

ATTACHMENT SS2

REGION 2 SENSITIVE SPECIES EVALUATION FORM

<p>1 Distribution within R2</p>	<p>B</p>	<p>The northern goshawk is found throughout National Forests in R2 with the exception of Nebraska and Kansas. Some sources indicate western Kansas and Nebraska as nonbreeding migratory winter range. Goshawks are not known to occur on NFS lands in those states (2)(5).</p> <p>The Colorado NHP rank of S3B infers that during the breeding season within Colorado the goshawk is “Vulnerable through its range or found locally in a restricted range (21 to 100 occurrences). Wyoming NHP finds the goshawk distributed in 18 of 23 counties. The WNHP gives a rank of S23B, S4N. The rank S2 means the species is “Imperiled because of rarity (often known from 6-20 occurrences) or because of factors demonstrably making a species vulnerable to extinction.” Rank S3 is defined in Wyoming as “Rare or local throughout its range or found locally in a restricted range (usually known from 21-100 occurrences).”</p> <p>The Wyoming State Game & Fish status rank (4) is SSC3 Species in which. “Species in which 1) habitat is not restricted, but populations are greatly restricted or declining (extirpation appears possible); or 2) habitat is restricted or vulnerable (but no recent or significant loss has occurred) and populations are declining or restricted in numbers or distribution (but extirpation is not imminent); or 3) significant habitat loss is on-going but the species is widely distributed and population trends are thought to be stable.”</p> <p>Generally breeding populations of goshawks are found in suitable habitat throughout Wyoming, Colorado, and the Black Hills in South Dakota.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • (1). CNHP Rank, 1999. • (2). R2 Goshawk Status Report, 2000. • (3). USFWS. 1997, 90-Day Finding for a Petition to List the Northern Goshawk in the Contiguous United States West of the 100th Meridian. Federal Register/ vol. 62, no. 188. September, 1998. • (4). Taken from the University of Wyoming Biodiversity website: • (5). The Birds of Nebraska and Adjacent Plains States.
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<p>2 Distribution outside R2</p>	<p>C</p>	<p>All Natural History Programs G5 rank is “Demonstrably secure globally, thought it may be quite rare in parts of its range, especially at the periphery.”(1)(4).</p> <p>The USFWS (3) lists that there are 12 subspecies that have been recognized world wide. Three subspecies are recognized in North America including <i>Accipiter gentiles laingi</i>, <i>A.g. atricapullus</i>, and <i>A.g. apache</i>.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • (1). CNHP G5 Rank, 1999. • (3). USFWS. 1997, 90-Day Finding for a Petition to List the Northern Goshawk in the Contiguous United States West of the 100th Meridian. Federal Register/ vol. 62, no. 188. September, 1998. • (4). Taken from the University of Wyoming Biodiversity website.
<p>3 Dispersal Capability</p>	<p>C</p>	<p>Experts (Reynolds, Squires) referred to the Black Hills population as unknown as to whether there is immigration to this relatively isolated timbered area (6).</p> <p>Migration routes of goshawks include journeys to winter range habitat through prairie and grasslands that is not considered suitable long term or breeding habitat (5).</p> <p>Beier (9) and others refer to goshawks using a wide variety of canopy closures, stem densities and sizes in Ponderosa pine habitat. That author also infers that the use of other types of habitat may be due to lack of preferred habitat within a goshawk territory rather than preference.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • (5). THE BIRDS OF NEBRASKA AND ADJACENT PLAINS STATES Paul A. Johnsgard. Available online at: http://rip.physics.unk.edu/NOU/Johnsgard/Page04.html • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. • (9). Beier, P. and J. E. Drennan. 1997.

