

**APPENDIX D**

**BIOLOGICAL ASSESSMENT / BIOLOGICAL EVALUATION  
WILDLIFE, FISHERIES,  
AND  
BOTANY SUMMARIES**



## **APPENDIX D – SUMMARY OF BIOLOGICAL EVALUATIONS FOR WILDLIFE, FISHERIES, AND BOTANICAL RESOURCES IN THE SLATE CASTLE PROJECT AREA**

This document is a synthesis for the Wildlife and Fisheries Resource in the Slate Castle Project Area (SCPA). The summary is an effort to reduce redundancy and improve reading ease while retaining important content. It is not intended to meet all the legal requirements and policies associated with the BE. The parent BE is contained in the Slate Castle Project administrative record.

The main purpose of a BE is to disclose, in detail, the potential effects of all alternatives to federally-listed and Forest Service sensitive species.<sup>1</sup> The BE also provides a “determination statement” to help decision-makers and other readers see how the project might affect the long-term persistence of a species. This summary document provides simplified effects disclosures and determination statements for all species relevant to the SCPA, and provides the reader with some of the information sources used in the analyses.

### **Pre-field Review and Field Reconnaissance**

Pre-field review and field reconnaissance are essential in determining which species could occur in a project area, and how they might be affected. Pre-field reviews were completed using past survey results, district records, literature reviews, on-line databases, and Forest Plan monitoring reports. Field visits were performed with intent to identify suitable and/or occupied habitat for sensitive species. These surveys were conducted by qualified biologists, including Forest Service employees and contractors. In addition to species-specific surveys, additional field visits to the Slate Castle Project Area (SCPA) were conducted with the general intent of identifying habitat and potential issues for other status species. Data from all sources mentioned above were used to determine design criteria needs and effects relevant to the SCPA.

### **Effects and Associated Determination Statements for Relevant Species**

The parent BE discloses the full set of federally-listed and sensitive species that are known or suspected to occur on the Black Hills National Forest (BHNF). The BE also identifies which of those species potentially have habitat within the SCPA. This latter subset of species are considered relevant to the Slate Castle Project, and are the main subject of this summary as well as the detailed analyses in the BE. The assumption is that if habitat is present, the species could be present and be affected by project activities. Project activities can directly impact most individual sensitive species in all alternatives. Indirectly, MPB infestation will likely affect sensitive wildlife species (positive and negatively) in Alternative A by changing mature/late successional pine habitat to a more open habitat, increasing snags and down woody material and increasing the potential for large-scale wildfire. Alternatives B and C treatment actions increase the chance of direct and indirect effects on most sensitive species (individuals) as compared to Alternative A. The action alternatives reduce MPB and wildfire hazard by moving dense mature/late successional pine habitat to a more open, early seral habitat through proposed

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<sup>1</sup> Federally-listed species are those that have been designated by the US Fish and Wildlife Service as endangered or threatened (i.e., under the Endangered Species Act), including those that have been formally proposed for listing. Sensitive species are designated by the Regional Forester. Both categories imply rareness or sensitivity to management actions.

treatments. These treatments may provide both positive and/or negative effects to sensitive species to varying degrees based on each alternative.

There are no federally-listed species with potential to occur in the SCPA. No “critical habitat” has been designated for any species on the BHNF. Therefore consultation is not required with the US Fish and Wildlife Service.

There are seventeen R2 sensitive wildlife species that potentially have suitable habitat within the SCPA. Comprehensive effects analyses were provided for all of these species in the parent BE. A list of the species, description of their habitats, basic effects of the project, and their project-specific determination statements are summarized in Table 1 below. The determination statements primarily reflect the most aggressive combination of management activities (e.g., number of acres treated). Implementation of a less aggressive combination of activities would likely have a lesser effect, but usually result in the same determination. Therefore, only one determination statement is given here, and is intended to apply to all alternatives.

