DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2020–0017; FF08E00000 FXES11110800000 212]

RIN 1018–BF94

Endangered and Threatened Wildlife and Plants; Finding on a Petition to List the Tiehm's Buckwheat as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list Tiehm's buckwheat *(Eriogonum tiehmii)* as an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). The Service has determined, after a review of the best available scientific and commercial information, that the petitioned action to list Tiehm's buckwheat, a plant species native to Nevada in the United States, is warranted. The Service, therefore, will promptly publish a proposed rule to list Tiehm's buckwheat under the Act.

DATES: The finding in this document was made on [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

FOR FURTHER INFORMATION CONTACT: Marc Jackson, Reno Ecological Services Field Office, 1340 Financial Boulevard, Suite 234, Reno, NV 89502; telephone 775–861–6337. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Relay Service at 800–877–8339.

Availability of supporting materials: Our Species Status Assessment for Tiehm's buckwheat is available at *https://www.fws.gov/reno/content/endangered-species*, and at *http://www.regulations.gov* under Docket No. FWS–R8–ES–2020–0017.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 et seq.), requires that, within 12 months of receipt of a petition to add a species to, or remove a species from, the Lists of Endangered and Threatened Wildlife and Plants, a finding be made as to whether the requested action is: (a) not warranted, (b) warranted, or (c) warranted, but precluded by other listing activity. If the action is found to be warranted, section 4(b)(3)(B)(ii) requires a prompt publication in the *Federal Register* of a general notice and the complete text of a proposed regulation to implement such action.

On October 7, 2019, we received a petition from the Center for Biological Diversity (CBD; CBD 2019, entire) requesting that Tiehm's buckwheat be listed as threatened or endangered, that critical habitat be concurrently designated for this species under the Act, and that the petition be considered on an emergency basis. The Act does not provide for a process to petition for emergency listing; therefore, we evaluated the petition to determine if it presented substantial scientific or commercial information indicating that the petitioned action may be warranted. The Service published a 90-day finding on July 22, 2020 (85 FR 44265), stating that the petition presented substantial scientific or commercial information indicating that listing Tiehm's buckwheat may be warranted.

On September 29, 2020, CBD filed a complaint in the U.S. District Court for the District of Nevada against the Service alleging violations under the Administrative Procedure Act (5 U.S.C. 551 et seq.); CBD amended the complaint on October 8, 2020, to include a claim under the Endangered Species Act that the Service had missed the 1-year deadline of October 7, 2020, for issuing a 12-month finding for Tiehm's buckwheat. On April 21, 2021, the court issued a decision, and, in response to a stipulated request for a revised remedy order, on May 17, 2021, the court amended the decision and ordered the Service to deliver a 12-month finding on

Tiehm's buckwheat to the *Federal Register* by May 31, 2021. The Service now announces a 12-month finding on the October 7, 2019, petition to list Tiehm's buckwheat.

Species Description and Habitat

Tiehm's buckwheat was first discovered in 1983 and described in 1985. All available taxonomic and genetic research information indicates that Tiehm's buckwheat is a valid and recognizable taxon and represents a distinct species. Tiehm's buckwheat is a low-growing perennial herb, with blueish gray leaves and pale, yellow flowers that bloom from May to June and turn red with age. Seeds ripen in late-June through mid-July. Tiehm's buckwheat is a narrow-ranging endemic known only from one population, comprising eight subpopulations, in the Rhyolite Ridge area of Silver Peak Range in Esmeralda County, Nevada. The single population of Tiehm's buckwheat is restricted to approximately 10 acres (4 hectares) across a 3-square-mile area, located entirely on public lands administered by the Bureau of Land Management (BLM). The subpopulations are separated by a rural county unpaved road where subpopulations 1, 2, and 8 occur north of the road, and subpopulations 3, 4, 5, 6, and 7 occur south of the road. A 2019 survey estimated that the total Tiehm's buckwheat population is 43,921 individual plants. Surveys have not detected additional populations of Tiehm's buckwheat.

