness, restricted habitat. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Trifolium dedeckerae* (*T. kingii* ssp. *dedeckerae*) - Dedecker's clover**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

CNDDDB cites grazing, road maintenance, and climate change as specific threats to Inyo NF occurrences. Southern-most population may be affected by Sierra Nevada bighorn sheep reintroduction and invasives.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; BLM CA

Trifolium dedeckerae (Dedecker's clover) most commonly occurs on granitic soils, among rocks and boulders, in pinyon-juniper woodland, subalpine coniferous forest, and upper montane coniferous forest, at 2100-3500 m elevation. Eleven of fourteen CNDDDB records are on the Inyo NF. There is concern for the persistence of this species due to immediate direct threats.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Viola purpurea* ssp. *aurea* (*V. aurea*) - golden violet**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? Yes

Proposed Species of Conservation Concern

Yes

Relevant Threats to Species

Grazing; unauthorized OHV travel; small occurrence numbers

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: None

Viola purpurea ssp. *aurea* occurs in Mono Basin. There are many occurrences on the Inyo National Forest and private lands (see California Consortium records and CNPS inventory records (including 2016) in Calflora). None of ten CNDDDB records the Inyo NF as owner/manager. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Best Available Scientific Information Considered

Calflora. 2017. Data provided by the participants of Calflora. Website <http://www.calflora.org/>. [accessed 26 August 2017].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Chapter 2 – Rationale for Plant Species Determined Not to be Species of Conservation Concern

***Abronia nana ssp. covillei* - Coville's dwarf sand verbena**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Grazing, mining, unauthorized OHV travel (CNPS, 2016; Natureserve, 2016). There are many historic mines, and some active claims within habitat for this species. However, because of the broad and sparse distribution of this species, it is unlikely that any individual project would impact the overall population within the Forest.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T3

State Rank: S3 (CA); S1? (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: FS RF Sensitive

Abronia nana ssp. covillei occurs in sagebrush shrublands, pinyon-juniper woodlands, upper montane, and subalpine coniferous forest above 5000 ft., typically in sandy, carbonate habitats. There are more than 50 collections documented in the Consortium of California Herbaria, including at least ten from the Inyo NF (Baxter et al. 2016; e.g. DeDecker 463, Morefield 4815). On the Inyo NF, many small populations are found in the White and Inyo Mountains. Populations outside the Inyo NF occur in desert mountain ranges of Inyo and San Bernardino Counties, and in Nevada. Plant species are tracked to the Quad and county level (CNDDB 2016). The Nevada Natural Heritage Program reports five occurrences (NV DCRS, 2016).

Sensitive plant evaluation forms completed by the Inyo NF in 2012 reported 10 occurrences on the plan area. Re-examination of those records revealed that these actually were 10 reported sightings/collections, some in overlapping areas. The Forest has a total of 11 mapped polygons, based on surveys from 1998, 2009, and 2010, some of which are less than 0.25 mi. apart, thus not meeting the definition of distinct populations at the 0.25 mi. distance rule. The distribution of known populations near roadways and along most accessible hiking routes indicates there may be more populations and individuals in this habitat in unsurveyed areas, and it appears to have a patchy, but relatively consistent distribution in suitable habitat.

Estimated acreage of potentially suitable carbonate habitat in the Inyo Mts. alone is more than 15,000 acres, based on inspection of the current distribution of known populations and overlays with imagery. Known occupied habitat is smaller in the northern distribution of the White Mts., but surveys have been restricted due to the difficulty of access outside of the Schulman Grove. It seems likely that more populations may be identified in the White Mts.

The known occurrences which have been observed on multiple dates by the botanists include:

- Upper Harkless Flat: Bagley 1998; Pritchett, 1999
- Papoose Flat Vicinity: DeDecker 1988; Andre and LaDoux, 2010
- Schulman Grove Vicinity: DeDecker Unknown Date, Morefield 1988
- Badger Flat to Inyo Crest; Blue Bell Mine area: Kerr, 1932; JT Howell, est. 1940s-50s; Alexander and Kellogg, 1940; Roos 1953; DeDecker 1953, 1956, 1968; Roos 1967; Andre et al. 2009; Andre and LaDoux 2010; Weis and Slaton 2014

Additional information on population size and distribution was documented in an email from Mike Uhler to Sue Weis 7/12/2009: "I have already gone back up in the Inyos to do a rough survey of ssp. *covillei*. I was happy to find several populations with more than 100 individuals... recorded at least 5 sites with *Abronia* populations, the highest population at 10,973, is higher than the range stated in Jepson... The following day I walked to the top of Waucoba Mountain, along the way I encountered many populations of *covillei*... I believe there are plants on a granite substrate."

While many surveys have been conducted, the only monitoring information available is for an Inyo NF Ecology Plot #277, located NE of Badger Flat, which was visited in 2004 and 2015. Individuals were not counted, but only observed to be present within the 1/10 acre area sampled on both dates. No threats or major changes to dominant species cover or composition were noted.

There are many populations and individuals known from a relatively large area on the Inyo National Forest, and though they are constrained to limestone substrates, they are not highly specific to elevation, and thus occupy major vegetation zones from sagebrush to pinyon-juniper, mountain mahogany, and bristlecone pine-limber pine. The threats of mining and grazing do not appear to be substantial because the plant is so widely distributed that impacts are unlikely to affect more than a small proportion of individuals on the Forest. Finally, monitoring and surveys have not indicated a downward trend for this species. The best available scientific information does not indicate substantial concern about the species' capability to persist over the long term in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Nevada Department of Conservation and Natural Resources. 2016. Nevada Natural Heritage Program. Available at <http://heritage.nv.gov/species/>. [accessed 11 Apr 2016].

***Aliciella ripleyi* (Gilia r.) - Ripley's aliciella**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S2 (CA); S3 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Aliciella ripleyi occurs on limestone cliffs, 65 to 1400 m elevation. Consortium of California Herbaria records and 2016 CNPS Inventory Database records on the plan area. *There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.*

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Aliciella triodon* (Gilia t.) - coyote gilia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Grazing; invasives

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Aliciella triodon occurs in the pinyon/juniper woodland and Great Basin scrub. There are 11 Consortium of California Herbaria records, many occurring near but not on the Inyo NF (Matson 2017). *Aliciella triodon* does not meet the requirement for consideration since it is not known to occur in the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Matson, S. 2017. Personal communication between Blake Engelhardt and Steve Matson in 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Allium atrorubens* var. *cristatum* - darkred onion**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T4

State Rank: S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Antennaria pulchella* - Sierra pusstyoos**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

High elevation; observations seem stable; impacts limited.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus kentrophyta* var. *danaus* - spiny milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Recreation; trampling

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

TESP_EDW Inyo NF addition (US Forest Service database). *There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.*

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus kentrophyta* var. *ungulatus* - spiny milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

N/A to plan area.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T3T4

State Rank: S1 (CA); S3S4 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Astragalus kentrophyta var. *ungulatus* has not been found in the Inyo NF plan area; it is known only from an area on BLM land adjacent to Inyo NF. In 2016, the total population size was less than 100 individuals but additional individuals of this variety were found in an area even closer to Inyo NF boundary.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus lentiginosus* var. *sierrae* - Sierra milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: California BLM Sensitive

