

# Owyhee Field Office

## Group 2 Special Status Plants Specialist Report

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## ASSESSMENT & EVALUATION

### Group 2 – Special Status Plants Specialist Report

#### Overview

Special status plant information is based on botanical surveys conducted in the allotments, BLM records from the Owyhee Field Office, and data on file with Idaho Natural Heritage Program (IDFG INHP 2011). Systematic inventories for special status plants have not been conducted in these allotments. Incidental clearance surveys conducted for other projects and small-scale inventories are the main source for locating known occurrences within allotments, although the number of projects and subsequent acres surveyed are minimal within the area of analysis. Ten species are known to occur on BLM-managed lands within the Group 2 allotments (Table 1).

Each special status species and their habitat will be discussed generally, followed by a description of the threats to each species in the specific allotment where the plants occur. All of the species discussed are on the BLM sensitive species list.

No plants listed under the Endangered Species Act are known or suspected to occur within these allotments. Per the USFWS Southwest Idaho is no longer considered within the range of Ute ladies'-tresses, which is an ESA species mentioned in previous assessments and will not be discussed any further.

**Table 1:** Group 2 Special Status Plant Species

Species	Status <sup>1</sup>	Soil Characteristics	Vegetation Type and Habitat <sup>2</sup>	Allotment
Idaho milkvetch ( <i>Astragalus conjunctus</i> )	4	volcanic basalt soils	sagebrush/grassland	Elephant Butte, Poison Creek, and Rats Nest
barren milkvetch ( <i>Astragalus cusickii</i> var. <i>sterilis</i> )	3	volcanic ash soils that decompose to clay	Wyoming big sagebrush, bitterbrush, and grassland	Blackstock Springs
Snake River milkvetch ( <i>Astragalus purshii</i> var. <i>ophiogenes</i> )	4	sand or gravelly-sand soils	Wyoming big sagebrush/salt desert shrub and grassland	Blackstock Springs
Cusick's pincushion ( <i>Chaenactis cusickii</i> )	2	volcanic ash-clay soils	Wyoming big sagebrush and salt desert shrub	Elephant Butte and Poison Creek
Malheur cryptantha ( <i>Cryptantha propria</i> )	4	volcanic ash or clay soils	sagebrush/grassland	Elephant Butte
false naked buckwheat <i>Eriogonum novonudum</i> )	3	volcanic ash soils	Wyoming big sagebrush/salt desert shrub and grassland	Elephant Butte

Species	Status <sup>1</sup>	Soil Characteristics	Vegetation Type and Habitat <sup>2</sup>	Allotment
soft blazingstar ( <i>Mentzelia mollis</i> )	2	volcanic ash soils	Wyoming big sagebrush and salt desert shrub	Blackstock Springs and Elephant Butte
Antelope Valley beardtongue ( <i>Penstemon janishiae</i> )	3	volcanic ash-clay soils or lakebed sediments	Wyoming big sagebrush/salt desert shrub	Elephant Butte
Owyhee phacelia ( <i>Phacelia lutea</i> var. <i>calva</i> )	3	volcanic ash soils	Wyoming big sagebrush and salt desert shrub	Blackstock Springs
small phacelia ( <i>Phacelia minutissima</i> )	2	gravelly, ephemerally wet soils	aspen/tall forb meadows, springs, along streambanks, wetter stream terraces, and snow bank areas	Soda Creek

1. Idaho BLM Type status (USDI BLM 2011):

- 1 – Threatened, Endangered, Proposed, and Candidate species – species listed by USFWS, or proposed or candidates under ESA-
- 2 – Rangewide/Globally imperiled species with high endangerment risk – have high likelihood of being listed in the future due to global rarity and significant endangerment factors-
- 3 – Rangewide/Globally imperiled species with moderate endangerment risk – species whose global rarity and inherent risks make them imperiled-
- 4 – Species of Concern – species which are generally rare in Idaho, with small populations and habitat areas-
- 5 – Watch list – species not considered BLM sensitive, and associated policy does not apply. These species may be added to sensitive list depending on new information concerning threats and species biology or statewide trends-

2. Species found in specialized habitats/soil inclusions within these habitats-

## **Species Descriptions**

### **Idaho milkvetch (*Astragalus conjunctus*)**

Idaho milkvetch is currently known from 16 populations within Idaho, all in Owyhee County. This species also occurs within the margins of Oregon, Washington, and Nevada. Rocky hilltops, hillsides, and canyon benches of sagebrush scabland and steppe communities on volcanic basalt substrates provide typical habitat for this species (Atwood 2001). Idaho milkvetch phenology for identification starts in mid-April, continuing into June. This species is known to occur in Elephant Butte, Poison Creek, and Rats Nest allotments with threats identified as grazing by livestock and wild horses, depending on the location.

### **Barren milkvetch (*Astragalus cusickii* var. *sterilis*)**

Barren milkvetch is an Owyhee uplands endemic within Owyhee County, Idaho, and Malheur County, Oregon, with a range that centers along a 30-mile stretch of the Owyhee River and its side drainages (natureserve). There are seven known sites of barren milkvetch in Idaho, all within Owyhee County, and more than 70 sites in Malheur County, Oregon. Within its restricted range, this species occurs on sparsely vegetated bluffs, knolls and slopes within sagebrush/grassland or bitterbrush communities, specifically on white or reddish-brown volcanic ash soils that decompose to clay. This specific habitat is highly vulnerable to disturbance, mining

in particular. Phenology for identification is generally from May through June. Within the assessment area, this species occurs in the Blackstock Springs allotment with potential threats identified as livestock trampling, OHV use, and a highway ROW. Currently, populations are protected and mining is not an immediate threat; however, it could potentially be a permitted activity in the future.

**Snake River milkvetch (*Astragalus purshii* var. *ophiogenes*)**

This species is a regional endemic to the Snake River corridor and surrounding uplands from Gooding and Twin Falls Counties to Owyhee County in southwest Idaho and in Malheur County, Oregon (Atwood 2001). There are 82 known populations within Idaho, 56 of which are within Owyhee County. This species grows on generally barren, loosely aggregated, frequently moving sand and gravelly sand deposits on bluffs, talus, dunes, and volcanic ash beds within big sagebrush or salt desert shrub communities. Snake River milkvetch phenology for identification generally begins in late April, lasting through June. Current threats to this species within the Blackstock Springs allotment are livestock trampling, non-native invasive species, and recreation.

