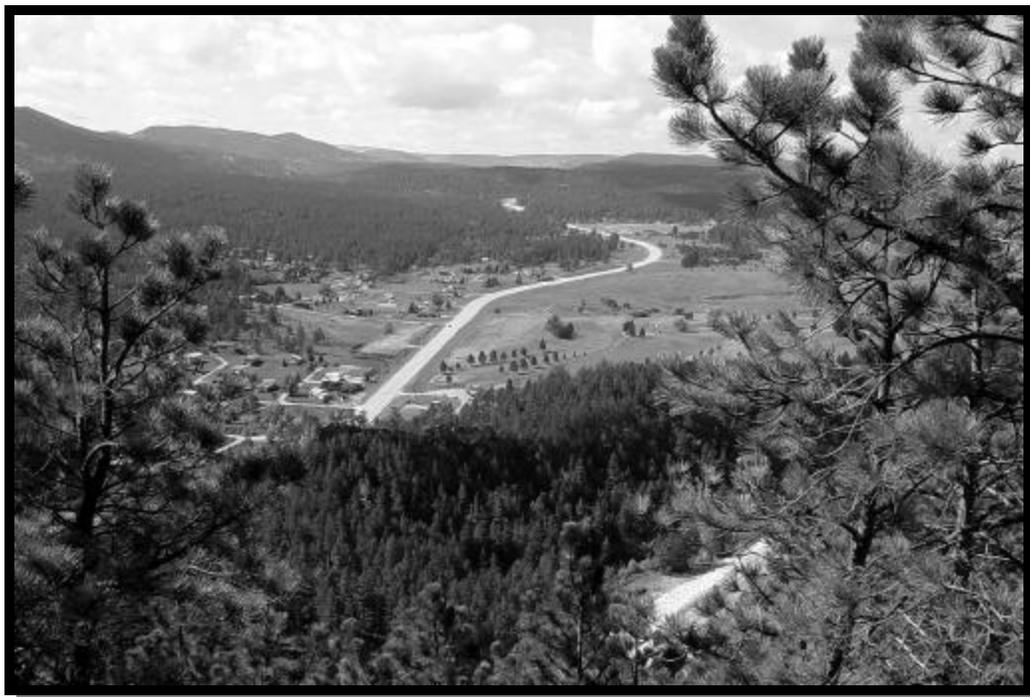


# Elk Bugs and Fuels Final Environmental Impact Statement

Appendix E: Response to Comments



**Black Hills National Forest,  
Northern Hills Ranger District  
Lawrence and Meade Counties, South Dakota**

October, 2003



USDA Forest Service

USDA

# Appendix E

## Response to Comments on Draft Environmental Impact Statement

The Elk Bugs and Fuels Draft Environmental Impact Statement was issued for public comment in June of 2003. The Forest Service received comments from 17 individuals and organizations.

Individual or Organization	Letter #	Hard mail	E-mail
Biodiversity Conservation Alliance Jeremy Nichols	1	X	X
Black Hills Forest Resource Association Aaron Everett	2	X	X
Defenders of the Black Hills/Native Ecosystems Council Charmaine White Face Brian Brademeyer	3	X	X
Brian Baxter	4		X
Greg Mumm Dakota Territory Cruiser Black Hills 4-Wheelers	5	X	X
William L. Baker	6	X	
Duane Claypool	7		X
Lawrence County Commissioners Timber Committee Bill Coburn	8	X	
Doug and Charlene Miller	9		X
Pope and Talbot, Inc. Jim Hoxie	10	X	
Rhonda Mumm	11	X	
Richard Finn	12	X	
John Rozelle	13		X
South Dakota Department of Game, Fish and Parks Shelly Deisch	14	X	
United States Department of the Interior Robert F. Stewart, Regional Environmental Coordinator	15	X	X
Philip Strobel Environmental Protection Agency Region 8 - NEPA Program	16		X
Prairie Hills Audubon Society Nancy Hilding	17	X	

The following comments outlined in the letters numbered above have been coded as follows:

Letter #- comment #: e.g. 12-05 (letter 12, comment 5)

July 14, 2003

Carl Leland

U.S. Post Office, Room 201

18 South Mill Avenue

Ridgway, PA 15853

Re: Elk Bugs and Fuels Draft Environmental Impact Statement

Dear Mr. Leland:

Biodiversity Conservation Alliance and Jeremy Nichols submit these comments in response to the draft environmental impact statement (“DEIS”) prepared for the Elk Bugs and Fuels project. We have previously expressed numerous concerns over the significant adverse effects of excessive timber harvest, thinning (commercial and noncommercial) and associated activities (e.g. road construction) on the Black Hills National Forest (“BHNF”).<sup>[1]</sup> For the purposes of these comments, we incorporate by reference all previous submissions listed in the footnote below.

To begin with, the Forest Service (“FS”) has issued an entirely inadequate DEIS.<sup>[2]</sup> It seems that professional and scientific integrity (see, 40 CFR § 1502.24) was barely exhibited, if at all, in the preparation and presentation of the DEIS and it appears more as if the agency is railroading the Elk Bugs and Fuel Project through the National Environmental Policy Act process in an entirely biased attempt to “get the cut out” of the BHNF and appease the demands of a few vocal timber industry proponents and misguided members of the public. The fact that the agency continues to mislead people into believing that mountain pine beetles are somehow bad for the BHNF ecosystem, the fact that the agency is misleading people into believing some relationship actually exists between mountain pine beetle activity and “fire risk,” and the fact that the agency continues to mislead people into believing it can actually control wildfire behavior on the BHNF only underscores the lack of scientific and professional integrity within the agency and the DEIS.

01-01

Most egregiously though is that the DEIS seems to entirely ignore public demands and concerns for increased wildlife and habitat protection on the BHNF. As an example, the DEIS entirely failed to identify any relevant wildlife concerns as significant issues raised during the scoping process. See, DEIS pp. 10-12. This, despite the fact that Biodiversity Conservation Alliance and others explicitly raised concerns over the impacts of the Elk Bugs and Fuel to several wildlife species and their habitats in their December 16, 2002 scoping comments. Amazingly, these concerns seem to have been altogether ignored.

01-02

Comment	Response
01-01	The purpose of and need for action is tiered to Revised Forest Plan goals; see the Purpose of and Need for Action section of Chapter 1. The relationship between mountain pine beetle-caused mortality and wildfires is discussed in Chapter 3 in the Physical Environment – Fire Hazard and Fuel Loading – Affected Environment section.
01-02	Wildlife issues identified through scoping are displayed in Appendix A of the EIS.

Even in the agency’s response to public comments (DEIS, Appendix A), there is no mention of Biodiversity Conservation Alliance’s concerns over the impacts to several wildlife species and their habitat, raising serious questions over whether the FS adequately considered public comment in the development of the DEIS and the action alternatives for the Elk Bugs and Fuel project.

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For instance, Biodiversity Conservation Alliance and others specifically questioned the FS’s conclusions regarding fire ecology in the BHNF and brought forth scientific information (e.g., Shinneman 1996, Shinneman and Baker 1997, Baker and Ehle 2001) that refuted much of the agency’s assertions regarding “natural conditions” in the Elk Bugs and Fuel project area and the purpose and need for the project. Biodiversity Conservation Alliance requested that this information be utilized for the environmental analysis and be objectively addressed. For example, Biodiversity Conservation Alliance commented that, “the agency must consider the effects of past timber harvesting and thinning, as well as the natural ecology of the BHNF ponderos pine forests as documented by Baker and Ehle, Shinneman, and Shinneman and Baker.” However, it seems as if our concerns fell on deaf ears because there is no indication that the FS utilized the information we provided in the environmental analysis or made any attempt to objectively address our concerns. Indeed, there is no mention of this comment in Appendix A of the DEIS. And, while the DEIS cites Shinneman and Baker (1997) and Baker and Ehle (2001), the FS raises these papers only in an attempt to discredit and/or refute their conclusions. See e.g., DEIS p. 89 “Shinneman and Baker appear to make this mistake in their paper...” The findings of Baker and Ehle (2001) and Shinneman and Baker (1997) were not used in the agency’s analysis and assessment of the impacts of the Elk Bugs and Fuel project and to the extent that this scientific information was addressed, it was not in an objective manner.

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Additionally, Biodiversity Conservation Alliance and others raised several other issues that were ignored in the preparation of the DEIS. Specifically, we requested the FS analyze and assess the impacts of the Elk Bugs and Fuel project to Cooper’s hawk, sharp-shinned hawk, and American kestrel. Yet, there is no analysis and assessment of the impacts to these species and the agency has given no explanation as to why this request was ignored. We also requested the FS analyze and assess the impacts of the project to Black Hills red-backed vole and Bearlodge meadow jumping mouse. Again, there is no analysis or assessment and no explanation as to why our request was ignored. We also requested the FS analyze and assess impacts to northern flying squirrel and its habitat, black bear, silver-haired bat and its habitat, all native fish species, and several plant species of concern and their habitats. Once again, there is no analysis or assessment in the DEIS, save for a select few native fish that are management indicator species, and no explanation as to why these species did not warrant consideration.

In fact, it is entirely evident that the FS entirely ignored most of Biodiversity Conservation Alliance’s scoping comments. For instance, Biodiversity Conservation Alliance asked several questions within these comments in an attempt to better understand the nature of the proposal and the associated environmental impacts. Most importantly though, is that Biodiversity Conservation Alliance asked several questions in an attempt to gain a better understanding of the agency’s rationale behind the Elk Bugs and Fuel project. To reiterate, our questions were as follows:

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- How will the Elk Bugs and Fuel project reduce fuel buildup?
- How will the existence of mountain pine beetles lead to “uncharacteristically intense wildfires”?
- Is the mountain pine beetle native?
- What benefits do mountain pine beetles provide to the BHNF ecosystem?
- How will mountain pine beetle affect the Sturgis Community Watershed?

Why must the FS ensure mountain pine beetles do not affect private land? What if private landowners want pine beetles on their land? Why doesn't the FS ensure wildlife species, such as the northern goshawk, nest on private land? Why is there such a double standard on the BHNF?

Are mountain pine beetles detrimental to private lands? If so, how?

How do mountain pine beetles affect homes?

How is it that the BHNF has experienced some of the largest fires in recorded history even in light of widespread and extensive efforts to control, prevent, and suppress mountain pine beetle infestations?

How is it that the BHNF has experienced some of the largest fires in recorded history in areas where mountain pine beetle outbreaks were nonexistent?

How will the Elk Bugs and Fuel project actually reduce the risk of a catastrophic wildfire?

Why are crown fires bad on the BHNF?

What is the FS doing to address the problem of arson-caused fires?

In light of the Jasper Fire, where 24 commercial timber sales and thinning projects removed 184 million board feet of timber prior to the fire (see, Jasper Fire Value Recovery Final EIS), how is it that forest management practices, such as the Elk Bugs and Fuel, will do anything to affect fire risk or behavior?

If fire suppression has led to adverse ecological conditions on the BHNF, how is it that further suppression of natural processes – such as mountain pine beetle outbreaks – will adequately address the “absence” of natural processes?

Is this about preserving the merchantability of trees or is the BHNF genuinely concerned about the status of the ecosystem? Be honest!

Unfortunately, we can find no response to these questions in the DEIS. While the FS may claim that the answers to these questions lie buried within the DEIS, we ask, where? The FS has not even provided us a general response to aid us in our search throughout the nearly 300 page document and without any general direction, it is difficult to see how our questions were addressed. Regardless though, we would expect the FS to address our questions upfront to ensure our understanding of the proposed action and to show that the agency has adequately considered public comment in the development of the NEPA document. As we stated in our scoping comments:

We will not only gain a better understanding of the proposed Elk Bugs and Fuel project if these questions are honestly answered, but our minds would rest easy knowing that the FS is really scrutinizing and honestly balancing the merits of implementing the Elk Bugs and Fuel project. (scoping comments, p. 3)

Overall, it seems as if the agency has most likely boiled down any concerns expressed by Biodiversity Conservation Alliance and others into Issue G, “Do not harvest any commercial timber.” While this may have been an issue raised by Biodiversity Conservation Alliance and others it was not the only issue raised in our 15 pages of comments and we are extremely frustrated and disappointed that the agency has seen fit to ignore all our other concerns.

The Council on Environmental Quality (“CEQ”) NEPA regulations state that, “If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion.” 40 CFR § 1502.9(a). Given that the agency has ignored so much of our comments and refused to even explain why certain portions of our comments were entirely ignored, it is entirely evident that the agency has prepared an inadequate DEIS that precludes meaningful analysis. Indeed, the level of inconsideration exhibited by the FS raises serious and substantial questions over the scientific and professional integrity of the agency and the DEIS.

If the FS does not believe that the DEIS is so inadequate as to preclude meaningful analysis, then we request the agency fully explain why. Specifically, we request the agency explain why it did not feel obligated to respond to our comments and concerns in the DEIS and why this does not flaw the NEPA document.

01-05

Comment	Response
01-03	Effects on wildlife are disclosed in Chapter 3 in the Biological Environment – Wildlife Habitat section.
01-04	An in-depth discussion of fire ecology is beyond the scope of this document. Chapter 3 of the EIS discusses fire history and ecology as they relate to fire regime and condition class of the project area (see Fire Hazard and Fuel Loading section). The Forest Service acknowledged that there appear to have been infrequent, stand-replacing fires, and disclosed that there is conflicting science concerning ponderosa pine in the Black Hills. The overwhelming majority of evidence, however, indicates that frequent, low-intensity surface fires were the primary influence in ponderosa pine stands such as those in the Elk Bugs and Fuels project area. Please see the referenced Revised Forest Plan for a more complete discussion of the ecology of the Black Hills.
01-05	Wildlife issues: See responses to Comments 01-51 through 01-55.  The topics of the fire and fuels comments that are within the scope of this project are addressed in Chapter 3 – Physical Environment – Fire Hazard and Fuel Loading.

**OTHER FLAWS IN DEIS**

To begin with, the DEIS is very difficult to read and follow. Not only does the Table of Contents provide inaccurate page numbers, but it is difficult to discern the various sections and the context in which the issues are raised. It is also difficult to determine how some sections are connected and how the information within certain sections is relevant. For instance, there is a section called “connectivity to other areas” on page 114 where the FS provides information and analysis, yet it is difficult to determine what this discussion is related to or how it is relevant. It seems to be related to a discussion of the impacts to fuels, but follows a discussion on air quality and provides information that doesn’t seem relevant to fuels. Further, the air quality discussion appears out of place as well, although it is difficult to tell. It would be helpful if sections were numbered or outlined in some way, but this does not help our understanding of the document at the present.

01-06

The organization and presentation of an EIS is incredibly important to ensuring members the public and federal agencies have an adequate understanding of the impacts of major federal actions and the nature of the decision being made. Indeed, the CEQ regulations require that, “Environmental impact statements shall be concise, clear, and to the point.” 40 CFR § 1500.2(b). The fact that the Elk Bugs and Fuel DEIS is difficult to read and follow makes it entirely evident that the FS has not prepared an EIS that is concise, clear, and to the point. In turn, the poor organization and presentation of the DEIS most likely precludes us from submitting substantive and helpful comments to the agency, although we will attempt to respond as best as we can. Further, given the poor organization and presentation of the DEIS, it is highly likely that members of the public are not able to fully understand the nature of the Elk Bugs and Fuel project and the impacts the project will have on the human environment. We therefore request the FS correct the deficient DEIS by preparing a revised DEIS and recirculating the document for public comment in accordance with 40 CFR § 1502.9(a).

Additionally, the entire DEIS seems to present entirely inadequate assessments of environmental impacts. Primarily, the FS seems to have assessed environmental impacts by comparing alternatives, rather than assessing the actual impacts associated with each alternative. While comparing alternatives is a helpful means of understanding the impacts of each alternative, it provides no insight whatsoever into the magnitude and significance of the impacts. As an example, in discussing the impacts of the action alternatives to soil erosion, the FS states:

01-07

Alternative 3 has the highest potential for associated erosion issues and Alternative 2 has the least. This potential is reflected in the estimated potential rates summarized in Table 26. These higher potential rates reflect the amount of prescribed burning proposed, the number of soil acres proposed for treatment that involve moderate to very high erosion potential (once they have been disturbed) as well as some mass movement potential. There are 15.1 miles of new road proposed for construction on these soils. DEIS, p. 61

01-08

Yet, there is no real assessment of the impacts of soil erosion associated with each action alternative. There is no discussion of how the FS assessed the significance of the potential erosion rates in Table 26 or how these figures even relate to erosion potential associated with the project (e.g., how many acres will soil erosion occur on? how widespread will erosion be?, etc.). Other sections similarly present flawed assessments.

Comment	Response
01-06	The Forest Service has improved the format of the FEIS.
01-07	Effects of the alternatives are disclosed in Chapter 3. The effects analyses for all resource areas are more in-depth than a simple comparison of alternatives. Table 6 displays a comparison of the alternatives in regard to issues raised through scoping.
01-08	<p>Since soil erosion can potentially affect various aspects of soil and water resources, discussions relevant to assessing potential soil erosion impacts are located throughout the soil/water section of the DEIS. Such discussions are organized first by soil or water topic and then by alternative.. As a result, assessments of erosion-related impacts are found in the following areas of Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences:</p> <ul style="list-style-type: none"> <li>• Soil Erosion, Compaction, Heating, and Nutrient Loss</li> <li>• Mass Movement</li> <li>• Water Quality</li> <li>• Channel Morphology</li> <li>• Floodplains</li> <li>• Riparian Zones, and Wetlands</li> <li>• Cumulative Effects Inside the Project Area</li> </ul> <p>The EIS documents the significance of potential erosion rates and how these rates are associated with the project. The Water Erosion Prediction Project (WEPP) model was used to estimate probable soil erosion and sediment movement for each alternative. The EIS states that the estimated potential erosion values are best used for comparison of alternatives (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences).</p> <p>Soil type acreage figures used in calculating WEPP estimates are located in section C1.1 of the Project File.</p>

In addition to the aforementioned inadequacies in the DEIS, there are several other inconsistencies and flaws plaguing this NEPA document.

- Hydrology and Soils

Are any streams or stream reaches in the project area currently listed as impaired? If so, how will the FS ensure that these streams are adequately protected?

01-09

The DEIS states that, “A distance of 300 ft was selected to ensure that the effect of all potential runoff was evaluated (Nelson 2002).” DEIS, p. 48. While we expected Nelson (2002) to be a scientific paper that supports this methodology, it seems that it’s nothing more than a report prepared for a fuels reduction project. Therefore, where is the scientific justification for assuming potential sediment sources within 300 feet of streams are a good indication of the affected environment? Why isn’t it 500 feet or even 1,000 feet?

01-10

In the discussion of the existing channel morphology, there is no disclosure of the existing conditions of channel morphology within the project area. Instead, the agency seems to rely on reports prepared for other timber sales and it is unclear to what extent these timber sales occurred in the project area. Additionally, how can these reports accurately reflect existing conditions when they were prepared several years ago?

01-11

In the discussion of the direct and indirect impacts of soil erosion, the DEIS appears to only consider treatments that occur on soils with “moderate to very high erosion potential.” It is difficult to understand why the FS only considered impacts in these areas, especially since roads can cause erosion by cutting and destabilizing hillsides regardless of the erosion potential. We request the FS better explain why erosion potential was only considered exist on soils with moderate to very high erosion potential.

01-12

The DEIS also provides no information or analysis showing that the Elk Bugs and Fuel project will comply with Standard 1103. While the DEIS states that, “Compaction is expected in the area of existing landings and skid trails,” there is no disclosure as to the extent and magnitude of this compaction. While the FS claims that the impacts of compaction will be offset by utilizing landings and skid trails, there is no indication that this measure will ensure that no more than 15% of “a land polygon or mapped soil unit” will experience compaction, erosion, or displacement. Finally, the FS has not presented any information or analysis that suggests any relationship between BMP implementation and Forest Plan compliance exists. In other words, the agency has not shown that BMP implementation ensures compliance with Standard 1103. Therefore, the agency cannot simply assume that BMPs will ensure compliance with the Forest Plan.

01-13

Comment	Response
01-09	<p>The EIS notes that the project area contains no stream reaches designated as impaired on the State of South Dakota’s 2002 303(d) and 305(b) lists. The DEIS inadvertently omitted the impaired reach of Whitewood Creek (from Spruce Gulch to Sandy Creek). This information has been added to the FEIS in addition to information on stream protection.</p>
01-10	<p>The Revised Forest Plan for the Black Hills FEIS , Ch.3, pg. 87, indicates that sediment potential for degrading water quality increases with proximity to streams. Larger distances, such as 500 ft or 1,000 ft were not used as the amount of sediment, and the probability that it will reach the stream decreases with distance from a stream. As distance from a stream increases there is increasing amounts of vegetation that can act as a filter, trapping sediment.</p> <p>The use of 300 ft in evaluating potential road related sediment issues is referenced in the scientific literature (Burroughs, E.R. Jr., and J.G. King, 1989.; Belt, et. Al, 1992; Ketcheson and Megahan, 1996.).</p>
01-11	<p>Conditions of ephemeral and intermittent streams were observed in 2002 during field checks and documented in the DEIS (Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Channel Morphology). Information on the localized, existing influences of roads on these types of channels has been added to the FEIS. A detailed analysis of the existing influence of roads on stream channels is located in the Soils/Water report for the Roads Analysis, located in Section D of the Project File.</p> <p>The DEIS indicates that perennial streams were also observed during the 2002 field season (Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Streamflow Regimes). Additional information is located in the Roads Analysis Report in Section D of the Project File. These observations have been clarified in the FEIS.</p> <p>Major channel changes are typically due to increases in flow volume and/or sediment supply. Since these reports were completed 5 to 7 years ago, no major floods have occurred on these streams within the project area. Previous harvest activities have stated that no significant changes to channel morphology, due to sediment, were expected due to the application of BMP’s. As a result, no major change in channel morphology is believed to have occurred.</p>
01-12	<p>In Chapter 3, the section on Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects states that St. Onge, Tilford, Savo and Winetti soil series all occur on 0-2% slopes. Potential for erosion and mass movement after soil disturbance is rated as low. These soils typically occur in valley bottoms and lowlands. For all roads, regardless of location, erosion control would be accomplished via the application of required Best Management Practices (BMPs) (see also response to Comment 01-14).</p>
01-13	<p>Additional information has been added to the FEIS on the extent and magnitude of soil compaction. Site-specific BMPs and design criteria were defined in the Water and Soil Specialist’s Report (Project File, section C1.1) to insure compliance with Standard 1103. These measures are listed in Appendix B of the EIS. Page 36 of the Water and Soil Specialist’s Report states that the purpose of the measures and design criteria is to ensure compliance with the Revised Forest Plan and relevant legislation. See also response to Comment 01-15.</p>

We question the FS’s methodology in analyzing and assessing the potentially significant impacts of sediment production. Why were roads only within 300 feet considered as potential sediment sources? Furthermore, while the FS claims that sediment should decrease in the long term, how is this possible? Based on the cumulative

impacts discussion, the Elk Bugs and Fuel project area has experienced several timber sales and road construction projects, is experiencing several timber sales and road construction projects, and will experience several timber sales and road construction projects. Given the cumulative impacts of sediment production, how can the FS possibly assert that sediment will decrease? Additionally, the mere existence of roads causes erosion and sediment transport (Waters 1995), raising serious questions as to whether BMPs can effectively reduce this impact to insignificant levels. Additionally, in considering the impacts of sediment, why isn’t the FS analyzing and assessing the long-term impacts of sediment deposition? What are the impacts of sediment deposition associated with roads and road construction? How does this affect aquatic environments, especially fish habitat, and water quality?