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<p>4 Abundance in R2</p>	<p>B</p>	<p>There is a severe lack of species abundance information region wide. The R2 goshawk team found that NHP occurrence records are not indicative of actual abundance. Forest Service personnel on different forests within the region sometimes withheld nest information from NHP's due to perceived security problems (2).</p> <p>The variation in cover types used by goshawks in R2 and territory sizes that differ by habitat type and quality make abundance estimation unreliable even in very localized situations. Apparently available territories may not be occupied by goshawks for unknown reasons (6).</p> <p>On most forests within the region there is no universally accepted standardized protocol for watershed scale nest detection. Therefore nest occurrence observations and documentation data is most often a function of the location of proposed projects, historical knowledge, or happenstance. Negative data, as to how much suitable habitat available to goshawks that is not occupied by nesting pairs is not recorded and therefore reliable abundance extrapolations cannot be determined by cover type or structural stage (2).</p> <p>Forests in the region vary dramatically in their goshawk survey techniques and locations that are surveyed. Some Forests like the Medicine Bow/Routt and Black Hills have a large timber program and conduct numerous goshawk surveys. Other Forests such as the White River and San Juan have a relatively small timber program and have conducted very limited goshawk surveys. This leads to very large discrepancies in the data between forests and habitat types. For example on the Brush Creek/Hayden District of the Med/Bow over 100 nests have been documented mostly from transects used to clear timber sales. On the entire White River NF with more habitat acreage, only approximately 15-20 nests are known and the majority of those have been found in areas not officially surveyed, but were observations from the public or agency personnel (2).</p> <p>The Black Hills NF estimates 30 breeding pairs of goshawks on Forest (6) but habitat is available for 300 pairs if territory densities were the same as similar ponderosa habitat in Arizona (6).</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • (2). R2 Goshawk Status Report, 2000. • • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000.
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<p>5 Population Trend in R2</p>	<p>D</p>	<p>In response to a petition to list the goshawk in 1997, the U.S.D.I. Fish and Wildlife Service (2) gathered information from all available scientific and commercial information including the USDA Forest Service in Region 2. The U.S.D.I. Fish and Wildlife Service, found that “The Service finds no evidence that the goshawk population is declining the western United States, that habitat is limiting the overall population, that there are any significant areas of extirpation, or that a significant curtailment of the species habitat or range is occurring.” The finding goes on to state, “Therefore, the Service finds that listing the northern goshawk in the contiguous United States west of the 100th meridian as threatened or endangered is not warranted because the best available information does not indicate that it is in danger of extinction or likely to become so in the foreseeable future.”</p> <p>The R2 Goshawk team (2) found that actual population trend data for goshawks is very limited within the region. The USFWS, (3) itself stated that the majority (75%) of reported territories analyzed for the status review were discovered in the last 10 years. The R2 goshawk team was not able to find any experts within the region that could supply population trend data. The team further suggested that nest monitoring and other protocols be undertaken region wide in order to begin the baseline information data gathering that could be used later for population trend projections.</p> <p>Kennedy (7) after a comprehensive review of peer-reviewed research concluded that there is no strong evidence to indicate that goshawk populations are declining, increasing or stable. She also stated that 1) either the goshawk is not declining or 2) current sampling techniques are insufficient to detect population trends. Kennedy and her well known vocalization protocol concentrated mostly on detecting nest location using highly labor intensive transects.</p> <p>In South Dakota the majority of goshawk habitat is in the Black Hills. However the local experts (6) consider the current status of goshawks uncertain on the Forest and managing for only the known breeding pairs would not ensure a viable population.</p> <p>Crocker-Bedford (8) recommended that along with goshawk demographic data other parameters should be considered (i.e. home range size, spacing of territories, diet, and habitat utilization), and then compared between replicate landscapes undergoing a variety of vegetation changes. Thus far, portions of this approach have been accomplished through various projects, but long term data is still unavailable.</p> <p>Confidence in Rank High</p>	<ul style="list-style-type: none"> • (2). R2 Goshawk Status Report, 2000. • (3). USFWS. 1997, 90-Day Finding for a Petition to List the Northern Goshawk in the Contiguous United States West of the 100th Meridian. Federal Register/ vol. 62, no. 188. September, 1998 • (7). Kennedy, 1997. • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. • (8). D. Coleman Crocker-Bedford. 1998. The Value of Demographic and Habitat Studies in Determining the Status of Northern Goshawks (<i>Accipiter gentiles atricapillus</i>) with Special Reference to Corcker-Bedford (1990) and Kennedy (1997).