Low likelihood of occurrence on the Inyo NF. ECA_Flora database addition; Congdon collection at Bloody Canyon 1898 but likely that this collection location was incorrect or that location was outside of forest. Site was revisited in 2015 and species was not found.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus oophorus* var. *oophorus* - egg milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T3T4

State Rank: S3S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

TESP_EDW Inyo NF addition (US Forest Service Database)

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus platytropis* - broadkeel milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Climate change; soil degradation; grazing; there may be few populations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Astragalus serenoii* var. *sordescens* - naked milk-vetch**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Mining, grazing and invasives are potential and based on location

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T2

State Rank: SNR (CA); S2 (NV)

CA Rare Plant Rank: not on CA inventory; NV only

CA State Status: None; *NV State Status:* None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Atriplex pusilla* - smooth saltbush**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: SH (CA); SNR (NV)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

All California sites are historical and there are no current known locations in the planning area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechnera cobrensis* - sagebrush rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

No threats listed; Grazing and hydrologic alterations, based on location (Mono Lake), but stable in CA

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); S4 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

This species is common, with 7 records in the Consortium of California Herbaria under this name and another 32 records in CCH under its older name, *Arabis cobrensis*. There are 28 occurrences in CNDDDB, of which 6 are from the Inyo.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Boechera dispar (Arabis d.) - pinyon rockcress

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

San Bernardino County lists mining, unauthorized OHV traveluse, road construction and military activity as threats; threats limited on Inyo NF

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S1S2 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Boechera dispar occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Boechera evadens (Arabis fernaldiana var. stylosa) - hidden rockcress

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

N/A

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G1

State Rank: S1 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Boechera evadens grows on rock outcrops around 2600 m elevation in the southern High Sierra Nevada. None of the four CNDDDB records is on the forest. There is also evidence that the species hybridizes with *B. lemmonii* and possibly other *Boechera* species, making identity of populations uncertain (CNPS 2017). The occurrence of this species in the plan area is not documented in the best available scientific information, including personal communication with experts (Lazar 2017).

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

California Natural Diversity Database (CNDDDB). California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded April 2017.

Lazar, K. 2017. Personal communication, via email, between Julie Kierstead Nelson, US Forest Service, and Kristi Lazar, California Natural Diversity Database botanist, California Dept. of Fish & Wildlife, Sept. 21, 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Boechera lincolnensis* (*B. pulchra*, *Arabis p. var munciensis*) - Lincoln rockcress**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Boechera pygmaea - Tulare County rockcress

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Some trampling by livestock in plan area; occurs on loose soils adjacent to meadows and in other less susceptible habitats

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Botrychium lunaria* - common moonwort**

Type of plant: fern

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Based on the locations of the potential occurrences, and the general habitat known for the species, the threats of hydrologic alteration, trampling, and unauthorized OHV travel (severe soil disturbance) were identified for the plan area. While *Botrychium* may be partially dependent on soil disturbance to create new habitat (Clines, 2009), direct disturbance to existing plants is identified as a threat. Grazing is listed as a possible threat (CNPS, 2016), as is loss of its open habitats to successional overgrowth (Natureserve, 2016).

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2? (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: FS RF Sensitive

Botrychium lunaria occurs in moist meadows, at 2300-3400 m elevation. It is found in North and South America, Eurasia, Australia, and New Zealand. In North America it occurs from Newfoundland and Labrador west to Alaska, and south to Massachusetts, New York, Michigan, Minnesota, Saskatchewan, New Mexico, Arizona, and California (Natureserve, 2016).

There are a total of 4 herbarium specimens entered in the Consortium for California, with two from the plan area (Baxter et al., 2016): Munz 15352, 7/24/1950 S Fork Monache Creek (annotated by D. Farrar as *B. crenulatum*); Taylor 7891, 7/4/1981, Lee Vining Creek, at town of Lee Vining, 0.6 miles above Mono Lake. A 2002 email from Taylor specifies the location as 150-250 m upstream from the Hwy 395 Bridge. This location is on a private parcel, though within the administrative plan area, and is apparently incorrectly mapped in the CNDDB (2014).

There is high genetic complexity in this taxon (Clines 2009). Field or even herbarium identification appears highly unlikely without genetic verification. In July 2007, Sue Weis collected a potential *B. lunaria* specimen from Trail Canyon in the White Mts, genetic testing is needed for identification; it may be a new variety of *B. simplex* (Farrar 2007).

Site visit or monitoring information:

4. Forest Botany staff conducted fen and meadow surveys throughout the Sierra Nevada and White Mts. on numerous dates 2001-present in support of packstation management, travel management, grazing permit issuance, fuels projects, and other activities. The single potential *B. lunaria* occurrence was noted in the section above.
5. Eve Laeger (2002) conducted numerous surveys for *Botrychium* across the Forest, with follow-up work conducted in 2004. No *B. lunaria* was reported.

There is insufficient information about its status on the Inyo National Forest. A single available record is based on a 35-year old collection that appears to be from a private parcel where no follow-up surveys have been conducted. In addition, taxonomic research for this species is strongly needed.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed 25 April 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Clines, Joanna. 2009. Conservation Assessment for *Botrychium* in California National Forests. Compiled from technical reports prepared by Donald Farrar and Cindy Johnson-Groh.

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Farrar, D. 2007. Personal communication between Sue Weiss and Don Farrar in 2007.

Laeger, Eve. 2002. *Botrychium* surveys in California. Prepared for the Sierra Nevada Frameworks. Bodfish, CA.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex congdonii* - Congdon's sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Threats minimal

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There is extensive unsurveyed habitat in plan area; threats are minimal.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Carex tahoensis* - Tahoe sedge**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Climate change; recreation

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: FS RF Watch

There are many Consortium records for this species in the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Ceanothus pinetorum* - Kern ceanothus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None documented in the plan area

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

No documented occurrences on the Inyo NF.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cladium californicum* - California sawgrass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

N/A

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); S2 (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: FS RF Sensitive

Adjacent to, but not yet found on Inyo NF

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Clarkia xantiana ssp. parviflora* - Kern Canyon clarkia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None in plan area

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4T3T4

State Rank: S3S4 (CA)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: No

CNPS has recently reassigned this species to California Rare Plant Rank 4, plants of limited distribution - a watch list species.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Claytonia palustris* - marsh claytonia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

CNPS cites threats to this species from logging, grazing, trampling, and fire; none specifically from the plan area.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Not documented from the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cryptantha fendleri* - sand dune cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Unclear of threats in sandy habitats

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cryptantha glomeriflora* - clustered-flowered cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4Q

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cryptantha howellii* - Howell's cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Sandy habitats at meadow margins; possible threats include grazing; trails; trampling

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: None

State Rank: None (CA)

CA Rare Plant Rank: None

CA State Status: None

Other Designations: No

This may be a new species that is not yet described and therefore absent from the Jepson Manual, CNPS inventory, and CDFW Special Plant list. Once described it may be added to list

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cryptantha incana* - Tulare cryptantha**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None are given in CNDDDB (most recent information is 1965), CNPS inventory (no changes since 2010), or Natureserve, and none were documented in the site visits or collections.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Cryptantha incana is distributed in southwestern high Sierra Nevada occurring in gravelly or rocky areas, open conifer forest, occasionally chaparral, between 1770-3000 m elevations. There are 69 Consortium records, including at least 10 from the Inyo NF, and many from the Sequoia NF (Baxter et al., 2016).