We also question the FS’s claim that a simple reduction in road densities will render the cumulative road-related impacts of sedimentation insignificant or minimize them in such a way that ensures protection of water quality. Whether or not road densities are decreased, there is sedimentation associated with roads and road construction. Therefore, while road densities may be reduced, there is no indication that this will actually reduce sedimentation rates to levels that are insignificant and adequately protect water quality and aquatic resources.

Furthermore, we cannot understand how the FS can rely upon BMPs as appropriate mitigation measures. The DEIS presents no information or analysis showing that South Dakota BMPs are effective in protecting water quality, aquatic ecosystems, and soils on the Black Hills. Although some monitoring has been done of BMP effectiveness in South Dakota, we cannot see how these monitoring results provide any meaningful insights. Indeed, there are many flaws in the monitoring that render all results meaningless. For instance:

- The report presents no cumulative effects discussion. For instance, the report does not discuss historic impacts to watersheds and fails to disclose the existing conditions of the watersheds that were monitored. Most glaringly, is that the report presents no water quality data whatsoever.
- The report does not cite or present any water quality monitoring data to suggest any relationship exists between BMP effectiveness and the protection of water quality.
- The report provides no temporal context for its conclusions. There is no indication that five years down the road the BMPs will lead to increased problems. There is no information provided or the long-term effectiveness of BMPs.
- There is no attempt to distinguish existing conditions in any of the monitoring areas. The report does not disclose whether a stream is impaired or experiencing periodic water quality problems.
- The report is entirely based on qualitative measurements, which are helpful, but without a quantitative context are meaningless and cannot provide accurate insights into the ability of mitigation measures to effectively protect water quality.
- The report doesn’t distinguish between “met” or “exceeded” BMP effectiveness, thus lumping these two categories into one and biasing the overall results and data.
- The report was prepared by the Black Hills Forest Resource Association, making it very difficult to take the results of the monitoring seriously. We find it hard to believe that a group dedicated to promoting logging can effectively measure the impacts of logging. It is to their interest to bias the results of monitoring in favor of logging and thus, there is no credibility to the report.

Comment	Response
01-14	<p>The rationale for the 300-foot distance is explained in the response to Comment 01-10.</p> <p>Sediment decreases over time are expected for several reasons. Under all action alternatives, more miles of road would be decommissioned than constructed (Chapter 3, Table 25 (Summary of Existing and Alternative Road Densities), Table 31 (Summary of Roads Decommissioned and Built by Alternative)). Under all alternatives, the density of existing Forest Service Roads within 300 feet of streams and within riparian zones would decrease (Chapter 3, Table 25 (Summary of Existing and Alternative Road Densities); Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects section). As a result, cumulative erosion related to roads would be expected to decrease under all alternatives. Sediment increases related to prescribed burning and vegetation treatments would be of short duration due to the recovery of vegetation within two to three years (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Cumulative Effects). Since the planned and proposed timber sales would not all occur at the same time, the ongoing process of revegetation would also reduce the amount of sediment available for erosion. Many of the perennial and intermittent stream courses are vegetated; this vegetation acts as a sediment filter (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Cumulative Effects). In addition, the project area does not flow into a single drainage area and effects would be dispersed over two very large drainages.</p> <p>In addition to factors affecting sediment availability, State of South Dakota BMPs and standards and design criteria from the Rocky Mountain Region’s Watershed Conservation Practices Handbook (WCPH, FSH 2509.25) have been incorporated into the proposed action and alternatives (Appendix B) and into the Forest Plan (Revised Forest Plan FEIS p. III-85; Revised Forest Plan Appendix D). The Forest Service is required under the Clean Water Act to protect water quality and to implement BMPs (Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Water Quality section; Water and Soils Specialist’s Report p. 12; WCPH p. 4). BMPs have been approved by the State and Environmental Protection Agency as practicable and effective in reducing non-point sources of pollution, such as sediment, compatible with water quality goals (Revised Forest Plan Appendix D; SD-DENR pers. comm. 2003). When implemented correctly, design criteria defined in the WCPH meet or exceed State BMPs (WCPH 1999). As a result of the factors discussed above, and the application of BMPs and the WCPH, an overall reduction in sediment would be expected under any of the action alternatives.</p> <p>Roads are recognized as a source of sediment (Revised Forest Plan FEIS pp. III-30, 87, 90). The effectiveness of BMPs in controlling road-related sediment has been shown to relate directly to proper implementation (Schuler and Briggs 2000, SD-DENR pers. comm. 2003). When BMPs are properly implemented, studies show a correlation between these practices and reduction of sediment (Foster Wheeler 2003, Schuler and Briggs 2000, Syedbhargi, 1996).</p> <p>The DEIS analyzes and discusses the long-term impacts of sediment deposition on channel morphology and water quality (Chapter 3, Physical Environment – Hydrology and Soils – Cumulative Effects).</p> <p>Tables 25 and 27 summarize proposed road decommissioning within 300 feet of streams and within riparian zones (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects). These roads could potentially supply sediment to streams. The Physical Environment – Hydrology and Soils – Affected Environment – Direct and Indirect Effects – Water/Road Interactions section of Chapter 3 indicates that the Roads Analysis</p>

Comment	Response
	<p>Report contains a full inventory and discussion of existing road conditions associated with sediment deposition and effects to aquatic environments and water quality within the project area. This report is located in Section D of the Project File.</p> <p>Discussion of effects on fisheries is found in Chapter 3, Fisheries and in the Roads Analysis Report.</p>
01-15	<p>The Forest Service is legally required to implement BMPs, as discussed in the response to Comment 01-14. The issue of BMP effectiveness is also addressed in this response. BMP effectiveness is documented in the Water and Soils Specialist's Report, p. 36, Section C1.1 of the Project File. The paragraph was inadvertently left out of the DEIS and has been added to the FEIS.</p> <p>It appears that the itemized bullets under this comment are in reference to the Black Hills National Forest monitoring report. Information pertaining to the Forest-wide monitoring report is outside the scope of this project. It should be noted, however, that an interagency team (USDA Forest Service, Natural Resources Conservation Service, Wyoming DEQ, and the University of Wyoming) conducted the evaluations for the 2000/2001 BMP effectiveness monitoring audit on the Black Hills National Forest. As a result, the Forest is confident regarding the adequacy of the report findings.</p> <p>It should be noted that responses to land management activities, and the magnitude of the responses, are a function of climate, local geology and tectonic setting, topography, soils, and flow regime (Foster Wheeler 2003). Foster Wheeler notes that because of these differences, the magnitude of land responses to activities in Oregon, California, or Idaho would be more pronounced than if the same activities were conducted in the Black Hills. The road-related BMPs required under Appendix B of the FEIS have been determined to be effective and are approved for use by the State of South Dakota and EPA.</p>

Furthermore, although BMPs and some types of road maintenance and improvement provide some nominal reduction in the some types of damage caused by roads, they do not come close to reducing road impacts to ecologically insignificant levels. Several types of environmental havoc caused by roads cannot be reduced an iota by BMPs. For instance, the loss of LWD recruitment from roads in riparian areas and the interception of subsurface flows at road cuts cannot be ameliorated by BMPs. Ziemer and Lisle (1993) indicated that there are no reliable data indicating that BMPs are cumulatively effective in protecting aquatic resources. Espinosa et al. (1997) provided evidence from case histories in granitic watersheds in Idaho that BMPs thoroughly failed to cumulatively protect salmonid habitats and streams from severe damage from roads and logging. In analyses of case histories of stereotypical resource degradation by stereotypical land management (logging, grazing, mining, roads) several researchers have concluded that BMPs actually increase watershed and stream damage because they encourage heavy levels of resource extraction under the false premise that resources can be protected by BMPs (Stanford and Ward, 1993, Rhodes et al., 1994 Espinosa et al., 1997). Stanford and Ward (1993) termed this phenomenon the "illusion of technique."

01-15

Most glaringly though, is that the FS has not provided any information or analysis suggesting that BMPs render impacts to water quality insignificant. For instance, the agency simply asserts in the DEIS that, "With the application of these BMP's and mitigation measures, no significant impacts to water quality are expected." DEIS, p. 66. Yet, there is no information or analysis showing this statement to be true. Even the meager monitoring that may have been done on BMPs has not shown that these measures render impacts insignificant. Compounding the lack of information and analysis is that the FS has not even adequately explained how it assessed the potentially significant impacts of sediment production and transport and the potentially significant impacts of sediment to water quality in the Elk Bugs and Fuel area. Again, the agency simply provides a comparison of alternatives without explaining how the impacts associated with each alternative were actually assessed.

01-16

Also, while the FS explains that a wildfire could potentially occur in the project area and cause increased sedimentation rates, the agency has not provided any monitoring data to support this claim. The DEIS discloses that comparisons were made with the Grizzly Gulch fire area (DEIS, p. 65), yet there is no actual data to support this comparison. Furthermore, the agency seems to have greatly exaggerated potential sedimentation impacts associated with wildfire. According to the DEIS, the potential sediment volume that could be produced as a result of wildfire could range between 312 tons per year and 25,529 tons per year. While the DEIS does not explain how these figures were derived, this is an incredibly huge range that really questions whether the impacts of sedimentation associated with wildfire, besides as cumulative impacts, should even be considered. Additionally, it is difficult to believe that a large proportion of the area within 300 feet of a stream could actually be severely impacted by wildfire. Aren't riparian and streamside areas typically more fire resistant given the availability of moisture? We also question Glen Lewis's claim that there is a 28% probability of a wildfire of 10,000 acres occurring in the area in the next ten years (DEIS, p. 65). How was this figure derived and what does it even mean? The FS states that, "The greatest potential threat to water quality develops under the scenario of a large wildfire," but there is no support for this claim.

01-17

Additionally, if the FS can calculate the potential sediment volume associated with a wildfire (DEIS, p. 65), why can't the agency calculate the potential sediment volume associated with the Elk Bugs and Fuel project?

01-18

Comment	Response
01-16	<p>Legal requirements directing the Forest Service to implement BMPs were addressed in the response to Comment 01-14, as was the issue of BMP effectiveness.</p> <p>The EIS documents methodology used to assess potential sediment production and impacts of each alternative. Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Water Quality summarizes existing water quality conditions, based on available data. The EIS states that WEPP was used to estimate volumes of potential sediment generation, assumptions used, and how estimated values were derived (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects, and Section C1.1 Project File). The EIS clearly states that estimates are highly variable (up to <math>\pm 50\%</math>), depend on actual precipitation, and are best used for comparison of alternatives.</p> <p>Potential for sediment delivery to streams is discussed by alternative in the Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects and Water Quality sections. The EIS discloses the short-term effects related to sediment. It indicates that there should be no long-term sediment yield increase, and that sediment yields should decrease over time as a result of removing CDAs, implementing BMPs and design criteria, and recovery of vegetation (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Channel Morphology, Water Quality, and Cumulative Effects sections; Hydrology Roads Analysis Report).</p> <p>There is no NEPA requirement that analysis be strictly quantitative.</p> <p>Discussions of sediment-related water quality analyses have been clarified (Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Cumulative Effects in the Analysis Area).</p>
01-17	<p>The western edge of the project area was involved in the Grizzly Gulch fire and contains four of the five major soil types found throughout the project area (Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Soils, Erosion, Compaction, Heating, and Nutrient Loss). Soil erosion and sediment impacts are serious concerns associated with wildfire, and their effects are established in the literature (Interagency BAER Report 2002, Forest Plan FEIS 1996 (pp. III-32, III-55, III-90)). Effects can include loss of soil productivity, increased runoff, development of water-repellent soil layers, increased erosion and sedimentation, and degradation of water quality. Magnitude of effects is directly related to burn severity (Interagency BAER Report 2002, Forest Plan FEIS 1996, Freedman 1981, Campbell et al. 1977, Debano 1981, and <a href="http://www.northernrockiesfire.org/effects/soilindi.htm">http://www.northernrockiesfire.org/effects/soilindi.htm</a>).</p> <p>The EIS summarizes visual monitoring and modeling results, projecting increases in soil erosion rates due to the fire (Chapter 3, Physical Environment – Hydrology and Soils – Affected Environment – Soils, Erosion, Compaction, Heating, and Nutrient Loss; Interagency BAER Report 2002). Since the completion of the DEIS, additional soil monitoring has taken place on areas burned in the Grizzly Gulch fire that are within the project area. This information has been added to Chapter 3 in the location described above.</p> <p>EIS statements of potential sediment increases related to fire and associated mass movement events are based on the Interagency BAER Report (2002) and WEPP modeling (Chapter 3, Physical Environment – Hydrology and Soils - Environmental Consequences). Mudslides and debris flows related to the Grizzly Gulch fire did occur near Deadwood, South Dakota in August</p>

Comment	Response
	<p>2002.</p> <p>Sediment-related wildlife concerns were listed only for the American Dipper. The EIS states that application of identified BMPs, mitigation measures, standards, and guidelines would minimize sediment-related impacts (Chapter 3, Biological Environment – Wildlife Habitat).</p> <p>The EIS clearly documents that WEPP was used to estimate the effects of soil erosion and sediment generation, the assumptions used, and how estimated values were derived. The EIS clearly states that estimates are highly variable (up to <math>\pm 50\%</math>), depend on actual precipitation, and are best used for comparison of alternatives. It should be noted that three municipal watersheds are within the project area boundary.</p> <p>Probability of fire occurrence and fire size was determined using the Probacre software program. See Chapter 3, Fire Hazard and Fuel Loading.</p>
01-18	<p>The EIS analyzes potential sediment volumes for each alternative. Table 16 compiles estimated sediment volumes for Alternatives 1, 2, 3, and 4. Table 17 summarizes potential sediment sources within 300 feet of streams. Table 20 summarizes the potential increase in erosion due to vegetation treatments by alternative and watershed. Table 23 summarizes the range of potential sediment increases. (Chapter 3, Physical Environment – Hydrology and Soils - Environmental Consequences).</p>

We seriously question the FS's claim that no change in channel morphology or impacts to stream temperature will occur. Increased sedimentation as a result of the Elk Bugs and Fuel project could potentially widen streams while reducing their depth in depositional environments (Schumm et al. 1969, Richards 1982). Increases in width/depth ratio can increase stream temperatures, even in the absence of shade loss (Bartholow 2000). Indeed, significant increases in channel width over time have been documented in streams in Oregon with elevated sediment delivery (and, possibly, peakflows) from logging and road construction (Dose and Roper 1994). Bartholow (2000) analyzed the changes in stream width found by Dose and Roper (1994) and found that they had likely increased summer water temperatures. Alexander and Hansen (1985) also found that adding sand to trout streams caused pool loss, depth loss, and increased water temperatures significantly. Given these findings, we request the FS take another look at the direct, indirect, and cumulative impacts of sedimentation upon stream morphology and stream temperature.

01-19

Finally, we cannot believe that the FS would even consider logging in riparian areas, but apparently that's what the agency wants to do through the Elk Bugs and Fuel project (DEIS, p. 69). While the agency claims that logging in riparian areas is needed to create shaded fuel breaks, we question the need for such an action. Aren't riparian areas generally fire resistant to begin with? Aren't riparian areas generally characterized by moist conditions? It would seem that riparian areas, if left alone, would be adequate fuel breaks. On top of that, how will logging in riparian areas "maintain or improve long-term stream health and riparian ecosystem condition" in accordance with Forest Plan Standard 1301? It is very questionable whether the proposed treatments will comply with this standard, regardless of mitigation, because the treatments are aimed at "intensively" managing and removing the understory of these riparian areas and removing overstory trees. It is difficult to see how these treatments will not degrade riparian ecosystem condition and inhibit the ability of riparian areas to support species of plants and animals that are dependent upon such habitat (e.g., moist conditions, shade, riparian plants) and which are undoubtedly a part of the riparian ecosystem.

01-20

While the FS claims that site-specific measures will protect riparian areas, we can find no specific measure that remotely addresses the need to ensure compliance with Standard 1301 (DEIS, Appendix B). In fact, the only measure that seems to specifically relate to logging in riparian areas is simply a reiteration of Standard 1301 (DEIS, B-6). Simply listing the Forest Plan Standard can hardly ensure compliance with the Forest Plan and we seriously question the FS's claim that the Forest Plan will not be violated and that riparian areas will be adequately protected. Without any specific measures, there is no justification for concluding the impacts of thinning in riparian areas will comply with the Forest Plan and not significantly impact the environment.

01-21

And, while the FS claims that, "...the risk of a large wildfire and resultant potential increase in effects to soil and water are much greater than compared to each of the action alternatives," (DEIS, p. 69), we can find no information or analysis supporting this claim. It is difficult, if not impossible, to believe this to be true anyway. Further, the FS has failed to show that its lumbering in the Black Hills actually leads to any real reduction in fire risk and/or intensity. The Jasper Fire, the Grizzly Gulch Fire, and other fires that have recently occurred in the Black Hills have all burned in areas that have been logged, thinned, and roaded. We cannot understand how the FS can possibly assert that the impacts of the Elk Bugs and Fuel project are somehow outweighed by the speculative impacts of some catastrophic fire. We are further disappointed that the FS would somehow use the speculative impacts of some catastrophe which cannot even realistically be prevented or predicted to justify extensive logging and road construction in the Elk Bugs and Fuel area, especially in riparian areas.

01-22

Comment	Response
01-19	<p>The Forest agrees with that increased sediment loads can result in changes to channel morphology as indicated by Schumm and Richards. Discussions by Foster Wheeler, 2003 document that the type of effects to a hydrologic system, from land management activities, in one part of the country may be similar to those in other parts of the country. However, Foster Wheeler notes that the magnitude of any effects, including sediment input into a system, varies due to factors such as climate regime, surface runoff amounts and time, geology, and vegetation types. Several of the references are from coastal areas. Foster Wheeler notes that although the effects are the same in the Black Hills their magnitude is predicted to be lower as both California and Oregon have unstable geologic conditions due to their tectonic setting, the coastal environment and much steeper slopes in general than the Black Hills.</p> <p>BMP effectiveness is addressed in the response to Comments 01-14. In a 2003 letter to Native Ecosystems Council regarding a Biodiversity Conservation Alliance letter on the Mercedes Timber Sale, the South Dakota Department of Environment and Natural Resources stated that BMPs have been proven effective in reducing non-point source pollutants. Chapter 3 indicates that increases in channel width/depth ratios are not expected, and that as a consequence stream temperatures would not increase.</p>
01-20	<p>Although riparian zones generally contain more moisture than upland areas, fire has been found to be common in riparian areas (Olson 2000). In addition, Everett et al. (2001) suggest that riparian fires are fewer and more severe than on adjacent sideslopes, but were still able to determine a correlation between sideslope and riparian burns. Under milder conditions, riparian areas may serve as a barrier to wildfire, but under more severe conditions riparian areas may burn intensely, necessitating a reduction in flammable fuels if they are to be part of preconstructed fuelbreaks. Removal of conifers from fuelbreaks is designed to reduce the flammability of vegetation within the fuelbreak and encourage hardwood development.</p> <p>Compliance with Standard 1301 is addressed in Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Riparian Zones and Wetlands. Standard 1301 states that riparian conditions must be maintained or improved. BMPs are defined in the Chapter 3 location referenced above, and mitigation measures for fuel breaks, wetlands, and riparian areas have been added to Appendix B as previously discussed. Effectiveness of BMPs is addressed in the response to Comment 01-14.</p> <p>Implementation of approved BMPs and required mitigation measures would ensure compliance with Standard 1301.</p>
01-21	<p>In addition to the Forest Standard and Guides, and WCPHB design criteria, recommended for the protection of riparian areas, site specific measures were included in the soils/hydrology specialist report (Project File Section C1.1). These mitigations were added into the Mitigations Common to all Alternatives section of Appendix B of the DEIS.</p>
01-22	<p>Analysis regarding wildfires and resultant potential sediment increases, and the resultant effects to soil and water are documented within the DEIS. The Water Erosion Prediction Project (WEPP) was used to estimate the effects of soil erosion and sediment generation. The DEIS notes</p>

Comment	Response
	<p>that the greatest utility of the model is in allowing comparison between alternatives (DEIS, Ch. 3, Environmental Consequences, Direct and Indirect section). Estimates for potential erosion rates, sediment sources within 300 ft of streams, increases in potential erosion from vegetation treatments, potential sediment increase to streams are found in Tables 26, 27, 30, and 33. Analysis and interpretation of this data occurs in Ch. 3, Environmental Consequences, Soil Erosion, Compaction, Heating, and Nutrient Loss, Water Quality, Riparian Zones and Wetlands, and in Ch. 3, Cumulative Effects, Soil Erosion, Compaction, Heating, and Nutrient Loss, Mass Movement, Flow Regime, Water Quality, and Channel Morphology.</p> <p>Refer to response 3-37 for information regarding reduction of fire risk and intensity. Also see 01-20.</p>

Furthermore, we cannot fathom how thinning in riparian areas does not pose significant cumulative impacts, whether or not the activity is mitigated. According to several sources, riparian habitat throughout the Black Hills has been seriously degraded and in most cases completely destroyed (see e.g., USFS 1996, Marriott et al. 1999). Given the cumulative loss and degradation of riparian habitat over the last century, how is it possible that continued riparian degradation is not a significant impact? Additionally, there is no discussion of the cumulative impacts of livestock grazing, water developments (e.g., spring developments), or private land development in riparian areas.