**Cusick's pincushion (*Chaenactis cusickii*)**

Cusick's pincushion is a narrow endemic currently known from 11 occurrences in Idaho, 10 of which occur in Owyhee County, Idaho; other populations occur in adjacent Oregon. Several populations are considered historic, indicating that they have not been seen for many years to decades, despite specific searches. At least one population in Idaho has been documented as extirpated (Moseley 1994). In 1994, Robert Moseley of the Conservation Data Center inventoried portions of the northern part of the assessment area for Cusick's false yarrow through a cooperative agreement with the BLM. Moseley's report, "The Status and Distribution of Cusick's False Yarrow (*Chaenactis cusickii*) in Idaho," (Moseley 1994) summarizes information about this species in Idaho.

This plant is limited to volcanic ash-clay soil outcrops of the Poison Creek Formation and Succor Creek Formation that are sparsely vegetated with Wyoming big sagebrush or salt desert shrub communities. The unique soils restrict the establishment of many species aside from invasive annuals, such as clasping pepperweed (*Lepidium perfoliatum*) and bristly fiddleneck (*Amsinckia tessellata*). The phenology for identification of this species is generally May through June (Atwood 2001). Cusick's pincushion is found in the Poison Creek and Elephant Butte allotments. Populations are threatened by livestock trampling/trailing, mining (permitted and recreational), illegal dumping, and OHV use.

**Malheur cryptantha (*Cryptantha propria*)**

Malheur cryptantha is known from southwest Idaho and from Malheur County, Oregon. There are five known occurrences in Idaho, all of which occur in Owyhee County. It occurs on bare soils of volcanic ash or clay on open hillsides in the sagebrush-grassland zone. Malheur cryptantha's phenology for identification is generally April through May (Atwood 2001). Current impacts to this population within the Elephant Butte allotment include roads, OHV trails, and non-native species invasion.

**False naked buckwheat (*Eriogonum novonudum*)**

False naked buckwheat is endemic to ash outcrops in the Owyhee uplands region (Mansfield 2010). It occurs primarily along the lower Owyhee River in Malheur County, Oregon, though there is one known occurrence in Owyhee County, Idaho and (INHP, nature reserve). This species is known from only one site in Idaho: within the Elephant Butte allotment. This species typically grows on sandy clay derived from dark brown-colored volcanic ash slopes and washes within sparsely vegetated salt desert shrub, sagebrush, and juniper woodlands (efloras; 2010, nature reserve). Phenology for identification occurs in spring through late summer. The current threats to this population are roads, OHV use, non-native species invasion, and recreational mining (INHP).

**Soft blazingstar (*Mentzelia mollis*)**

Soft blazingstar occurs in the assessment area on the same soil type as Cusick's pincushion; the two species are often co-located. This plant is more widespread than Cusick's pincushion, but it is still quite restricted. It occurs in Owyhee County, Idaho, where it is known from 18 occurrences, as well as in Malheur County, Oregon, and Humboldt County, Nevada. Lynda Smithman inventoried some potential habitat in the assessment area and visited several occurrences in Idaho in 1989 under a contract for the Vale District BLM. Her report, "Distribution and Occurrence of *Mentzelia mollis* Peck" (Smithman 1989) describes the range of the species and discusses the habitat and threats to known occurrences in Idaho and Oregon.

This species grows on brown, green, or gray volcanic ash from the Succor Creek Formation within Wyoming big sagebrush communities. Its average phenology for identification begins in May and continues into June (Atwood 2001). Within the assessment area this species occurs in the Blackstock Springs and Elephant Butte allotments. Impacts to this species are similar to those threatening Cusick's pincushion and include livestock trailing, mining (permitted and recreational), OHV use, and illegal dumping.

**Antelope Valley beardtongue (*Penstemon janishiae*)**

Antelope Valley beardtongue occurs from very northeastern California and southeastern Oregon to central and northeastern Nevada and western Idaho. Within Idaho, there are 29 known populations, 20 of which are located within Owyhee County. This species grows on clay soils derived from volcanic ash or lake bed sediment in a sagebrush communities (Atwood 2001). The average phenology for identification for this species begins in late April and continues through mid-June (Atwood 2001). Within the assessment area, this species occurs in the Elephant Butte allotment; OHV trails, roads, non-native species invasion, and recreational mining impact this population.

**Owyhee phacelia (*Phacelia lutea* var. *calva*)**

Owyhee phacelia has a distribution from northwest Humboldt County, Nevada to eastern Malheur County, Oregon and locally in Owyhee County, Idaho. This species has 25 known populations within Idaho, all within the Succor Creek Formation volcanic ash area on the extreme western edge of Owyhee County. This species is restricted to sparsely vegetated, volcanic ash soils within Wyoming big sagebrush or salt desert shrub communities. Generally, phenology for identification occurs in May through June. Non-native invasive species invasion and livestock trampling threaten this population within the Blackstock Springs allotment.

**Small phacelia (*Phacelia minutissima*)**

This species occurs from central Washington, northeastern Oregon, and southern Idaho. There are 21 known occurrences within Idaho, 19 of which occur in Owyhee County. This species occurs on moist soils, in the understory of aspen and tall forb communities in meadows, especially snow bank areas (Atwood 2001). Phenology for identification is generally from April through July/August. Impacts to this species within the Soda Creek allotment, as reported in 1996, are livestock grazing and OHV use.

**Allotment Descriptions**

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**Allotment Name**

Alkali-Wildcat, Burgess, Burgess FFR, Chimney Pot FFR, Cow Creek Individual, Ferris FFR, Jackson Creek, Joint, Lowry FFR, Madriaga, Sands Basin, Texas Basin FFR, and Trout Creek/Lequerica allotments

**Current Assessment Summary**

While surveys may have been attempted and habitat may exist, no populations of BLM special status plant species are known to occur on BLM-managed lands in the above listed allotments. However, this does not preclude these allotments from future surveys associated with rangeland projects, as special status plants can be episodic in nature.

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**Allotment Name**

Blackstock Springs

**Previous Assessment Summary**

The 2006 assessment (USDI BLM 2006) identified four special status plants that occur within this allotment: Idaho milkvetch, Snake River milkvetch, barren milkvetch, soft blazingstar, and Owyhee phacelia. No threats to these species or their habitats were identified within the assessment.

**Current Assessment Summary**

All four known special status plants within the Blackstock Springs allotment (barren milkvetch, Snake River milkvetch, soft blazingstar, and Owyhee phacelia) are located within pasture 1.

The previous assessment noted the presence of Idaho milkvetch within the allotment. However, the location information for this species is imprecise, with a 4-mile diameter area and a center point located approximately 1 mile outside of pasture 1 and the Blackstock Springs allotment in general. It is also unclear at what time the site was last visited; prior to the 2006 assessment, the report mentions an unspecified date in the 1980s.

The barren milkvetch site in pasture 1 is a sub-population of a larger site that occurs immediately outside of pasture 1, within the McBride Creek ACEC. At the time of the last reported visit in 2002, no threats were identified. However, potential threats were noted as cattle trampling, OHV damage and the location of the population within a highway right-of-way.