Site visit or monitoring information from Inyo NF: Sue Weis, Botanist, Inyo NF, Inyo NF Rare Plant Files, Note on Casa Vieja Meadow survey, 2010; Ron Kelley, Botanist, primary author of *Cryptantha* treatment in The Jepson Manual (Baxter et al., 2012), Inyo NF Rare Plant Files, Notes on Kern Plateau, 8/30/2006. *Cryptantha incana* was collected at both site visits above, and no threats were noted. Common and abundant in Kern area per Ron Kelley – need additional records to verify population numbers and reconsider ranking.

Transfer of collection information into the CNDDDB and subsequent re-ranking using the Natureserve protocol would help document the more common distribution of this species. Documentation of threats, if they exist, is also needed.

This species occurs on both the Inyo and Sequoia National Forests. Numerous collections from the plan area indicate this species is much more common than previously thought, and that several occurrences could be added to CNDDDB. In addition, no threats have been documented. Natureserve indicates that ranks were assigned based on the very small number of occurrences, and that ranks have not been reviewed since 2005, and, thus, may need revision. There is no substantial concern about the species' capability to persist over the long term in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

CNDDDB. California Department of Fish and Wildlife. April, 2017. Special Vascular Plants, Bryophytes, and Lichens List. Sacramento, CA. Available at: <http://www.dfg.ca.gov/wildlife/nongame/list.html> [accessed 6 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Cymopterus cinerarius* - cymopterus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: SNR (CA); S1? (NV)

CA Rare Plant Rank: CBR

CA State Status: None

Other Designations: No

Many Consortium records; considered too common in CA to track.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba asterophora* var. *asterophora* - Lake Tahoe draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known in the plan area.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2T2?

State Rank: S2? (CA); S1S2 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive

Draba asterophora var. *asterophora* occurs in rock crevices, alpine barrens, and talus at 2600-3300 m elevation. It is distributed in northern and central high Sierra Nevada (primary El Dorado and Alpine Counties) and western Nevada (Washoe County). There are 23 total Consortium records herbarium specimens for this species; there are none from within plan area but one single Consortium record (Smiley 776, 8/14/1916) is from just outside Inyo NF on Mt. Gibbs, in Yosemite National park. Surveys were conducted in the Mono Pass area for this species on the following dates, but no positive identifications were made: 8/12/1986 (Dean Taylor, Botanist, Inyo NF Rare Plant files); 6/2015 (Michèle Slaton, Botanist, Inyo NF, Inyo NF Ecological Plot Database); summer 2000 (Inyo NF Botany Personnel, NRIS database Wilderness surveys). There is a CNDDDB Rarefind Note from Jim Morefield that occurrences outside Lake Tahoe Basin may be mis-identifications.

There is no substantial concern about the species' capability to persist over the long term in the plan area because the single occurrence near the Inyo NF has not been relocated in 100 years, and other occurrences are long distances from the Forest. The taxonomic identification of the occurrence near the Forest has some uncertainty.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba cana* - canescent draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Trail maintenance, climate change; very small population sizes

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

(Not tracked in NV)

Seven of eight CNDDDB occurrences are from Inyo NF. Populations are above 10,000 feet in alpine and subalpine habitat on limestone.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2017. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba cruciata* - Mineral King draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Draba cruciata is distributed in southern High Sierra Nevada near Mineral King, Tulare County, occurring on gravelly slopes and subalpine areas, at 2500-3050 m elevation (Baxter et al., 2016). There are many herbarium specimens collected in Tulare County, outside the plan area; collections considered on the plan area include:

- *D. cruciata* var. *cruciata*, Smith & Sawyer 7786, 7/11/1974; E of Upper Gaylor Lake, Mono Co. (near but not on the Inyo NF)
- *D. cruciata* var. *integrifolia*, Roos 2200, 8/8/1937; Sierra Nevada, Inyo Co.
- *D. cruciata* var. *integrifolia*, Sharsmith 3353, 8/21/1937; above Mirror Lake, Lone Pine Creek (see below)
- *D. cruciata*, DeDecker 4407, 9/5/1977; above Mirror Lake on Mt. Whitney trail
- *D. cruciata* var. *integrifolia*, Ertter 5004, 7/30/1983; Matlock Lake, Independence Creek
- *D. cruciata* var. *integrifolia*, Minnich, 7/26/1964; Trail Crest Pass, ca. 2 mi. S of Mt. Whitney
- *D. cruciata*, Shevock 9901, 7/15/1982; ridge N of Jordan Peak (SQF)

Site visit or monitoring information:

There are no records of *D. cruciata* in the plan area in the CNDDDB (2016). The Mirror Lake site was visited by Forest botany personnel in 2012, and the population was identified as *D. sharsmithii*. *D. cruciata* var. *integrifolia* has been reclassified taxonomically by Baxter et al. (2016) as *D. sharsmithii*, which is determined to be species of conservation concern. Because DeDecker 4407 and Sharsmith 3353 in Lone Pine Canyon probably represent the same population, it is most likely that this population should be assigned to *D. sharsmithii*. The potential occurrence of *D. cruciata* on the Inyo NF is thus based upon the record from Smith & Sawyer 7786 for the Upper Gaylor Lakes. A note from Ann Howald from 2015 in the Consortium (Baxter et al., 2016) questions the location of the occurrence as being within Mono County; the description makes it seem more likely to be in Tuolumne. No information was available for the *D. cruciata* occurrence on the Sequoia NF (CNDDDB Occurrence #1) since the original collection in 1982 (Shevock 9901). CNDDDB (2016) notes that the population is disjunct from the majority of occurrences around the Mineral King area and needs fieldwork.

There is no substantial concern about the capability of *Draba cruciata* to persist over the long term in the plan area because it is not known to occur in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba incrassata* - Sweetwater Mountains draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Potentially climate change. No other threats known.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Draba incrassata occurs in northern Eastern Sierra Nevada, on alpine barrens and rocky slopes. There are more than 40 herbarium specimen collections from the Sweetwater Mts., none from the plan area (Baxter et al., 2016).

CNDDDB (2016) shows a collection from "Red Slate Mt. summit slopes, 13,000 + ft." (Major and Major 1338; DAV #33897, 8/19/1962). It is unknown if the plant was present on the Inyo NF, although the mapped area is estimated as a 2/5 mi. radius, including the head of the Convict Creek and McGee Creek drainages. CNDDDB (2016) states that field surveys are needed. Botanical surveys were conducted on the shoulder of Red Slate Mt. at McGee Pass by Forest botany personnel in 2001 and 2006, in support of pack station and trail project work and *D. incrassata* was not detected. However, areas over 13,000 ft. elevation were not visited.