01-23

- Roads

We are baffled as to how the FS believes decommissioning roads that are proposed to be used under a Special Use Permit is not allowable. In Appendix A of the DEIS, the FS responded to concerns that roads under special use permit would be closed by not decommissioning these roads. Does the FS believe it does not have the authority to close these roads or is the agency simply responding to this public concern by adjusting the proposed action? While we are totally in support of the FS responding to public concerns over the impacts of its actions and adjusting its proposals, we cannot help but feel that the agency is giving special preference to certain user groups while completely ignoring others. We therefore request the agency fully explain its rationale for giving special preference to this user group and fully explain how the existence of a special use permit precludes decommissioning roads to prevent future environmental harm.

01-24

Additionally, what is the nature of the special user permit? What cumulative impacts does this special user permit pose to the environment? How many miles are under special use permit?

- Fuels

Once again the FS has totally ignored the conclusions of pertinent research that has been done on the ecosystem, especially the fire history and regime, of the BHNF. In discussing the existing conditions of the “Fire Regime,” the agency characterizes the reports of Shinneman and Baker (1997) and Baker and Ehle (2001) as somehow flawed, yet there is no basis for this characterization. Indeed, in an attempt to somehow refute their findings, the FS cites numerous papers that are based on research that was not even conducted on the BHNF. Yet, Shinneman (1996) and Shinneman and Baker (1997) did their research in the northern Black Hills. How is this science not relevant or accurate? We request the agency give serious and objective consideration to the findings of this research and fully assess the existing conditions, as well as the impacts of the Elk Bugs and Fuel project to the human environment, with full consideration of these reports and their findings.

01-25

- White spruce

The FS claims, “Wildfire, a common occurrence before the 1900’s, limited white spruce to moist sites such as draw bottoms and steep north aspects.” DEIS, p. 127. Yet, where is the support for this statement? While wildfire undoubtedly occurred on the Black Hills, there is no indication that it was of such a frequency that limited the growth of white spruce only to draw bottoms and steep north aspects. In fact, studies by Shinneman and Baker (1997) and Baker and Ehle (2001) suggest that the infrequency of wildfires could have easily facilitated the development of more extensive and continuous stands of white spruce. Furthermore, several species, such as northern flying squirrel, three-toed woodpecker, marten, and some rare land snail species generally thrive in spruce dominated habitat. Additionally, these species are all reported to be sensitive to fragmentation (Reunanen et al. 2000, Imbeau and Desrochers 2002, Buskirk 2002, Frest and Johannes 2002). Given the lack of connectivity between spruce stands today, it seems highly likely that spruce was once more connected and accordingly more abundant to facilitate the persistence of these species. Indeed, the FS states that white spruce is climax on 3,616 acres, or 8% of the entire project area. Of course if a fire burned through the area, it would prevent the succession of white spruce as the dominant species. However, the assumption that white spruce never became the dominant species in areas where it is currently a climax species is facetious at best and is misleading. There is every indication that in areas where spruce is currently climax, the species would naturally become dominant if not disturbed.

01-26

Comment	Response
01-23	<p>The health and status of riparian habitat throughout the Black Hills is outside the scope of this project. The EIS does analyze potential effects on riparian habitat inside the cumulative watershed effects boundary for this project. Chapter 3 states that 106 out of 3,762 acres of riparian habitat are proposed for treatment under all action alternatives. Given the small percentage of riparian acreage involved and the implementation of mitigation measures and State-approved BMPs, long-term cumulative effects have been evaluated to be insignificant.</p> <p>Additional information on the cumulative impacts of livestock grazing, water developments, and private land development within riparian areas has been added to the FEIS.</p>
01-24	<p>The Forest Service knows of no compelling reason to decommission the roads used by the Black Hills 4-Wheelers group under special use permit (FSRs 168.2A and 168.2B). This five-year permit allows use of the roads for an annual three-day recreational event. During field reviews, Forest Service permit administrators have noted no negative environmental effects resulting from the event.</p> <p>Approximately 24 miles of road are under permit within the project area, with approximately 20 miles being National Forest System roads.</p>
01-25	<p>The EIS cites numerous papers on ponderosa pine ecology and fire history from both the local area (the Black Hills) and other areas with similar characteristics (the Rocky Mountains). This is a common practice in both environmental planning and scientific research. The EIS discloses that there is somewhat conflicting documentation on ponderosa pine in the Black Hills. The assessment of existing conditions and effects is based on the standards given in the Revised Forest Plan for the hazard, risk, and values in the project area. See Chapter 3, Physical Environment – Fire Hazard and Fuel Loading.</p>
01-26	<p>Habitat types where white spruce is climax are shown in Table 60 (Habitat Types and General Characteristics). In Chapter 3, Biological Environment – Forest Vegetation – White Spruce section states: “Where spruce is climax, it will become the dominant species if fire does not burn through the stand.”</p>

Additionally, the FS failed to adequately analyze and assess the potentially significant direct, indirect, and cumulative impacts to white spruce. For instance, the agency claims that no white spruce will be impacted, yet there is no discussion of the impacts of the Elk Bugs and Fuels project to white spruce in areas where the species is climax, but not dominant. Potentially, the removal of a ponderosa pine overstory would prevent the natural succession of spruce and inhibit the ability of this tree species to restore itself. This would in turn lead to a reduction in diversity. Finally, there is no discussion of cumulative impacts to white spruce.

01-27

- Snags

The DEIS states on page 157 that, “The ongoing mountain pine beetle epidemic within Elk Bugs and Fuel is expected to create numerous additional snags across the landscape in 4B and 4C stands under all action alternatives.” This statement is confusing at best. Isn’t the whole purpose of the Elk Bugs and Fuel project to “control” the mountain pine beetle epidemic? Won’t this “control” lead to a reduction in mountain pine beetle activity? This statement is further called into question given that the DEIS further discloses that, “Thinning would decrease short-term snag recruitment within treated stands since the residual trees would be less likely to succumb to insects, diseases, or natural mortality.” While there is no context provided for the word “short-term,” this statement indicates that the action alternatives will not lead to the creation of “numerous additional snags,” but rather will result in lower overall snag recruitment and, assumably, short and long-term snag creation. What is the deal with this discrepancy?

01-28

Additionally, while the FS claims that thinning will lead to the creation of larger diameter trees and larger diameter snags, the agency provides no temporal context for this potential benefit. There is no indication that the long term benefits of snag creation, which could happen a hundred years or more down the road, will effectively offset the adverse short term impacts to snags. Furthermore, there is no indication that larger diameter trees will be spared from logging in the future. What guarantee do we have that large diameter trees will not be logged in the future?

01-29

- Wildlife and wildlife habitat

The discussion of impacts to wildlife and wildlife habitat is incredibly lacking and seems to reflect not just misunderstanding over the impacts of the Elk Bugs and Fuel project, but pure and simple inconsideration. Indeed, the impacts of the Elk Bugs and Fuel project to wildlife habitat, save for wildlife habitat that is created by thinning (which the FS is coincidentally proposing through the project), appear to have been largely overlooked, misrepresented, ignored, exaggerated, and/or assumed. The entire section reads as if the FS is simply attempting to justify thinning, rather than conducting an objective, accurate, and adequate analysis and assessment of the environmental impacts associated with the project.

01-30

For instance, we can find no valid assessment of the impacts of the Elk Bugs and Fuel project to forest vegetation, namely dense mature and late successional forest habitat. For example, what is the significance of the effects of the thinning to ponderosa pine in SS 4C? This would help provide some insight into how the project will affect species of wildlife dependent on dense mature and old growth ponderosa habitat.

Additionally, we can find no analysis or assessment of the impacts of the Elk Bugs and Fuel project to the distribution of forest vegetation. This a glaring omission as the USFS is required to ensure wildlife habitat is “well distributed” in order to maintain viable populations of native vertebrate species. 36 CFR § 219.19.

01-31

Comment	Response
01-27	In Chapter 3, the Biological Environment – Forest Vegetation – Stand Diversity section of the FEIS has been updated to include a discussion of the effects on white spruce.
01-28	<p>Mountain pine beetle mortality is discussed in Chapter 3, Biological Environment – Forest Vegetation – Direct and Indirect Effects – Forest Insects: “Mountain pine beetle-caused mortality would likely continue in all alternatives, especially in dense, untreated pine stands.”</p> <p>Since all action alternatives refrain from altering overstory condition in some 4B and most 4C stands, these stands are expected to continue to experience tree mortality and snag creation, mostly due to mountain pine beetle.</p> <p>Thinning of mature ponderosa pine has been shown to increase growth rates of residual trees. Thinned stands are expected to produce larger trees (and snags) sooner than unthinned stands. Larger snags on the landscape increase the potential for use by a greater number of cavity-nesters. Due to lower mortality rate, however, short-term (10-20 years) snag numbers in treated stands are likely to be lower in comparison to unthinned stands. Treatments would not reduce short-term or long-term snag densities below those identified in Revised Forest Plan standard 2301. While there is no guarantee that the larger trees will not be harvested in the future, development of stands with large trees maintains a wider spectrum of management options for the future.</p>
01-29	Refer to the previous response above. Also note that snag and green tree retention was estimated for years 2003 and 2023 (Table 76, Post Treatment Green Tree Retention on Pine Sites by Aspect and Watershed). The cumulative effects analysis of snags and green tree retention was based on reasonably foreseeable future actions.
01-30	The Elk Bugs Project does not propose to treat stands classified as old-growth (structural stage 5). In addition, most ponderosa pine 4C stands would remain untreated. Additional structural stages are distributed throughout the project area. Refer to 01-33 for information on vegetation tables.
01-31	See response above.

The cumulative effects discussion is also entirely lacking. The DEA discloses that only 41.7 acres of ponderosa pine in SS 5, or old growth, exists in the project area. However, we know this is not a natural phenomenon. Old growth forest has been described by early expeditions into the Black Hills (see e.g., Dodge 1876, Newton and Jenney 1880, Graves 1899, Shinneman 1996, Shinneman and Baker 1997). Furthermore, Mehl (1992) reports that, “Virtually all of the accessible areas have been cut over at least once since the mid-1870’s” and that “Since little old growth ponderosa pine remains in the Black Hills old growth will have to develop from existing stands” (p. 114). Additionally, loss of old growth in ponderosa pine forests has been attributed primarily to human activities such as logging and livestock grazing (Baker and Ehle 2001). The lack of old growth is a potentially significant impact, brought about by past logging and livestock grazing. Yet these cumulative impacts are altogether ignored in the DEA. Instead, the USFS appears to believe that the lack of old growth is an irreversible and irretrievable consequence of past activities and therefore an impact that cannot possibly be mitigated by the present timber sale. If this is the case, then we request the USFS state this logic. This would be helpful for us as it would clearly indicate the agency does in fact consider logging and other activities to pose irreversible and irretrievable commitments of resources. However, if this is not the case, then we fully expect the USFS to analyze and assess the impacts of past, present, and reasonably foreseeable impacts to old growth ponderosa pine forest in the Power timber sale area. We fully expect the USFS to analyze and assess how the Elk Bugs and Fuel project, in harvesting stands of ponderosa pine in SS 4C, 4B, and 4A, will affect the future abundance and distribution of old growth forest.

01-32

While the FS may believe the entire BHNF was historically one big open ponderosa pine forest, we can find no information or analysis supporting this assessment and the USFS appears only to be justifying the extensive thinning of dense, mature forest. If the USFS believes pictures from the Custer Expedition are somehow the “real” representation of the natural BHNF, then we request the agency address the findings of Shinneman and Baker (1997). They state:

[M]ost of the Custer photos were taken in two locations (the Deerfield and Custer areas), almost always centered around mountain parks or prairies, and they may not be a representative sample of conditions in the Black Hills forest. In addition, early photographers, such as Custer’s, were often concerned mainly with aesthetics and not with documenting characteristic forest conditions. (p. 1282-1283).

Additionally, Shinneman and Baker (1997) report, “[M]any of the Custer photos document dense, pre-EuroAmerican forests. Moreover, the photo comparisons demonstrate a younger and denser forest often exists today, rather than older and denser, likely as a result of the elimination of the original forest by logging or severe fires” (p. 1284-1285).

Furthermore, Baker and Ehle (2001) report that ponderosa pine forests were historically more dense than today’s condition. This is supported by other critiques and research (see e.g., Shinneman 1996, Shinneman and Baker 1997, Frest and Johannes 2002). The abundance and distribution of dense, mature forest in the Elk Bugs and Fuel project area is most likely far below historical figures. This is supported by others (see e.g., Anderson and Crompton 2002). Anderson and Crompton (2002) state, “Despite increasing demands for timber harvest, large tracts of unlogged, mature forest should be retained throughout the Black Hills” (p. 372). We ask the USFS to fully address these findings in the context of the impacts of the Elk Bugs and Fuel project.

01-33

Comment	Response
01-32	<p>The Forest Service recognizes that there is a lack of late succession and old structure on the landscape in the project area. Proposed treatments would “thin from below”, removing smaller trees and retaining the largest trees in the overstory. These treatments would not only maintain and promote development of large trees on the landscape, but also increase the potential for retention of a long-term forested overstory by reducing the potential of a stand-replacing event. These treatments would also retain a wide range of future management opportunities.</p> <p>Effects on forest structural stages are disclosed in Chapter 3, Biological Environment – Wildlife Habitat – Affected Environment and Environmental Consequences. Refer to the response to Comment 01-33 for information on vegetation tables.</p>
01-33	<p>The treatments proposed in the alternatives (see Chapter 2, Vegetation Treatments) were developed in response to the purpose of and need for action and issues raised during scoping, described in Chapter 1. Effects on forest structural stages are disclosed in Tables 77, 78, 79, and 80.</p> <p>Historical literature for ponderosa pine ecosystems in the Black Hills and the West in general suggests that open, “park-like” forests were the norm, altered by periodic fires (Weaver 1951, 1959, Cooper 1960, 1961, Covington and Moore 1994). Extensive literature and photographic documentation specific to the Black Hills (Jenney 1880, Graves 1899, Progulski 1974, Sieg 1992, Parrish et al. 1996, Ball and Shaefer 2000) suggest that, generally, ponderosa pine is denser and more extensive in the Black Hills now than historically. See also responses to Comments 01-04 and 01-25.</p>

Additionally, the cumulative effects of livestock grazing to forest vegetation are entirely ignored. Belsky and Blumenthal (1996) state:

The studies cited above strongly suggest that livestock as well as fire suppression, logging, and other anthropogenic activities, have contributed to altered ponderosa pine and mixed conifer forests throughout the Interior West. Not only have cattle and sheep helped convert the original park-like forests into dense stands of less fire-tolerant species, but they have changed the physical environment by reducing fire frequencies, compacting soils, reducing water infiltration rates, and increasing erosion. (p. 324)

They also emphasize, “The effects of livestock grazing are, of course, not homogenous across the western landscape... Nonetheless, the similarities of the changes occurring in grazed low- and mid-elevation forests through the Interior West suggest that livestock grazing has had profound effects over a wide range of conditions” (p. 324). It is entirely evident that livestock grazing on the Black Hills affects ponderosa pine stand condition and this must be addressed.

- Northern Goshawk

We are very happy to see that the FS has decided to remove all potential goshawk nesting habitat from harvest consideration. This is a very good first step toward ensuring this rare and imperiled raptor is adequately protected and its persistence ensured in the BHNF.

However, we are confused as to whether treatments will or will not occur in goshawk PFAs. The DEIS states that, “Since no treatments expected to alter stand habitat structure are proposed in the PFAs, all alternatives will maintain the current balance of structural stages.” This statement is unclear though – are treatments being proposed within PFAs? If so, how is it possible that the current balance of structural stages will not be impacted.

Additionally, what is the current balance of structural stages within goshawk PFAs? Is there sufficient VSS 6 or VSS550? If not, what are the cumulative impacts of this habitat shortage (i.e., what is the cumulative impact of having little to no nesting habitat?)?

Comment	Response
01-34	<p>Livestock grazing is one of the actions considered in the analysis of cumulative effects (Chapter 3, Biological Environment – Forest Vegetation – Cumulative Effects). The Black Hills National Forest has developed standards and guidelines directed towards the proper management of livestock in order to prevent or limit soil compaction, reduced water infiltration rates, and soil erosion. Monitoring data indicate that graminoid density and biomass are such that tree recruitment and fine fuel production are not affected by livestock. This is especially true in areas of pine overstory. Based on site-specific management needs, Northern Hills Ranger District has implemented more stringent allowable-use standards in certain locations. The Revised Forest Plan FEIS also states that the proper amount of livestock grazing will enhance the success of pine regeneration. There are no site-specific data from the Black Hills that indicate livestock grazing has harmfully affected ponderosa pine stand condition.</p>
01-35	<p>No treatments are proposed under any alternative in PFAs established around historic nest sites or in PFAs established in empty territories. Because no treatments are proposed, the current balance of structural stages for PFAs surrounding historic nest sites was not calculated.</p> <p>Recent wildfires include Grizzly Gulch (2002), which burned 6,282 acres in the project area; Little Elk (2002), and piedmont elk which burned approximately 300 acres on National Forest System land; and the Jasper and Elk Mountain Complex fires in 2000, which burned a total of 94,116 acres on National Forest System land. Burned area totals 100,698 acres. The Grizzly Gulch fire burned approximately 2,729 acres at moderate or high severity. Estimates of burn intensity and stand mortality were not available for other fires. Also see 01-39 below</p> <p>Effects on black-backed woodpecker are disclosed in Chapter 3, Wildlife Habitat.</p> <p>Permitting wildfires to burn in the Black Hills is generally prohibited by the Revised Forest Plan and is beyond the scope of this document.</p> <p>All action alternatives would retain over 9,000 acres in ponderosa pine structural stage 4C stands. Refer to the structural stage distribution tables in Chapter 3, Wildlife Habitat – Environmental Consequences.</p>

- Black-backed woodpecker

The FS claims that “recent wildfires across the Forest have created a substantial amount of suitable habitat” for the black-backed woodpecker. While burned areas are indeed excellent habitat for black-backed woodpeckers, the FS has not shown that “a substantial amount of suitable habitat” currently exists on the Black Hills or that this habitat is even well distributed. For instance, existing research has found that black-backed woodpeckers only exploit burned areas for 2-3 years after fires (Murphy and Lehnhausen 1998). Additionally, while the black-backed woodpecker has been reported to have utilized the Jasper Fire burn area and burn areas to the south of Jasper, there is no information or analysis showing that the species is now using the Grizzly Gulch fire area or other burned areas in the BHNF. We request that the agency provide information and analysis showing that “a substantial amount of suitable habitat” exists.

Additionally, we are extremely concerned that the FS has entirely overlooked potentially significant impacts and failed to adequately assess the impacts of the Elk Bugs and Fuel project. For instance, the species depends heavily on wood-boring beetles for survival and thus insect outbreaks and burned areas provide excellent habitat and are necessary for the survival of populations (Hutto 1995, Murphy and Lenhausen 1998, Imbeau et al. 1999, 2001, Mohren 2002, Powell et al. 2002). Dense mature and late successional forests are also essential to ensure persistence of the species in between largescale fire and insect episodes (Settingington et al. 2000, Mohren 2002, Anderson 2003). Snags are also vital and snag shortages may be limiting populations on the Black Hills (Mohren 2002). The species also responds negatively to logging (Saab and Dudley 1998, Hutto 1995, Murphy and Lenhausen 1998, Imbeau et al. 1999).

Black-backed woodpeckers are most likely suffering on the Black Hills due to low snag densities, a lack of old growth, and insect and fire prevention and control measures (Mohren 2002). Indeed, even the DEIS recognizes that habitat trend is downward for the species (DEIS, p. 165). Mohren (2002) makes several suggestions for how to mitigate impacts to the black-backed woodpecker, stating:

Permitting wildfires to burn in the Black Hills may improve the population size of the species. (p. 89)

Allowing stands to mature and become decadent will help provide foraging habitat for black-backed and three-toed woodpeckers. (p. 89)

Creating stands that become susceptible to wood-boring beetles will provide an abundance of available prey for both these [black-backed and three-toed woodpecker] species. (p. 89)

Anderson and Crompton (200) make a similar recommendation, stating “Despite increasing demands for timber harvest, large tracts of unlogged, mature forest should be retained throughout the Black Hills” (p. 372). It is difficult to see how the Elk Bugs and Fuel project provides any of these benefits and thus, how the black-backed woodpecker will not be significantly impacted or the species’ viability jeopardized as a result.

01-35

Indeed, while the FS claims that a “potential for some level of mortality and snag creation in the near future” exists (DEIS, p. 165), this seems to conflict with the agency’s assessment of the impacts of the Elk Bugs and Fuel project to insect activity and tree mortality. For instance, the DEIS states that snag recruitment is likely to suffer. Additionally, the DEIS states that, “Proposed treatments in Alternatives 2, 3, and 4 would decrease the risk of mountain pine beetle caused losses in ponderosa pine stands.” DEIS, p. 134. It is difficult to see how the black-backed woodpecker will not be significantly impacted or the species’ viability jeopardized as a result of this project. We therefore request the FS explain how it assessed impacts to black-backed woodpecker and the rationale used to justify the viability determination for the species.