Three populations of Owyhee phacelia occur within pasture 1 of Blackstock Springs. Two populations have been reported as subject to invasion of various non-native weeds, such as

medusahead (*Taeniatherum caput-medusae*), clasping pepperweed, field brome (*Bromus arvensis*), and curvseed butterwort (*Ceratocephala testiculata*). At one site, weed invasion densely covered the habitat that supports Owyhee phacelia. In 2007, it was reported that this site had been subjected to significant disturbance from fire and livestock since 1994. No plants have been confirmed at the site since the original 1970 discovery of the site. The other site subject to heavy weed invasion was last visited in 1997 and plants were observed; although vigor was not addressed in the report, plants were flowering at the time. The third population of Owyhee phacelia overlaps with soft blazingstar. The population was last visited in 1994 and reported to have high vigor. The habitat of this population was relatively undisturbed, with limited grazing impacts.

Snake River milkvetch occurs at one site within pasture 1. Information pertaining to this population is incomplete. The site was originally discovered in the 1980s and has not been revisited due to a lack of information for relocating the original site. No information was recorded during the 1980s sighting for population, vigor, habitat, or threats. However, the poor condition of the native plant community and weed invasion within a livestock concentration area and a recreation area is a concern for special status plant habitat maintenance.

Soft blazingstar occurs at one site within pasture 1 and was described as a large, dense population in the last observation (1994). The population is co-located with Owyhee phacelia. The habitat of this population was relatively undisturbed with limited grazing impacts.

### **Evaluation of Standard 8**

Evaluation Finding – Allotment is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard for Owyhee phacelia

### **Rationale for Evaluation Findings**

For barren milkvetch, the last reported visit in 2002 documented little to no disturbance of this subpopulation. However, potential threats were noted as cattle trampling, OHV damage and the location of the population within a highway right-of-way.

The co-located Owyhee phacelia population and soft blazingstar population were last reported on in 1994 with good vigor, no indication of threats, and excellent habitat condition. Two Owyhee phacelia populations were noted to have been subject to disturbance from fire and livestock, although proper documentation of these disturbances is not supported in the record. The populations were also subject to invasion by various non-native invasive species.

There is insufficient information for Snake River milkvetch regarding location, specific habitat, and population size to determine any threats to this population. However, the poor condition of the native plant community and weed invasion within a livestock concentration area and a recreation area are causes for concern for special status plant habitat maintenance.

Based on the available information, the habitats for two Owyhee phacelia populations are not being maintained and are not in conformance with the BLM Manual 6840 - Special Status

Species Management, which requires proactive management to decrease threats to BLM-identified sensitive species habitat in order to reduce the need to list species under the ESA (USDI BLM 2008). Therefore, the Standard is not being met for Owyhee phacelia.

### **Determination**

Based on the available information, concern has been raised for the presence of invasive species and a shift in the surrounding plant community of Owyhee phacelia away from the ecological site potential, which would indicate that habitats for special status plants are not being maintained and are therefore not meeting the Standard for these species' habitats.

The Standard is being met for barren milkvetch populations. Given the limited information, the Standard is considered to be maintained for Snake River milkvetch.

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### **Allotment Name**

Elephant Butte

### **Previous Assessment Summary**

At the time of the 2001 assessment (USDI BLM (c) 2001) and Determination (USDI BLM (d) 2001) for this allotment, two special status species were known to occur: Cusick's pincushion and soft blazingstar. Threats identified at the time were livestock trailing, mining, recreational rock hounding, non-native invasive species, and OHV use. The impacts from livestock were limited but detrimental due to the fragile habitat in which these species occur. The Standard was not being met for these species and livestock grazing was a contributing factor.

### **Current Assessment Summary**

Presently there are six species of special status plants known to occur within Elephant Butte allotment: Cusick's pincushion, soft blazingstar, Idaho milkvetch, Malheur cryptantha, false naked buckwheat, and Antelope Valley beardtongue. The latter three species were discovered incidentally in 2011 and were revisited in 2012.

Soft blazingstar and Cusick's pincushion occur at the same location within pasture 3, so the impacts to both populations are similar. Past mining, OHV use, livestock trailing, trash dumping and recreational rock hounding were reported as threats to both species at this location in 1998 and in 2012. OHV use was an imminent threat in 1998; it continues to be the greatest concern in 2012 and is associated with trash dumping, especially for the northwestern sub-population. While the area was noted to be used by cattle, they likely only trail through the outcrops, as the forage is sparse and of poor value. Trailing appears to be minor and concentrated to established trails across steeper slopes (Wigglesworth 2012). The Standard is not being met for these two species.

Cusick's pincushion was located in pasture 5 in 1938 and again in 1952. However, the site was revisited in 1994 and the population was not relocated. In 1994, it was noted that the site was sandier than is typical of the preferred habitat for this species. No information was recorded during any site visits with regard to population, vigor, habitat, or threats. The palatability of Cusick's pincushion is low and it occurs in a sparsely vegetated habitat where livestock are not

likely to congregate, except during trailing. Given this information, it is likely this site is not impacted by livestock and it is meeting the Standard.

An Idaho milkvetch occurrence was discovered in 2011 in the southern portion of pasture 2. Plants had been grazed by an unknown animal but still had adequate mature fruit, and the population was in good condition. No threats were identified for this population.

Malheur cryptantha, false naked buckwheat, and Antelope Valley beardtongue occur within close proximity in pasture 2 and somewhat overlapping habitats, so they are subject to similar threats. In 2011, all three species were discovered in this pasture, with Malheur cryptantha being the most widespread and the other two species occupying smaller inclusions within the cryptantha habitat. In the 2011 and 2012 field reports, roads, OHV trails, and weeds were identified as threats to all species. Roads and weed patches were noted to be extensive in the area, though with few occurrences in the habitats, resulting in little immediate disturbance. Recreational mining of jasper was noted to be a threat to false naked buckwheat and Antelope Valley beardtongue, with recommendations that management of this issue is necessary.

### **Evaluation of Standard**

Evaluation Finding – Allotment is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard for Cusick’s pincushion and soft blazingstar in pasture 3

### **Rationale for Evaluation Findings**

Cusick’s pincushion and soft blazingstar are subject to the imminent threat of OHV traffic that has increased greatly since 2000 and caused severe habitat degradation. This is coupled with recreational rock hounding and cattle trailing. Trash dumping has resulted in habitat degradation and is widespread throughout the northern sub-populations, decreasing to the south. Cattle trailing is concentrated to a few established trails and is not identified as a causal factor in habitat degradation. Impacts from OHV use and trash dumping are not in conformance with the BLM Manual 6840 - Special Status Species Management, which requires proactive management to decrease threats to BLM identified sensitive species habitat in order to reduce the need to list species under the ESA (USDI BLM 2008). The standard is not being met for Cusick’s pincushion and soft blazingstar and livestock are not a causal factor.