There are no verified occurrences of this species in the plan area. A single collection was made more than 50 years ago, potentially outside the Forest boundary, with no other information available for the species in the plan area. There is no substantial concern about the species' capability to persist over the long term in the Inyo NF plan area

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba lonchocarpa* - spear-fruited draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

climate change; the species is alpine

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Both of the two CNDDDB occurrences in California are from the Inyo, where it occurs on calcareous rock substrates above 10,000 feet elevation.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba praealta* - tall draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Climate change, very small population sizes.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Six of seven CNDDDB occurrences are on Inyo NF. *Draba praealta* CA state rank was recently changed from S2 to S3. Plan area occurrences are in wilderness with no known direct impact threats in plan area. All occurrences are above 9500 ft. elevation; some are above 11,000 feet. Population size is not noted in most occurrence records, but for the two that are, one is 100 individuals and the other is 20-30 individuals.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba sierrae* - Sierra draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

Seven of 14 CNDDDB occurrences are on Inyo NF. Habitat is alpine; all but one occurrence is above 11,000 feet elevation, and most occurrences are in wilderness.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Draba subumbellata* - mound draba**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3.3 (CA); S1 (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There are no CNDDDB occurrences for this species, as CNDDDB does not track California Rare Plant Rank 4 species. There are many collection records from the plan area in the Consortium of California Herbaria; found near Barcroft, but no collection

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Elymus scribneri* - Scribner's wheat grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Five of twelve CNDDDB occurrences are on the Inyo NF, growing in alpine grasslands at 10,000 feet elevation or above.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Epilobium howellii* - subalpine fireweed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There are no CNDDDB occurrences for this species, as CNDDDB does not track California Rare Plant Rank 4 species. There are no records for this species in the Consortium of California Herbaria. Records exist in the Forest Service rare plant database (USDA Forest Service, 2017).

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

USDA Forest Service. 2017. Natural Resource Information System; Threatened, Endangered and Sensitive Plants—Invasive Plants. [accessed 26 August 2017].

***Eremothera boothii* ssp. *boothii* - Booth's evening primrose**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

CNPS lists possibly threatened by mining, unauthorized OHV travel, foot traffic; no threats listed specifically for plan area occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Nine of 35 CNDDDB occurrences are on the Inyo NF, growing in pinyon-juniper and sagebrush on volcanic or granitic substrates at middle elevations.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eremothera boothii ssp. intermedia (Camissonia b. ssp. i.)* - Booth's hairy evening-primrose**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Unauthorized OHV travel and road maintenance may be threats; no threats listed specifically for plan area occurrences

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T3T4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Two of fourteen CNDDDB occurrences are on the Inyo NF, one in pinyon woodland in the Inyo Mountains, the other in Glass Mountains with no habitat information recorded. Several records from the Consortium of California Herbaria are near the shore of Mono Lake.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded August 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erigeron aequifolius* - Hall's daisy**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

No threats were noted by Norris in 1982 for the occurrence on the Inyo NF. Potential threat for known *E. aequifolius* populations along trails is trampling from hikers/rock climbers, although likelihood of adverse impact is negligible. Stochastic threats because of low population numbers—the one known occurrence in the plan area is documented as ten individuals, though other adjacent habitat was not searched.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive; CA BLM Sensitive

Erigeron aequifolius occurs in southern High Sierra Nevada on rock ledge and, crevices, 1500-2100 m elevation. About 13 occurrences have been reported, primarily on the Sequoia National Forest and in Sequoia-Kings Canyon National Park. There are 14 herbarium specimen collections in the Consortium

(Baxter et al., 2016), several from the Boyden Cave vicinity of the Kings River Canyon, none from the Inyo NF.

The only information available for the Inyo NF is based on the CNDDDB record for occurrence #4, which is based on a field survey form from Norris L., 1982-07-23. The detailed location is given as, “on outcrop about 30 meters north of trail and just south of creek; mapped in the ne 1/4 of the ne 1/4 of estimated section 21.” About 10 plants were seen at that time, though not all cliffs were searched. The steep, rocky terrain of the Kern River drainage and distance required to travel by vehicle and by foot for those portions that occur on the Inyo National Forest have contributed to extreme infrequency in botanical surveys for habitat of *E. aequifolius*.

There is little occurrence information for this species in the plan area. During the 2012 R5 sensitive species review, Inyo National Forest personnel stated, “Populations are relatively stable due to steep, rugged nature of the habitat, making them inaccessible for timber harvest, grazing, and most recreation.” There is no substantial concern about the species’ capability to persist over the long term in the plan area because no threats are known. In addition, it is likely that more populations may be detected in the currently unsurveyed terrain of the Kern River drainage.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Wildlife. April, 2017. Special Vascular Plants, Bryophytes, and Lichens List. Sacramento, CA. Available at: <http://www.dfg.ca.gov/wildlife/nongame/list.html> [accessed 6 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erigeron inornatus* var. *keilii* - Keil's daisy**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species’ capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species’ capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Very few populations, but need to be visited

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

None of the four CNDDDB occurrences is on the Inyo NF; nor is there any record of the species from the Inyo in the Consortium of California Herbaria or Calflora. ECA_Flora database Dedecker collection Symmes Creek *var. inornatus* 1981

Best Available Scientific Information Considered

Alexander, J., S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2017. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 22 August 2017].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Wildlife. August, 2017. Special Vascular Plants, Bryophytes, and Lichens List. Sacramento, CA. Available at: <http://www.dfg.ca.gov/wildlife/nongame/list.html> [accessed 22 August 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erigeron multiceps* - Kern River daisy**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

No known threats on the Inyo National Forest (see details below)

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 1B.2

CA State Status: None

Other Designations: FS RF Sensitive; BLM CA Sensitive

One of thirty CNDDDB occurrences of this species occurs on Inyo NF; in riparian habitat along Kern River. *Erigeron multiceps* is restricted to the Northern portion of the Kern Plateau, the middle North Fork of the Kern River, and the Roaring Fork of the Kings River, all in Tulare County. On the Kern Plateau, occurrences are concentrated in the Jackass drainage on Sequoia National Forest lands, with a few found along the South Fork of the Kern River in the Kennedy Meadows area, on the Sequoia National Forest. The middle North Fork of the Kern occurrences are north of the Kern Ranger Station along the Kern, in Sequoia National Park and in the lower Little Kern on the Sequoia National Forest. One occurrence of *Erigeron multiceps* is found 25 miles north, both up and downstream of the Roaring River Ranger Station, in Kings Canyon NP; and known from one site in the Spring Mountains of Clark County, Nevada. *Erigeron multiceps* occur in riverbanks, sandy flats, and meadows in pine or aspen woodland, at 1500-2500 m elevation. Herbarium specimens include 20 collections listed in the Consortium, primarily from the Jackass Meadow and Kern River Flats areas in Kern and Tulare Counties. One from “Bloody Canyon”, with no additional information; and Milano (1992) specimen housed in Inyo National Forest herbarium is actually from a population on the Sequoia NF, and notes “heavy grazing”.