01-36

Furthermore, while the FS states that the Grizzly Gulch burn area has created 3,020 acres of suitable habitat, there is no information or analysis supporting this statement. Are the trees that burned of sufficient diameter to encourage black-backed woodpecker foraging? Is this amount of habitat even enough to support the species? What was the intensity of the fire that burned in the 3,020 acres? Given that black-backed woodpeckers prefer areas that have experienced stand replacing fires (Anderson 2002), an understanding of the burn intensity in the Grizzly Gulch area is crucial to understanding the cumulative impacts of the Elk Bugs and Fuel project.

01-37

Finally, since the black-backed woodpecker is a management indicator species, we request the FS present population trend data to provide a legally and biologically valid context for the agency’s conclusion that the Elk Bugs and Fuel project will not jeopardize the viability of the species and its habitat. Additionally, is the black-backed woodpecker currently viable? Is the species’ habitat well distributed across the project area and the BHNF? While the FS may claim that viability is outside the scope of the analysis, we seriously question this claim. The FS makes viability determinations in the DEIS, indicating that the agency assessed the impacts of the Elk Bugs and Fuel to viability, so species viability is clearly not outside the scope of the analysis.

01-38

- three-toed woodpecker

The DEIS’s discussion of the three-toed woodpecker is vague and cursory and again asserts, with no supporting information and analysis, that the Grizzly Gulch fire area has provided habitat and that the Elk Bugs and Fuel project will not significantly impact the species or jeopardize its viability. Yet, there is no discussion of the project will affect populations by reducing the availability of prey, of nesting and foraging habitat, and how the project will affect the overall population of the species.

01-39

For instance, several reports have documented the importance of late successional forest that has been undisturbed by timber management and where natural processes, such as insect outbreaks and wildfires are allowed to occur (Settingington et al. 2000, Imbeau and Desrochers 2002, Mohren 2002). Aspen also appears to be an important nest tree in the Black Hills (Mohren 2002). Furthermore, researchers have found that simple snag retention standards may be inadequate to protect the three-toed woodpecker (Imbeau and Desrochers 2002). Imbeau and Desrochers (2002) state, “Among snags, which were preferred over live trees for foraging, recently dead trees were used more often than more deteriorated ones. Among live trees, more deteriorated, dying trees were preferred over healthy ones.” (p. 229). The two conclude, “Demonstrating the importance of recently dead or dying trees – as opposed to all types of snags – for foraging three-toed woodpeckers, illustrates the importance of natural disturbance dynamics as a key factor ensuring woodpeckers persistence in managed forests” *Id.* Based on

01-39

this existing research, it doesn't even seem that the FS's proposed snag and green tree retention standards are adequate for the three-toed woodpecker. Therefore, we request the FS revisit its analysis of impacts to the three-toed woodpecker and ensure that the species is adequately protected as a result of the Elk Bugs and Fuel project.

Additionally, Mohren (2002) makes several suggestions for how to mitigate impacts to the three-toed woodpecker, stating:

Permitting wildfires to burn in the Black Hills may improve the population size of the species. (p. 89)

Allowing stands to mature and become decadent will help provide foraging habitat for black-backed and three-toed woodpeckers. (p. 89)

Creating stands that become susceptible to wood-boring beetles will provide an abundance of available prey for both these [black-backed and three-toed woodpecker] species. (p. 89)

Anderson and Crompton (200) make a similar recommendation, stating "Despite increasing demands for timber harvest, large tracts of unlogged, mature forest should be retained throughout the Black Hills" (p. 372). Even the DEIS recognizes that habitat trend is downward for the species (DEIS, p. 165), indicating there is a need to protect more of the species' habitat. It is difficult to see how the Elk Bugs and Fuel project provides any of these benefits and thus, how the black-backed woodpecker will not be significantly impacted or the species' viability jeopardized as a result.

Finally, since the three-toed woodpecker is a management indicator species, we request the FS present population trend data to provide a legally and biologically valid context for the agency's conclusion that the Elk Bugs and Fuel project will not jeopardize the viability of the species and its habitat. Additionally, is the three-toed woodpecker currently viable? Is the species' habitat well distributed across the project area and the BHNF? While the FS may claim that viability is outside the scope of the analysis, we seriously question this claim. The FS makes viability determinations in the DEIS, indicating that the agency assessed the impacts of the Elk Bugs and Fuel to viability, so species viability is clearly not outside the scope of the analysis.

01-39

Comment	Response
01-36	<p>Analysis of black-backed woodpecker suitable habitat shows no net change in available suitable habitat as a result of any alternative. Viability statements are based on the potential for a species to persist both inside and outside the project area given proposed treatments. No alternative is expected to negatively impact populations since all alternatives a) would retain suitable habitat throughout the project area and b) do not propose actions that are detrimental at the population level. No treatments are proposed in old-growth.</p>
01-37	See response to Comment 01-35.
01-38	The determination of “not likely to result in loss of species viability” is based on the alternatives’ lack of impacts on suitable habitat.
01-39	<p>Analysis of three-toed woodpecker suitable habitat shows no net change in available suitable habitat would result from any alternative.</p> <p>The primary habitat type described for three-toed woodpecker is mature spruce (Imbeau and Desrochers 2002, Murphy and Lehnhausen 1998, Kistler and Fager 1981), as well as lodgepole pine in some areas of the country (Bull et al. 1986, Goggins et al. 1987) and aspen associated with spruce (Mohren 2003). No spruce stands would be treated under any alternative. Also see response to Comment 01-33.</p> <p>Mohren (2002) stated that the combined Jasper, Rogers Shack, and Elk Mountain fires made approximately 130,000 acres of burned habitat available to black-backed and three-toed woodpeckers. Black-backs were observed actively using the burned habitat by the end of the 2001 field season. The Grizzly Gulch Fire burned approximately 6,282 acres within the project area, of which 2,729 acres were considered to have been moderately or severely burned.</p>

- pygmy nuthatch

It is very difficult to believe that the Elk Bugs and Fuel project can impact individual pygmy nuthatch and not affect the viability of this bird’s population. According to monitoring reports (Panjabi 2001, 2003), pygmy nuthatch are very, very rare. Panjabi (2003) states, “Pygmy nuthatch is a rare bird in the Black Hills. We recorded only two individuals on point-transects in 2002, at different locations than where we recorded the species in 2001” (p. 75). However, it does not seem that the FS took into consideration the fact that the pygmy nuthatch is so rare. These reports also identified key survey needs, stating, “More specific efforts aimed at locating individuals and important breeding areas are needed” Id. Yet, it does not seem that the FS has taken any action to locate individuals and important breeding areas. Overall, it doesn’t appear the FS has addressed relevant information suggesting the Elk Bugs and Fuel project may jeopardize the viability of the pygmy nuthatch. This is very disconcerting, especially since the bird is a management indicator species.

Compounding the failure to consider key information is the fact that the analysis and assessment in the DEIS is incredibly flawed. For instance, the FS asserts that the Elk Bugs and Fuel project will increase potential habitat for the bird, yet there is no support for this statement. First, a sufficient amount of trees greater than 20” in diameter doesn’t even exist in the project area, so it is difficult to see the benefits derived from this measure. Second, even though green trees may be retained, there is no indication that they will die and become snags any time soon. Thus, the FS has failed to provide any temporal context for its assessment. It is difficult to see how prospectively meeting snag standards can provide any protection at the present from the cutting of the species’ habitat.

Additionally, while the FS may believe this species’ habitat could be increased through the creation of open pine forest and mature, single-story stands, it is difficult to understand how simply creating more open pine forest can increase habitat for this species. How is it possible that open pine forest, without snags, can actually create habitat for this species? Additionally, the species needs very large diameter trees, so unless there is some understanding of existing and future tree diameters, it is further difficult to see how creating more open pine forest can benefit this sensitive species. As it is, there is no justification for the FS’s viability determination and no indication that this rare bird and its habitat will be adequately protected.

- flammulated owl

Contrary to the FS’s claim, there is no indication that thinning increases flammulated owl habitat. Given the species’ rare status throughout its range, its dependence upon old growth ponderosa pine, and the fact that this species’ existence has only recently been confirmed on the BHNF, there is significant concern over the impacts of forest management activities – especially logging and thinning – to this species and its habitat. Special attention must be given to the owl to ensure its habitat is adequately protected and that the owl and its habitat do not suffer adverse impacts as a result of the Cement timber sale (see e.g., Linkhart et al. 1998, Linkhart and Reynolds 1997, Reynolds and Linkhart 1992, 1987a, 1987b). We request the agency provide information and analysis showing that this species does not respond negatively to logging and thinning before assuming this species will not be adversely impacted as a result of the Elk Bugs and Fuel project.

We also request the FS do some surveys for this rare owl before proceeding with the proposed project. We can’t believe that the FS has done nothing to better understand this species in the Black Hills besides continue to justify logging in its habitat. We request the FS gather the necessary data to make reasoned and accurate conclusions regarding the impacts of logging, thinning, and other activities to this species and its habitat before implementing the Elk Bugs and Fuel project.

01-40

01-41

Comment	Response
01-40	<p>Pygmy nuthatch is described as a pine obligate that favors large trees (Kistler and Fager 1981) and open canopy conditions (USGS WWW) with snags averaging 19 inches in diameter (Ghalambor 2003). Surveys in the Black Hills by Panjabi (2002) and Mills (1994) found few or no sightings of this species. Ponderosa pine overstory in stands proposed for treatment in the project area averages 8 to 13 inches in diameter. Small tree size in treatment units, along with the scarce nature of this species, indicates a low potential for occupancy. Treatments in stands with larger diameter trees (structural stage 5) would likely warrant surveys for pygmy nuthatches to avoid impacts on species distribution, but stands with larger tree diameters are not proposed for entry under this project.</p> <p>Thinning treatments are designed to retain the largest trees in a given stand while accelerating growth of these trees by reducing competition. Future suitability of habitat within the project area is likely to be improved by proposed treatments since larger tree diameters would be achieved more rapidly than under the no-action alternative. No timeline for achieving suitable habitat was provided in the DEIS due to variability in growth and stand conditions. Instead, the rate of growth was compared between action and no-action alternatives.</p> <p>Suitable pygmy nuthatch habitat should include the presence of large snags. Thinning treatments that reduce stand densities to 60-80 square feet of basal area are still at risk of pine beetle mortality, although the risk is reduced from existing conditions. Residual stocking density of 60-80 trees per acre is well above historic densities, described by Graves (1899) and summarized by Parrish et al. (1996) as ranging from an estimated 5 to 11 trees per acre, based on trees averaging 20 inches in diameter. This indicates that treatments retain an abundance of trees available for snag recruitment through time.</p>
01-41	<p>The responses to Comment 01-40 are also applicable to the flammulated owl. Refer to Chapter 3, Wildlife Habitat for more information.</p>

- marten

While the FS claims that the marten and its habitat will experience no direct or indirect impacts, this statement is flat out wrong. Indeed, it is believed that ponderosa pine stands area used as habitat for this sensitive species (Buskirk 2002). This is because so little spruce currently exists on the Black Hills and because in order for the species to disperse between spruce stands, the marten inevitably must use ponderosa pine as dispersal habitat. Buskirk (2002) states, "...it would be physically impossible for a marten to assemble a home range in the Black Hills without include some or a majority of ponderosa pine-dominated forest" (p. 17). Therefore, it is entirely likely that dense mature and late successional ponderosa pine stands in the Elk Bugs and Fuel project provide suitable habitat for the marten and potentially support marten. Given that the species has a fairly large home range, the FS must also consider the possibility that martens outside of the project area may use the project area.

01-42

Additionally, the DEIS states that, "...Mitigation #4 (Appendix A) is expected to retain suitable connective habitat for marten," yet we cannot find any "Mitigation #4" and furthermore, there are no mitigation measures listed in Appendix A.

- fringe-tailed myotis

The FS is entirely wrong in concluding this bat subspecies will not be adversely impacted by the Elk Bugs and Fuel project. Indeed, not only are these bats sensitive to disturbance, but they are dependent to some extent on the existence of snags. Indeed, several reports have documented the importance of snags with loose bark as roost sites (Cryan 1997, Cryan et al. 2001, Mattson et al. 1996, Rabe et al. 1998), which is often found in late successional forest stands, yet there is no mention of this habitat preference or the impacts of the Elk Bugs and Fuel project to this habitat type.

01-43

Additionally, it is even questionable whether forest plan snag densities currently adequate to offset the impacts of logging in the next year to five years? Rabe et al. (1998) recommended snag densities around 10.6/hectare (4.04 snags/acre) for a community of bats and Mattson et al. (1996) recommended snag densities of 21/hectare (8.50 snags/acre) for silver-haired bats. Current snag standards require a minimum of 2 snags per acre and a maximum of 4 snags per acre, depending on aspect, strongly indicating that even snag management direction may not provide adequate snags for bats like the fringe-tailed myotis in the future. Additionally, snags used by reproductive females in the Black Hills were found to be 43.2 +/- 12.1 cm (~17.28 +/- 4.84 inches) in diameter (Cryan et al. 2001) and the mean day roost snag diameter in northern California was found to be 120.8 +/- 5.3 cm (~48.32 +/- 2.12 inches (Weller and Zabel 2001). Current snag standards require a minimum diameter of 10 inches, strongly indicating that existing snag diameter standards are inadequate to protect the fringe-tailed myotis.

Comment	Response
01-42	Expert interviews show a general consensus that potential marten habitat consists of spruce stands and pine stands with a significant spruce component (USDA 2000). These stands were avoided for treatment, consistent with Forest Plan standard 3215. In addition, 4B and 4C stands are expected to retain an adequate travel network for marten.
01-43	Schmidt (2003) summarizes suitable roosting, maternity, and hibernating habitat as including caves, mine tunnels, and buildings. Cryan (1997, 2001), however, found fringe-tailed bats in the Black Hills roosting in rock crevices as well as in cavities of ponderosa pine snags (rather than under exfoliating bark). Analysis for this species in the FEIS has been modified to include the use of snags as potential habitat. The adequacy of Revised Forest Plan snag guidelines is outside the scope of this analysis.

- Black Hills mountainsnail (*Oreohelix cooperi*), Cockerell's striate disk (*Discus shimeki*), snail species of concern

We can find no analysis and assessment of impacts to snail species of concern besides the Black Hills mountainsnail and Cockerell's striate disk. Additionally, how did the FS conclude that the Black Hills mountainsnail and Cockerell's striate disk are only associated with spruce stands (DEIS, pp. 172-173)? Based on surveys throughout the 1990's, these species are typically associated with undisturbed riparian and dense mature and/or late successional habitat (Frest and Johannes 2002). Although spruce is sometimes a component of their habitat, it is not the only component. Indeed, these species have been found in areas associated with ponderosa pine, springs, seeps, birch, aspen, and other components.

The DEIS also presents no mitigation measures to protect known colonies of snail species of concern.

Furthermore, the FS's analysis and assess of impacts to the Black Hills mountainsnail and Cockerell's striate disk is entirely lacking. For instance, while the FS may claim that snail colonies will not be directly impacted, even logging and road construction and reconstruction that does not directly impact a snail colony may be detrimental to the species and its habitat. The creation of "edge effect," which is defined by Baker and Dillon (2000) as "the suite of differences in microenvironment and biota across edges between forest and nonforest or early successional vegetation" (p. 221, citations omitted), can be detrimental to land snails and their habitats (Murcia 1995). Logging and road construction creates edge effects between cut and uncut forest (i.e., the edge) and as a result, creates an environment that is different from interior or undisturbed forest habitat. Logging and road construction most often creates edges between older forest and younger forest, but in some cases (i.e., clearcutting) creates edges between older forest and no forest. The creation of edges often leads to increased levels of light, increased air and soil temperatures, lower soil moisture, increased exposure to wind and other weather, and decreased diversity when compared to interior or undisturbed forest (Baker and Dillon 2000). Additionally, edges amplify or alter the effects of natural disturbances, such as fire (Baker and Dillon 2000). However, the impacts of "edge effect" often extend beyond the edge itself (Murcia 1995, Baker and Dillon 2000). The depth-of-edge influence, or the distance over which an edge environment differs from an undisturbed forest environment, may extend 60 meters (approximately 197 feet) or more from an edge into undisturbed forest (Baker and Dillon 2000). Thus, the detrimental impacts of logging and road construction (i.e., increased insolation, increased ground temperature, increased exposure, decreased moisture and humidity, and decreased diversity) may be experienced by Black Hills mountainsnail and Cockerell's striate disk colonies and their habitat even though logging may be occurring 60 or more meters away. The FS must address this potentially significant impact.

Additionally, logging and road construction may indirectly impact Black Hills mountainsnail and Cockerell's striate disk colonies by negatively affecting suitable habitat and local hydrology. Frest and Johannes (2002) state, "...to effectively conserve the colony, consideration must be given to the surrounding plant community, the dynamic aspect of snail colonies, and, perhaps most importantly, the geology (physiography, geomorphology, and ground water hydrology, minimally) of the site" (p. 14). Logging and road construction may reduce vegetative diversity and degrade and/or destroy vegetation communities that support snail species of concern colonies, which in turn limits the ability of colonies to expand and/or disperse (Frest 2003, Frest and Johannes 2002). According to Frest (2003), most snail species of concern colonies are ephemeral, or shift back and forth through time. Therefore, while the species may not exist in a suitable habitat at the present, it is very likely that the species may inhabit suitable habitat in the future (Frest 2003). Logging may also adversely affect local hydrology (Frest 1994, 2003). Surface water and ground water are closely related on the Black Hills (USFS 1996). Accordingly, logging may indirectly reduce the availability of water for absorption into the ground by increasing insolation, increasing ground temperature, increasing exposure, and decreasing moisture and humidity (USFS 1996, Frest 1984, Frest 2003). In turn, this may reduce the availability of water for springs, seeps, or other moist areas that typically support snail species of concern (USFS 1996, Frest and Johannes 2002, Frest 1984, 2003). The FS must address these potentially significant impacts.

01-44

Comment	Response
01-44	<p>Frest and Johannes (2002) describe <i>Oreohelix strigosa cooperi</i> as occurring on calcareous (limestone) soils, as well as in parts of lower Spearfish Canyon. Habitat includes lowland wooded areas and talus slopes. Frest and Johannes also state that the species is essentially confined to one major drainage (Spearfish Creek). Analysis for this species in the FEIS has been modified to account for the above information.</p> <p>Frest and Johannes (2002) describe <i>Discus shimiki</i> as occurring in litter in rich lowland forest, generally on shaded north slope bases, often bordering or ranging slightly onto stream floodplains. This species is locally abundant in very limited colonies, and is most frequently found in <i>Picea glauca</i> (white spruce) stands.</p>

- northern leopard frog and tiger salamander

There is no context given whatsoever for the agency's viability determinations for these species and the agency's assessment of impacts to these species. Despite the fact that all action alternatives will adversely impact these species by thinning in riparian habitat, there is no information or analysis provided that remotely suggests these species and their habitats will not be significantly impacted or that their viability will not be jeopardized.

Finally, the FS totally avoided discussing the cumulative impacts of livestock grazing and mining. Instead, the agency claims that, "These factors are outside the scope of this project and would be addressed in Grazing EAs or mining plans of operation." While the FS may be correct that the direct and indirect impacts of grazing and mining are required to be addressed in Grazing EAs (or EISs) and mining plans of operation, the cumulative impacts of these activities must be addressed in the Elk Bugs and Fuel DEIS. This is especially necessary given that the project will directly and indirectly impact these sensitive amphibians. The FS needs therefore to conduct an analysis and assessment of the cumulative impacts of livestock grazing and mining.

- Brown creeper

Recent studies have all found that brown creepers are only found in unmanaged stands of ponderosa pine and that logging has a negative impact on the bird (Thomas 1979, Crompton 1994, Dykstra 1996, Dykstra et al. 1999, Rumble et al. 2000, Anderson and Crompton 2002). Studies have also documented the importance of "interior" forest to the brown creeper, or large blocks of mature to late successional forest (Anderson and Crompton 2002). Anderson and Crompton (2002) recommend that:

Despite increasing demands for timber harvest, large tracts of unlogged, mature forest should be retained throughout the Black Hills. These areas contain the habitat characteristics associated with many timber-gleaning insectivores and ovenbirds. As the landscape becomes more fragmented, the value of large contiguous tracts of dense forest will become increasingly important to maintain populations of interior-dwelling birds. (p. 372)

While the DEIS provides no analysis of how the Elk Bugs and Fuel project will affect fragmentation and patch size in the project area, it seems reasonable to conclude that the proposed logging and road construction will continue to reduce patch size, reduce the availability of interior forest, and overall degrade thousands of acres of brown creeper habitat. In light of these negative impacts, how is it possible that this species will not be significantly impacted? Furthermore, while the FS will retain all trees over 20" in diameter, it is difficult to understand how this measure will adequately protect the brown creeper, especially given its negative reactions to logging and its need for interior forest habitat. And, while the FS is obviously not going to cut the entire project area, it is still difficult to understand how the negative impacts of the project will be offset by the availability of "uncut" habitat. The DEIS provides no information or analysis showing how much brown creeper habitat will remain, whether this habitat is well-distributed, and whether or not this "uncut" habitat will be treated in the near future (i.e., experience reasonably foreseeable impacts).

Finally, no population trend data is presented to provide any context for the habitat declines that will occur as a result of the Elk Bugs and Fuel project. The FS has thus failed to provide the most minimal context for its assessment, that is the agency's requirement that population trends of management indicator species be monitored and integrated into project-level analyses and decisions to ensure the viability of native species will be maintained. We request the FS present population trend data to ensure a valid and accurate assessment of impact to the brown creeper and to other species dependent upon dense mature and late successional forest habitat. If such data is not currently available, we request the agency obtain such data before proceeding with the Elk Bugs and Fuel project.

01-46

- American dipper

The agency's analysis and assessment of the impacts of the Elk Bugs and Fuel project to the American dipper are entirely lacking and only underscores the need to immediately list this imperiled bird under the Endangered Species Act.