There are no recorded threats to the Idaho milkvetch population within this allotment and the population appears to be in good condition. The Standard is being met for this species.

Malheur cryptantha, false naked buckwheat, and Antelope Valley beardtongue are subject to the impacts of roads, OHV trails, recreational mining, and weeds. Livestock trailing was noted in 2012 to be at light to no impact. This is likely due to minimal forage within the habitat of these species and subsequent lack of allure to livestock. Management of recreational mining is recommended. Given the 2012 information, the Standard is being met for these three species.

### **Determination**

There are six special status plants known to occur within this allotment. Cusick's pincushion and soft blazingstar are co-located within the same habitat in pasture 3. Cusick's pincushion is also known to occur in pasture 5. Idaho milkvetch occurs in the southern portion of pasture 2. Malheur cryptantha, false naked buckwheat, and Antelope Valley beardtongue all occur in the same general area in pasture 2.

, Cattle trailing is present in minor amounts near soft blazingstar and Cusick's pincushion populations, with concentration on a few established trails; therefore, trailing is not a significant factor in habitat degradation or the failure to meet the Standard for these two species. However, extensive OHV and trash dumping impacts within the habitats of Cusick's pincushion and soft blazingstar within pasture 3 are significant causal factors in not meeting the Standard.

The Idaho milkvetch population is in good condition and the Standard is being met for this species.

Peripheral habitat disturbance appears to be where threats to Malheur cryptantha, false naked buckwheat, and Antelope Valley beardtongue occur. The habitats themselves are generally intact with little disturbance. Livestock impacts are limited due to the lack of forage within these unique soil inclusions. This Standard is being met for these species' habitats.

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**Allotment Name**

Poison Creek

**Previous Assessment Summary**

At the time of the 2001 assessment, the only known special status plant, Cusick's pincushion, was noted to be threatened by OHVs and perhaps mining, but specific impacts from cattle at this location were not documented. The Standard was not being met for this population, yet there was insufficient information to determine if livestock grazing management was a contributing factor (USDI BLM (a) 2001).

**Current Assessment Summary**

Two special status plant species are known to occur within this allotment, Cusick's pincushion and Idaho milkvetch. There are 11 populations of Cusick's pincushion known to occur within Idaho and only one within this allotment. Idaho milkvetch is known from 16 populations within Idaho and one within the portion of the allotment, residing in the Jump Creek Canyon ACEC.

The one population of Cusick's pincushion within the allotment is known to occur in the northeastern portion adjacent to the northern end of Jump Creek State Park. In 1994, Moseley performed a thorough survey of all known and potential habitats of this species, which included the Jump Creek site. At the time, this population consisted of approximately 1,000 individuals (Moseley 1994) and had been disturbed by past mining activities. Potential threats included expansion of the mining operation, nearby OHV activity, and livestock trailing. In 1996, the site was visited at the end of June and plants were noted to be 100 percent senescent with good plant vigor, but a good population count was not possible due to the decadence of the plants. During this 1996 visit, OHVs were not a current threat but were noted to be a potential threat in the future. The site was surveyed again in 2002, 2005, and 2009, all late in the year (end of June or

later) and no plants were observed. Heavy OHV use resulting in habitat degradation was noted during all three visits, in addition to illegal dumping and livestock trampling.

The most recent visit, April 25, 2012, documented several threats to the site and no observed plants, although the lack of plants could be due to a site visit prior to plant development and/or a drier than normal spring. Threats were noted as extreme sheep and cattle trampling, with cattle being the primary culprit, on the adjacent brown-ash toe-slopes and to a lesser degree on the more likely habitat of white-ash, severe OHV hill climbing, and illegal dumping of trash on approximately 5 percent of the habitat.

Idaho milkvetch occurs at one known site within the Jump Creek Canyon ACEC. The most recent visit to this population in 1992 identified the population occurring on steep, rocky, west-facing slopes of the canyon wall. Plants appeared to be healthy and no threats were noted.

### **Evaluation of Standard**

Evaluation Finding – Allotment is:

- Meeting the Standard for Idaho milkvetch
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard for Cusick's pincushion

### **Rationale for Evaluation Findings**

Cusick's pincushion occurs at one site within the Poison Creek allotment and only at one location. As with most annual species, the number of individuals above-ground and in the seed bank is necessary to determine population quality of annual species (Mosely 1994). Because BLM does not have this information, population area and habitat quality are better attributes with which to assess the conservation status of this Cusick's pincushion population.

Site surveys from 1994 through 2012 have noted an increase in habitat disturbance and an apparent decline in the number of plants observed at this site. OHV use, illegal dumping and livestock trampling all play a role in the decline of habitat quality; a site report from 2000 noted the greatest increase of OHV activity. In 2012, cattle trampling was more or less confined to a smaller area, as cattle tend to use preexisting trails. However, sheep trailing/trampling was excessive and not confined to specific trails, but rather, dispersed across a vast area of the habitat from the lower toe-slope to the upper where Cusick's pincushion is most prevalent (Wigglesworth 2012). Sheep grazing and trailing in the area is a significant threat to the quality of this species' habitat. This disturbance has resulted in plant mortality, along with soil mixing that has reduced the seedbank and created an opportunity for non-native plant invasion. This Standard is not being met for Cusick's pincushion habitat.

Idaho milkvetch is located within the Jump Creek Canyon ACEC, with the population situated below the canyon rim and within the rocky canyon shelves. There are no recorded threats to this population. The Standard is being met for this specific species.

### **Determination**

Two special status plant species, Idaho milkvetch and Cusick's pincushion, are known to occur in this allotment. Idaho milkvetch has no documented threats and livestock access is not an issue,

given the precipitous nature of where this population grows within the Jump Creek Canyon ACEC. This Standard is being met for known populations of Idaho milkvetch.

The Cusick's pincushion population is currently threatened by livestock trampling, OHV use, and illegal dumping. The severe sheep trampling disturbance noted in the Cusick's pincushion habitat in 2012 is a significant concern due to the lack of conservation measures to minimize the need for listing of this species under the ESA (USDI BLM 2008). This widespread disturbance reduces the seed bank, eliminates individual plants, and results in long-term habitat degradation through the introduction and establishment of exotic annuals such as clasping pepperweed, annual wheatgrass (*Eremopyrum triticeum*), and cheatgrass (*Bromus tectorum*). OHV use is dilapidating Cusick's pincushion habitat but to a lesser extent than livestock trampling due to its more concentrated area of impact. OHV use has increased over the past decade and according to the Owyhee Field Office Resource Management Plan (RMP III-24) is expected to increase 70 percent from 1999 to 2029 (USDI BLM 1999). Illegal dumping at this location has not been clearly documented within the exact habitat of the species but has been noted to occur immediately adjacent to the habitat. This standard is not being met for this population of Cusick's pincushion and livestock management is the primary contributing factor.

