

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: (<i>Eriogonum coloradense</i> /buckwheat)			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	A	<p>This taxon is narrowly endemic to the mountains of Central Colorado, and is known from the following counties: Chaffee, Gunnison, Park, Pitkin, and Saguache. The majority of known occurrences (17 of the 24) have been documented in the mountains of the Maroon Bells/Snowmass Wilderness in Gunnison and Pitkin counties.</p> <p>Status: G5; CO SNR Confidence in Rank High</p>	<ul style="list-style-type: none"> Anderson 2004 Handwerk pers. comm. 2013
2 Distribution outside R2	A	<p>No occurrences have been documented outside Region 2.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> Anderson 2004
3 Dispersal Capability	B	<p>The seeds of <i>Eriogonum</i> species are dispersed by wind, rain, streams, and animals (Stokes 1936). Due to their high oil content, the seeds float and are readily moved by flowing water and sheeting of water during heavy rains. Stokes (1936) also cites birds and vehicles as likely dispersal vectors, particularly for annual species of <i>Eriogonum</i>.</p> <p>Another mechanism of seed dispersal for <i>Eriogonum coloradense</i> may be ants, which have often been observed on plants. Ants often carry seeds underground where they are provided a place for germination (Reveal pers. comm. 2002).</p> <p>Confidence in Rank High or Medium or Low</p>	<ul style="list-style-type: none"> Anderson 2004 Stokes 1936 Reveal pers. Comm. 2002
4 Abundance in R2	B	<p>The estimated population size for <i>E. coloradense</i> is 4,700 to 5,000 individuals.</p> <p>Confidence in Rank High or Medium or Low</p>	<ul style="list-style-type: none"> Anderson 2004 Handwerk pers. comm. 2013
5 Population Trend in R2	D	<p>No trend established. Further studies are needed to establish population trends for <i>E. coloradense</i>.</p> <p>Confidence in Rank High or Medium or Low</p>	<ul style="list-style-type: none"> Anderson 2004

Comment [pmm1]: May be error? Natureserve identifies as G2 S2.

ATTACHMENT SS2

Species: (<i>Eriogonum coloradense</i> /buckwheat)			
Criteria	Rank	Rationale	Literature Citations
6 Habitat Trend in R2	C	<i>Eriogonum coloradense</i> is somewhat vulnerable to habitat alteration, since some occurrences are in areas that potentially receive either heavy recreational use or livestock grazing. Alpine habitats in particular have the potential for negative impacts from human activities, but Johnston (personal communication 2002) states that occurrences he has seen are not typically in the sorts of habitat toward which hikers tend to gravitate. Revisits to the low elevation occurrences are needed to assess impacts from land uses. Confidence in Rank High	<ul style="list-style-type: none"> Anderson 2004
7 Habitat Vulnerability or Modification	C	In order of decreasing priority the existing threats to <i>E. coloradense</i> are recreation impacts, grazing and its secondary effects, right-of-way management, residential development and human population growth, exotic species invasion, effects of small population size, mining, rust, global climate change, and pollution. Confidence in Rank High	<ul style="list-style-type: none"> Anderson 2004
8 Life History and Demographics	C	<i>E. coloradense</i> is a densely matted, caespitose, long-lived perennial. It flowers from July-August, and flowers in September. Plants have a long life span, and individuals can survive for decades, with the oldest plants likely over 100 years old. Plants have the ability to self-pollinate, but maintaining heterozygosity may prove important for maintaining fitness in populations. Rates of reproduction, dispersal, and establishment and the effects of environmental variation on these parameters have not been investigated in <i>Eriogonum coloradense</i> . Confidence in Rank High or Medium or Low	<ul style="list-style-type: none"> Anderson 2004
Evaluator(s): David A. Anderson, Director, Colorado Natural Heritage Program, Fort Collins, Colorado Bernadette Kuhn, Botanist, Colorado Natural Heritage Program, Fort Collins, Colorado			Date: 2/14/2013

ATTACHMENT SS2

National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)¹ to occur:

Species Name:											
<u>Colorado NF/NG</u>		<u>Kansas NF/NG</u>		<u>Nebraska NF/NG</u>		<u>South Dakota NF/NG</u>		<u>Wyoming NF/NG</u>			
Known	Likely	Known	Likely	Known	Likely	Known	Likely	Known	Likely	Known	Likely
		Cimarron NG		Samuel R. McKelvie NF		Black Hills NF		Shoshone NF			
x				Halsey NF		Buffalo Gap NG		Bighorn NF			
				Nebraska NF		Ft. Pierre NG		Black Hills NF			
x				Ogallala NG				Medicine Bow NF			
								Thunder Basin NG			

References:

Anderson, D.G. (2004, October 14). *Eriogonum coloradense* Small (Colorado buckwheat): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/eriogonumcoloradense.pdf> [November 20, 2010].

Handwerk, Jill. 2013. Personal communication regarding CNHP published and unpublished data on *E. coloradense* element occurrence records.

Reveal, J.L. 2002. Personal communication to David Anderson regarding *E. coloradense*.

Stokes, S.G. 1936. The Genus *Eriogonum* - a Preliminary Study Based on Geographic Distribution. J.H. Neblett Pressroom, San Francisco, CA.

¹ Likely is defined as more likely to occur than not occur on the National Forest or Grassland. This generally can be thought of as having a 50% chance or greater of appearing on NFS lands.