The agency's entire analysis and assessment seems to boil down into one unsupported statement: "...application of mitigation measures, Forest Plan standards and guidelines, and Best Management Practices related to roads and timber harvest, is likely to minimize sediment delivery as well as minimize potential impacts to water quality and dipper habitat." DEIS, p. 164. Yet, all indications are that this statement is flat out wrong. Indeed, the FS has been implementing mitigation measures, BMPs, and Forest Plan standards and guidelines for years and the dipper is still facing extinction in the Black Hills (Backlund 2001, Biodiversity Conservation Alliance et al. 2003). Backlund (2001) states, "Until it can be shown that Spearfish Creek is not the only source population of dippers in the Black Hills, the dipper population must be considered at high risk of extirpation." This statement does not seem to have prompted the FS in the least bit to do more to protect water quality in the Elk Bugs and Fuel project area. Indeed, given the flawed Soils and Hydrology report, it is entirely evident that this bird and its habitat will not be adequately protected and that it will be pushed closer to extinction as a result of the Elk Bugs and Fuel project.

01-47

Additionally, since the dipper is an indicator of water quality and stream health (Feck 2002), it is highly questionable whether streams in the project area are healthy. Indeed, the dipper used to occur on Elk Creek, but now this creek is heavily impacted by excessive sediment (Backlund 2001). It is further difficult to believe that the Elk Bugs and Fuel project, in contributing more sediment and exacerbating water quality problems that already exist in the project area, will adequately protect the dipper and its habitat.

We request the agency seriously and objectively analyze and assess the impacts of the Elk Bugs and Fuel project to the American dipper and its habitat. We request the agency utilizes the sources in Biodiversity Conservation Alliance et al. (2003) to ensure an adequate analysis and assessment.

Comment	Response
01-45	Expert interviews reflected little expectation that logging would have adverse impacts on tiger salamander or northern leopard frog, since these species are not known to use upland forests (USDA 2000). Experts identified grazing, non-native fish stocking, and off-road vehicles as concerns, all of which are outside the scope of this document. Consideration of livestock grazing in cumulative effects analysis has been added to the FEIS.
01-46	<p>Panjabi (2003) describes brown creeper density in the Black Hills as closely tied to mature and old growth forest. Patch size of structural stages 4C and 5 (dense, mature and old growth stands) would not change under any alternative since these stands are not proposed for entry. White spruce, which Panjabi describes as highly selected by this species, is exempted from harvest entry as well.</p> <p>Fragmentation analysis has been added to the EIS and shows no significant shifts in patch size for mature stands within the project area.</p>
01-47	Table 27 of the EIS shows that predicted sediment input to three stream systems identified as potential American dipper habitat would decrease under all action alternatives. Actions are not expected to impact water quality or dipper habitat.

- Mountain sucker

We cannot understand how the FS determined average mountain sucker populations in the various streams in the project area. We request the agency explain the methodology used to estimate populations and to what extent these streams were surveyed.

01-48

Additionally, the agency’s conclusions regarding the status of the mountain sucker in the Black Hills are very questionable. According to Erickson (2002), the mountain sucker has declined significantly since historical times and is currently found in only 27 of 133 streams sampled in South Dakota. The fish has also disappeared from a number of streams in the Black Hills (Erickson 2002). Given Erickson’s (2002) findings – mainly that the mountain sucker has declined and disappeared from several streams in the Black Hills – it is difficult to believe that the current status of the species is somehow “normal” or indicative of historical distribution. We request the FS explain how the mountain sucker is somehow “doin’ fine.”

Additionally, regardless of the status of the mountain sucker, the agency has not adequately analyzed and assessed the impacts to this fish. Mainly, the DEIS relies on the flawed soils and hydrology section to assume that impacts to water quality will not be significant and will not jeopardize the mountain sucker and its habitat. The assessment also seems to be nothing more than a comparison of alternatives and really provides no insight into the actual magnitude of impacts. Finally, no population trend data is provided, despite the fact that such data does exist. It is therefore impossible to tell how the Elk Bugs and Fuel project will affect aquatic species in the BHNF and there is no context or support for the agency’s conclusion that the viability of the mountain sucker and aquatic species and their habitats will be maintained.

01-49

Finally, there is no discussion of the cumulative impacts of nonnative fish (i.e., trout) to mountain sucker (e.g., Isaak et al. 2002).

01-50

- Impact to other species

- northern flying squirrel

We request the FS fully analyze and assess the potentially significant impacts of the Elk Bugs and Fuel project to the northern flying squirrel. Indeed, there exists a wealth of research on northern flying squirrel, making it entirely feasible for the FS to analyze and assess the impacts of the project to the species. For instance, Reunanen et al. (2000) found that fragmentation of breeding habitat is a huge threat to the northern flying squirrel and that management of boreal forests must maintain a deciduous structure. The two recommended that forest managers recognize these habitat needs and strive to maintain and restore breeding habitat connectivity and maintain deciduous forest structure. Additionally, Bakker and Hastings (2002) recommended that forest managers retain small groups of large snags and live trees with “conks, heavy mistletoe infections, and top damage” (p. 1632).

01-51

This is to ensure an adequate supply of northern flying squirrel den trees. Furthermore, numerous reports have emphasized the importance of ectomycorrhizal fungi and lichen in the diet of the northern flying squirrel (Hall 1991, Hayward and Rosentreter 1994, Rosentreter et al. 1997). Typically, late successional or old growth forest structure has been found to provide the most abundant forage for northern flying squirrel (Carey 1999).

We therefore request the FS ensure the Elk Bugs and Fuel project does not adversely impact the northern flying squirrel and its habitat. We request the FS develop measures to ensure connectivity between northern flying squirrel breeding habitat is maintained or restored, to maintain deciduous structure (even in pine stands), retain small groups of large snags and live trees exhibiting natural damage, and ensure that adequate foraging habitat is provided for. The FS must fully analyze and assess the potentially significant impacts of the project to the northern flying squirrel.

01-51

Comment	Response
01-48	<p>Criteria used to determine average population of each species is noted at the bottom of each table in Chapter 3, Biological Environment – Fisheries – Existing Condition. The tables show survey data from 1997, 1998, and 2000 and the number of sites surveyed. The South Dakota Department of Game, Fish and Parks (SDGFP) conducted the surveys.</p> <p>Recent stream surveys suggest that mountain sucker occurs in much of the historic Black Hills range (Isaak et al. 2002). Density estimates derived with a closed-population, removal-estimator methodology (Zippin 1958) exist for the South Dakota portion of the Black Hills. SDGFP personnel routinely collect this information during stream surveys. Based on the most recent set of surveys (Meester 1993-1999), mountain sucker densities ranged from 7 to 13,399 fish/ha, with an average of 1,262 fish/ha and a median of 265 fish/ha for 59 sites where this species occurred. Comparison of the early distribution of mountain sucker in the Black Hills with the recent distributions suggests that changes over the last century have been minimal (Isaak et al. 2002). According to the Black Hills National Forest 2001 Monitoring Report for Management Indicator Species, no trends in mountain sucker population densities were observed for four stream sites that were repeatedly sampled in the 1990s, suggesting stability within the core of its range.</p>
01-49	<p>Analysis of impacts on fishery resources is found in Chapter 3 of the EIS under Biological Environment – Fisheries – Environmental Consequences.</p> <p>Population trend data is found in Chapter 3 of the EIS under Biological Environment – Fisheries – Existing Conditions.</p>
01-50	<p>The cumulative effects of stocking non-native fish are discussed in Chapter 3 of the EIS under Biological Environment – Fisheries – Environmental Consequences.</p>
01-51	<p>Stands suitable for northern flying squirrel (structural stages 4C and 5) would have minimal change under all alternatives. In addition, no treatments are proposed that would eliminate overstory cover or limit movement of this species across the landscape.</p>

- ruffed grouse

There has been concern expressed over the ruffed grouse due to its preference for aspen, which is at a very low abundance throughout the BHNF. Additionally, aspen stands are highly fragmented in the Black Hills, inhibiting the ability of this grouse to disperse into new territories. We are concerned that several treatments in pine stands may also affect aspen stands in the project area, possibly destroying or degrading ruffed grouse habitat. We request the FS fully analyze and assess the potentially significant impacts of the project to the ruffed grouse and its habitat.

01-52

- American kestrel

Monitoring on the Black Hills has found the American kestrel to be less abundant than historically reported, raising concerns that its population may be in trouble (Panjabi 2001, 2003). Panjabi (2003) states, “This species has probably declined in the Black Hills, perhaps due to the encroachment of forests into open areas and a shortage of large snags for nesting” (p. 42). These findings strongly indicate the American kestrel may not be viable or that its viability is at risk. We request the FS fully analyze and assess the potentially significant impact of the Elk Bugs and Fuel project to the American kestrel.

01-53

- western wood-pewee

Monitoring on the Black Hills has found the western wood-pewee to be less abundant than historically reported, raising concerns that its population may be in trouble (Panjabi 2001, 2003). Panjabi (2003) states, “Although it is still locally common, the data presented here suggest that Western Wood-Pewee has declined significantly over the past decades” (p. 59). These findings strongly indicate this species may not be viable or that its viability is at risk. We request the FS fully analyze and assess the potentially significant impacts of the Elk Bugs and Fuel project to the western wood-pewee.

01-54

- Sharp-shinned hawk, Cooper’s hawk

Monitoring on the Black Hills has found these accipiter species to be in very low abundance on the BHNF, suggesting the species are either rare or experiencing declines (Panjabi 2001, 2003). Panjabi (2003) reports, “Although *Accipiter* hawks have low detectability, it appears that Sharp-shinned hawk presently occurs in very low density in the Black Hills, and it is probably less abundant now than in earlier times, given the intensity of survey effort and low number of observations” (p. 36). Additionally, only four Cooper’s hawk were found on the BHNF in 2002 (Panjabi 2003). These findings strongly indicate the sharp-shinned hawk and Cooper’s hawk may not be viable or that their viability is at risk. We therefore request the FS fully analyze and assess the potentially significant impacts to the sharp-shinned hawk and Cooper’s hawk.

01-55

Comment	Response
01-52	Treatments in and adjacent to aspen stands are designed to maintain or restore the deciduous forest component. Therefore, these treatments are expected to provide long-term benefits to ruffed grouse.
01-53	Kestrels are likely to inhabit areas more open than those found on National Forest System land in the project area. Most suitable habitat is found outside the forest fringe and in valley bottoms in private ownership.
01-54	Panjabi (2003) found the western wood pewee in a variety of habitats, including riparian and pine communities. Haldeman (1980) describes this species as nesting in deciduous or pine forest stands with large trees and partly open canopy. Nearby openings are also necessary habitat requirements. Proposed treatments would increase acreage of open-understory pine stands, maintain and enhance deciduous stands, and accelerate growth of larger conifers, all of which are likely to improve habitat for this species in the long term. Declines described by Panjabi may be the result of stand densification and conifer encroachment in open areas caused by decades of fire exclusion.
01-55	Both sharp-shinned and Cooper's hawks are most likely to nest in stands with high canopy closure and dense tree spacing (Reynolds, no date), which equate to structural stages 3C and 4C. The action alternatives will retain most 4C stands. Precommercial thinning is proposed on up to 1,200 acres of structural stage 3C stands, changing structural stage to 3A or 3B. These stands are, however, likely too young to support nesting by either sharp-shinned or Cooper's hawk.

- lynx, a federally threatened species

In the final rule to list the lynx in the contiguous United States, the USFWS (2000) stated:

Lynx observations in Nevada, North Dakota, South Dakota, Iowa, Nebraska, Indiana, Ohio, and Virginia are considered individuals dispersing subsequent to periods of cyclic high lynx numbers in Canada. During the early 1960's, lynx moved into the Great Plains and Midwest Region of the U.S. associated with an unprecedented cyclic high in Canada. These records are outside of the southern boreal forests where most lynx occurrences are found. We conclude that these unsuitable habitats are unable to sustain lynx and that these records represent dispersing individuals that are lost from the metapopulation unless they return to boreal forest. We do not consider these states to be within the contiguous U.S. range of lynx.

65 Fed. Reg. 16059 (citations omitted). However, with regards to historical lynx observations in South Dakota, historical records and the best available science flatly contradicts the USFWS. Indeed historical records and the best available science strongly indicate the lynx historically inhabited the Black Hills of western South Dakota and possibly northeastern Wyoming as a permanent resident and the USFS must address this information.

#### Lynx in the Black Hills

Reports have indicated that the lynx historically inhabited the Black Hills. Turner (1974) states:

Lynx canadensis is typical of the heavily forested boreal regions of North America, but formerly occurred sparingly in suitable habitat in the Northern Great Plains region. Grinnell (1875:79) and Dodge (1876:323) both indicated that this species previously inhabited the Black Hills, and there have been several recent reports of lynx in the area. (p. 263)

Turner (1974) further reports that one lynx was taken from Meade County in the Black Hills in 1944 and that two specimens that had been shot in the northern and western Black Hills were examined between the years 1964 and 1974. Some of these reports may coincide with the increase in lynx populations in Canada during the 1960's (USFWS 2000). However, the reports of Grinnell (1875) and Dodge (1876) strongly indicate the lynx historically inhabited the Black Hills as a permanent resident – not as dispersing individuals.

Indeed, both Grinnell and Dodge were part of the first two European-American expeditions into the Black Hills and were the first European-Americans to report on the natural resources of the Black Hills. Grinnell accompanied the Custer expedition into the Black Hills in 1874 and Dodge led the next expedition in 1875 (Ludlow 1875, Dodge 1876).<sup>[3]</sup> This is significant in two regards. First, their reports were the first European-American

accounts of the natural resources of the Black Hills. Thus, their reports most likely reflect an accurate baseline with which to assess historical conditions on the Black Hills. Second, both the Custer and Dodge expeditions entered the Black Hills with a mission to inventory natural resources. Both Ludlow (1875) and Dodge (1876) provide extensive accounts of various natural resources of the Black Hills, including flora and fauna. Finally, the fact that the first two European-American expeditions into the Black Hills both reported lynx is uncanny. These consistent findings lend a significant level of accuracy to the reports, strongly indicating that the lynx historically inhabited the Black Hills as a permanent resident.

Although there are few subsequent reports of lynx in the Black Hills, the lack of further reports is most likely attributable to the extensive exploitation of timber and wildlife that occurred after European-American settlement. Reports of gold in the Black Hills in 1874 marked the beginning of European-American settlement and the beginning of widespread and intensive exploitation of timber, wildlife, and other resources (Graves 1899, Shinneman 1996, USFS 1996). In his 1891-1897 forest inventory, Graves (1899) reported widespread logging and human-caused fires had already impacted much of the Black Hills. Additionally, from the years 1875 through 1898, over 1.5 billion board feet of timber was cut in the northern Black Hills alone (USFS 1948). As a result of hunting pressure, other mammals, like the grizzly bear (*Ursos arctos horribilis*), Audubon's bighorn sheep (*Ovis canadensis auduboni*), Manitoban elk (*Cervus eleaphus subsp.*), and gray wolf (*Canis lupus*), were either extinct or very near extinction on the Black Hills by the 1900's (Froiland 1990, Raventon 1994, USFS 1996). It is likely this early unchecked exploitation of timber and wildlife caused the decline and possible extirpation of the lynx on the Black Hills following the reports of Grinnel and Dodge. Indeed, such activity is believed to have caused declines of lynx elsewhere within its range (USFWS 2000).

Overall, historical reports of lynx inhabiting the Black Hills seem accurate and valid. These reports indicate that the lynx historically inhabited the Black Hills as a permanent resident (Grinnel 1975, Dodge 1876, Turner 1974), but that extensive habitat modification and unchecked hunting pressure has most likely caused the decline and possible extirpation of the species (Graves 1899, Shinneman 1996, USFS 1996), similar to what has occurred in other portions of the species' contiguous United States range (USFWS 2000). The Black Hills should therefore be considered as within the contiguous United States range of lynx.

### Lynx Habitat in the Black Hills

While historical reports of lynx inhabiting the Black Hills strongly indicate that the Black Hills are within the contiguous United States range of the lynx, the historical and present-day existence of suitable habitat further supports these findings.

- Forest habitat

The USFWS (2000) reports that spruce forest is utilized extensively by the lynx, although other forest types may also be utilized, depending on the abundance of prey and down woody debris, as well as climate. The Black Hills support white spruce forest (Hoffman and Alexander 19897), which is utilized by the lynx elsewhere within its range (USFWS 2000). White spruce forest on the Black Hills is locally abundant in the higher elevations, canyons, and moist sites, and appears to exist primarily in the northern and central Black Hills (Graves 1899,

01-56

01-57

Hoffman and Alexander 1987,USFS 1996). See, Figure 2. There is currently over 20,000 acres of white spruce in the Black Hills.

However, there is evidence that white spruce forest was once more prevalent in the Black Hills. Graves (1899) reported “considerable bodies of spruce” in the northern part of the Limestone Range and that many northern slopes supported “pure” stands of spruce (p. 76). Graves (1899) reported the distribution of white spruce to be generally “in the northeastern section of the hills, above an elevation of about 4,500 feet” (p. 76). However, as is evident today, the northeastern Black Hills support little to no spruce (Figure 2), an indication that the tree species’ distribution has been reduced and may be below historical levels.

Additionally, while Graves (1899) reported 15,000 acres of spruce to exist on the Black Hills, he also reported that much of the forest had been impacted by fires and logging. In particular, fires in 1881, 1891, and 1893 impacted much of the northern and central Black Hills and were reported to impact much of the Limestone Range (Graves 1899). Graves (1899) also reported heavy logging to have occurred throughout the northern and central Black Hills. And, although white spruce was not an economically important tree species, the tree was utilized for mine timbers, firewood, and sometimes for lumber (Graves 1899). These early reports strongly suggest that the historical extent of white spruce in the Black Hills may have been reduced by fires and logging.

Recent analysis of historical natural disturbance in the Black Hills also indicates white spruce may have been more prevalent in the Black Hills. Based on climatic and structural conditions, as well as historical reports, the central and northern Black Hills are believed to have been historically dominated by infrequent stand-replacing wildfires that impacted large areas (e.g., 19,000 hectares) of the forest (Shinneman 1996, Shinneman and Baker 1997). As a result of this disturbance regime, the northern and central Black Hills are believed to have historically supported large, contiguous, and dense patches of old, even-aged forest (Shinneman 1996, Shinneman and Baker 1997). As white spruce is very sensitive to the effects of fire (Graves 1899, USFS 1996), the infrequent occurrence of stand replacing fires most likely stimulated the development of large, dense stands of spruce in the central and northern Black Hills. Thus, Graves’ (1899) reports of “considerable bodies of spruce” in parts of the Black Hills seem consistent with the natural disturbance regime.

Unfortunately, the natural disturbance regime of the northern and central Black Hills has been greatly altered due to the effects of human activities (Shinneman 1996, Shinneman and Baker 1997). The occurrence of widespread historical and contemporary logging, road construction, and other activities (e.g., cultivation of land, largescale mine development) usually precludes the occurrence of largescale, stand replacing fires and the subsequent development of large, contiguous, dense, and old forest in the Black Hills (Mehl 1994, Shinneman 1996, USFS 1996, Shinneman and Baker 1997, Shinneman and Baker 2000). Furthermore, logging and associated activities (e.g., road construction, thinning) on the Black Hills directly inhibits the development of large, contiguous, dense, and old forest by reducing stand density over large areas, fragmenting the forest into smaller stands of varying ages, and by promoting the development of young stands over old stands (USFS 1996, Shinneman and Baker 1997, Shinneman and Baker 2000). Indeed, management of the forest in the Black Hills has typically emphasized reducing forest density across the landscape (USFS 1996). Additionally, as white spruce is a climax species (USFS 1996), it is highly likely that widespread logging precludes the establishment and persistence of spruce in potentially suitable habitats. Because of the impacts of historical and contemporary forest management on the natural disturbance regime and forest structure of the northern and central Black Hills, it is highly likely that white spruce was historically more abundant on the Black Hills.

The status of certain native species on the Black Hills also seems to attest to the historical abundance of white spruce. Currently, the three-toed woodpecker (*Picoides tridactylus*) population on the Black Hills is dangerously low (Mohren 2002, Panjabi 2003). Recent reports suggest the bird's population is around 20 individuals (Mohren 2002). Observations and studies of the three-toed woodpecker in the Black Hills and elsewhere have shown the value of spruce forest to the health of the species' population (Imbeau and Desrochers 2002, Mohren 2002, Panjabi 2003). In particular, three-toed woodpeckers seem to be closely associated with mature spruce stands where natural disturbance processes (e.g., fire, insect outbreaks) are allowed to take place (Id.). The low population of three-toed woodpecker in the Black Hills has been attributed to the control or elimination of natural disturbance processes and the lack of mature spruce forest (Mohren 2002). Mohren (2002) states, "Currently...white spruce is limited in the Black Hills area, and this may be an explanation for the low population size of the three-toed woodpecker" (p. 90). The status of the three-toed woodpecker and its habitat in the Black Hills also strongly suggests that white spruce forest was historically more abundant.

Finally, while the USFWS (2000) did not identify ponderosa pine (*Pinus ponderosa*) forest as potential lynx habitat, it is highly likely that ponderosa pine historically provided lynx habitat in the Black Hills. In the northern and central Black Hills, the ponderosa pine grows naturally dense throughout its lifetime (Shinneman 1996, Graves 1899). This phenomenon results in the development of large, dense stands of large-diameter ponderosa pine that continue to grow until fire, insect outbreak, or other disturbances occur (Shinneman 1996, Graves 1899). As Duthie (1930) stated:

The western yellow pine of the Black Hills has a peculiar habit, when the old forest has been killed or cleared away, of reproducing in dense thickets. I say this is a peculiar habit because it is unlike the behavior of the same pine in forests farther west where the seedlings will not stand crowding, and come up sparsely. But in the Black Hills the western yellow pine has acquired a characteristic of the lodgepole pine in that the seedlings come up in dense stands crowding each other, yet clinging tenaciously to life until growth practically reaches a stalemate....Some of these dense stands may be found where the trees are two hundred years old and the deadlock persists.

The resultant ponderosa pine forest also typically supports abundant down woody debris, an important component of lynx habitat (Mehl 1992, USFS 1996). While not reported as lynx habitat, it seems reasonable to conclude the dense ponderosa pine forest that is naturally typical of the northern and central Black Hills may have historically provided suitable lynx habitat in the Black Hills.

