

Recovery Plan for Osterhout Milkvetch (*Astragalus osterhoutii*) and Penland beardtongue (*Penstemon penlandii*) https://ecos.fws.gov/docs/recovery_plan/920930c.pdf

Original Recovery Plan Approved: September 30, 1992

RECOVERY CRITERIA CLARIFICATION

We have identified best available information that indicates the need to clarify the existing recovery criteria for the Osterhout milkvetch (*Astragalus osterhoutii*) and Penland beardtongue (*Penstemon penlandii*) since the recovery plan was completed. We are clarifying the recovery criteria because the current recovery criteria, as written, are not measurable, objective, or quantifiable. The proposed clarification will supplement the recovery criteria on page 6 of the original recovery plan.

**For U.S. Fish and Wildlife Service
Mountain Prairie Region
Lakewood, Colorado**

May 2019

Approved: _____


Regional Director,
U.S. Fish and Wildlife Service
Interior Regions 5 & 7

Date: 2-5-2020

ADEQUACY OF RECOVERY CRITERIA

Section 4 (f)(1)(B)(ii) of the Endangered Species Act (Act) requires that each recovery plan shall incorporate, to the maximum extent practicable, "objective, measurable criteria which, when met, would result in a determination... that the species be removed from the list." Legal challenges to recovery plans (see *Fund for Animals v. Babbitt*, 903 F. Supp. 96 (D.D.C. 1995)) and a Government Accountability Audit (GAO 2006) also have affirmed the need to frame recovery criteria in terms of threats assessed under the five factors.

BACKGROUND INFORMATION and BASELINE DESCRIPTION

Osterhout milkvetch is a member of the pea family (Fabaceae), it is a tall rush like plant with linear leaflets and several bright green stems up to 100 centimeters (cm) (40 inches (in)) tall. Osterhout milkvetch occurs in scattered colonies over a fifteen mile range from three miles east of Troublesome Creek to a few miles west of Muddy Creek in Middle Park, Colorado. The majority of individuals can be found on Federal lands administered by the Bureau of Land Management (BLM), with some colonies on private lands. There are 6 principal occurrences documented in the Colorado Natural Heritage Program database; one of which has not been observed in over 20 years (NatureServe 2018a). An estimated total number of individuals from five of the six occurrences is 10,385 (NatureServe 2018a). The sixth occurrence does not report

the number of individuals, but does report the species as "locally abundant" (NatureServe 2018a).

The BLM conducted a range-wide trend analysis from 2011-2017, though individual plot data stretch back as far as 2005 at several study sites. Between 2011 and 2017 an overall decrease in landscape level population density was observed; however this decrease was not found to be statistically significant ($p=0.36$) (BLM 2017). Despite this decline the results indicate that Osterhout milkvetch is stable at the landscape level (BLM 2017).

Penland beardtongue is a member of the snapdragon family (Scrophulariaceae), it is a short perennial herb with linear leaves, clumped pubescent stems up to 25 cm (10 in) tall, 5-15 bright colored flowers with blue lobes and a violet throat. Penland beardtongue is known only to occur along Troublesome Creek in Middle Park, Colorado; its estimated range is 5 square miles (NatureServe 2018b); with an estimated number of 46,460 rosettes in 2017 (inside BLM monitoring plots). Estimate from Ecotone 2010 surveys are approximately 1.4 million individuals (NatureServe 2018).

The BLM conducted a range-wide analysis, extending back to 2012, that shows a stable population trend in mean rosette density across the established monitoring plots ($p=0.08$), with little, if any, change occurring since 2012 (BLM 2017).