Natureserve (2016) notes the threats of grazing, vehicles, logging, and recreation. Based on overlays of land use and road networks, it appears these threats may pertain to the Sequoia National Forest only. For the Inyo National Forest, site visit or monitoring information includes: Gary Milano (1992, email to T. Ritter) reported the populations on the South Fork above and below Kennedy Meadows, elev. 6000 ft. to be 70% blooming; Kathleen Nelson reported on 7/9/1999 that she, Sue Weis, and Jim Shevock visited the population near Kennedy Meadows Campground during a Jepson Workshop. Population status and threats were not reported. Threats are not known on the Inyo National Forest; plants on the Inyo National Forest do not occur within a grazing allotment, there is no timber harvest in the area, the area is inaccessible by off-highway vehicle, and no site information is available regarding any other threats in the area. There is no substantial concern about the species’ capability to persist over the long term in the plan area because there is insufficient information to conclude that there is a substantial threat.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum ampullaceum* - Mono wild buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

No threats have been documented on the Inyo NF. Nevada lists livestock use and water diversions

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: SNR (CA); S1 (NV)

CA Rare Plant Rank: CBR

CA State Status: None

Other Designations: No

There are many Consortium records; it is not tracked in CA since it is very common. Overall this species is common on the Inyo NF. No threats have been documented and information about Mono wild buckwheat does not indicate substantial concern about the species' capability to persist over the long term in the plan area.

Best Available Scientific Information Considered

Alexander, J., S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2017. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 22 August 2017].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum microthecum* var. *alpinum* – alpine slender buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None documented.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: FS RF Watch

There are no records for this species in CNDDDB, which does not track species with a California Rare Plant Rank of 4. The subspecies rank changed from T3 to T4; that combined with California state rank of S4 and CNPS rank of 4.3, and numerous CCH records from the plan area indicates that the species is common enough in Mono County in the plan area and lacking in threats (CRPR threat rank of 0.3 means not very threatened in California) that SCC status is not warranted.

The original herbarium collections could not be re-located during two surveys in the plan area in 2015 and 2016, and this is believed to be due to original potential mis-identification.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum microthecum* var. *lapidicola* - Inyo Mountains buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Grazing; recreation

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Grazing; recreation; may need some disturbance

TESP_EDW Inyo NF addition (US Forest Service Database)

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum microthecum* var. *panamintense* - Panamint Mountains buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: CA BLM Sensitive

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum nutans* var. *nutans* - Dugway wild buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T3T4

State Rank: S3 (CA); S3 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Eriogonum polypodium* - Tulare County buckwheat**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Erythranthe calicicola* - limestone monkeyflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: CA BLM Sensitive

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Euphrosyne nevadensis* (Iva n.) - Nevada wormwood**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: Watch

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Festuca minutiflora* - small-flowered fescue**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Gentiana prostrata* - pygmy gentian**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None Known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hulsea vestita ssp. pygmaea* - pygmy hulsea**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

California Native Plant Society (2016) reports recreational activities as a potential threat across the species' distribution. The species has not been relocated on the forest in over 40 years.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T1

State Rank: S1 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Two Consortium records from the 1960s.

Hulsea vestita ssp. pygmaea (pygmy hulsea) is known only from San Bernardino and Tulare Cos. in California, inhabiting subalpine forests, alpine boulder and rock fields, open gravel and talus slopes, and alpine barrens at 3200–3900 m elevation. Natureserve (2016) reports the Tulare population as possibly extirpated. Occurs in subalpine forest and alpine barrens, from 3200-3900 m elevation.

There are many collections listed in the Consortium for San Bernardino County. (Baxter et al., 2016). For the plan area: Major et al. s.n., 8/6/1966, E side Mt. Tom, Sierra Nevada (Inyo National Forest) and Howe 3048, 4/26/1961, N of Westgard Pass, White Mountains. (Inyo National Forest). Numerous project surveys (CARMA, Travel Management) from 2001-2011 included inventory of the Westgard Pass area, including attempted relocations of the Howe 3048 record (Inyo National Forest Natural Resource Information System database, 2016). The species has not been relocated in this location since the original

collection in 1969. The East side of Mt. Tom has not been extensively surveyed botanically. The Major et al. record has not been relocated since its original documentation in 1966. It seems likely to be a mis-identification.

The best available science is insufficient to conclude a substantial concern about the species' capability to persist over the long term in the plan area because reported occurrences have not been relocated in 40+ years; there is insufficient information positively documenting its current occurrence in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/>. [accessed Jan through Apr 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Hymenopappus filifolius* var. *nanus* - little cutleaf**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Many recent observations; stable

CNPS rank not very endangered; no threats listed

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Jaffueliobryum wrightii* - Wright's jaffueliobryum moss**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S2? (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Juncus nodosus - knotted rush

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Hydrologic alterations; very limited habitat in plan area

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Need to verify occurrence

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Leptosiphon oblanceolatus - Sierra nevada leptosiphon

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lomatium rigidum* - stiff lomatium**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Locally common, stable, based on observations; CNPS rank not very endangered

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lupinus gracilentus* - slender lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lupinus lepidus var. culbertsonii* - Hockett Meadows lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Natureserve (2016) reports that little is known about threats or trends, but that there are likely no threats due to its occurrence almost solely on National Park Service lands.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3?T2

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Habitat: Rocky slopes, 2500-3000 m elevation (Baldwin et al., 2012); Meadows and seeps in upper montane coniferous forest (mesic, rocky) (CNPS, 2016)

Distribution: southern High Sierra Nevada, though many identifications are questionable (see below)

Herbarium specimens: More than 20 collections are recorded in the Consortium (Baxter et al., 2016).

- Sharsmith 3438, 8/27/1937; Boreal Plateau SW of Siberian Outpost (INF)
- Ferris and Lorraine 10695, 7/20/1942; N face of Farewell Gap (SQF)
- Everett and Balls 21995, 7/9/1956; Mammoth Lakes vicinity (INF)
- Davidson s.n., 7/9/1973; ca. 1 mi. upstream from Lundy Lake (INF)
- Halperin & Crafts 445, 8/1/1932; near Rock Creek Lake (INF)
- Rice 369, 7/18/1966; Farewell Gap (SQF)
- Rice et al. 151, 6/28/1966; Upper Franklin Lake (SQF)

- Rice 494, 8/5/1966; Empire Mt. and Timber Gap (SQF)
- Taylor 7922, 8/9/1981; Coyote Ridge (INF)
- Reveal et al. 7922, 8/9/1981; along Piute Creek trail, Humphrey Basin (SNF)
- Long, 8/14/1942; between Golden Trout Camp and Lake Muir (INF)

CNDDDB (2016) maps five occurrences, with three on National Park Service lands, and two on the border of the Sequoia National Forest and Sequoia-Kings Canyon National Park. There are no occurrences on the Inyo National Forest. Occurrence #3 information includes the “only source of information a 1904 collection by Culbertson and a 1959 collection by Hardham. Needs fieldwork.” Occurrence #5 is based on the Ferris & Lorraine 10695 collection, with no additional information since 1942.