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**Allotment Name**

Rats Nest

**Previous Assessment Summary**

The 2001 assessment identified Idaho milkvetch and Malheur cryptantha as present within this single-pasture allotment in approximately the same location. The co-located populations were reported to have negligible impacts from cattle and, therefore, were meeting the Standard (USDI BLM (b) 2001).

**Current Assessment Summary**

Idaho milkvetch is the one special status plant population known to occur within this allotment, based on current records and files. Survey reports on file at the OBLM Owyhee Field Office show that Idaho milkvetch was last visited in late June 2010. Observed disturbances at the time were wild horse and cattle grazing, with light-moderate utilization noted to be higher later in the season. Plants were concentrated under protective cover of sagebrush. Although the previous assessment in 2001 showed that Malheur cryptantha was present in this allotment, current records and file searching do not show any historical or present occurrence of this species within this pasture. Therefore it will not be discussed further in this document or the subsequent Determination and EIS. ..

**Evaluation of Standard**

Evaluation Finding – Allotment is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

### **Rationale for Evaluation Findings**

Impacts from cattle and wild horse grazing were reported to be low, and non-native invasive species were not reported to be present within the immediate habitat of Idaho milkvetch. Given the lack of threats to this population and habitat, the BLM is in conformance with Manual 6840 - Special Status Species Management (USDI BLM 2008). There is insufficient information to determine site-specific impacts of livestock grazing on any other special status plants that may occur in this allotment. However, the poor condition of surrounding native plant communities, lack of plant species diversity, and the abundance of cheatgrass in burned areas are causes for concern for special status plant habitat maintenance, particularly at lower elevations. Higher elevation, where resilience to disturbance tends to be greater, may be suitably maintained.

### **Determination**

Given the limited information, it appears that the Standard is being met for Idaho milkvetch. There are limited impacts from livestock and wild horse grazing on this species and no other threats noted. Although additional special status plant populations are likely to occur in areas of poor habitat condition within the allotment and thus would be impacted by cattle and wild horses, no other populations are known to occur.

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### **Allotment Name**

Soda Creek

### **Previous Assessment Summary**

The 2004 draft assessment identified the habitat of the known occurrence of small phacelia in pasture 3 (amended to pasture 6 as of January 2013) to be in fair condition due to non-native invasive species (USDI BLM 2004).

### **Current Assessment Summary**

Small phacelia is the only known special status species in this allotment. There are 21 recorded populations of this species within Idaho, with one occurring in pasture 6 of this allotment. This annual species was found in 1996 and has not been revisited since. It occurs in seasonally wet areas in the cover of a tall forb meadow community. At the time of the only site visit in 1996, the area was heavily grazed by livestock and there were fresh OHV tracks with the former being the most widespread. There was also a potential threat of silver mining in the area. Phenology of the approximate 100 species at the time was good, with 95 percent in fruit and 5 percent in flower.

### **Evaluation of Standard**

Evaluation Finding – Allotment is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard
- Standard doesn't apply

### **Rationale for Evaluation Findings**

Data on the small phacelia site in pasture 6 is limited to one site visit/record from 1996. This sole record does not provide adequate information to determine current site specific impacts of

livestock grazing on this population. However, moist areas of increased vegetative production and palatability where small phacelia grows are livestock congregation areas and remain a concern.

### **Determination**

The only known species occurring in the Soda Creek allotment is small phacelia. The single population occurs within pasture 6 and was last reported (1996) as being subjected to impacts of livestock grazing and OHV activity, with generally good reproduction of those plants that were present. This is the only record for this population leading to insufficient information as to whether the site is meeting Standard 8. However, moist areas of increased vegetative production and palatability where small phacelia grows are livestock congregation areas and remain a concern.

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# ANALYSIS METHODS for SPECIAL STATUS PLANT SPECIES

## Group 2 – Special Status Plants Specialist Report

### *Affected Environment*

#### A. Data used

1. Idaho Fish and Wildlife Information System (IFWIS)<sup>1</sup> and Oregon Biodiversity Information Center (ORBIC)<sup>2</sup> element occurrence (EO) data, IFWIS Plant Conservation Database observations<sup>3</sup>, and BLM Owyhee Field Office (OFO) survey reports<sup>4</sup>.
2. Watershed Boundaries<sup>5</sup>
3. Allotment/pasture boundaries<sup>6</sup>

#### B. Assumptions

1. Occurrences not visited before 1980 are deemed to have insufficient information to make a call of meeting or not meeting standards. If a site visit is older than 2000 and it is the only site visit for that species, it is also considered insufficient information. All occurrences with 1) more than one site visit, and 2) the first visit occurred after 1980 are assumed to be in the same condition as when last evaluated.
2. Individual occurrences are not considered populations.
3. Electronic reports, BLM survey reports, and GIS data were used to identify known occurrences within allotment boundaries (the project area). GIS data only were used to identify known occurrences beyond allotment boundaries, at the watershed level (area of analysis).
4. Electronic reports were not used to identify known occurrences beyond allotment boundaries (the project area) because the GIS data provide a magnitude of the effect the action would have on populations within the area of analysis. Further refining the analysis by electronic form review beyond allotment boundaries would not improve the basis for a decision on the action.
5. Though undiscovered species exist within the area of analysis, no assumptions were made as to the abundance of unknown occurrences.
6. Geology data were not used to determine potential locations of occurrences based on habitat because the majority of the species are associated with soils derived from volcanic ash outcrops. Such outcrops have not been thoroughly mapped or characterized within the analysis area; therefore a habitat analysis cannot be conducted for those species<sup>6</sup>.

