



Conserving Tiehm's
buckwheat
(*Eriogonum tiehmii*)

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Principles of Conservation

- Protection of species in their **natural habitat** is central
- Global Strategy for Plant Conservation
 - Employ *in situ* conservation measures as the **primary** approach for conservation (2010)
- Center for Plant Conservation (2019)
 - CPC does not support or promote reintroduction as an alternative to *in situ* ecosystem protection. *All those working in plant conservation firmly agree that the priority is to conserve species in situ and to preserve wild populations in natural habitats in as many locations as possible. Reintroduction is never the first action to take for a critically endangered species, even when crisis is imminent.*



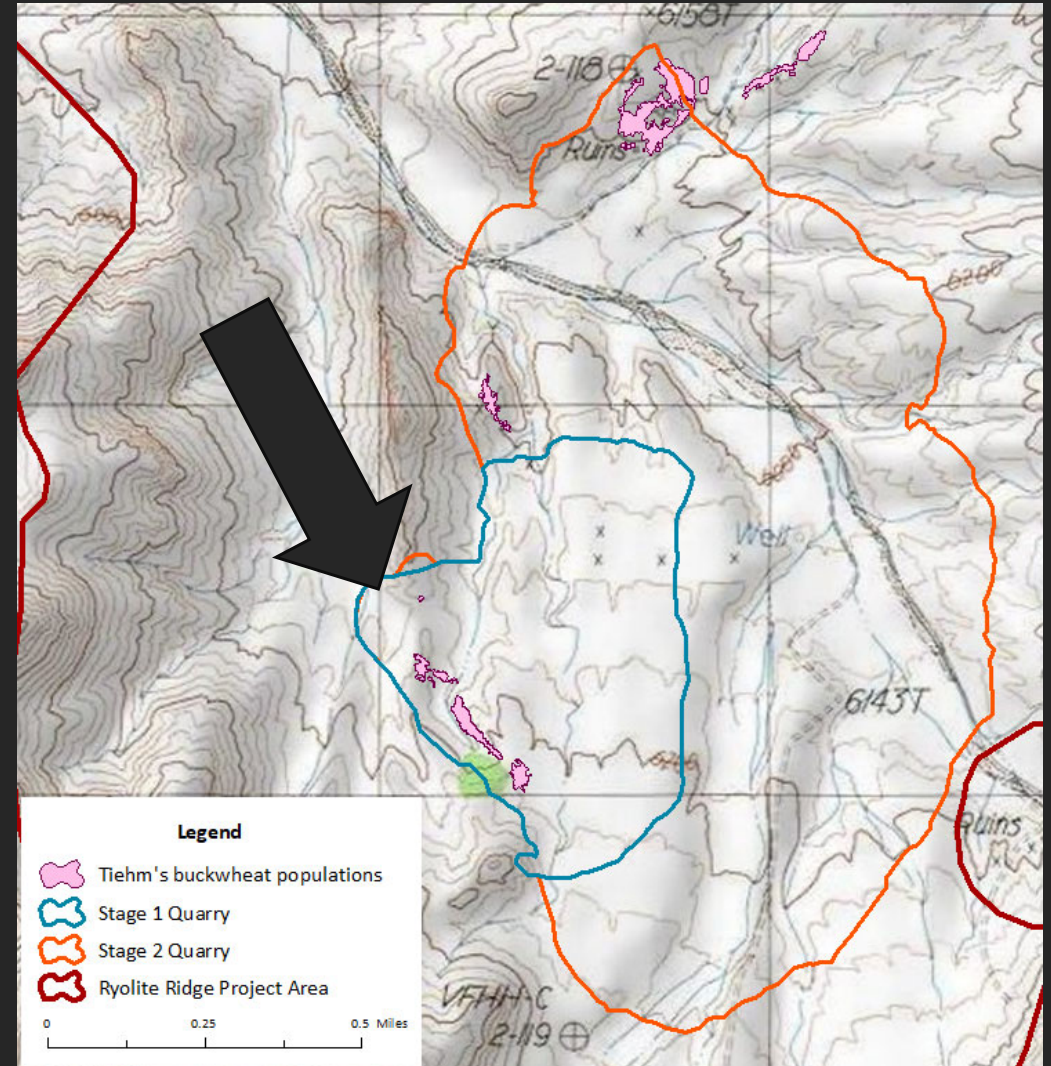
Conservation Considerations for Rare Plants

- Population size and risk of local extinction
 - Population size ↓
 - Extinction risk ↑
- Habitat fragmentation and reduction of gene flow
 - Impact pollinator movement
 - Dispersal of seed and pollen
 - Colonization of plants into new areas



Threats to Tiehm's buckwheat

- **Rhyolite Ridge Project**
- Based on 2019 surveys, first stage would impact **65% of plants** and 30% of the habitat.
 - (>28,000/44,000, or 5/8 subpopulations)
- Invasive species
- Off highway vehicle use
- Cattle grazing



“Buckwheat Protection Plan”

- Mitigation plan
- Page one under **Goals**
 - “Avoidance, Protection, and Awareness and Education”.
 - Cannot be effectively met if 65% of the existing plants are extirpated.
- Mitigation strategies include:
 - Out-planting
 - Seeding
 - Salvage



“Buckwheat Protection Plan”

- Commissioned research is valuable but largely does not address threats
 - Translocation studies
 - Reproduction
 - Genetic diversity
 - Field surveys
 - Genetic Analysis
 - Monitoring
- No research proposed
 - Impacts from invasive species



Protecting Tiehm's Buckwheat

- Recommendations
 - Formal legal protection
 - Withdrawal of mineral rights
 - Continue monitoring
 - population trends
 - assess impacts from habitat disturbance
 - Invasive species management
 - Evaluate published results from research



Value of Biodiversity

- Tiehm's buckwheat is an irreplaceable component of Nevada's remarkable and biodiversity
- We cannot fully comprehend what we can lose in a few short years of mining.
- The state of Nevada has the opportunity to protect its endemic diversity