**Table 1. Habitat Description, Effects Summary, and Determination Statement for R2 Sensitive Species Relevant to the Slate Castle Project Area.**

<b>Common Name</b>	<b>Habitat Description<sup>1</sup></b>	<b>Effects Summary</b>	<b>Determination Statement<sup>2</sup></b>
<b>Forest Service Sensitive Species -- Animals</b>			
Bald Eagle	Usually found near open water or in areas with abundant carrion in winter. Roosts in snags, trees, and rock outcrops that provide good visibility and security from disturbance.	Potential for some transitory roost sites to be lost. Will not affect the bald eagles’ ability to roost, breed, or otherwise survive on the BHNF or the SCPA	May impact individuals... but no loss of viability
Fringe-tailed Myotis	Roosts in caves and mines, on snags and rock faces.	Potential reduction in snag roost availability.	May impact individuals... but no loss of viability
American Marten	Spruce forests with complex near-ground structure.	Potential reduction in downed woody material within corridor habitat.	May impact individuals... but no loss of viability
Northern Goshawk	Nests primarily in dense mature conifer forests; forages in a variety of forested areas and small openings.	Potential reduction in nesting habitat. Vegetation treatments and prescribed fire will increase foraging habitat.	May impact individuals... but no loss of viability
Flammulated Owl	Open ponderosa pine forests.	Potential decrease in snag roost/nest site availability, with an increase in preferred open habitats.	May impact individuals... but no loss of viability

<b>Common Name</b>	<b>Habitat Description<sup>1</sup></b>	<b>Effects Summary</b>	<b>Determination Statement<sup>2</sup></b>
Black-backed Woodpecker	Pine forests that are recently burned, or in late successional or dense mature condition, or have high populations of mountain beetles.	Potential decrease in preferred forested habitats, barks beetle food sources, and snag availability.	May impact individuals... but no loss of viability
Black Hills Red-belly Snake	Moist habitats with well-developed ground litter.	Potential reduction in downed woody material.	May impact individuals... but no loss of viability
Townsend's Big-eared Bat	Roosts in caves and mines, occasionally buildings; forages on insects in various habitats including forested and wet areas.	Vegetative treatment near cave or mine entrances could affect microhabitat inside caves or mines.	May impact individuals... but no loss of viability
Leopard Frog	Riparian and wetland areas for tadpoles, subadults, and breeding adults; upland areas for foraging adults.	Potential for limited pine removal within riparian habitats.	May impact individuals... but no loss of viability
Mountain Sucker	Occurs most often in cool, clear mountain streams, but have been observed elsewhere in large rivers, lakes and reservoirs.	No notable consequences to stream flow regimes, stream connectivity, sedimentation, water temperatures, or water yield.	No Impact
Northern Harrier	Open areas; prairies, wetlands or grasslands with tall dense vegetation and high residual cover; logged or burned woodlands	Habitat quality may be affected in the short term. Potential improvement within certain areas long-term	May impact individuals... but no loss of viability
Loggerhead Shrike	Open areas with scattered, low deciduous thickets.	Habitat quality may be affected in the short term. Potential improvement within certain areas long-term.	May impact individuals... but no loss of viability
Grasshopper Sparrow	Grasslands of intermediate height with bare patches and moderately deep litter	Potential decrease in nesting habitat for the short-term. Habitat improved in the long-term.	May impact individuals... but no loss of viability
Regal Fritillary Butterfly	Tall-grass or mixed-grass prairie with violets	Potential decrease in habitat quality for the short-term. Habitat improved in the long-term.	May impact individuals... but no loss of viability