**Figure 2. Current Distribution and Abundance of White Spruce on the**

**Black Hills National Forest. White spruce covers less than 2% of the entire forest. This percentage does not distinguish between mature or young forest (USFS data).**

- Climate

The USFWS (2000) indicates climate may determine where suitable lynx habitat exists. The climate of the Black Hills also suggests that suitable lynx habitat historically occurred on the Black Hills and occurs today. Indeed, the northern and central Black Hills are normally cooler, receive heavier snowfalls, and receive more moisture than the southern Black Hills (Froiland 1990, USFS 1996). The USFS (1996b) states, “The Northern Hills is typically cooler, has heavier snowfalls and more thunderstorms with resultant higher annual precipitation (26 inches in the Deadwood-Lead area)” (p. III-7). The cooler and wetter climate of the northern and central Black Hills strongly indicates that suitable habitat for the lynx exists and historically existed in the Black Hills (USFWS 2000).

- Prey

Although the snowshoe hare (*Lepus americanus*) may not have historically inhabited the Black Hills (USFS 1996), the forest does support many other species that may be prey for the lynx (USFWS 2000). The white spruce and ponderosa pine forests of the northern and central Black Hills and their associated vegetation (e.g., aspen (*Populus tremuloides*), birch (*Betula* spp.), box elder (*Acer negundo*), willow (*Salix* spp.), dogwood (*Cornus* spp.)) support red squirrel (*Tamiasciurus hudsonicus dakotensis*), red-backed vole (*Clethrionomys gapperi brevicaudus*), northern flying squirrel (*Glaucomys sabrinus*), ruffed grouse (*Bonasa umbellus*) and other species of mammals and birds that the lynx may prey upon (Turner 1974, USFS 1996, Marriott et al. 1999, USFWS 2000, Panjabi 2003, Hall et al. 2002). As the lynx is at the southern periphery of its range in the Black Hills, the cat may not depend entirely on snowshoe hare as prey and it does not appear that the absence of the hare would preclude the existence of the species in the Black Hills (USFWS 2000). Historical reports suggest the lynx in the Black Hills may depend on prey other than snowshoe hare (Turner 1974).

Overall, the present-day and historical existence of suitable lynx habitat in the Black Hills strongly corroborates historical reports of lynx inhabiting the Black Hills. However, it is entirely likely that extensive habitat modification has most likely caused the decline and possible extirpation of the species (Graves 1899, Shinneman 1996, USFS 1996), similar to what has occurred in other portions of the species’ range in the contiguous United States (USFWS 2000). Because of the present-day and historical existence of suitable lynx habitat, the Black Hills should be considered as within the contiguous United States range of lynx.

In summary, historical reports of lynx and the present-day and historical occurrence of lynx habitat in the Black Hills strongly indicates the Black Hills are within the contiguous United States range of the lynx. Thus, the FS must ensure that the Cement timber sale does not impact any lynx that may be potentially inhabiting the BHNF at this time and must ensure that suitable lynx habitat is not further degraded by the Cement timber sale. Accordingly, an EIS must fully analyze and assess the potentially significant impacts to lynx and lynx habitat and ensure that habitat recovers to the point of being able to support a population of lynx as the species recovers under the Endangered Species Act. Furthermore, the FS must consult with the U.S. Fish and Wildlife Service regarding the potentially adverse impacts to lynx and lynx habitat in the Elk Bugs and Fuel project area and the BHNF as a whole.

Comment	Response
01-56	The US Fish and Wildlife Service has determined that South Dakota is not within the contiguous range of lynx (USFWS 2000). South Dakota is outside the southern boreal forests where most lynx occurrences are found. USFWS considers lynx observations reported in South Dakota during the 1960s to be the result of an unprecedented cyclic high in Canada when lynx moved into the Great Plains and the Midwest region of the United States.
01-57	See response to Comment 01-56.
01-58	Analysis of fragmentation has been added to the FEIS.

- Fragmentation

The DEIS fails to provide any analysis and assessment of the direct, indirect, and cumulative effects of the Elk Bugs and Fuel project to fragmentation in the project area. This, despite the fact that studies have found fragmentation to be a huge problem in the Black Hills (Shinneman 1996, Shinneman and Baker 2000). Furthermore, studies have shown the level of fragmentation that exists in the area studied in the Black Hills is outside the range of natural variability (Shinneman 1996, Shinneman and Baker 1997). This is supported by historical accounts of the area, which reported larger expanses of mature forest as well as stand-replacing fires (Dodge 1876, Newton and Jenney 1880, Graves 1899, Duthie 1930). Shinneman and Baker (2000) state:

Our study demonstrates that the Black Hills National Forest is presently a highly fragmented landscape, with high road density, patchy forest conditions, much edge and little interior habitat, few large interior areas, and very little dense old-growth forest. Moreover, these conditions represent a significant deviation from the large patches and dense old forests, which are a component of the Black Hills range of natural variability. Thus, widespread application of proposed thinning and fragmenting management strategy will move the forest farther from its range of natural variability by decreasing patch size and increasing patch edge in an already severely fragmented landscape. (p. 322)

The two also recommend:

...our analysis suggests that restoration of the Black Hills National Forest landscape to its range of natural variability will require: (1) restoration and maintenance of some large patches in order to regain large interior areas, (2) restoration of large areas of dense old-growth forest in order to increase rare interior old-growth habitat, (3) a strategy for road closures, as well as careful site selection for new roads, to reduce road edge habitat on the landscape, and (4) a management plan that maintains or restores connectivity between large core areas with similar habitat in order to reduce the degree of habitat isolation for species dependent on habitats such as old growth forest. (p. 322).

In light of these findings, we request the FS take measures to restore and maintain large patches of dense, mature forest in the Elk Bugs and Fuel project area, take measures to restore large areas of dense old-growth forest in the timber sale area, reduce road edge habitat, and restore connectivity between large core areas with similar habitat. Indeed, connectivity has been defined as crucial for the survival of marten and northern flying squirrel (Buskirk 2002, Reunanen et al. 2000), both species for which there are currently viability concerns on the BHNF. Restoring connectivity has also been recommended by other Black Hills research (Anderson and Crompton 2002). We therefore request the FS fully analyze and assess the impacts of fragmentation to the landscape.

01-58

Additionally, the DEIS entirely fails to provide an analysis and assessment of the edge effect caused by roads and logging. The creation of “edge effect,” which is defined by Baker and Dillon (2000) as “the suite of differences in microenvironment and biota across edges between forest and nonforest or early successional vegetation” (p. 221, citations omitted), can be detrimental to plants and animals and their habitats (Murcia 1995). Logging and roads create edge effects between cut and uncut forest (i.e., the edge) and as a result, create environments that are different from interior or undisturbed forest habitat. Logging and road construction most often creates edges between older forest and younger forest, but in some cases (i.e., clearcutting, road placement) creates edges between older forest and no forest. The creation of edges often leads to increased levels of light, increased air and soil temperatures, lower soil moisture, increased exposure to wind and other weather, and decreased diversity when compared to interior or undisturbed forest (Baker and Dillon 2000). Additionally, edges amplify or alter the effects of natural disturbances, such as fire (Baker and Dillon 2000). However, the impacts of “edge effect” often extend beyond the edge itself (Murcia 1995, Baker and Dillon 2000). The depth-of-edge influence, or the distance over which an edge environment differs from an undisturbed forest environment, may extend 60 meters (approximately 197 feet) or more from an edge into undisturbed forest (Baker and Dillon 2000). Thus, the detrimental impacts of logging and road construction (i.e., increased insolation, increased ground temperature, increased exposure, decreased moisture and humidity, and decreased diversity) may be experienced by plants and animals and their habitat even though logging may be occurring 60 or more meters away. In terms of sensitive plant management, edge effect should be a great concern of the FS, yet there doesn’t appear to be any consideration given to this situation. The DEIS does not address the “edge effect” that is caused by roads and logging and thus has failed to adequately analyze and assess the potentially significant impacts of the Elk Bugs and Fuel project.

01-59

**FAILURE TO CONSIDER A RANGE OF REASONABLE ALTERNATIVES**

The evaluation of alternatives is the heart of the environmental impact statement. 40 CFR § 1502.14. In the EIS, the agency must “[r]igorously explore and objectively evaluate all reasonable alternatives,” including alternative outcomes, alternative means of accomplishing similar outcomes, taking no action, and taking actions which may be outside the jurisdiction of the agency. *Id.* The evaluation of alternatives must constitute a “substantial treatment,” presenting the impacts of the alternatives in comparative form to “sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and public.” *Id.*

However, the DEIS for the Elk Bugs and Fuel Project entirely fails to comply with these requirements because it failed to evaluate – much less give “substantial treatment” to – a number of perfectly reasonable alternatives. For example, the DEIS does not even give any consideration to Biodiversity Conservation Alliance’s proposal that the Elk Bugs and Fuel project area be designated Management Area 3.7. This alternative is entirely reasonable. Indeed, the FS proposes and implements site-specific, non-significant forest plan amendments very regularly on the BHNF, usually amending big game thermal cover and other cover standards to facilitate more logging. In that case, it would be the opposite. The Elk Bugs and Fuel project area would be designated as Management Area 3. in order to protect habitat, not log it. The DEIS similarly failed to consider in detail other reasonable alternatives: such as an alternative that provides no commercial timber. This, despite the fact that the FS identified “Do not harvest any commercial timber” as a significant issue. Furthermore, the FS is proposing NON-COMMERCIAL THINNING through all three action alternatives, so it is difficult to believe that non-commercial thinning would not meet the goals and objectives of the Elk Bugs and Fuel project.

01-60

Comment	Response
01-59	<p>Forest fragmentation is discussed in the Revised Forest Plan FEIS, pp. III-247 through III-275. Analysis of forest patch size was added to the FEIS. Stands proposed for harvest under all alternatives have been harvested in the past. Proposed road closures would decrease overall disturbance in the project area.</p>
01-60	<p>The Forest Service is not aware of any compelling reason to change management area designation as suggested. Due to extensive intermixing of federal and private ownership in the project area, the fuel treatments needed to assure compliance with Revised Forest Plan forest-wide objective 224 regarding fuel levels in areas of elevated risk and value would not be consistent with the commentator's earlier descriptions of late succession as dense forest.</p> <p>An alternative that considered treatments without commercial timber harvest was considered and is discussed in Chapter 2, Alternatives Considered but Eliminated from Detailed Study.</p>

Finally, it is entirely evident that the FS has failed to consider a range of reasonable alternatives because the impacts of all three action alternatives are virtually all the same. For instance, all three action alternatives will impact sensitive species like the northern goshawk, black-backed woodpecker, three-toed woodpecker, pygmy nuthatch, flammulated owl, marten, and fringed-tailed myotis in the same way. This is very confusing that the FS would propose this, especially since the Elk Bugs and Fuel project has the potential to impact snag-dependent sensitive species, like the black-backed and three-toed woodpecker, tremendously by inhibiting future snag recruitment. This is also very confusing because Biodiversity Conservation Alliance and others expressed concerns over the impacts of the Elk Bugs and Fuel project to sensitive species, yet it appears these concerns were not considered at all in the development of alternatives. Furthermore, the fact that the FS has not proposed alternatives that respond to concerns over the impacts to northern goshawk, black-backed and three-toed woodpecker, and other sensitive species makes it questionable whether the FS is taking seriously its duty to protect sensitive species and maintain the viability of native species on National Forest System lands.

01-61

To remedy the lack of a range of reasonable alternatives, we request the FS rigorously explore and objectively evaluate the following reasonable alternatives:

- An alternative that harvests no stands of ponderosa pine in SS 4C or 4B. Such an alternative responds to Anderson and Crompton's (2002) concerns that more mature forest be retained on the BHNF.
- An alternative that proposes no thinning within 500 feet of riparian areas, springs, seeps, and other areas characterized by moist conditions.
- An alternative that prohibits logging any trees over 10" in diameter.
- An alternative that proposes no new (temporary or permanent) road construction.
- An alternative that impacts less black-backed and three-toed woodpecker habitat according to the recommendations of Mohren (2002).
- An alternative that is based on the conclusions of Shinneman (1996), Baker and Shinneman (1997) and Baker and Ehle (2001). Such an alternative would propose actions to bring the Elk Bugs and Fuel project area closer to the natural conditions described in these papers and seek to restore large, more continuous stands of dense mature and late successional forest.
- An alternative that minimizes the effects of fragmentation caused by the proposed thinning. Such an alternative would propose actions to respond to Shinneman (1996) and Shinneman and Baker (2000), which concluded that the BHNF is an extremely fragmented landscape and that the level of fragmentation existing today is totally inconsistent with natural conditions on the BHNF.

01-62

Again, the FS must revise the current DEIS because it is so inadequate that it precludes meaningful analysis. Not only is the presentation of the DEIS entirely inadequate and hard to understand, but the agency has failed to adequately respond to public comments in the development of the DEIS, has overlooked key information in its analysis and assessments of potentially significant impacts, has failed to provide information and analysis that is necessary to understand the agency's conclusions and the impacts of the various action alternatives, and has failed to analyze a range of reasonable alternatives. We hope the agency takes its NEPS and public service duties serious enough to recognize that the Elk Bugs and Fuel DEIS is a poor quality NEPA document. We hope the agency redeems the scientific and professional integrity it has lost during the development, preparation, and circulation of the DEIS. Indeed, it would make us, as members of the public who have a stake in these public lands and who fund the FS, more comfortable to know that the United States Forest Service is competent, responsive to public concerns, and actually caring about the land and resources it manages.

01-63

Comment	Response
01-61	The Forest Service developed alternatives in response to issues raised during scoping (Chapter 2, Public Involvement – Issues; Appendix A: Public Involvement and Scoping; Chapter 2, Alternatives Including the Proposed Action – Alternatives Considered in Detail, Alternatives Considered but Eliminated from Detailed Study.
01-62	See response to Comment 01-61.
01-63	The FEIS includes a number of clarifications. See above responses to Letter 1.

Sincerely,

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[1] See e.g., Biodiversity Associates et al. Appeal of 1997 BHNF Revised Land and Resource Management Plan, Biodiversity Associates et al. Peak Project Appeal, Biodiversity Associates' et al. comments on the Phase I Amendment to the BHNF Revised Land and Resource Management Plan ("Phase I Amendment"), Biodiversity Associates' et al. Appeal of the Phase I Amendment, Biodiversity Associates' et al. scoping comments for the Phase II Amendment to the BHNF Revised Land and Resource Management Plan, Biodiversity Conservation Alliances 2002 scoping comments for the Elk Bugs and Fuel Project, Biodiversity Conservation Alliances et al.'s scoping comments for the Prairie project Biodiversity Conservation Alliances' 2003 comments on the Welcome-Sand timber sale proposal, comments on the Fanny timber sale Draft Environmental Assessment, etc. For the purposes of these comments, we incorporate by reference these previous submissions and request all concerns, questions, comments, and requests within these documents be fully considered in any and all future environmental analysis completed for the Elk Bugs and Fuel project.

[2] One example highlighting the inadequacy of the DEIS is that the Table of Contents provides inaccurate page numbers for particular sections. For instance, the section "Affected Environment and Environmental Consequences" is supposed to begin on page 36 according to the Table of Contents, yet actually begins on page 34. While not a fatal flaw, it raises serious questions over the professional integrity of the DEIS.

[3] It is important to note that both expeditions entered the Black Hills illegally and are probably better characterized as invasions. The U.S. Government had previously entered into the Ft. Laramie Treaty of 1868 with the Sioux Nation of Indians. The Treaty explicitly prohibited white people from entering the Black Hills. In complete disregard to the Treaty and the Sioux Nation, both Custer and Dodge entered the Black Hills.

# Black Hills Forest Resource Association

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Mr. Carl Leland, US Forest Service  
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July 14, 2003

Dear Mr. Leland,

This letter is in response to the Forest Service’s request for comments on the Elk, Bugs & Fuels DEIS. As always, the Black Hills Forest Resource Association and its members appreciate the opportunity to comment and contribute to project development.

We applaud the Northern Hills Ranger District and the ID Team for its efforts to bring Elk, Bugs & Fuel to completion within the constrained timelines of P.L. 107-206, as we realize this was a difficult task. At the onset of Scoping for this project, you’ll note that we were very much encouraged by the degree to which the proposed action addressed the stated purpose and need of the project. However, as a result of the changes that have apparently occurred between Scoping and the DEIS, we find the modified proposed action and its related analyses sorely deficient and altogether unacceptable.

02-01

## DEFFICIENCIES of the Analyses, Proposed Action, and Alternatives:

*1. The project is deficient pursuant to the provisions of 40 CFR 1500.2 (b), failing to “emphasize real environmental issues and alternatives”, and of 40 CFR 1500.2 (f) failing to “restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of (the Agency’s) actions upon the quality of the human environment.”*

Elk, Bugs & Fuel correctly identified the number-one Purpose and Need of reducing the risks of mountain pine beetle infestation and of catastrophic wildfire events within the project area. Regrettably, the project analysis goes on to completely ignore these two issues, proposing alternatives that accomplish embarrassingly little to meet the Purpose and Need:

02-02

- a. The analysis fails to disclose and address the ‘real environmental issue’ of the current mountain pine beetle (MPB) epidemic within the project area, as it does not include so much as a rough quantification of the current infestation’s extent. This information is fundamental to the Purpose and Need, and is critical in evaluating the effectiveness of the proposed alternatives.

02-03

02-01	The rationale for modifying the original proposed action is discussed in Chapter 2, Alternatives Considered but Eliminated from Detailed Study/Original Proposed Action.
02-02	The extent of mountain pine beetle-caused losses is discussed in Chapter 3, Biological Environment/Forest Vegetation/Affected Environment/Insects and Disease. A map of the areas and intensity of recent mountain pine beetle-caused mortality has been added to the FEIS map set.
02-03	<p>In Chapter 3, the Biological Environment – Forest Vegetation – Environmental Consequences – Forest Insects and Stand Structure and Stocking sections discuss stand susceptibility to mountain pine beetle infestation.</p> <p>In addition, potential indirect effects to R2 Sensitive plants by implementation of the Elk Bugs and Fuels Project action alternatives have resulted in a rating of “May Affect...” for the R2 Sensitive plants that are known from or have high potential habitat within the project area. The project Biological Evaluation addresses potential effects of livestock grazing. Grazing could impact R2 sensitive plants if proposed activities were to increase access or forage for livestock. Under these circumstances, livestock could affect sensitive plants through trampling, herbivory, and noxious weed spread. These effects are expected to be short-term (less than five years) and insignificant. Proposed activities would not take place at known occurrences of sensitive plants and plant species of interest, or on approximately 3,800 acres of high-potential habitat for unusual plants. This avoidance would greatly reduce the risk of adverse effects on sensitive plants due to livestock grazing.</p> <p>The EIS discloses that a large percentage of the high fire hazard acres in the project area are in potential goshawk nesting habitat. See Chapter 3, Physical Environment – Fire Hazard and Fuel Loading.</p>

- b. The analysis fails to disclose and address the ‘real environmental issue’ of the corollary between the areas deferred from treatment to accommodate goshawk and sensitive plant Forest Plan direction, and areas most susceptible to mountain pine beetle infestation and catastrophic fire, as these are most often one and the same.
- c. The analysis discloses that the project area exhibits a 28 percent chance of experiencing a 10,000-acre wildfire within the next ten years, and that 79 percent of the project area stands at moderate to extreme risk of losing key ecosystem components to catastrophic fire. The Agency’s proposed action, by virtue of its statistically insignificant reduction in these risks, fails to ‘avoid or minimize any possible adverse effects...upon the quality of the human environment.’ Wildfires and insect epidemics detrimentally affect habitat for wildlife species, water quality, air quality, scenic integrity, soil productivity, archaeological and cultural resources, forest resources, rangeland resources, forest infrastructure, and private property. These impacts are both reasonably foreseeable and catastrophic, yet neither the proposed action, nor any alternative presented thereto, would minimize their aggregate impact on the human environment (either under the ‘rule of reason’ or any scientifically valid means of evaluation).

02-03  
02-04

2. *The project is deficient pursuant to the provisions of 40 CFR 1502.1, failing to “provide full and fair discussion of significant environmental impacts and...inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” Additionally, the project fails to “focus on significant environmental issues and alternatives.” Similarly, the project fails to meet the provisions of 40 CFR 1502.2(b), pursuant to discussing impacts “in proportion to their significance.”*

02-05

- a. Wildfires and insect epidemics detrimentally affect habitat for wildlife species, water quality, air quality, scenic integrity, soil productivity, archaeological and cultural resources, forest resources, rangeland resources, forest infrastructure, and private property. We can think of no effects more ‘significant’ or ‘adverse’ as these, yet the analysis contains scarcely a passing mention of them.
- b. Neither the proposed action, nor any alternative presented thereto, offers to significantly ‘minimize’ these aforementioned adverse impacts to the human environment. Therefore, the project fails to offer a reasonable range of alternatives.
- c. The project fails to focus on the ‘significant environmental issues’ (environmental consequences, cumulative effects) of the aforementioned adverse impacts of wildfire and insect infestation, instead dedicating itself in wholly inappropriate proportion to the non-significant issue of perceived potential impacts of the action alternatives upon goshawks and sensitive plants. The effect of vegetative management activities and timber harvesting operations on wildlife species, conducted with appropriate mitigation measures and in compliance with the Black Hills LRMP As Amended (see Recommendations), are non-significant, especially in comparison to the complete loss of habitat associated with wildfire and insect epidemics.