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<p>6 Habitat Trend in R2</p>	<p>B</p>	<p>There is some contention as to the habitat preferences of goshawks. Goshawks are recognized as an interior forest (mature habitat) species (3). However some literature (6) points out that foraging goshawks do utilize other habitat types and may consider the goshawk a forest generalist. In the Black Hills nesting habitat preference is for mature or old growth Ponderosa Pine, on portions of the Med-Bow/Routt mature lodgepole, and in portions of the San Juan and White River mature Aspen mixed with conifer is preferred nesting habitat. The common thread is nesting seems to occur mostly in mature forest habitat types, while foraging may include other younger or more open canopy types.</p> <p>Future habitat trends will be affected by such factors as the implementation of the Roadless Rule, rate of development, and the resulting habitat modifications on private and public lands. Presently private land urbanization in the Southern Rockies is among the fastest in the nation (9). Less than 5% of the lower elevation ponderosa pine is in a preferred nesting old growth structural stage, and only 12% is presently in a protected status, including the roadless area lands. Most (88%) of the Ponderosa belt in the Southern Rockies (S. Wyoming through Forested Colorado to Northern New Mexico) is in a roaded condition which may detract from being suitable nesting habitat. Other habitat types such as aspen, lodgepole, Engelmann spruce, and subalpine fir are found in larger percentages in older age classes. In the Southern Rockies Region 93.8% of all the land acreage is within 0-2 miles of a road.</p> <p>This criteria really needs to be addressed in relationship to the biome connectivity the habitat is associated with. For example in the MedBow Routt or Black Hills, and the front range of Colorado the nesting habitat would rate as A = Decline in habitat quality or quantity. On the White River or San Juan the nesting habitat condition would rate out that some loss of nesting habitat is occurring, but there are large connected blocks mature Aspen, Spruce/Fir and Lodgepole habitat under Wilderness Designation or roadless areas so B = Stable amounts of suitable or potential habitat, relatively unchanged habitat quality is more appropriate.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • (2). R2 Goshawk Status Report, 2000. • (3). USFWS. 1997, 90-Day Finding for a Petition to List the Northern Goshawk in the Contiguous United States West of the 100th Meridian. Federal Register/ vol. 62, no. 188. September, 1998 • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. • (9). Southern Rockies Ecosystem Project. 2000. State of the Southern Rockies Ecoregion.
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<p>7 Habitat Vulnerability or Modification</p>	<p>B</p>	<p>Squires (6) indicated nesting habitat is the most important component in limiting distribution and numbers of birds. In the Black Hills Forest Plan Revision, the experts (Squires, Reynolds) considered a lack of providing landscape level nesting habitat as a major negative effect. In R2, isolated timbered regions like the Black Hills may be more vulnerable to loss of nesting habitat and local population viability.</p> <p>Other portions of R2 such as northern Wyoming and Central Colorado have some large blocks of contiguous habitat within designated wilderness areas that will remain intact. Since roughly 80% of goshawk habitat in the Region is found on National Forest lands (2) future vulnerability of habitat will depend on management decisions regarding the implementation of the Roadless Rule, and others.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. • (2). R2 Goshawk Status Report, 2000.
<p>8 Life History and Demographics</p>	<p>B</p>	<p>The goshawk is vulnerable to nest tree abandonment due to disturbance within the area. Alternate nests are used commonly, but Crocker-Bedford (8) found yearly nest tree fidelity remained at 67% in uncut forests, while treated units dropped to 20-15%, even with no-cut buffers around the nests.</p> <p>The Black Hills NF found that goshawks would use less than ideal habitat as territories however breeding may not occur (6).</p> <p>Even with a literature search on available goshawk literature that produced 1145 worldwide references, I could find little information regarding specific nest success rates on a Rocky Mountain region scale.</p> <p>Confidence in Rank Medium</p>	<ul style="list-style-type: none"> • (2). R2 Goshawk Status Report, 2000. • (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. • (8). D. Coleman Crocker-Bedford. 1998. The Value of Demographic and Habitat Studies in Determining the Status of Northern Goshawks (<i>Accipiter gentiles atricapillus</i>) with Special Reference to Corcker-Bedford (1990) and Kennedy (1997).
<p>Evaluator(s):</p> <ul style="list-style-type: none"> • <i>/s/ Timothy M. Snowden</i> (6). Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. 			<p>Date: 7/03/01</p>