Teresa Sholars email to S. Weis 2/17/2010: “I have looked for this taxon but have not seen it. According to Cox who did his Ph.D thesis on the group, this taxon is only found in a narrow region along the Kaweah River in Tulare Co. and at Farewell Gap.”

Ann Howald email to Sue Weis 11/4/2014: “...*Lupinus lepidus* varieties are a complicated group... identification of many individual collections seem somewhat random, when you look through the folders. Hardly any specimens have been annotated, and none by Teresa Sholars, who wrote the key. I found that most specimens labeled as *L. l.* var. *c.* at RSA and UCR, definitely aren’t that variety... I did not find any specimens from Mono Co. that looked exactly like var. *culbertsonii*.”

No collections from the plan area could be verified to be this variety of *L. lepidus*, and no occurrences have been relocated in over 30 years. There is insufficient information about the species, best available science does not support the occurrence of the species in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

CNDDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

CNDDDB. California Department of Fish and Wildlife. April, 2017. Special Vascular Plants, Bryophytes, and Lichens List. Sacramento, CA. Available at: <http://www.dfg.ca.gov/wildlife/nongame/list.html> [accessed 6 April 2017].

***Lupinus magnificus* var. *glarecola* - Coso Mountains lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species’ capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3T3Q

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

No Consortium records; Taxa not recognized in The Jepson Manual, 2nd Ed.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Lupinus magnificus var. hesperius - Panamint Mountains lupine

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3T2Q

State Rank: S2 (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: CA BLM Sensitive

Subspecies not recognized in The Jepson Manual, 2nd Ed.

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Lupinus pusillus ssp. intermontanus* - intermountain lupine**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T5?

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Meesia longiseta* - long seta hump moss**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Micromonolepis pusilla* - dwarf monolepis**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3? (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Mimulus glabratus* var. *utahensis* - Utah monkeyflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known; species is currently included under *Mimulus guttatus* (widespread species) in Jepson manual

Rationale for Species (ranks are from CNPS Rare Plant Inventory)

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S1 (CA)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

These are only in CNPS, not in Jepson or the CDFW special plant list. Included in *M. guttatus* in The Jepson Manual, 2nd Ed.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Mimulus parryi* - Parry's monkeyflower**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Minuartia stricta* - bog sandwort**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Many populations in wilderness with little visitor use

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Myurella julacea* - myurella moss**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Oenothera caespitosa ssp. crinita* - cespitose evening-primrose**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T4T5

State Rank: S4 (CA); SNR (NV)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: FS RF Watch

Many Consortium records. There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Oenothera californica ssp. californica* - California evening-primrose**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4?TNR

State Rank: SNR (CA)

CA Rare Plant Rank: None

CA State Status: None

Other Designations: No

TESP_EDW Inyo NF addition (US Forest Service Database)

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Oenothera longissima* - long-stem evening-primrose**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

More information is needed on distribution and threats. Location is not confirmed on Inyo NF. There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Parnassia parviflora* (*Parnassia palustris* var. *parviflora*) - small-flowered grass-of-parnassus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5?

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Peltigera gowardii* - net-veined water lichen**

Type of plant: lichen

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known. No threats were observed on Mt. Dana.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4

State Rank: S3 (CA)

CA Rare Plant Rank: 4.2

CA State Status: None

Other Designations: FS RF Sensitive

Habitat: Rocks in cold water creeks

Distribution: Nine counties in Sierra Nevada in California; Mt. Dana area in Mono County; also MT, OR, WA

Herbarium specimens: None in Consortium of CA Herbaria (<http://ucjeps.berkeley.edu/consortium/>); Single record from Larson (2005) about an occurrence in the "hanging meadow" of Mt. Dana (INF).

Site visit or monitoring information: no CNDDDB occurrences for the SQF; nine occurrences are mapped for the SNF in CNDDDB (2016); CNDDDB (2016) reported that the hanging meadow location on Mt. Dana (INF) could not be identified, so the population was mapped as a best guess.

Michèle Slaton, Inyo NF Botanist, Inyo NF Ecological Plot Database, 8/2013 - did not identify any threats to meadow habitat on Mt. Dana.

Notes: Lichen specialist, Kerry Knudsen, will be surveying for this species in the Tioga Pass area in 2016, and will report any new locations to the Inyo NF.

Very few field botanists are trained in lichen identification. Additional surveys and collection are needed to better document the distribution of this species in the plan area, and potential threats to persistence.

Peterson Conservation Assessment.

There is no substantial concern about the capability of *Peltigera gowardii* to persist over the long term in the plan area because no threats were identified for this species in the plan area, and known threats do not occur in the habitat where this species is found. In addition, it is likely that additional field surveys by qualified personnel would identify additional occurrences in the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Penstemon barnebyi* - Barneby's beardtongue**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4

State Rank: S1 (CA); S3S4 (NV)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

Very remote location, need to revisit, nothing known. *There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.*

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Penstemon papillatus* - Inyo beardtongue**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Locally common; stable based on observations; CNPS rank not very endangered; no threats listed

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Penstemon scapoides* - naked-stem beardtongue**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known; potentially mining

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia barnebyana* - Barneby's phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3?

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia gymnoclada* - naked-stemmed phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phacelia peirsoniana* - Peirson's phacelia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3G4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Phlox dispersa* - High Sierra phlox**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Poa abbreviata ssp. marshii* - Marsh's blue grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T2

State Rank: S1 (CA); S1 (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

More information on distribution and threats is needed. Species has not been relocated on forest since original collection (1987). Uncertainty remains which subspecies occurs on the Inyo NF (both collected from same location on Inyo NF in 1987). There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Poa abbreviata ssp. pattersonii* - Patterson's blue grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

More information on distribution and threats is needed. Species has not been relocated on forest since original collection (1987). Uncertainty remains which subspecies occurs on the Inyo NF (both collected from same location on Inyo NF in 1987). There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Poa lettermanii* - Letterman's blue grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None listed; potentially climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

(not tracked in NV)

This high elevation species has a wide range in California, mostly in wilderness. There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Poa nemoralis* - wood blue grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

climate change; hydrologic alterations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: SNR (CA)

CA Rare Plant Rank: None

CA State Status: None

Other Designations: No

TESP_EDW Inyo NF addition (US Forest Service Database)

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Podistera nevadensis* - Sierra podistera**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There are many Consortium records for this high elevation species occurring mostly in wilderness.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Pohlia tundrae* - tundra pohlia moss**

Type of plant: moss

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Climate change; hydrologic alterations

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2G3

State Rank: S2S3 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at:
<http://explorer.natureserve.org/> [accessed 10 April 2017].