02-06  
02-07  
02-08

Comment	Response
02-04	The original proposed action would have treated a larger area. The rationale for modifying the original proposed action is discussed in Chapter 2, Alternatives Considered but Eliminated from Detailed Study – Original Proposed Action.
02-05	See response to Comment 01-61.
02-06	<p>Wildfire and insect epidemics can affect wildlife in a variety of ways. The degree of impact depends on both the magnitude and intensity of disturbance, as well as the species in question. For example, a disturbance that severely reduces forest canopy cover across a large area is likely to reduce or exclude use by species such as brown creeper, marten, and possibly big game (where road densities are high). Conversely, other species are likely to benefit. Studies have shown that Lewis', black-backed, and three-toed woodpeckers all benefit from stand-level mortality events.</p> <p>While the objective of this project is to reduce the potential for large-scale wildfire and insect epidemics, the Forest Service must still allow natural disturbance processes to take place in order to provide habitat for a full spectrum of wildlife.</p> <p>Wildfire potential is discussed in Chapter 3, Physical Environment – Fire Hazard and Fuel Loading. Potential for mountain pine beetle infestation is discussed in Chapter 3, Biological Environment – Forest Vegetation. The location, extent, and intensity of past wildfire and insect mortality are unknown.</p> <p>Refer to Chapter 3, Environmental Consequences under the various resources for additional information.</p>

Comment	Response
02-07	See response to Comment 01-61. Effects of the alternatives are summarized in Chapter 2 and disclosed in Chapter 3.
02-08	<p>The Forest Service acknowledges that the impacts of timber harvest on various species can be minor, non-existent, or beneficial. While increasing the area proposed for timber harvest is likely to reduce the potential for large-scale tree mortality, it would occur at the expense of habitat suitable for species that require denser canopies and higher snag densities. Treatments associated with the range of alternatives discussed in the EIS are designed to reduce the potential for large-scale disturbance while maintaining habitat for all species. No alternative can eliminate the potential for wildfire or insect epidemics and still maintain suitable habitat for all endemic wildlife.</p> <p>Non-treatment of the approximately 3,800 acres that have been determined to be high-potential habitat for R2 sensitive plants and Species of Interest generally would not affect the goal of reducing the risk of pine beetle infestation. The 3,800 acres are hardwood-dominated habitats, generally consisting of paper birch, ironwood (hop-hornbeam), and bur oak, with some aspen and white spruce. The areas proposed for treatment are dominated by ponderosa pine. Treatments that were dropped in the 3,800 acres include hardwood restoration and fuelbreak construction. The interdisciplinary planning team balanced the needs of multiple resources with the effectiveness of proposals for fuels management/fire suppression and the need to maintain and restore hardwoods. In general, the high-potential sensitive plant habitat consists of relatively moist areas that are less prone to the spread of wildfire. The proposed upland fuel treatments would benefit high-potential plant habitat by reducing the threat of intense wildfire and subsequent effects such as sediment movement. See also response to Comment 02-06.</p>

3. *The project is deficient pursuant to the provisions of 40 CFR 1502.14(a), failing to “rigorously explore and objectively evaluate all reasonable alternatives.”*

- a. As discussed above, not one of the proposed alternatives offers to significantly minimize the adverse and imminent impacts to the human environment caused by wildfire and insect epidemics, nor does the analysis disclose these impacts to a reasonable degree. Therefore, the project fails to ‘objectively evaluate’ the alternatives it has proposed.
- b. Additionally, the project fails to ‘rigorously explore’ reasonable alternatives such as the original (Scoping) proposed action. We dispute the Forest Service’s determination of non-significance for the original proposed action (see Recommendations), and regard its elimination from serious consideration as arbitrary and capricious.

02-09

4. *The project is deficient pursuant to the provisions of 40 CFR 1502.16, failing to “include the environmental impacts of the alternatives including the proposed action.” While the analysis indeed discloses “any adverse environmental effects which cannot be avoided should the proposal be implemented,” it has failed to identify “the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity.”*

- a. In following with the deficiencies outlined above, the ‘environmental impacts of the alternatives’ were not fully or fairly disclosed in the project analysis.
- b. The project fails to identify the ‘short-term use’ of vegetative management and timber harvesting operations as beneficial to the ‘maintenance and enhancement of long-term productivity.’ Simply, the project area stands to lose significant long-term productivity through the adverse impacts of insect epidemics and catastrophic wildfire. The sufficiently extensive application of silviculture and vegetative management would greatly mitigate the likelihood of these impacts occurring in the first place, and should they occur nonetheless, greatly mitigate their severity. Instead, the project analysis virtually invents adverse effects of project implementation, going on to erroneously weigh these perceived effects higher than those of catastrophic wildfire and insect infestation.

02-10

RECOMMENDATIONS:

1. *The Forest Service should analyze and adopt an Alternative that includes the application of vegetative treatments in a fashion spatially equivalent to or greater than the Original (Scoping) Proposed Action.*

We understand that, due to negligence in the collection of goshawk and sensitive plant survey data, the Forest Service believes a conflict exists between the Original Proposed Action and existing planning direction and that a non-significant Forest Plan Amendment pertaining to goshawk and sensitive plant management direction would be necessary to proceed with the Original Proposed Action. However, there is no indication in either the FSM Supplement 2672 or the LRMP Phase I Amendment that explicitly directs the

02-11

Comment	Response
02-09	<p>The planning team developed a range of alternatives in response to issues raised during scoping (Chapter 1, Issues; Appendix A: Public Involvement and Scoping). Rationale behind the alternatives is discussed in Chapter 2 in the Alternatives Considered in Detail and Alternatives Considered but Eliminated from Detailed Study sections.</p>
02-10	<p>Short-term uses and long-term productivity are discussed in Chapter 3, Short-term Uses and Long-term Productivity.</p>
02-11	<p>The EIS shows that a total of 44,766 acres of National Forest System (NFS) land exists in the project area. Areas excluded from harvest as potential northern goshawk nesting habitat comprise 29% of NFS acres, but not all of this area is on ground considered suitable for timber harvest. Some of the forest on suitable ground would be harvested under the authority of P.L. 107-206. In all, the excluded stands on ground suitable for timber harvest would comprise 18% of project area NFS land after all proposed and legislated activities.</p> <p>Without comprehensive surveys of goshawk nesting presence in suitable habitat, the Forest Service felt that treatments in suitable habitat would violate Revised Forest Plan standard 3108a (“A goshawk nest survey must be conducted prior to any projects in forested habitat”).</p> <p>Treatments in goshawk PFAs are allowed, and often appropriate (as identified in Revised Forest Plan standard 3114). Proposed treatments would, however, have altered stand canopy closure and overstory. Without knowing whether a given suitable stand were occupied by goshawks, the Forest Service could not ensure compliance with Revised Forest Plan standard 3110: “Activities should not reduce the structural and compositional integrity of active and alternative conifer-forested goshawk nest stands.”</p> <p>See also response to Comment 02-04.</p>

Forest Service to defer treatment based upon the “assumed presence” of sensitive species. FSM 2672.102 simply directs the Forest Service to base all actions and mitigations on the assumption of presence, not to abstain from action on this basis. We believe the Policy stated in FSM 2672.103 leaves the Forest Service sufficient discretion to execute vegetative management in areas of “assumed presence”, provided that Amended LRMP forestwide Standards are met.

- a. There is a clear and identifiable need to manage Structural Stages 3C, 4B, and 4C. These are the forest conditions most susceptible to mountain pine beetle and wildfire that exist within the project area, and they comprise a glaring 53 percent of it. There is simply no wisdom in “preserving” such a vast portion of the project area (12,794 acres) for goshawk nest and PFA stands, only so they can be consumed by insects and wildfire (10,554 of these acres are in high fire hazard condition). Furthermore, such an interpretation of FSM and LRMP direction is indefensibly erroneous.
- b. In its haste to comply with Standard 3108, the District appears to have grossly misinterpreted its intent. For all its covenants, this Standard is qualified by the statement “...for all projects involving the removal of trees in suitable habitat, except those done for the express purpose of enhancing goshawk habitat: (emphasis added)” There is simply no Amended LRMP direction that gives even the remotest implication that all suitable nesting habitat within a project area should be deleted from timber management consideration; the only direction to exclude areas from projects is in association with historically active nests or replacement stands (as defined by Standard 3109). The District has in its database an extensive archive of historically active nests; these and their associated replacement stands, and these alone, should be excluded from the project.
- c. The remainder of “assumed presence” acreage should be managed as a PFA in accordance with the Structural Stage distribution described in forestwide Guideline 3114. As we have noted, the entirety of the “assumed presence” acreage is in 3B, 4B and 4C stands; these forest conditions spread over such an extensive area simply present a ‘manage it or lose it’ scenario, and it is perfectly justifiable for the Forest Service to prescribe treatments that insure the persistence of high-quality goshawk habitat. In accordance with Guideline 3114, approximately forty percent of this area should remain in its current Structural Stage. However, also in accordance with 3114, at least 7 percent of this area should be managed for the grass/forb Structural Stage, another 7 percent for the seedling/sapling Structural Stage, another 8-18 percent for mid-aged forest stages with 50 percent crown closure, and another 2-12 percent for mid-aged forest stages with 60 percent crown closure. This distribution of structural stages should be arranged spatially so as to provide maximum benefits to the historically active nests and replacement stands; those benefits being inclusive of high-quality and proximate forage habitat, along with intelligently placed treatments that protect nest stands from the progression of the mountain pine beetle epidemic in the project area and from the progression of a wildfire. We believe treatments such as these, designed both to enhance habitat quality

02-12

02-13

02-14

and protect identified nest stands from the inevitability of catastrophic disturbance, fulfill both the spirit and letter of current FSM and Amended LRMP direction. We also remind the Forest Service that Guideline 3114 is indeed a *Guideline*, and the Forest Service should regard its direction as subject to their discretion as to what treatments would be the most effective at protecting or enhancing goshawk habitat in this situation.

02-14

- d. Additional survey information on previously unidentified nest stands may well be gathered between the Content Analysis of DEIS comments and the issuance of a FEIS and Decision Notice, or even during the process of project implementation. The Forest Service needs to do no more to address these potential impacts than note among its mitigation measures that any newly discovered goshawk nest stands will be avoided pursuant to Standard 3109.

02-15

*2. The Forest Service should eliminate its arbitrary sensitive plants set-aside.*

With regard to the 3,800 acres eliminated from treatment on the basis of “high potential sensitive plant habitat”, the Forest Service again erroneously interprets its LRMP Phase I direction. While forestwide Guideline 3107 does offer ‘avoiding disturbance of locations with known sensitive plant populations’ as a means by which to protect these biological resources, we remind the Forest Service that this is a Guideline. While the Forest Service is bound by the same FSM direction to “assume presence” in high quality sensitive plant habitat, sensible mitigation measures should more than compensate for the potential disturbance which may occur to these habitats due to road/trail construction and timber harvest. The decision to arbitrarily exclude “assumed” sensitive plant habitat from treatment areas is a simply not based on any LRMP direction.

02-16

*3. The Forest Service should re-incorporate its originally proposed non-significant Forest Plan Amendment related to big-game habitat effectiveness standards into the proposed action.*

There is a high likelihood that treatments proposed in accordance with the correct interpretation of goshawk LRMP direction will result in a slight shortfall in meeting Standards 3203, MA 5.4-2101, MA 5.4-3203, and MA 3.31-3202. We recommend that the Forest Service revisit its Original Proposed Action and reissue the previously considered non-significant Forest Plan Amendments pertaining to these Standards. It is well recognized that the HABCAP model is insensitive to the importance of forage habitat for big-game species, while being simultaneously over-sensitive to the influence of thermal/hiding cover and open road density. Therefore, it would be a reasonable conclusion that neither summer nor winter range habitat will experience real-life effectiveness decreases under the proposed treatments, despite HABCAP’s results.

02-17

OTHER COMMENTS:

We assume that the proposed treatments in all the action alternatives will, at some point involve harvesting stands before the Culmination of Mean Annual Increment (CMAI).

02-18

Comment	Response
02-12	See response to Comment 02-11.
02-13	Treatments in unsurveyed, suitable goshawk nesting habitat would violate Revised Forest Plan standard 3108 and guideline 3110. The Forest Service agrees that the Revised Forest Plan does not require all suitable nesting habitat to be dropped from timber management consideration.
02-14	<p>Managing the remainder of “assumed presence” acreage in accordance with Revised Forest Plan guideline 3114 would be possible if all suitable nesting habitat were surveyed for goshawk presence/absence. Without surveys, treatments that alter stand structure and compositional integrity would violate Revised Forest Plan standards 3108 and 3110.</p> <p>The Phase I Amendment states that guideline 3114 will be treated as a standard.</p>
02-15	Proposed treatments need to be implemented as soon as possible in order to reduce the threat of fire and widespread bug-kill. Surveying for goshawks during the planning and/or implementation phase would slow implementation of treatments.
02-16	<p>Ideally, field surveys would be completed to a degree of certainty that all occurrences of R2 sensitive plants and Species of Interest could be GPS/GIS located in a proposed project area. 2002 was a very dry year, which made locating for many plant species difficult. Prolonged drought (2002 and previous years) can cause some of the R2 sensitive plant species to be dormant, dwarfed, or less widespread, which reduces the chance that surveyors will find individual plants. Surveys focused on community types, indicator species, and the perceived potential of an area to harbor R2 sensitive plant species. In the northern Black Hills, moisture is an important feature of high-probability plant habitat. The Arcview Hillshade application is extremely helpful in predicting high-probability plant habitat because it determines the length of time to which a location is exposed to the sun on a given day and the intensity of the sun on that day; these factors strongly influence site moisture. In addition to Hillshade, aerial photographs and topographic maps were used to identify areas to survey. The areas that were determined to be potential high-quality habitat were field-verified during the 2002 field season. The known sensitive plant occurrences in the Elk Bugs and Fuels Project area include historic occurrences as well as 2002 survey results. The 3,800 acres of high-probability habitat are based on the 2002 surveys. The high-probability habitat generally did not intersect with areas originally proposed for treatment; where they intersected fuelbreaks, modifications were made to assure both the effectiveness of the fuelbreak network and protection of high-quality plant habitats.</p>

Comment	Response
02-17	Without considering HABCAP values, treatments proposed under the action alternatives, including prescribed burning, thinning, and maintenance or restoration of hardwood stands, would be likely to improve big game forage.
02-18	A statement regarding CMAI is included in Chapter 3, Biological Environment – Forest Vegetation – Environmental Consequences – Direct and Indirect Effects – Harvest Volume.

The National Forest Management Act generally prohibits the harvest of stands before CMAI, though provisions are made for proceeding with such harvests when resource needs demand it. As far as we can see, the project analysis does not contain a discussion of CMAI, nor does it acknowledge the project’s anticipated harvest of small-diameter stands before they have reached this point. The Forest Service should acknowledge the necessary departure from NFMA direction necessarily involved with non-commercial, pre-commercial, and fuels treatments, lest you open yourselves to potential appellant challenge on what should be a non-substantive, no-brainer issue.

02-19

While we believe this point should go without saying, especially given the issues raised above, we nonetheless feel compelled to discuss silvicultural treatments. By eliminating 4B and 4C stands from treatment through the mischaracterization of FSM and Amended LRMP direction, the Forest Service has foreclosed on the opportunity to make significant progress toward reducing wildfire risk and mountain pine beetle susceptibility through the use of overstory removal and shelterwood preparation cut treatments. We do not believe arbitrarily limiting the entirety of Elk, Bugs & Fuels proposed treatments to commercial thinning, and commercial thinning alone, is in any way compliant with the spirit or letter of the Amended LRMP and it is certainly not sensitive to the overall needs of the forest resource. Furthermore, limiting the commercial thinning prescription to 80 square feet per acre of residual basal area is counter productive to buying insurance against large-scale disturbance. We encourage the Forest Service to consider reducing the residual basal area prescription based on site characteristics such as moisture, aspect, topography, soils, and proximity to the “wildland-urban interface”, in addition to implementing treatments such as overstory removal that would more significantly vary the landscape’s Structural Stage distribution. Simply, the Forest Service should establish what it wishes the project area’s post-treatment Structural Stage distribution to be in order to meet the Purpose and Need, and prescribe whatever silvicultural means are necessary to achieve that distribution. This distribution, or ‘desired condition’, should be sensitive to both the goshawk habitat improvement (where appropriate), MPB risk reduction, and wildfire risk reduction aspects of the Purpose and Need. We believe that, in order to meet the Purpose and Need, the Forest Service should attempt to achieve at least a 50 percent reduction below current conditions in the latter two risks.

02-20

Thank you for your time and consideration. Please feel free to contact me if you have any questions about our comments.

Sincerely,

s// *Aaron Everett*

Aaron Everett  
Forest Programs Manager

Comment	Response
02-19	See response to Comment 02-18. Non-commercial treatments do not “depart from NFMA direction.”
02-20	<p>Treatments are not limited to commercial thinning. Treatments considered in Alternatives 2, 3, and 4 are listed and described in Chapter 2, Vegetative Treatments. Stands proposed for thinning would be thinned to 80 square feet of basal area (BA), or half the existing BA, whichever is less. Fuel breaks and stands close to private land would be thinned to wider spacing. Shelterwood removal was not considered as a treatment because multi-storied stands are generally less susceptible to mountain pine beetle risk as compared to dense, single-storied pine stands (Stevens et al. 1980). Shelterwood preparation treatments in ponderosa pine stands are usually prescribed and implemented as a thin-from-below to a stocking level of 60-80 BA. The proposed thinning treatments would result in the same residual stand structure. The silvicultural terms shelterwood preparation and thinning have a similar outcome although treatment objectives are different. Treatments were proposed to meet the purpose and need of this project. The residual stocking of treatments proposed under Alternative 3 would vary by aspect.</p> <p>Fuel hazard was determined using a matrix of habitat structural stage, slope, and dominant tree species. Areas proposed for treatment under Alternatives 2 and 4 were based on expected fire behavior and proximity to private property.</p>

# *Defenders of the Black Hills*

P.O. Box 2003  
Rapid City, SD 57709-2003

## *Native Ecosystems Council*

### **Black Hills Regional Office**

P.O. Box 2003  
Rapid City, SD 57709-2003

July 13, 2003

Carl Leland  
USDA Forest Service  
U.S. Post Office, Room 201  
18 South Mill Avenue  
Ridgeway, PA 15853  
<cleland@fs.fed.us>

#### **Re: Elk Bugs & Fuels DEIS Comments**

Dear Mr. Leland:

Please include the following comments from *Defenders of the Black Hills* and *Native Ecosystems Council* in your development of the environmental impact statement (EIS) for the Elk Bugs & Fuel Project.

*Native Ecosystems Council* is a non-profit Montana-based organization with an interest in protecting native ecosystems on public lands in the Northern Rockies and the Northern Plains, including the Black Hills. *Native Ecosystems Council* has a scientific interest in the management of wildlife and wildlife habitat on the public lands of the Black Hills, including protection and/or restoration of its full complement of native ecosystems.

*Defenders of the Black Hills* is a group of volunteers, without racial or tribal boundaries, whose mission is to ensure that the provisions of the Fort Laramie Treaties of 1851 and 1868 are upheld by the federal government of the United States. In doing so, these volunteers are also upholding the Constitution of the United States, Article Six, which states "treaties are the Supreme Law of the land." Until the Treaties are upheld, the actions of the Defenders are to restore and protect the environment of the Black Hills to the best of their ability.

It is our honor to be able to submit these comments to you on behalf of *Defenders of the Black Hills* and *Native Ecosystems Council*.

Sincerely,

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Charmaine White Face  
*Defenders of the Black Hills*  
(605) 343-5387

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Brian Brademeyer  
*Native Ecosystems Council*  
(605) 348-8625

## 1. Authorization for Activities on Great Sioux Reservation Lands

The Forest Service must not once again fail to use the NEPA process to resolve conflicts over resources. Rather, the Elk Bugs and Fuels DEIS environmental analysis must be used to address the land claims of the signatory tribes to the 1851 and 1868 Fort Laramie Treaties. The 1997 Revised Forest Plan failed to address Native American concerns, and failed to explore alternatives of transferring management authority or Black Hills ownership back to the tribes of the Great Sioux Nation, and also failed to evaluate alternatives based on addressing Native American cultural and spiritual concerns.

According to information provided by the U.S. Census Bureau, American Indians are the largest minority population within counties of the Black Hills. Accordingly, this minority population may be disproportionately impacted by the Elk Bugs and Fuels DEIS timber sale. In accordance with Executive Order 12898 and Department of Agriculture Regulation DR5600-2, the Forest Service must therefore fully analyze and assess the effects of the Elk Bugs and Fuels DEIS timber sale to American Indian populations to ensure environmental justice. Such an analysis and assessment should be consistent with the 1997 Council on Environmental Quality report, "Environmental Justice Guidance Under the National Environmental Policy Act." In accordance with this report and direction provided by NEPA and CEQ NEPA implementing regulations, the Forest Service must fully analyze and assess the direct, indirect, and cumulative effects to American Indian populations in and around the Black Hills.

Such an analysis and assessment should consider the cumulative economic impacts of the taking of the Black Hills to the Sioux and Arapahoe Indian tribes (see, e.g., *United States v. Sioux Nation of Indians*, 448 U.S. 371 (1980)), the impacts to American Indian feelings regarding the taking of the Black Hills, the direct and indirect impacts to American Indian religious interests, the cumulative impacts to American Indian religious interests, the cumulative impacts of restricting American Indian subsistence hunting in the Black Hills, the cumulative impacts to American Indian cultural values that have been destroyed through past actions that have been inconsiderate to these values, and the direct and indirect impacts to American Indian cultural values. The Forest Service must fully mitigate any significant direct, indirect, and cumulative effects to American Indian values, interests, and claims in order to ensure environmental justice is achieved.

The Elk Bugs and Fuels DEIS must also fully analyze and assess the potentially significant effects to American Indian sacred sites in accordance with Executive Order 13007. We request that all sacred sites be fully protected.

The Elk Bugs and Fuels DEIS environmental analysis is the proper vehicle to finally resolve these conflicts and to document needed protections to address tribal cultural and spiritual concerns in the sacred Black Hills. Therefore, the Elk Bugs and Fuels DEIS environmental analysis must:

- document the source of the Forest Service's alleged jurisdiction to override Treaty provisions that have never been abrogated by Congress;
- demonstrate how the Forest Service intends to honor the terms of the 1851 and 1868 Fort Laramie Treaties as it proceeds with forest management activities; and
- base all alternatives on fulfilling the United States' trust responsibility toward the Sioux Nation, including how the Forest Service intends to prohibit actions that would destroy cultural artifacts or desecrate burial or other sacred sites, recognizing that the entire Black Hills area is such a sacred site to the Fort Laramie signatory tribes.