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National Forests in the Rocky Mountain Region where species is KNOWN (K) or LIKELY (L)¹ to occur: Known to occur in all National Forests in Colorado, Wyoming, and South Dakota. Not known to occur on National Forest System lands in Kansas or Nebraska.

<u>Colorado NF/NG</u>	Known	Likely	<u>Kansas NF/NG</u>	Known	Likely	<u>Nebraska NF/NG</u>	Known	Likely	<u>South Dakota NF/NG</u>	Known	Likely	<u>Wyoming NF/NG</u>	Known	Likely
Arapaho-Roosevelt NF	x		Cimmaron NG			Samuel R. McKelvie NF			Black Hills NF	x		Shoshone NF	x	
White River NF	x					Halsey NF			Buffalo Gap NG			Bighorn NF	x	
Routt NF	x					Nebraska NF			Ft. Pierre NG			Black Hills NF	x	
Grand Mesa, Uncompahgre, Gunnison NF	x					Ogalala NG						Medicine Bow NF	x	
San Juan NF	x											Thunder Basin NG		
Rio Grande NF	x													
Pike-San Isabel NF	x													
Comanche NG														

- (1). CNHP Rank, 2001. Colorado Natural History Program, Vertebrate Occurrence Data, Colorado State University, College of Natural Resources, 254 General Services Building, Ft. Collins, CO 80523. Available Online.
- (2). USDA Forest Service, Rocky Mountain Region. 1999. R2 Goshawk Status Report. Lakewood, CO. 48pp.
- (3). USFWS. 1997. 90-Day Finding for a Petition to List the Northern Goshawk in the Contiguous United States West of the 100th Meridian. Federal Register/ vol. 62, no. 188. September, 1998.
- (4). Wyoming Natural History Program. 2001. Taken from the University of Wyoming Biodiversity website: <http://uwadmnweb.uwyo.edu/wyndd/WYNDD/SpeciesofConcern.htm>
- (5). Paul A. Johnsgard. 1998. THE BIRDS OF NEBRASKA AND ADJACENT PLAINS STATES. Available online at: <http://rip.physics.unk.edu/NOU/Johnsgard/Page04.html>
- (6). USDA Forest Service. 2000. Expert Interview for the Black Hills National Forest Land and Resource Management Plan Amendment. USDA Forest Service, Black Hills NF, Custer, South Dakota. October, 2000. This may be found at the website: http://www.fs.fed.us/r2/blackhills/fp/planning/99Amend/00_10_25_ExpertInterviewSum.pdf#xml=http://www.fs.fed.us/cgi-bin/tehis/searchallsites/search.allsites/xml.txt?query=Black+Hills%2C+Northern+goshawk&db=allsites&id=3b2a5bde0

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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- (7). Kennedy, P.L. 1997. The Northern Goshawk (*Accipiter gentiles atricapillus*): is there evidence of a population decline? J. Raptor Res. 31:95-106.
- (8). D. Coleman Crocker-Bedford. 1998. The Value of Demographic and Habitat Studies in Determining the Status of Northern Goshawks (*Acciptier gentiles atricapillus*) with Special Reference to Corcker-Bedford (1990) and Kennedy (1997). J. of Raptor Research. Vol 321, No. 4, Dec. 1998.
- (9). Beier, P. and J. E. Drennan. 1997. Forest Structure and Prey Abundance in Foraging Areas of Northern Goshawks. Ecological Applications, 7(2). Pp. 564-571.