Tiehm's buckwheat is a soil specialist specifically adapted to grow on its preferred soil type. The species is restricted to dry, open, relatively barren slopes with light-colored rocky clay soils derived from an uncommon formation of interbedded claystones, shales, tuffaceous sandstones, and limestones. Vegetation varies from pure stands of Tiehm's buckwheat to sparse associations with a few other low-growing herbs and grass species. The abundance and diversity of arthropods (insects, mites, and spiders) observed in Tiehm's buckwheat subpopulations is especially high (1,898 specimens from 12 orders, 70 families, and 129 species were found in 2020) for a plant community dominated by a single plant species. Primary pollinator visitors to

Tiehm's buckwheat include wasps, beetles, and flies. Tiehm's buckwheat benefits from pollinator services and needs pollination to increase seed production.

Threats

The naturally occurring Tiehm's buckwheat population (represented by one population with eight subpopulations) and a seedling transplant experiment suffered detrimental herbivory in 2020. All of the naturally occurring subpopulations experienced greater than 50 percent damage or loss of individual plants, while almost all transplants were lost to rodent herbivores in a 2-week period. An environmental DNA analysis (*i.e.,* trace DNA found in soil, water, food items, or other substrates with which an organism has interacted) conducted on damaged Tiehm's buckwheat roots, nearby soils, and rodent scat strongly linked small mammal herbivory to the widespread damage and loss of the naturally occurring Tiehm's buckwheat population. This was the first time herbivory was documented on the species, although, prior to 2019, surveys of the population were infrequent. The significance of herbivory in the naturally occurring population depends not only on its frequency and intensity, but whether damaged plants can recover and survive, as we are uncertain if the species will be able to recover from this damage and loss. Rodent herbivore pressure precluded seedling survival in experimental plots. Further studies and monitoring need to be conducted to determine if management to reduce rodent herbivory is necessary to maintain Tiehm's buckwheat individuals and subpopulations, or if it was just a random catastrophic event that is not likely to occur on a regular basis.

The specialized soils on which Tiehm's buckwheat occurs are high in lithium and boron, making this location of high interest for mineral development. In May 2020, Ioneer USA Corporation (Ioneer) submitted a plan of operations to BLM for the proposed Rhyolite Ridge Lithium-Boron project. The proposed project is awaiting BLM permitting and approval for mineral development in the areas where the Tiehm's buckwheat population occurs. Ioneer's proposed Rhyolite Ridge Lithium-Boron project, if permitted by BLM, would result in the loss

of habitat and subpopulations 4, 5, 6, and 7, even with the voluntary protection measures included in Ioneer's s project proposal. The potential impact from the proposed project, combined with the loss resulting from the recent herbivory event, would reduce the total Tiehm's buckwheat population by 70 to 88 percent, or from 43,921 individuals to roughly 5,289–8,696 individuals. The number of individuals estimated to survive is a range because we do not know yet if the plants damaged from herbivory will be able to recover and survive. The low end of this range is based on permanent loss of damaged plants, while the high end represents conditions if all the herbivore-damaged plants recover. Dust deposition, generated from increased vehicle traffic associated with mine operations, may also negatively affect the overall health and physiological processes of the subpopulations remaining (1, 2, 3, and 8) after full implementation of the project.

Ioneer is proposing to salvage all remaining plants in subpopulations 4, 5, 6, and 7 by transplanting them to another location. However, we are uncertain whether the salvage operation will succeed because current research indicates that Tiehm's buckwheat is a soil specialist, that adjacent unoccupied sites are not suitable for all early life-history stages, and there has been no testing and multiyear monitoring on the feasibility of successfully transplanting the species. The impact to Tiehm's buckwheat from mining, salvage operations, or both would be permanent and irreversible under the proposed project because the plants and the land on which they are currently growing, including any existing seed bank in the soil, would be completely removed, and in place of that site there would be a terminal quarry lake. The terminal quarry lake would develop when the mining operation ceased pumping out the anticipated groundwater that would infiltrate the quarry. Elimination of these subpopulations may remove corridors for pollinator movement, seed dispersal, and population expansion. There is strong evidence that subpopulation 6 is the most resilient of the eight Tiehm's buckwheat subpopulations. This subpopulation contains multiple life stages of individual plants, including the majority of older and larger plants across all populations. In addition, subpopulation 6 has the most variety in size

classes of individual plants, indicating it is likely experiencing the most recruitment. Loss of subpopulation 6, in particular, may have an immense impact on the overall resiliency and continued viability of the entire Tiehm's buckwheat population.