***Polygala intermontana* - intermountain milkwort**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.1

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Potamogeton robbinsii* - Robbin's pondweed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Wide range over northern US

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Potentilla concinna* var. *proxima* - early cinquefoil**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5?T4T5

State Rank: S1 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Salix brachycarpa var. brachycarpa - dwarf willow

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T5

State Rank: S2 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

All occurrences are in wilderness. There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Salix nivalis* - snowfield willow**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known; potentially climate change and trampling by recreationalists

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

(Not tracked in NV)

Although *Salix nivalis* occurs in many western states, species distribution in California is limited, with seven of nine CNDDDB element occurrences occurring within the Inyo NF plan area occurrences are in high elevation wilderness. Potential impacts have not been documented; information is needed on level of threat from climate change and recreationists. There is insufficient information regarding species populations, trends, threats and stressors in the plan area, including limited best available science.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Sedum pinetorum* - stonecrop**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: GUGHQ

State Rank: SUSH (CA)

CA Rare Plant Rank: 3

CA State Status: None

Other Designations: FS RF Watch

There is one single Consortium record – Brandegee. There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Senecio pattersonensis* - Patterson's groundsel**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

No known threats in the plan area; potentially climate change.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G2

State Rank: S2 (CA); S1 (NV)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: FS RF Sensitive

Habitat: Talus slopes, alpine boulder and rock field, 2900-3700 m elevation

Distribution: central High Sierra Nevada, eastern Sierra Nevada in CA; Nevada

Herbarium specimens: Several from Mono County, outside the plan area (Baxter et al., 2016). From within the plan area, Morefield & Ross, 4703, 7/25/1987, White Mts., N wall of cirque heading the N Fork of Perry Aiken Creek

Rare plant surveys were conducted by Forest botany personnel in 1991, 2004, and 2011 along the White Mt. trail, and at the head of the North Fork of Perry Aiken Creek. However, there have been no revisits to the site for the Morefield & Ross 4703 collection, which occurs on a steep, rugged slope with difficult access (CNDDB Occurrence #1).

CNDDB occurrence #1 was reported as a noteworthy collection in Madrono 35:2 in 1988, and is reported as disjunct from the rest of California occurrences in the Sweetwater Mts. and adjacent Sierra Nevada (CNDDB, 2016).

No recent information was available for the occurrence reported from the Forest, based on a single collection from 1987. There is no substantial concern about the species' capability to persist over the long term in the plan area because there is insufficient information about the species in the plan area.

Best Available Scientific Information Considered

Baxter, D, S Markos, NR Morin, RL Moe, E Dean, M Nazaire. 2016. Consortium of California Herbaria. Available at: <http://ucjeps.berkeley.edu/consortium/> [accessed 23 Feb 2016].

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

CNDDB. California Department of Fish and Game, Biogeographic Data Branch. 2016. California Natural Diversity Database. Sacramento, CA. Data downloaded February 2016.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Sidalcea multifida* - cut-leaf checkerbloom**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Silene aperta* - naked catchfly**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S4 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

Many Consortium records

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Silene oregana* - Oregon campion**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

Stipa arida (Achnatherum a.) - Mormon needle grass

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

There is insufficient information to suggest this species is at risk for persistence on the planning unit at this time.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Stuckenia filiformis* spp. *alpina* (*S. filiformis*; *Potamogeton* f.) - slender-leaved pondweed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Hydrologic alterations; climate change

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5T5

State Rank: S3 (CA); SNR (NV)

CA Rare Plant Rank: 2B.2

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Tonestus eximius* - Lake Tahoe serpentweed**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Insufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

N/A

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA); S2 (NV)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There are no CNDDDB records for this species, as CNDDDB does not track plants with a California Rare Plant Rank of 4. CNDDDB file information shows only records from Lake Tahoe Basin (Lazar 2017.) There is one report in of the species from a 1938 checklist of species from Rock Creek Basin on the Inyo, but the determination of species is provided with a “?” (Calflora 2017). The occurrence of this species in the plan area is therefore not documented in the best available scientific information, including personal communication with experts.

Best Available Scientific Information Considered

Calflora: Information on California plants for education, research and conservation. [web application]. 2017. Berkeley, California: The Calflora Database [a non-profit organization]. Available: <http://www.calflora.org/> (Accessed: Aug 16, 2017).

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Lazar, K. 2017. Personal communication, via email, between Julie Kierstead Nelson, US Forest Service, and Kristi Lazar, California Natural Diversity Database botanist, California Dept. of Fish & Wildlife, Sept. 21, 2017.

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Tonestus peirsonii* - Peirson's tonestus**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

None known

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G3

State Rank: S3 (CA)

CA Rare Plant Rank: 4.3

CA State Status: None

Other Designations: No

There are many Consortium records for this high elevation species that has many locations in wilderness.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Townsendia condensata* - cushion townsendia**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Grazing off plan area; no threats listed in plan area but climate change affects possible

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4

State Rank: S3 (CA)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Triglochin palustris* - marsh arrow-grass**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Foot traffic and trampling listed as threats in CNPS but unclear where this occurs. In the plan area there are potential impacts from grazing/trampling.

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G5

State Rank: S2 (CA); SNR (NV)

CA Rare Plant Rank: 2B.3

CA State Status: None

Other Designations: No; not tracked in NV;

Found by Forest Service botany staff on Piute Pass trail.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Natureserve. 2017. NatureServe Explorer. Arlington, VA. U.S.A. Available at: <http://explorer.natureserve.org/> [accessed 10 April 2017].

***Viola pinetorum* var. *grisea* - gray-leaved violet**

Type of plant: flowering plant

Is there sufficient scientific information available to determine if there is substantial concern about the species' capability to persist over the long term in the plan area? Sufficient

Does the best available science indicate substantial concern about the species' capability to persist over the long term in the plan area? No

Proposed Species of Conservation Concern

No

Relevant Threats to Species

Recreation trampling, unauthorized OHV travel, road maintenance, and grazing

Rationale for Species

NatureServe Global and Taxa (subspecies) Rank: G4G5T3?

State Rank: S3? (CA)

CA Rare Plant Rank: 1B.3

CA State Status: None

Other Designations: No

Viola pinetorum var. *grisea* occurs in meadows and seeps, subalpine coniferous forest, and upper montane (lodgepole forest, subalpine forest, red fir forest) coniferous forest. It has been observed in Alpine, El Dorado, Fresno, Inyo, Kern, Madera, Mariposa, Mono, Monterey, Placer, San Bernardino, Sierra, Tulare, Tuolumne, and Ventura Counties. It is considered difficult taxonomically. The California Native Plant Society rare plant rank changed from 1B.3 to 1B.2 on 2017-10-06, and alternatively, the Regional Forester removed the species from the 2013 sensitive species list for the Region.

This plant is common on Kern Plateau and also found on Coyote and Wheeler. There are 39 CNDDDB record occurrences in the plan area. Threats reported in database records include recreation trampling by hikers and unauthorized OHV travel, road maintenance, and grazing. There are no substantial threats

documented. Based upon the evidence and supporting best available science, this species does not meet the established criteria at CFR 1909.12 chp. 10, 12.52 (c-d) as a species of conservation concern in the plan area.