RATIONALE FOR THE RECOVERY CRITERIA CLARIFICATION

We coordinated with the BLM to update these recovery criteria. The first and second recovery criteria from the original recovery plan were combined into one recovery criterion for simplicity. The third recovery criterion from the original recovery plan states: "Factors required to establish and maintain minimum viable populations of each species are identified and minimum viable populations are documented as being maintained" (Service 1992, p. 6). However, the original recovery plan does not clarify how, when, or what monitoring protocols or methodologies should be used to establish the minimum viable population size for each of the species. Thus, we are clarifying the population-based criterion so that it aligns with monitoring protocols that the BLM established for Osterhout milkvetch and Penland beardtongue. Since the original recovery plan was signed, the BLM designed and implemented demographic monitoring studies for both Osterhout milkvetch and Penland beardtongue to help evaluate population trends. The key goals of the BLM's monitoring protocols are to (1) understand the status and trend of listed plant populations range-wide; (2) identify important life history and demographic characteristics including: recruitment rates, phenological traits, and population fecundity; and (3) identify the response of listed species to various and differing management actions, disturbances, and environmental conditions.

RECOVERY CRITERIA

Recovery criteria serve as objective, measurable guidelines to assist in determining when an endangered species has recovered to the point that it may be downlisted to threatened or that the protections afforded by the Act are no longer necessary and Osterhout milkvetch and Penland beardtongue may be delisted. Delisting is the removal of a species from the Federal Lists of Endangered and Threatened Wildlife and Plants. Downlisting is the reclassification of a species from endangered to threatened. The term "endangered species" means any species (species, subspecies, or distinct population segment) that is in danger of extinction throughout all or a significant portion of its range. The term "threatened species" means any species which is likely to become an endangered species within the foreseeable future throughout all of a significant portion of its range.

We provide delisting criteria for Osterhout milkvetch and Penland beardtongue which will clarify those included in the recovery plan, as follows:

Current Recovery Criteria (from the original recovery plan)

1. Land management designations are established and habitat management programs are developed and implemented for all known populations of Osterhout milkvetch and Penland beardtongue.
2. Both species are protected from detrimental environmental impacts through fulfillment of informal and formal consultation responsibilities under Section 7 and protection regulations under Section 9 of the Endangered Species Act.
3. Factors required to establish and maintain minimum viable populations of each species are identified and minimum viable populations are documented as being maintained.

CLARIFIED RECOVERY CRITERIA

Population Based Recovery Criteria

P-1. Overall population trends for Osterhout milkvetch and Penland beardtongue must be stable or increasing across the current range of each species (as described above) according to the following measures and not reduced from the baseline (see description of baseline above):

- a) Range-wide populations trends (measured using density (plants/m²)) must be stable or increasing over a 10-year period as determined by the Bureau of Land Management's monitoring methodology (BLM 2017); and
- b) Range-wide population trends (measured using density (plants/m²)) must maintain at least 90 percent confidence that Osterhout milkvetch and Penland beardtongue density estimates are within 10 percent of their estimated true value (BLM 2017).

Data collected in years preceding this clarification can be used to measure this criterion.

Threats and Management Based Criteria

T-1. Land protection covering the habitat of all populations for Osterhout milkvetch and Penland beardtongue and/or statutory and regulatory protections for plants are such that the protections of the Act are no longer needed to compensate for regulatory inadequacies. Current Federal land protection through resource management plans, conservation agreements, recreation management plans, and/or travel management plans must be maintained for all Osterhout milkvetch and Penland beardtongue populations that occur on Federal lands.

LITERATURE CITED

Bureau of Land Management (BLM). 2017. Threatened and Endangered Plant Monitoring Summary. pp. 8-55.

NatureServe 2018a. NatureServe Explorer: An online encyclopedia of *life-Astragalus osterhoutii* [web application] . Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: November 29, 2018).

NatureServe 2018b. NatureServe Explorer: An online encyclopedia of *life-Penstemon penlandii* [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: November 29, 2018).

U.S. Fish and Wildlife Service (Service). 1992. Recovery Plan for Osterhout Milkvetch (*Astragalus osterhoutii*) and Penland beardtongue (*Penstemon penlandii*). https://ecos.fws.gov/docs/recovery_plan/920930c.pdf.