In addition to the direct impacts from the physical removal of subpopulations as a result of the project, road development and vehicle traffic associated with the proposed mine, as well as livestock grazing which currently occurs within the Tiehm's buckwheat population as part of the BLM's Silver Peak allotment, may create conditions that further favor the establishment of nonnative invasive species within Tiehm's buckwheat habitat. Mineral exploration has already impacted Tiehm's buckwheat habitat by contributing to the spread of saltlover (*Halogeton glomeratus*), a nonnative invasive plant species, within all subpopulations of the species. Mineral exploration activities can result in disturbance to natural soil conditions that support Tiehm's buckwheat and encourage spread of saltlover, which alters the substrate by making the soil more saline and less suitable as habitat for Tiehm's buckwheat. Mineral exploration vehicles also can carry the seeds of nonnative invasive plant species into the area. Road improvements also allow easier and greater access for recreational vehicles and off-highway vehicles (OHVs), with OHV impacts documented in subpopulation 1. Both livestock grazing and OHV use can kill or damage individual plants and modify Tiehm's buckwheat habitat through fragmentation and soil compaction.

In addition, Tiehm's buckwheat is adapted to dry upland sites, subject only to occasional saturation by rain and snow. Under climate change predictions, we anticipate alteration of precipitation and temperature patterns, as models forecast warmer temperatures and slight increases in precipitation. The timing and type of precipitation received (snow vs. rain) may impact plant transpiration and the soil water recharge needed by Tiehm's buckwheat. Additionally, variability in interannual precipitation combined with increasing temperatures, as recently seen from 2015 through 2020, may make conditions less suitable for Tiehm's buckwheat by bolstering local rodent populations. High rodent abundance combined with high

temperatures and drought may have contributed to the large herbivore impacts in 2020 in both the transplant experiment and native population. Thus, climate change may exacerbate impacts from other threats currently affecting this species and its habitat.

Tiehm's buckwheat does not currently receive regulatory protection from the State of Nevada. BLM has designated Tiehm's buckwheat as a sensitive species. However, BLM's regulations require operators to avoid adverse effects only to species listed as threatened or endangered under the Act and their habitat (43 CFR 3809.420(b)(7)), not sensitive species. Also, under BLM's regulations operators may explore, place mining claim monuments, and cause a surface disturbance of up to 5 acres after an operator gives notice to BLM and waits 15 days (43 CFR 3809.21(a)). BLM lacks discretion to require conservation measures for sensitive species as a condition for exploring for or developing minerals subject to disposal under the Mining Law of 1872, as amended (30 U.S.C. 22–54). In some circumstances, operators may include voluntary commitments to undertake protection or conservation measures as part of their proposed mining operations, as Ioneer has done in its proposed mine plan.

Finding

Based upon the preceding information, the totality of threats described above, and other information contained in the Tiehm's buckwheat Species Status Assessment (SSA), the Service has determined that the petitioned action to list Tiehm's buckwheat under the Endangered Species Act of 1973, as amended, is warranted. The Service, therefore, will promptly publish a proposed rule to list Tiehm's buckwheat. We will open a public comment period at the time of publication of the proposed rule. Any information received from the public prior to the publication of the proposed rule will be considered and addressed when we address comments received on the proposed rule.

Author

This document was prepared by the U.S. Fish and Wildlife Service, Reno Fish and Wildlife Office, 1340 Financial Blvd. Suite 234, Reno, NV 89521 and the U.S. Fish and Wildlife Service, Regional Office, 2800 Cottage Way, Sacramento, CA 95825.

Authority

The authority for this action is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Martha Williams,
Principal Deputy Director,
Exercising the Delegated Authority of the Director,
U.S. Fish and Wildlife Service.

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