Best Available Scientific Information Considered

California Dept. of Fish & Wildlife. 2017. Special vascular plants, bryophytes, and lichens list, April 2017. Available at <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline/> [accessed 10 April 2017].

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Website <http://www.rareplants.cnps.org> [accessed 10 April 2017].

Appendix

Table 2. Summary of changes to list of botanical species of conservation concern for the Inyo National Forest.

Scientific Name Common Name	Native to and Known to Occur in the Plan area	NatureServe Global Rank & T Rank	NatureServe State Rank CA or NV	Calif. Rare Plant Rank from CDFW Special Plants list Apr. 2017	FWS-BCC BLM-SS FS-SS State SSC (CA) (NV) or SGCN or other	June 2016 RF SCC List	2018 Decision Summary Rationale Statement
<i>Aliciella triodon</i> (Gilia t.) coyote gilia	No	G5	S2	2B.2	No	SCC	Removed. Aliciella triodon occurs in the pinyon/juniper woodland and Great Basin scrub. There are 11 Consortium of California Herbaria records, many occurring near but not on the Inyo NF (Matson 2017). The occurrence of this species in the plan area is not documented in the best available scientific information.
<i>Boechera evadens</i> (BOEV = current Jepson name; <i>Arabis fernaldiana</i> var. <i>stylosa</i>) hidden rockcress	No	G1	S1	1B.3	Sensitive	SCC	Removed. Boechera evadens grows on rock outcrops around 2600 m elevation in the southern High Sierra Nevada. None of the four CNDDDB records is on the forest. There is also evidence that the species hybridizes with B. lemmonii and possibly other Boechera species, making identity of populations uncertain (CNPS 2017). The occurrence of this species in the plan area is not documented in the best available scientific information, including personal communication with experts (Lazar 2017).
<i>Boechera pendulina</i> (<i>Arabis p.</i>) rabbit-ear rockcress	Yes	G5	S1	2B.1	No	No	Added. Boechera pendulina has only one record in CNDDDB, and it is from Inyo NF in gravelly or rocky habitat at approximately 10,000 feet elevation. Nine known element occurrences (CNPS 2017) in the White Mountains. A 2015 record says 50 plants in population. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Scientific Name Common Name	Native to and Known to Occur in the Plan area	NatureServe Global Rank & T Rank	NatureServe State Rank CA or NV	Calif. Rare Plant Rank from CDFW Special Plants list Apr. 2017	FWS-BCC BLM-SS FS-SS State SSC (CA) (NV) or SGCN or other	June 2016 RF SCC List	2018 Decision Summary Rationale Statement
<i>Eriogonum microthecum</i> var. <i>alpinum</i> Alpine slender buckwheat	No	G5T4	CA S4	4.3	RF Watch	SCC	Removed. The subspecies rank changed from T3 to T4, that combined with California state rank of S4 and CNPS rank of 4.3 does not warrant consideration for SCC status. More important: the original herbarium collections could not be re-located during two surveys in the plan area in 2015 and 2016; this is believed to be due to original potential mis-identification. There is insufficient information regarding species populations, trends, threats and stressors in the plan area.
<i>Greeneocharis circumscissa</i> var. <i>rosulata</i> (<i>Cryptantha circumscissa</i> var. <i>rosulata</i>) Rosette cushion cryptantha	Yes	G5T2	S2	1B.2	FS-SS	SCC	Scientific name change only, still maintain as SCC
<i>Tetradymia tetrameres</i> dune horsebrush	Yes	G4	CA S2 NV S4	2B.2	No	No	Added. The distribution of <i>T. tetrameres</i> in California is limited; the Consortium of California Herbaria lists 14 collection records for this species, all from Mono County, and most from the dunes along the ancient Mono Lake shorelines on the north side of the lake. Some of these sand dunes with <i>T. tetrameres</i> are located on the Inyo NF. In 2015, new infestations of the invasive <i>Salsola</i> sp. were observed on dunes with populations of <i>T. tetrameres</i> , including dunes on the Inyo NF. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.

Scientific Name Common Name	Native to and Known to Occur in the Plan area	NatureServe Global Rank & T Rank	NatureServe State Rank CA or NV	Calif. Rare Plant Rank from CDFW Special Plants list Apr. 2017	FWS-BCC BLM-SS FS-SS State SSC (CA) (NV) or SGCN or other	June 2016 RF SCC List	2018 Decision Summary Rationale Statement
<i>Thelypodium milleflorum</i> many-flowered thelypodium	Yes	G5	CA S3? NV SNR	2B.2	None	No	Added. Another location of this species was found and documented with a voucher (Howald 3744) on Inyo NF in 2016 - administered land in the eastern Mono Basin, on caliche-covered clay mounds that support at least five SCC species and other special status plants. Two colonies were found, one consisting of 4 individuals, and the other of 11 individuals. There is substantial concern for the persistence of this species due to the limited distribution and immediate direct threats.
<i>Tonestus eximius</i> Lake Tahoe serpentweed	No	G3	S3	4.3	None	SCC	Removed. There are no CNDDDB records for this species, as CNDDDB does not track plants with a California Rare Plant Rank of 4. CNDDDB file information shows only records from Lake Tahoe Basin (Lazar 2017.) There is one report in of the species from a 1938 checklist of species from Rock Creek Basin on the Inyo, but the determination of species is provided with a "?" (Calflora 2017). The occurrence of this species in the plan area is not documented in the best available scientific information, including personal communication with experts. It does not meet consideration as an SCC.
<i>Transberingia bursifolia</i> ssp. <i>virgata</i> (<i>Halimolobos</i> v.) virgate halimolobos	Yes	G4T4	S1	2B.3	None	No	Added. <i>Transberingia bursifolia</i> ssp. <i>virgata</i> status ranks were recently updated from NatureServe G4 to G4T4, CA S1? to S1, and CNPS 2B.2 to 2B.3. Known only from Inyo and Mono counties in California, in the White and Inyo Mountains. Due to limited distribution and threats there is substantial concern for the persistence of this species.

Table 3. Sensitive species not included in rationales and reason.

Scientific Name	Native to and Known to Occur in the Plan area	NatureServe Global Rank & T Rank	NatureServe State Rank CA or NV	Calif. Rare Plant Rank from CDFW Special Plants list Apr. 2017	FWS-BCC BLM-SS FS-SS State SSC (CA) (NV) or SGCN or other	June 2016 RF SCC List	2018 Decision Summary Rationale Statement
<i>Botrychium paradoxum</i>	No	G3G4	S1	2B.1	Sensitive	No	Did not meet occurrence criteria.
<i>Botrychium tunux</i>	No	G3G4	S1	2B.1	Sensitive	No	Did not meet occurrence criteria.
<i>Botrychium yaaxudakeit</i>	No	G3G4	S1	2B.1	Sensitive	No	Does not meet occurrence criteria.
<i>Pinus albicaulis</i>	Yes	G3G4	SNR	CBR	Sensitive	No	This is a candidate species for ESA listing with US Fish and Wildlife Service, so is not considered an SCC at this time.