#### C. Methods

1. Analysis of each species was based on known occurrences.
2. Within the project area (i.e., allotments) both IFWIS geolocated data and electronic reports were used to identify locations of known occurrences. Total occurrences by species were counted for each allotment and pasture.
3. Beyond allotment boundaries, within the area of analysis (i.e., watersheds), IFWIS geolocated data were used to identify locations of known occurrences of species previously identified to occur within allotments. Total occurrences by species were counted for each watershed.
4. An extensive literature review was conducted for each species identified to occur within allotment boundaries. References 7-12 and 14 were used to describe individual species. Other sources reviewed, but that did not supply additional information, included:

OR/WA ISSSSP <http://www.fs.fed.us/r6/sfpnw/issssp/species-index/flora-vascular-plants.shtml>

BLM-ID, OR, WA

INHP publications: <https://fishandgame.idaho.gov/content/page/botany-publications-idaho-natural-heritage-program>

ORBIC rare plant field guide [http://orbic.pdx.edu/plants/view\\_plants2.php](http://orbic.pdx.edu/plants/view_plants2.php)

OR Flora Project rare plant guide <http://www.oregonflora.org/rareplants.php>

NNHP rare plant atlas <http://heritage.nv.gov/atlas/atlasndx.htm>  
 INPS <http://www.idahonativeplants.org/>  
 USDA Plants database  
 Jepson <http://ucjeps.berkeley.edu/interchange/>  
 WNHP <http://www1.dnr.wa.gov/nhp/refdesk/fguide/hfm/fsfgabc.htm>  
 CNHP [http://www.dfg.ca.gov/biogeodata/cnddb/plants\\_and\\_animals.asp](http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp)  
 CNPS <http://www.cnps.org/>  
 Hagwood 2006- Jarbidge field guide  
 NPSO <http://www.npsoregon.org/>  
 NNPS <http://www.nvnps.org/> (contacted waited on reply)  
 ODA Plant Division, Plant Conservation  
<http://cms.oregon.gov/ODA/PLANT/CONSERVATION/Pages/statelist.aspx>  
 Intermountain Flora

*Alternative Development*

A. Data used

1. IFWIS EO data<sup>1</sup> and OFO survey reports<sup>4</sup>.
2. Allotment/pasture boundaries<sup>6</sup>
3. Species habitat descriptions from references 7-12
4. NAIP<sup>13</sup>

B. Assumptions

1. Palatability was not considered when developing an alternative to mitigate herbivory impacts for the following reasons:
  - a. Most species have low palatability to livestock or are too inconspicuous to be preferred.
  - b. Soft blazingstar is considered marginally palatable<sup>14</sup>. Cusick’s pincushion is likely unpalatable<sup>9</sup>.
  - c. The milkvetch species and beardtongue may be palatable to livestock. However, of those 4 species, only Idaho milkvetch and Antelope Valley beardtongue prefer habitat that would be commonly utilized by livestock. However, both species are considered to have a moderate to low risk of threat and further refining the analysis would not improve the basis for a decision on the action.

C. Methods

Alternatives were developed based on (1) specific mention of livestock impacts to species occurrences in EO records or OFO reports and (2) the susceptibility of preferred habitat to livestock impacts (Table 2). A review of the records indicated that Cusick’s pincushion had been impacted by sheep trampling in Poison Creek allotment and small phacelia had been impacted by livestock congregation in pasture 6 of Soda Creek allotment. Habitat was considered susceptible to livestock impacts if the origin of soils was volcanic ash making it susceptible to trampling and surrounding vegetative community is likely utilized by livestock. If both columns were marked yes in the following table, livestock would have impacts to preferred habitat:

<b>Table 2: Livestock impacts to preferred habitat</b>			
<b>Species</b>	<b>Habitat</b>	<b>Surrounding vegetation typical area of utilization by livestock?</b>	<b>Area susceptible to trampling?*</b>
Idaho milkvetch	Soil derived from volcanic (primarily basalt) parent material on rocky hilltops, hillsides and canyon benches within sagebrush scabland or steppe communities up to the lower boundary of pine	yes	yes

<b>Table 2: Livestock impacts to preferred habitat</b>			
<b>Species</b>	<b>Habitat</b>	<b>Surrounding vegetation typical area of utilization by livestock?</b>	<b>Area susceptible to trampling?*</b>
	forest.		
barren milkvetch	Clay soils derived from volcanic ash on sparsely vegetated bluffs, knolls, and slopes within sagebrush/grassland or bitterbrush communities.	yes	yes
Snake River milkvetch	Loosely aggregated, frequently moving, sand and gravelly sand deposits on barren bluffs, talus, dunes, and volcanic ash beds within big sagebrush or salt desert shrub communities.	yes	yes
Cusick's pincushion	Clay soils derived from volcanic ash outcrops that are sparsely vegetated with Wyoming big sagebrush or salt desert shrub communities.	yes	yes
Malheur cryptantha	Clay soils derived from volcanic ash on barren, open hillsides of sagebrush-grassland zones.	yes	yes
false naked buckwheat	Sandy clay derived from volcanic ash slopes and washes within sparsely vegetated salt desert shrub, sagebrush, or juniper woodlands.	yes	yes
soft blazingstar	Barren soils derived from volcanic ash near Wyoming big sagebrush communities.	yes	yes
Antelope Valley beardtongue	Clay soils derived from volcanic ash or lake bed sediment in sagebrush communities.	yes	yes
Owyhee phacelia	Soils derived from volcanic ash in upland areas within sparsely vegetated Wyoming big sagebrush or salt desert shrub communities.	yes	yes
Small phacelia	Moist soils in the understory of aspen and tall forb communities in meadows, especially snow bank areas.	yes	yes

\* Soils in this area are expected to be susceptible to trampling during the critical growing season when soils moisture content is high.

D. Alternatives were developed that concurrently met species goals. Therefore, there are no alternatives specific to species needs.

1. An alternative was developed to close Poison Creek allotment to sheep grazing and another alternative was developed to rest soils during the spring when soil moisture content is high 2 out of 3 consecutive years. These alternatives would either remove impacts from sheep trampling and/or allow Cusick's pincushion to recover from such impacts. On an average year, Cusick's pincushion germinates and flowers in April<sup>9</sup>; this is also when soils have high soil moisture content.
2. An alternative was developed that rested pasture 6 of Soda Creek allotment 2 out of 3 consecutive years during the active growing season for upland vegetation areas. This alternative would allow small phacelia to recover from livestock congregation impacts.
4. An alternative was developed to rest soils during the spring when soil moisture content is high 2 out of 3 consecutive years. This would allow barren milkvetch, Cusick's pincushion, Malheur cryptantha, false naked buckwheat, soft blazingstar, Antelope Valley beardtongue, Owyhee phacelia and small phacelia to recover from trampling and trailing impacts in allotments that have failed to

meet Rangeland Health Standards for soils due to current livestock grazing, with the exception of FFR allotments.

5. An alternative was developed to rest upland vegetation during the active growing season 2 out of 3 consecutive years. This would allow Idaho milkvetch, Antelope Valley beardtongue and small phacelia to recover from livestock grazing and trampling impacts in allotments that have failed upland vegetation rangeland health standards due to current livestock grazing, with the exception of FFR allotments. Corral FFR contains Idaho milkvetch; however applying an upland rest grazing regime would not have an effect on this species because degraded upland vegetation conditions are due to historic grazing rather than current grazing. It is expected that current grazing is allowing upland vegetation, and therefore Idaho milkvetch, to recover from grazing impacts.

