

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: <i>Lagopus leucurus</i> - White-tailed ptarmigan			
Criteria	Rank	Rationale	Literature Citations
<p><b>1</b> Distribution within R2</p>	<p><b>B</b></p>	<p>Within this region, <i>Lagopus leucurus</i> occurs primarily in alpine tundra of the Southern Rocky Mountains in Colorado. Small populations are thought to exist in alpine areas of northern New Mexico, and an extremely small population existed on the Snowy Mountains of Wyoming until the late 1970's. Suitable habitat exists on the Shoshone National Forest, and possibly the Bighorn National Forest, but confirmed reports of <i>L. leucurus</i> from these areas are lacking.</p> <p>Confidence in Rank <b>High</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p> <p>Colorado Gap website: <a href="http://ndis.nrel.colostate.edu/cogap/cogaphome.html">http://ndis.nrel.colostate.edu/cogap/cogaphome.html</a></p> <p>Merrill, E. H., T. W. Kohley, M. E. Herdendorf, W. A. Reiners, K. L. Driese, R. W. Marrs, S. H. Anderson. 1996. Wyoming Gap Analysis: a geographic analysis of biodiversity. Final report. Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming, Laramie, Wyoming.</p> <p>Wyoming Natural Diversity Database - Biological and Conservation Data System. University of Wyoming, Laramie, Wyoming.</p>

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<p><b>2</b> Distribution outside R2</p>	<b>B</b>	<p>This species is broadly distributed throughout the Canadian Rockies into northern Canada and Alaska. Only isolated and patchy populations exist on the southern extension of the Rocky Mountains into Wyoming, Colorado, and New Mexico. Populations in the latter region are small and isolated from the main occurrence center to the northwest.</p> <p>Confidence in Rank <b>High</b></p>	(see citations for criteria 1)
<p><b>3</b> Dispersal Capability</p>	<b>B</b>	<p>This species can move 15-20 km during seasonal migrations, and movements of up to 50km have been documented in Colorado. Dispersal between alpine areas separated by forest and woodland has also been documented. This suggests that although metapopulation-style recolonization is possible throughout the Southern Rocky Mountains, there is likely complete separation of the Southern Rocky Mountain and Central/ Northern Rocky Mountain populations. "B" ranking is based on limited dispersal distance relative to other bird species, and the requirement for relatively rare alpine habitats at destination points.</p> <p>Confidence in Rank <b>Medium</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p>
<p><b>4</b> Abundance in R2</p>	<b>B</b>	<p>Populations fluctuate widely between years, and local populations do not necessarily vary synchronously. Can become locally common in some years. "B" rank is selected because alpine habitat is generally rare in the region, precluding the species from attaining true common status. Because of strong alpine affinities, USFS units in Colorado clearly support the majority of individuals of this species in the region.</p> <p>Confidence in Rank <b>Low</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p>

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<p><b>5</b> Population Trend in R2</p>	<b>D</b>	<p>As outlined above, local populations fluctuate widely from year to year. Two populations in Colorado appear to have remained stable from 1967-1991, but inferences from these data to the entire region are likely unreliable. The small population on the Snowy Range in Wyoming (Medicine Bow National Forest) apparently became extinct ca. 1980. This evaluator (G. Beauvais) is unaware of any data with which to reliably estimate regional trends for this species.</p> <p>Confidence in Rank <b>Medium</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p> <p>Wyoming Natural Diversity Database - Biological and Conservation Data System. University of Wyoming, Laramie, Wyoming.</p>
<p><b>6</b> Habitat Trend in R2</p>	<b>B</b>	<p>Although habitat quantity has likely remained stable, trends in quality are more difficult to assess. Historically, heavy livestock grazing in alpine areas likely reduced habitat quality substantially. More recently, the establishment of USFS Wilderness Areas and subsequent reductions in grazing pressure probably increased quality. Because of strong alpine affinities, USFS units in Colorado clearly support the majority of suitable habitat for this species in the region. The Shoshone and Bighorn National Forests may also support some suitable habitat, but confirmed reports of <i>L. leucurus</i> occupation of these units are lacking. Note that willow-dominated tundra is very important for supplying both food and cover, especially in winter.</p> <p>Confidence in Rank <b>Medium</b></p>	<p>(see also citations for criteria 1)</p> <p>American Ornithologists' Union (AOU), Committee on Classification and Nomenclature. 1983. Checklist of North American Birds. Sixth Edition. American Ornithologists' Union, Allen Press, Inc., Lawrence, Kansas.</p>
<p><b>7</b> Habitat Vulnerability or Modification</p>	<b>B</b>	<p>Alpine environments in general are rather fragile and susceptible to disturbance. Livestock grazing, and to a lesser extent fire, are probably the primary threats to <i>L. leucurus</i> in the region. Note that much habitat lies within USFS Wilderness Areas, and thus is relatively well-protected.</p> <p>Confidence in Rank <b>Medium</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p>

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<p><b>8</b> Life History and Demographics</p>	<p><b>A</b></p>	<p>Rates of clutch-failure, chick mortality, and adult mortality are rather high, with predation as the main cause of all three. Notoriously harsh and variable alpine climate likely hampers reproduction and survival as well. Wide annual fluctuations predispose local populations to extinction; note local extinction has been documented in Wyoming.</p> <p>Confidence in Rank <b>Low</b></p>	<p>Braun, C. E., K. Martin, and L. A. Robb. 1993. White-tailed ptarmigan (<i>Lagopus leucurus</i>). No. 68 in A. Poole and F. Gill (eds.). The Birds of North America. Academy of Natural Sciences / American Ornithologists Union.</p> <p>Wyoming Natural Diversity Database - Biological and Conservation Data System. University of Wyoming, Laramie, Wyoming.</p>
<p>Initial Evaluator(s): <b>Dr. Gary P. Beauvais, Director, Wyoming Natural Diversity Database - University of Wyoming</b></p>			<p><b>Date: 14 June 2001</b></p>

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

<sup>1</sup> 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.

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<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
X		Cimmaron NG		Samuel R. McKelvie NF		Black Hills NF		Shoshone NF	?
X				Halsey NF		Buffalo Gap NG		Bighorn NF	?
X				Nebraska NF		Ft. Pierre NG		Black Hills NF	
X				Ogalala NG				Medicine Bow NF	?
X								Thunder Basin NG	
X									
X									

? = occurrence suspected, but with a probability of less than 50%.