

## **5-YEAR STATUS REVIEW**

### **Mosquito Range Mustard (*Eutrema penlandii*)**

#### **GENERAL INFORMATION:**

**Species:** Mosquito Range Mustard (*Eutrema penlandii*)

**Date listed:** August 12, 1993

**FR citation(s):** 58 FR 40539; July 28, 1993

**Classification:** Threatened

#### **BACKGROUND:**

**Most recent status review:** January 31, 2018. U.S. Fish and Wildlife Service. Mosquito Range mustard (*Eutrema penlandii*) 5-year review. U.S. Fish and Wildlife Service, Grand Junction, Colorado. 2 pp.

**FR Notice citation announcing this status review:** 87 FR 48037, Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status Reviews of Five Listed species in the Mountain-Prairie Region, August 5, 2022.

#### **ASSESSMENT:**

##### **Information acquired since the last status review:**

This 5-year review was conducted by the U.S. Fish and Wildlife Service's (Service) Colorado Ecological Services Field Office. Data for this review were solicited from interested parties through a Federal Register notice announcing this review on August 5, 2022. The Service also contacted federal agencies and species experts to request any data or information we should consider in our review. Additionally, we conducted a literature search and a review of information in our files.

Since the last 5-year review, the Service has completed a biological report for the Mosquito Range mustard (Service 2019) which summarizes its life history, ecology, and threats to the species. It also summarizes the Mosquito Range mustard (mustard) biological status based on an assessment of the habitat and demographic resources and conditions that the species needs to maintain viability, currently and into the future. In the biological report, we considered what the mustard needs to maintain viability, or its ability to survive in the wild, by characterizing the current condition of the species in terms of its resiliency, redundancy, and representation.

The Service also completed a recovery plan (Service 2022), which focuses on site-specific management actions as may be necessary to achieve the conservation and survival of the mustard. It establishes objective, measurable criteria which, when met, would result in a determination, that the species be removed from the endangered species list and estimates of the time required and the cost to carry out those measures needed to achieve recovery and to achieve intermediate steps toward that goal.

We received additional survey and monitoring reports from the Bureau of Land Management, Colorado State Office (BLM 2022). The results indicate that the species is still present at the five study sites: Cameron Amphitheater, Hoosier Ridge, Mt. Sherman, Mosquito Pass, and Weston Pass. The Mt. Sherman site has replaced the Horseshoe Cirque site, which presented challenges for completing statistical analysis since monitoring began. The mustard has significant variability in abundance from year to year, but across all years monitored (which ranges from 7 to 11 years depending upon the site) each site appeared stable with population growth rates greater than 1. The number of individuals encountered at the five survey sites also indicate that the current range wide estimate listed in the recovery plan, which represents the number of individuals among the 26 known populations, is low and likely underestimates the true number of individuals.

The new information compiled from the biological report, recovery plan, and annual monitoring reports have not changed the condition of the species or its threats. No new populations or threats were discovered, and no range expansion documented since the last 5-year review.

### **Conclusion:**

After reviewing the best available scientific information, we conclude that the Mosquito Range mustard remains a threatened species. The evaluation of threats affecting the species under the factors in 4(a)(1) of the Act and analysis of the status of the species in our January 31, 2018, 5-year review (Service 2018), remains an accurate reflection of the species current status.

### **Literature Cited:**

- Bureau of Land Management (BLM). 2022. Mosquito Range mustard (*Eutrema penlandii*) population trend monitoring summary – 2022. Bureau of Land Management. Colorado State Office. Lakewood, Colorado. 11 pages.
- U.S. Fish and Wildlife Service (Service). 2018. Mosquito Range mustard (*Eutrema penlandii*) 5-year review. U.S. Fish and Wildlife Service, Grand Junction, Colorado. 2 pp.
- U.S. Fish and Wildlife Service (Service). 2019. Species Biological Report for Mosquito Range mustard (*Eutrema penlandii*). U.S. Fish and Wildlife Service. Colorado Ecological Services Field Grand Junction. Denver, Colorado. 46 pages.
- U.S. Fish and Wildlife Service (Service). 2022. Recovery plan for the Mosquito Range mustard (*Eutrema penlandii*). U.S. Fish and Wildlife Service, Mountain-Prairie Region. Denver, Colorado. 23 pages.

**RECOMMENDATIONS FOR FUTURE ACTIONS:**

- Protect and conserve all known, extant Mosquito Range mustard populations and their habitat.
- Increase monitoring of the 11 recovery populations to determine if they are stable or improving. Apply conservation measures, if needed.
- Survey suitable habitat for additional populations.
- Make recommendations for additional species protections on federally managed lands as land use management plans or other documents are initiated or updated.

**Lead Field Supervisor, Fish and Wildlife Service**

Approve \_\_\_\_\_ Date 07/10/2023