Impacts

A. Data used

**Table SSPS-Z: Standards applicable to pastures with special status plants.**

Standard 8	Allotment - Pasture	Meeting (Y) or Not Meeting (N)		
		Standard 4	Standard 5	Standard 6
Y	<b>Elephant Butte - Pasture 2</b> Antelope Valley beardtongue	-	-	N*
Y	<b>Elephant Butte - Pasture 3</b> Idaho milkvetch Malheur cryptantha false naked buckwheat Cusick's pincushion soft blazingstar	-	-	Y
Y				
Y				
N				
N				
?	<b>Elephant Butte - Pasture 5</b> Cusick's pincushion	-	-	Y
Y	<b>Poison Creek</b> Idaho milkvetch Cusick's pincushion	-	Y	-
N*				
Y	<b>Rats Nest</b> Idaho milkvetch	N	-	-
Y	<b>Blackstock Springs - Pasture 1</b> barren milkvetch soft blazingstar Owyhee phacelia Snake River milkvetch	N	-	-
Y				
Y/N				
?				
?	<b>Soda Creek - Pasture 6</b> small phacelia	Y	-	-
?	<b>Corral FFR</b> Idaho milkvetch	N	-	-
?	<b>Chipmunk Field FFR</b> soft blazingstar	Y	-	-
? - current condition of species is unknown.				

1. **Alternative 1/Current condition** was used as the baseline for comparison of alternatives using the following categories – decline, decline or maintain, maintain, maintain or improve, improve. Table 3 documents standard calls by pasture and was used to determine the current condition (Alternative 1) of special status plants by pasture/allotment as described below:

- a. Not meeting Standards 4, 5, 6\*, and 8 = decline
  - Elephant Butte, pasture 3 - Cusick's pincushion, soft blazingstar
  - Blackstock Springs, pasture 1 – Owyhee phacelia
- b. Not meeting Standard 8 with livestock as the causal factor = decline
  - Poison Creek – Cusick's pincushion

- c. Meeting Standard 8 & not meeting Standards 4, 5, or 6\* = decline or maintain
  - Elephant Butte, pasture 2 – Antelope Valley beardtongue
  - Elephant Butte, pasture 3 – Idaho milkvetch, Malheur cryptantha, false naked buckwheat
  - Blackstock Springs, pasture 1 – barren valley milkvetch, soft blazingstar, Owyhee phacelia
  - Rats Nest – Idaho milkvetch
- d. Meeting Standards 4, 5, and 8 = maintain
  - Poison Creek – Idaho milkvetch
- e. Standard 8 unknown and meeting Standards 4 and 5 = maintain
  - Soda Creek, pasture 6 – small phacelia
  - Chipmunk FFR – soft blazingstar
- f. Standard 8 unknown and not meeting Standard 4, or Standard 6\* applies = maintain or decline
  - Elephant Butte, pasture 5 – Cusick’s pincushion
  - Corral FFR – Idaho milkvetch

\*the allotment only has to be managed under Standard 6, meeting or not meeting is irrelevant considering the inherent threat of non-native weed invasion in either scenario decreasing resiliency and inhibiting recovery of the surrounding vegetative community

2. Alternatives 2-6

**Table 4:**

Insufficient information/population condition unknown		
<i>Soda Creek</i>	small phacelia	Y (S4)
<i>Corral FFR</i>	Idaho milkvetch	N (S4)
<i>Chipmunk Field FFR</i>	soft blazingstar	Y (S4)
<i>Elephant Butte</i>	Cusicks P5	Y (S6)

Elephant Butte				
	Alt 1	Alt 2	Alt 3	Alt 4
Decline	Cusick, blazing	Cusick, blazing	Cusick, blazing	
Decline or Maintain	IDmilk, cryp, buckwh, antel	All plants	All plants	
Maintain				Cusick, blazing
Maintain or improve				All plants
improve				

Rats				
	Alt 1	Alt 2	Alt 3	Alt 4
Decline				
Decline or Maintain	IDmilk	IDmilk		
Maintain			Idmilk	
Maintain or improve				Idmilk
improve				

	<b>Poison</b>				
	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
Decline	Cusick				
Decline or Maintain		Cusick	Cusick		
Maintain	IDmilk	IDmilk	IDmilk	IDmilk	IDmilk
Maintain or improve				Cusick's	
improve					Cusick's

	<b>Blackstock springs</b>			
	Alt 1	Alt 2	Alt 3	Alt 4
Decline	Owyhee phacelia	Owyhee phacelia		
Decline or Maintain	Barren, soft, snake Owyhee	Barren, soft, snake Owyhee	Owyhee phacelia	
Maintain			Barren, soft, snake Owyhee	
Maintain or improve				all SSP
improve				

	<b>Soda</b>			
	Alt 1	Alt 2	Alt 3	Alt 4
Decline				
Decline or Maintain	small phacelia	small phacelia		
Maintain				
Maintain or improve			small phacelia	
improve				small phacelia

## B. Assumptions

1. Impacts were based on (1) specific mention of livestock impacts to species occurrences in EO records or OFO reports and (2) the susceptibility of preferred habitat to livestock impacts (Table 1).
2. The existing populations of each species were assumed to remain static for the life of the permit. There is insufficient information on recruitment and loss due to habitat degradation in order to reasonably foresee changes to the population for the life of the permit. Impacts were assumed to occur at the individual occurrence level.
3. The extensive literature review conducted for the affected environment section rarely identified impacts specifically from livestock on species. Therefore, it is assumed that species and their preferred habitat are not enhanced by disturbance from livestock herbivory, trailing, or trampling.
4. The palatability assumptions used for the alternatives section were used for the impacts analysis.
5. Alternatives that maintain or improve soil, vegetation, riparian, or wildlife habitat conditions inherently maintain or improve species habitat.
6. Numbers used in this analysis are approximate projections for comparison and analytical purposes only. Readers should not infer that they reflect exact measurements or precise calculations.
7. The timescale for impacts was based on (1) the life of the permit for direct impacts from the proposed action and (2) individual species specific duration (e.g., annual, perennial). The life of the permit was used for the timescale for the analysis area because though long-term impacts would occur beyond the life of the permit, the permit would be re-evaluated at the end of the life of the permit and it cannot be known if the management proposed in this EIS would be carried forward in the life of the next permit (this would not apply if a species occurrence EIS could become extirpated).

C. Cumulative Impacts Analysis Area

a. Watersheds were used to delineate the area of analysis because they would have a likelihood of containing populations that could genetically influence each other. Watershed boundaries are determined by hydrographic and topographic criteria that can be used to infer a high concentration of preferred habitat inclusions within the boundary.