<b>Common Name</b>	<b>Habitat Description<sup>1</sup></b>	<b>Effects Summary</b>	<b>Determination Statement<sup>2</sup></b>
Rocky Mtn Bighorn Sheep	Semi-open rough, steep buttes and canyons of western mountains.	Habitat quality may be affected short term, Potentially improved in the long-term.	May impact individuals... but no loss of viability
Mountain Sucker	Occurs most often in cool, clear mountain streams with moderate stream flow velocities.	No notable consequences to stream flow regimes, stream connectivity, sedimentation, water temperatures, or water yield.	No impact
Cooper's Mountain Snail	Lowland wooded or riparian areas on limestone soils.	Inadvertent loss of individuals and isolation of unknown colonies in treated areas may occur during project activities.	May impact individuals... but no loss of viability
Three-toed Woodpecker	White Spruce and mature pine forests.	Mature pine will be reduced. Spruce habitat will remain intact.	May impact individuals... but no loss of viability

<sup>1</sup> Habitat descriptions primarily reflect conditions where the species is known or suspected to occur in the BHNF.

<sup>2</sup> Determination statements in table are shortened from the official wording provided in Forest Service Manual 2670 (for sensitive species).

Possible determinations for sensitive species are

- No impact;
- Beneficial impact;
- May adversely impact individuals, but not result in a loss of viability in the Planning Area, nor cause a trend toward federal listing, and
- Likely to a result in a loss of viability in the Planning Area, or in a trend toward federal listing.

Region 2 sensitive species that may have suitable habitat somewhere on BHNF, but not within SCPA, are listed in the parent BEs. Comprehensive analyses and determination statements are not necessary for this latter group of species because there is no potential that the project would affect them. If habitat is not available, it is very unlikely that the species would be present or affected.

## Forest Service Sensitive Species – Plants

The determination of effects for action alternatives (Alternatives B and C) on Region 2 sensitive species in this BA/BE were made as the result of the information gathered in the pre-field review, field reconnaissance, survey results, and effects analysis for all action alternatives. The basis for these determinations was potential habitat, distribution, and effects from proposed activities. The determination language is set forth in Forest Service Manual 2670.

Objectives, standards, and guidelines have been identified in the Forest Plan Phase II to conserve Region 2 sensitive species found on the Black Hills National Forest (USDA Forest Service 2005). This project will follow the objectives, standards, and guidelines that are applicable to those species and habitats found in the Slate Castle Project Area.

The project area was surveyed for Region 2 sensitive plants species and one occurrence (yellow lady's slipper) was confirmed. For most species with identified suitable but unoccupied habitat within the project area (foxtail sedge, trailing clubmoss, large round-leaf orchid, sage willow, autumn willow, and great-spurred violet) as well as the yellow lady's slipper, habitat is generally located in small areas not designated for mechanical treatments (drainages and wetlands) and is limited within the project area. Species with undefined suitable habitat (prairie moonwort and narrowleaf grapefern) appear to require a certain amount of historical disturbance to establish. Activities such as road construction and prescribed broadcast burning may generate the disturbed environment required for establishment. Although negative impacts to suitable habitat associated with implementation of this project are possible, they are outweighed by the long-term beneficial effects of reducing the risk of unnaturally intense wildfires in the future. The various methods of treatments designed to reduce fuel loading within the project area could help prevent the occurrence of a stand replacing fire and the resulting effects on suitable sensitive plant habitat both within and adjacent to the project area.

With implementation of the Forest Plan Phase II Amendment and all of the standards and guidelines adopted therein, and project specific design criteria, a determination of "May adversely impact individuals, but not likely to result in a loss of viability on the planning area, nor cause a trend to federal listing or a loss of species viability range-wide" is made for the following species for the proposed action:

Prairie moonwort	<i>Botrychium campestre</i>
Narrowleaf grapefern	<i>Botrychium lineare</i>
Foxtail sedge	<i>Carex alopecoidea</i>
Yellow lady's slipper	<i>Cypripedium parviflorum</i>
Trailing clubmoss	<i>Lycopodium complanatum</i>
Large round-leaf orchid	<i>Platanthera orbiculata</i>
Sage willow	<i>Salix candida</i>
Autumn willow	<i>Salix serissima</i>
Highbush cranberry	<i>Viburnum opulus</i> var. <i>americanum</i>
Great-spurred violet	<i>Viola selkirkii</i>