

REGION 2 SENSITIVE SPECIES EVALUATION FORM

Species: Greater sage grouse (<i>Centrocercus urophasianus</i>)			
Criteria	Rank	Rationale	Literature Citations
1 Distribution within R2	B	The greater sage grouse occurs in South Dakota, Wyoming, and Colorado. The species has been extirpated from Kansas and Nebraska. Confidence in Rank High or Medium or Low	•
2 Distribution outside R2	C	RESIDENT: locally from central Washington, southern Idaho, Montana, southeastern Alberta, southwestern Saskatchewan, southwestern North Dakota, and western South Dakota south to eastern California, south-central Nevada, southern Utah, western Colorado; formerly north to southern British Columbia, south to northern New Mexico and southeast to western Oklahoma (AOU 1998, 2000). Confidence in Rank High or Medium or Low	•
3 Dispersal Capability	B	Fragmentation of habitat may influence the species' ability to disperse and occupy other sage brush areas. Confidence in Rank High or Medium or Low	• Connelly et al 2000
4 Abundance in R2	A	A current total of fewer than 142,000 grouse rangewide, and population levels for each state and province as follows: extirpated in Kansas, Nebraska, Oklahoma, Arizona, New Mexico, and British Columbia; estimated 500 in Alberta and Saskatchewan; fewer than 2000 in North Dakota, South Dakota, and Washington; fewer than 5000 in California; fewer than 15,000 in Colorado and Utah; fewer than 20,000 Idaho and Nevada; fewer than 20,000 Montana, Oregon and Wyoming. Confidence in Rank High or Medium or Low	• Braun 1998

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<p>5 Population Trend in R2</p>	<p>A</p>	<p>Populations throughout the range have been experiencing serious declines over the last 50 years, and in the last 20 years, declines have been dramatic.</p> <p>Prior to the 1950s, estimates of abundance were anecdotal, and historical population levels are unknown (Braun 1998). Early accounts, however, suggest that this species was once widespread and abundant in many areas of the West, and there are reports of sage grouse at times blackening the sky and being shot by the wagon-load (Braun 1999b). Declines began with livestock overgrazing of western rangelands aggravated by overharvesting and periods of drought, and by the 1920s and 1930s sage grouse were thought to be declining throughout their range (Braun 1998). Population declines have continued to present day with accumulating loss and degradation of sagebrush habitats.</p> <p>The distribution has contracted by approximately 50 percent since European settlement, and the species has been extirpated from five states and one province (Kansas, Nebraska, Oklahoma, Arizona, New Mexico, and British Columbia) (Braun 1998).</p> <p>Populations have continued to decline over the past several decades (Rich 1993, Braun 1998) in areas where they remain. Overall, the breeding population has decreased by 45 to 80 percent since the 1950s, with much of the decline occurring since 1980 (Braun 1998, 1999c). Rangelwide, estimated declines since 1985 averaged 33 percent across 10 states, and ranged from 17 percent in Wyoming to 47 percent in Washington (Braun 1998). In Washington, abundance has declined at least 97% from historical levels (USFWS 2000). In Colorado, populations have probably decreased more than 50 percent since 1900 (Braun 1995) and between 45 and 82 percent since 1980 (Braun 1998). In Wyoming, still occur in every county, but populations are declining in numbers (Braun 1999c).</p> <p>There is some evidence that populations may be cyclic, with peaks approximately every ten years (Rich 1985), although there is some debate whether populations fluctuate in regular cycles (Schroeder et al. 1999). Nonetheless, trends for populations in Colorado, for example, reveal that each population peak has been lower than the last (Braun 1999c). There have been no sustained population increases in any part of the range (Braun 1998).</p> <p>Confidence in Rank High or Medium or Low</p> <p>Confidence in Rank High or Medium or Low</p>	<ul style="list-style-type: none"> • www.natureserve.com • see citations in references section

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<p>6 Habitat Trend in R2</p>	<p>A</p>	<p>Requires an extensive mosaic of sagebrush of varying densities and heights, high levels of native grass cover for nesting, and areas rich in high-protein forbs and insect foods during nesting and brood-rearing. The traditional standard for breeding habitat of a 3 kilometer radius circle around an occupied lek is now known to be insufficient to support breeding populations (Connelly 1999a). Manipulating stands to provide moderate levels of sagebrush cover (15-20%) and high levels of forb production will likely increase grouse reproduction and survival (Johnson and Braun 1999).</p> <p>Nesting sites are irregularly distributed around leks, depending on location of quality habitat. Sagebrush overstory and grass understories are important to maintain for breeding habitat, with sagebrush canopy cover of 15-25 percent, grass equal to or greater than 18 centimeters tall (or equal to or greater than 15 centimeter visual obstruction reading on Robel pole) are optimum (Connelly 1999a). For summer brood-rearing, maintaining food-rich areas is important, including seeps, wet meadows, and riparian areas. Sagebrush and tall grasses provide escape cover. In winter, varied topography and maintaining a mosaic of sagebrush with a diversity of heights and densities over large areas are important to grouse survival. In all seasonal habitats, sagebrush control should be avoided unless it helps restore a sagebrush/steppe mosaic. The importance of native grasses and forbs in the understory to provide cover, food, and a productive insect fauna cannot be understated (Connelly 1999a). The Conservation Reserve Program (CRP) can be a valuable avenue for providing a mosaic of native habitats in adjacent areas (Braun and Schroeder 1999).</p> <p>Population declines and range contractions are largely attributed to the widespread loss, fragmentation and degradation of sagebrush habitats and associated riparian areas. Habitats have been lost to, and fragmented by, agricultural conversion to croplands, mining and energy development, reservoirs, power lines, roads and highways, urban and rural development of home sites, and treatments to control sagebrush (including burning, mechanical methods, and herbicides). Habitats have also been lost or degraded due to sagebrush control, spread of non-native grasses and forbs, livestock overgrazing, and the accelerating increase in the size and extent of wildfires due to the widespread invasion of sagebrush shrub-steppe by cheatgrass (Braun 1998). Habitat degradation leads to lower productivity and higher predation rates (e.g., Ritchie et al. 1994). No pristine sagebrush habitat, undisturbed by human activity, remains in the states of Region 2 or elsewhere (Braun 1998).</p>	<ul style="list-style-type: none">• see citations in references section

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7 Habitat Vulnerability or Modification	A	Still common in the core of its range, but range has contracted significantly (now extirpated in five states and one province) and populations have declined throughout range. Threatened by loss, fragmentation and degradation of sagebrush habitat Confidence in Rank High or Medium or Low	<ul style="list-style-type: none">• www.natureserve.org
8 Life History and Demographics	B	 Confidence in Rank High or Medium or Low	<ul style="list-style-type: none">•
Initial Evaluator(s): John Sidle			Date: 6/29/01

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

<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
Arapaho-Roosevelt NF		Cimmaron NG		Samuel R.McKelvie NF		Black Hills NF	L	Shoshone NF	
White River NF	L			Halsey NF		Buffalo Gap NG	K	Bighorn NF	
Routt NF				Nebraska NF		Ft. Pierre NG		Black Hills NF	
Grand Mesa, Uncompahgre, Gunnison NF	K			Ogalala NG				Medicine Bow NF	K
San Juan NF	K							Thunder Basin NG	K
Rio Grande NF	K								
Pike-San Isabel NF	K								
Comanche NG									

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.

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