*References*

1. IFWIS EOs
2. ORBIC EOs
3. IFWIS PCD
4. BLM surveys
5. HUC
6. allotments/pastures
7. Mansfield 2010
8. Atwood 2001
9. Moseley 1994
10. efloras
11. naturereserve
12. Smithman 1989
13. NAIP
14. CPC

NAIP<sup>13</sup> - Group 2 Allotment NAIP Review Methods

October 18, 2012 - Group 2 EIS - NAIP review of allotments
<b>Methods</b>
1. Zoom to allotment.
2. If more than 1 pasture; zoom into each pasture.
3. Visually review each pasture for botanical survey areas and plant occurrences. If they are close to a fenceline review 2009 and 2011 NAIP to see if sites are within pasture.
4. Identify landowner/manager and basic habitat/topography.
4. Adjacent lands are within 0.25 miles of fenceline.
<b>Summary of findings</b>
Identified some pastures with incorrect polygons, however none are an issue.
Allotments identified as having occurrences on BLM within: Elephant (pastures 2, 3, & 5), Poison, Rats Nest, Blackstock Springs (pasture 1), Chipmunk, Corral (pastures 1 & 2), Soda (pasture 3)
Allotments identified as having occurrences on BLM adjacent: Alkali-wildcat, Elephant (pastures 1, 3, & 5), Poison, Rats Nest, Blackstock Springs (pasture 1), Chipmunk, Corral (pastures 1 & 2), Burgess FFR (pasture 1)
Allotments identified as having occurrences on non-BLM within: Elephant (pastures 1 & 2), Chipmunk, Corral (pastures 1 & 2), Jackson (state, pasture 5), Burgess FFR (pasture 1)
Allotments identified as having occurrences on non-BLM adjacent: Elephant (pastures 1 & 5), Chipmunk, Corral (pastures 1 & 2), Jackson (private & state, pasture 5), Soda (state, pasture 3)
Identified one new species not mentioned previously <i>Cymopterus acaulis</i> var. <i>greeleyorum</i> adjacent to Blackstock Springs pasture 1; it is located within McBride Creek ACEC

# Owyhee Field Office

## Addendum to: Group 2 Special Status Plants Specialist Report

Prepared by:

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August 2013



## **Addendum to: ASSESSMENT & EVALUATION**

### **Group 2 – Special Status Plants Specialist Report**

This addendum incorporates new information on small phacelia (*Phacelia minutissima*) which overrides the current condition as described in the Group 2 Special Status Plants Specialist Report from December 2012.

#### **Species Descriptions**

##### **Small phacelia (*Phacelia minutissima*)**

This species occurs from central Washington, northeastern Oregon, and southern Idaho. There are 21 known occurrences within Idaho, 19 of which occur in Owyhee County. This species occurs on moist soils, in the understory of aspen and tall forb communities in meadows, especially snow bank areas (Atwood 2001). Phenology for identification is generally from April through July/August. Impacts to this species within the Soda Creek allotment, as reported in 1996, are livestock grazing and OHV use. A more recent site report from July 2013 has become available which identified no signs of grazing, insignificant trampling on the habitat microsite, and no OHV sign or mining activity. Although the threats of livestock, mining, or OHV are not anticipated they remain a potential future concern.

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#### **Allotment Name**

Soda Creek

#### **Assessment Summary**

The 2004 draft assessment identified the habitat of the known occurrence of small phacelia in pasture 3 (amended to pasture 6 as of January 2013) to be in fair condition due to non-native invasive species (USDI BLM 2004).

#### **Current Assessment Summary**

Small phacelia is the only known special status species in this allotment. This annual species was initially located in 1996 and has not been revisited since. It occurs in seasonally wet areas in the cover of a tall forb meadow community. At the time of the 1996 site visit, the area was heavily grazed by livestock and there were fresh OHV tracks with the former being the most widespread. There was also a potential threat of silver mining in the area. Phenology of the approximate 100 species at the time was good, with 95 percent in fruit and 5 percent in flower.

A more recent site report from July 2013 (See Project Record) has become available which identified no signs of grazing and insignificant trampling on the habitat microsite. The current condition of the plant community was reported to be intact with low to moderate levels of alterations from reference condition. No OHV sign was seen. Mines are within the vicinity but

not at this occurrence and no mine disturbance is anticipated. The cursory inventory noted good vigor with all plants observed in fruit.

### **Evaluation of Standard**

Evaluation Finding – Allotment is:

X Meeting the Standard

\_ Not meeting the Standard, but making significant progress towards meeting

\_ Not meeting the Standard

\_ Standard doesn't apply

### **Rationale for Evaluation Findings**

Soda Creek pasture 6 is meeting Standard 8 and associated ORMP objectives. Most recent data on small phacelia identifies a relatively intact vegetation community with minimal livestock activity in the habitat microsite.

Although no scientific studies confirm that annual phacelias need some minimal level of disturbance to stir up the seed bank, expose seeds to light, and encourage reproduction it is a general assumption based on conventional wisdom (Dr. Meinke, personal communication July 30, 2013). Several species reviews ([https://fishandgame.idaho.gov/ifwis/idnhp/cdc\\_pdf/u02mur03.pdf](https://fishandgame.idaho.gov/ifwis/idnhp/cdc_pdf/u02mur03.pdf), [http://www.blm.gov/ca/pdfs/cdd\\_pdfs/charlottes1.PDF](http://www.blm.gov/ca/pdfs/cdd_pdfs/charlottes1.PDF), <http://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=PDHYDOC1J0>, [http://fieldguide.mt.gov/detail\\_PDHYDOC270.aspx](http://fieldguide.mt.gov/detail_PDHYDOC270.aspx), <http://www.fs.fed.us/r2/projects/scp/assessments/phaceliascopulinavarsubmutica.pdf>, [http://nrmrareplants.unm.edu/rarelist\\_single.php?SpeciesID=144](http://nrmrareplants.unm.edu/rarelist_single.php?SpeciesID=144), <http://www.npsnm.org/2012/09/15/the-cloudcroft-phacelia-an-update>) describe a low level disturbance for phacelias with association to an individual species substrate, geographic position, or climatic conditions. These disturbances may play a role in habitat creation and maintenance, but those possibilities have not yet been demonstrated. A disturbance like grazing was generally not considered a positive influence. For this particular species, disturbance may play a role in habitat creation and maintenance. Based on this species habitat position of residual spring snow fields, frost heaving may be the most beneficial disturbance in maintaining open microsites. Although livestock have access to this occurrence, disturbance from livestock was noted to be fairly insignificant.

### **Determination**

The only known species occurring in the Soda Creek allotment is small phacelia. The single population occurs within pasture 6 and was last reported in 2013 as being maintained with good reproduction of those plants that were present and an intact surrounding vegetation community.

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