03-01

03-02

03-03

03-04

Comment	Response
03-01	<p>No Indian Tribes currently have hunting or fishing rights, gathering rights, water rights, or any other treaty rights on the Black Hills National Forest.</p> <p>The Fort Laramie Treaty of 1851 recognized the territory of the Cheyenne and Arapahoe to include most of Colorado east of the foothills of the Rocky Mountains, the northwestern part of Kansas, the southwest corner of Nebraska, and the southeast corner of Wyoming. It also acknowledged the territory of the “Sioux or Dacotah Nation” to include all of South Dakota west of the Missouri River, including the Black Hills, and parts of southern North Dakota, northwestern Nebraska, eastern Wyoming, and southeastern Montana.</p> <p>In 1970, the Indian Claims Commission interpreted the “Sioux or Dacotah Nation” to mean the Teton and Yankton only, since the Yanktoni and Santee Sioux were not signatories to the treaty. Many court decisions dealing with the treaty have held that it did not take any lands away from the Indians but merely “recognized the title of certain signatory tribes on the basis of the territory which they used and occupied.”</p> <p>In the Fort Laramie Treaty of April 29, 1868 (15 Stat. 635), the United States promised the Sioux Nation that the Great Sioux Reservation, including the Black Hills, would be “set apart for the absolute and undisturbed use and occupation of the Indians named.” Within a decade, however, the Act of February 28, 1877 (Stat. 254) abrogated the Fort Laramie Treaty and the Indians’ claim to Black Hills land. The Act ratified an agreement made between the Federal Government and some of the adult male Sioux population to cede the Black Hills to the United States in exchange for rations and other considerations.</p> <p>After nearly 60 years of litigation, the Supreme Court in <i>United States v. Sioux Nation of Indians</i> (65 L.Ed. 2d844; 100 S.Ct.2716 (1980)) held that the 1877 Act constituted a taking, which implied a right to just compensation under the Fifth Amendment. The Court affirmed the Indian Claims Commission’s award of \$17.1 million, plus interest at the annual rate of five percent dating from 1877.</p> <p>On July 18, 1980, the Oglala Tribe filed a complaint in U.S. District Court for return of the Black Hills, additional damages, and a restraining order on payment of the previous award. The court dismissed the complaint for lack of jurisdiction, whereupon the Oglala Sioux Tribe appealed to the Eighth Circuit Court of Appeals. On June 1, 1981, the circuit court affirmed the District Court’s dismissal because Congress had established the Indian Claims Commission as the exclusive remedy for the claim (see <i>Oglala Sioux Tribe v. United States</i>, No. 80-1878, slip op. at 2-3, note 4 (8<sup>th</sup> Cir. 1981)). Since the Indian Claims Commission has already disposed of the Indian claims to the Black Hills, the decision in <i>Oglala Sioux</i> means there is no legal Indian right to ownership or permanent occupation of the Black Hills under the 1868 Treaty.</p> <p>The Black Hills National Forest has neither the authority nor the need to establish</p>

Comment	Response
	<p>or re-establish a Presidential Commission to determine compensation to be paid Sioux Tribes under the 1851 and 1868 treaties. All compensation claims under these treaties were addressed in 1980 by the Indian Claims Commission, and the Tribes have exhausted all Court remedies available for resolution of their claim. Only Congress has authority to transfer ownership of the Black Hills National Forest to the Sioux Tribes. Until Congress takes such action, the Forest Service must continue management in accordance with the current direction of Congress. The Forest will continue to make payments to counties in accordance with statutory direction provided by the Congress of the United States.</p>
03-02	<p>For a discussion of American Indian issues on the scale referenced in this comment, see pp. III-507 through III-509 and F-1 through F-5 of the Final Environmental Impact Statement for the Black Hills National Forest 1996 Revised Land and Resource Management Plan. There is no evidence that the Elk Bugs and Fuels project would have disproportionate impacts on American Indians or any other minority population.</p>
03-03	<p>Executive Order 13007 states, in part:</p> <p><b>“Section 1. Accommodation of Sacred Sites.</b> (a) In managing Federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites...</p> <p>“iii. “Sacred site” means any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, and Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.”</p> <p>Protection of Cultural Resources and Sacred Sites:</p> <p>The Black Hills National Forest implements the National Historic Preservation Act for each undertaking. This includes the inventory, identification, and evaluation of heritage resources. The Forest proposes avoidance or mitigation measures for each site that is eligible for the National Register of Historic Places or has not been evaluated. The Forest consults with the South Dakota and Wyoming State Historic Preservation Officers (SHPOs) on the inventory, evaluation, and protective measures for each undertaking. The Forest also consults with the Tribal Historic Preservation Officers (THPOs) from the Standing Rock Sioux Tribe and Cheyenne River Sioux Tribe in the same manner and with the same documentation for each undertaking.</p>

Comment	Response
	<ul style="list-style-type: none"> <li>• For the Elk Bugs and Fuels Project, as for all other projects, the Forest Service conducted an inventory and identified, recorded, and evaluated sites. In consultation with the SHPO and THPOs, each site was evaluated for its potential to be eligible for nomination to the National Register of Historic Places. <ul style="list-style-type: none"> <li>○ Redmond, Louis A. <i>A Level III Heritage Survey Conducted for the Elk Bugs Planning Unit on the Northern Hills Ranger District of the Black Hills National Forest in Meade and Lawrence Counties, South Dakota</i>. March 2003. On file Black Hills National Forest, Supervisors Office, 25041 N. Highway 16, Custer, South Dakota 57730.</li> </ul> </li>   <li>• If a site is eligible for the National Register, unevaluated, or has been identified as a sacred site, the Forest consults with tribal government officials and the appropriate SHPO on protection, avoidance, or mitigation measures. <ul style="list-style-type: none"> <li>○ Northern Hills Ranger District letter to South Dakota SHPO and THPOs dated March 21, 2003 for Elk Bugs Analysis Area.</li> <li>○ SHPO Section 106 Project Consultation – Identification/Evaluation Project No. 030325004F, dated April 10, 2003.</li> </ul> </li>   <li>• As part of the consultation process, the Forest requests field visits by tribal government representatives to identify or verify sacred site locations. <ul style="list-style-type: none"> <li>○ Field visits with Tribal Representatives on June 1, 2000, June 12, 2003, and a Tribal Monitor Inventory on August 15, 2000, established that there are two American Indian culturally significant sites within the Elk Bugs analysis area. Implementing proper avoidance measures (described below) would protect these sites. Avoidance during all potential ground- and vegetation-disturbing activities is proposed for the Elk Bugs and Fuels alternatives.</li> </ul> </li>   <li>• Protection measures: Site boundaries in treatment areas will be marked with flagging and/or paint. On project or timber sale maps, the sites will be labeled as generic “sensitive” areas that must be avoided. A sensitive area may be a cultural site, a rare plant location, goshawk nest, etc. Cultural sites will not be identified on maps specifically as cultural sites in order to protect their integrity.</li>   <li>• Appendix B of the Draft Environmental Impact Statement (Mitigation) provides protection for any heritage resource sites discovered during implementation of the project.</li> </ul>

Comment	Response
	<p>A Level I Inventory is documented in the Level III inventory report for the Elk Bugs and Fuels Project Area, dated March 2003. This report indicates that 290 cultural resource sites were recorded in the Elk Bugs and Fuels Project Area. Of these sites, 121 are considered eligible for nomination to the National Register of Historic Places or are currently unevaluated for significance. An additional 49 cultural resource sites were recorded during the Elk Bugs and Fuels Project Area Inventory. Of the 49 sites, seven are considered eligible for nomination to the National Register of Historic Places or are currently unevaluated for significance (Redmond 2003).</p> <p>Special avoidance measures will be implemented for the 128 sites, including two that have American Indian cultural significance. An additional site (a marked, historic gravesite) is considered ineligible for nomination to the National Register of Historic Places, though it will be protected in the same manner as the significant properties (SHPO concurrence letter dated April 10, 2003, No. 030325004F).</p>
03-04	<p>Response to bullet statements 1 and 2:</p> <ul style="list-style-type: none"> <li>▪ document the source of the Forest Service’s alleged jurisdiction to override Treaty provisions that have never been abrogated by Congress;</li> <li>▪ demonstrate how the Forest Service intends to honor the terms of the 1851 and 1868 Fort Laramie Treaties as it proceeds with forest management activities; and</li> </ul> <p>1851 and 1868 Laramie Treaties</p> <p>The Sioux claim to the Black Hills has been the major issue for over 100 years. The consistent position by Congress and the Courts has been that the lands were taken by the United States when the Fort Laramie treaty of 1868 (15 Stat 635) was abrogated by Congress. This occurred when an 1876 special commission agreement with the Sioux Tribes was enacted into laws by Act of Congress in 1877 (19 Stat 254). Subsequent legislation and all Court cases dealt with the matter of just compensation for the taking and for the satisfaction of other claims.</p> <p>In 1980, after almost sixty years of litigation, the Supreme Court in <i>U.S. v. Sioux Nation</i> held that the 1877 Act constituted an unconstitutional taking. This decision affirmed a 1976 Indians Claim Commission (ICC) award to the Sioux Nation of \$17.1 million plus interest at the annual rate of 5 percent from the date the lands were taken by the United States in 1877.</p> <p>On July 18, 1980, in <i>Oglala Sioux v. U. S.</i>, the Sioux filed a quiet title suit against the U. S. and the State of South Dakota in District Court alleging that the United States taking the Black Hills under the 1877 Act was an</p>

Comment	Response
	<p>unconstitutional exercise of its powers of eminent domain. The Sioux sought restoration of the Tribe’s territorial rights to the Black Hills, as well as payment for damages resulting from waste, severance of minerals, and wrongful exclusion from the territory. They also moved for a temporary restraining order to prevent the U.S. from making any payment of the \$105 million Sioux Nation award. The District court dismissed this action for lack of jurisdiction. The Court of Appeals affirmed the District Court Decision on June 1, 1981. It held that Congress, by enacting the Indian Claims Commission Act, established the exclusive remedy for the Oglala Sioux’s claim under the Fifth Amendment and thus the district court did not have jurisdiction. The Supreme Court declined to review the Appeals Court Decision.</p> <p>Therefore, the United States’ taking of the lands in 1877 was affirmed, the Sioux Nation’s claims for return of the lands was denied, and the exclusive remedy for the Sioux and all other Indian claims provided for by Congress is the Indian Claims Commission Act of 1976. Furthermore, the lands have been set aside as a public reserve, Black Hills National Forest, for over 100 years. Other court cases have stated that lands set aside and reserved as National Forests constitute a taking of the land for Federal purpose.</p> <p>The claimed lands are now and have been National Forest System lands since they were set aside and reserved for public purpose by presidential proclamation. Over 1 million acres are within the Black Hills National Forest, which was established as a public reserve by President Grover Cleveland under authority of Sec. 24 of Act of Congress dated March 3, 1891, by Proclamation No. 25 dated February 22, 1897 29 Stat. 102. It was enlarged to its present size by President William McKinley by Proclamation No. 20 dated September 19, 1898. As a result of subsequent Congressional ratification providing for the management of these lands for public purposes, they have been managed for over 100 years for the public benefit.</p> <p>As an agency, the USDA – Forest Service is responsible for administration and management of all Federally owned lands within the National Forest System, including the Black Hills National Forest, in accordance with the statutory direction provided by the Congress of the United States. Congress has not authorized the Forest Service to settle or even address the lands claim issue of the Sioux Tribes. The Tribes have exhausted all Court remedies available for the resolution of their claim. Only Congress has the authority to transfer ownership of the Black Hills National Forest to the Sioux Tribes. Further consideration of the Sioux Nation’s desire for the return of the lands is a matter of deliberation for Congress.</p> <p>Response to Bullet Statement 3:</p>

Comment	Response
	<ul style="list-style-type: none"> <li>▪ base <u>all</u> alternatives on fulfilling the United States’ trust responsibility toward the Sioux Nation, including how the Forest Service intends to prohibit actions that would destroy cultural artifacts or desecrate burial or other sacred sites, recognizing that the entire Black Hills area is such a sacred site to the Fort Laramie signatory tribes.</li> </ul> <p>The Forest Service Desk Guide on Tribal Relations defines trust responsibility as " The term has never been defined by the U.S. Congress, any President, or any Cabinet official. Generally, it is a set of principles and concepts outlining the responsibilities of the U.S. Government to act as the trustee of Indian people and Indian owned assets. The U.S. Government through the President has certain responsibilities to protect Indian property and rights, Indian lands, and resources. The trust responsibility may involve a fiduciary obligation in which the President, through the Secretary of Interior, acts as the trustee of Indian assets.</p> <ul style="list-style-type: none"> <li>• Fulfilling or redeeming a trust responsibility, can best be reflected or demonstrated as a matter of action: a stream that was protected, a site that was maintained intact, a property right that has been left unaffected by a federal action. The writing of an environmental document is not an example of fulfillment of a trust duty. <ul style="list-style-type: none"> <li>○ The Forest Service continues to meet trust obligation by (1) consulting on and protecting sites (see response to comment 3-3) and (2) requesting consultation with the tribes on implementation of the Forest Plan (see response to comment 3-48).</li> <li>○ The Forest will continue to implement NHPA, Section 106, and we will continue to seek cooperative input from the Tribes so that we can, to the best of our abilities, and within the framework of the Forest Plan, meet our trust responsibilities</li> </ul> </li> </ul>

The Forest Service must use this public review process, including an appropriate consultation process with the Sioux Tribes for the Elk Bugs and Fuels DEIS project, and to reach an agreement with the Sioux Nation as required by the Fort Laramie Treaties on continued activities (such as logging, grazing, mining, and motorized travel) that degrade the environmental, cultural and spiritual values of the sacred Black Hills, prior to reauthorizing any commodity or activity program on the Black Hills National Forest.

03-05

## 2. Viable Populations of Species

The Black Hills Forest Plan employs a “proxy on proxy” approach to meet the requirement of maintaining viable wildlife populations. First, a number of “management indicator species” were selected to represent the needs of various types of wildlife throughout the Forest. For example, the pygmy nuthatch, black-backed woodpecker and three-toed woodpecker were selected to represent a wide-range of species dependent on mature forest conditions in general, and snag habitat in particular. By monitoring the health of the bird populations, the health of a wide range of other species that use similar habitat would be monitored as well. In this way, these birds act as indicators, or proxies, for many other species. The indicator species approach is the first level of proxy.

Next, rather than actually monitoring the population of each indicator species to determine if viable populations are being maintained, the Forest Service designates certain types and quantities of habitat as sufficient to maintain viable populations of the selected indicator species. Then habitats used by MIS will be monitored to determine what population changes, if any, are induced by management activities. For example, the suitable pygmy nuthatch habitat occurs in mature ponderosa pine communities having 3-5 snags per acre in excess of 19 inches dbh.

The Forest Plan sets out detailed and exacting requirements for various categories of forest stands (stand density, snag density, big game hiding and thermal cover, etc.). In order to support the minimum viable population of pygmy nuthatches, the Forest Service must determine how many blocks of mature ponderosa pine forest containing 3-5 large snags per acre exist on the Forest. These blocks of habitat are the second level of proxy, each potential breeding block “counting” as the presence of a certain number of breeding pair of pygmy nuthatches, which in turn indicates (in theory) the presence of numerous other species that share similar habitat needs. This is the second level of proxy.

But the Black Hills National Forest doesn’t even monitor the second level of habitat conditions necessary for minimum populations. Instead, it further correlates stand conditions with habitat conditions through a completely unvalidated and scientifically indefensible computer matrix multiplication process known as HABCAP. This “proxy on proxy on HABCAP” process is totally inadequate to meet the viability requirements of the National Forest Management Act. That even the proxies are not monitored makes the entire species determination process on the Black Hills National Forest a total fraud, not even qualifying a “junk science”. This inadequate procedure must be abandoned, and actual monitoring of wildlife populations begun on the Forest. Until a new methodology for maintaining viable wildlife populations is demonstrated on the Black Hills National Forest, it would be unlawful to further weaken and Forest Plan wildlife standards, as is being proposed in the initial letter(s) describing this project. Rather, the Elk Bugs and Fuels DEIS environmental analysis should be seen as the wonderful opportunity it is to finally comply with wildlife laws and regulations on the Black Hills.

03-06

The Elk Bugs and Fuels DEIS environmental analysis must provide specific direction relating to maintaining viable populations of species. This direction must be scientifically supported within the Elk Bugs and Fuels DEIS, must provide adequate information and analysis to support the effects determinations for sensitive species, and must not rely solely on habitat

03-07

capability changes as a means to make effects determinations. Rather, the Elk Bugs and Fuels DEIS must:

- ensure high to moderate capability habitat for sensitive species is well distributed on the Elk Bugs and Fuels DEIS Project Area;
- provide species-specific discussion of snag standards and the effects of forest management to snags and snag dependent species of wildlife;
- make viability determinations supported by species-specific discussions of critical habitat features, actual populations, and habitat distributions in order to meet the requirements of the NFMA and its implementing regulations;
- provide habitat capable of supporting well-distributed populations of native vertebrate species across the planning area;
- present a fragmentation analyses for those species where fragmentation effects are suspected or known to affect the species;
- protect existing old growth habitat, and provide direction that allows more younger forest stands the chance to attain old-growth conditions;
- abandon any proposal to construct or reconstruct roads in the Elk Bugs and Fuels DEIS project area; and
- ensure compliance with the NFMA and its implementing regulations with regards to the diversity of plant and animal communities and species viability.

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If a fragmentation model is used, the model must assess the effects of fragmentation in terms of more than one spatial scale and one set of criteria in order to adequately assess the effects of fragmentation. In addition, the Forest Service must reduce the road density by prohibiting new road construction and obliterating environmentally-damaging existing roads, and by allowing natural processes such as fires and insects to provide their full ecological benefits.

Comment	Response
03-05	This comment is outside the scope of this project.
03-06	The HABCAP model is used to estimate habitat effectiveness for big game species only. The model was used in preparation of the EIS to compare effects of each alternative on big game.
03-07 & 03-08	Assessment of potential impacts on threatened, endangered, and sensitive species are provided in the EIS. Viability statements are based on the potential for a species to persist both inside and outside the project area given proposed treatments. None of the alternatives is expected to negatively impact populations, since all would a) retain suitable habitat throughout the project area and b) not propose actions that are detrimental at the population level. Fragmentation analysis has been added to the EIS; fragmentation is not, however, implicated as a major factor determining species persistence in the Black Hills since these species evolved with a naturally patchy environment. No treatments are proposed in old growth. Overall road densities within the project area would decrease under all action alternatives.

### 3. Management Indicator Species (MIS)

Once again, absolutely no population data and presented. The Elk Bugs and Fuels DEIS must evaluate the current viability of MIS on the BHNF, not merely conduct an effects analysis to existing MIS populations. Rather, the Forest Service must determine if viable populations currently exist for the purposes of establishing MIS population and habitat goals as required by the Chief's Forest Plan appeal decision.

The EIS must fully analyze and assess the potentially significant effects to all MIS and their habitat that may exist within the Elk Bugs and Fuels DEIS timber sale area. The EIS must include and present quantitative MIS population trend data in order to accurately analyze and assess all potentially significant effects to MIS populations. Special attention must be given to the brown creeper as this bird species is an indicator of dense mature and late successional forest, a habitat type that has declined precipitously on the BHNF and now exists in very isolated and sparse stands on the forest. To accomplish this evaluation of MIS viability, the Elk Bugs and Fuels DEIS must:

- develop and implement a species-specific monitoring plan with quantified goals and objectives for MIS and sensitive species and their habitat;
- document in what habitat exists within the Elk Bugs and Fuels DEIS project area for the pine marten, including pine habitat;
- document the cumulative effects of meadow dewatering and draining on eliminating beaver from the Elk Bugs and Fuels DEIS project area, and the associated aquatic habitat for native fish species that has been lost;
- clearly articulate the role of MIS in project analysis;
- develop a hard list of MIS so as to ensure MIS are not excluded from analysis; MIS for which the project area is asserted to provide no suitable current habitat must be fully evaluated from the cumulative effects perspective on loss of historical habitat due to the exploitation of the natural resources of the Black Hills;
- establish a clear link between project-level MIS analysis and forest-wide population monitoring;
- develop quantitative MIS population goals and ensure project-level activities do not jeopardize these goals;
- provide information and analysis that supports the designation of MIS;
- must designate fish, wildlife, and plant MIS;
- must select and monitor MIS in accordance with NFMA regulations and FSM direction; and
- must provide documentation that describes how high, moderate, and low habitat capability is determined before using any HABCAP analysis.

If MIS from the original LRMP are not designated, the Elk Bugs and Fuels DEIS must document why these MIS are not designated. For those MIS excluded from evaluation because of alleged lack of habitat, the EIS must provide a comprehensive review of the cumulative effects on the Black Hills that produced this loss of habitat.

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Comment	Response
03-09	Direct, indirect, and cumulative effects on MIS are described in Chapter 3, Biological Environment – Wildlife Habitat.
03-10	Direct, indirect, and cumulative effects on MIS are described in Chapter 3, Biological Environment – Wildlife Habitat.

#### 4. Snag-Dependent Species

The Elk Bugs and Fuels DEIS environmental analysis must terminate the “bad mouthing” of natural processes such as insect outbreaks and storm damage that has led to the public hysteria surrounding fire danger on the Black Hills National Forest, which is primarily a function of weather conditions such as ongoing drought. Rather, the Elk Bugs and Fuels DEIS must provide population trends for snag dependent species to provide a context for the impacts of forest management to snag densities taking into consideration the “current age and structure of the forest” and any other natural or human-caused impacts to snag densities.

Mountain pine beetle infestations, if left alone, lead to the creation of snags and consequently the existence of down woody debris. These habitat components are essential to the survival of many native species on the Black Hills. We therefore request the EIS fully analyze and assess how the Elk Bugs and Fuels DEIS timber sale will affect snag habitat and down-woody debris habitat, as well as snag recruitment and the creation of future down-woody debris. Such an analysis and assessment must consider the fact that certain native species depend upon large-diameter snags and large diameter down-woody debris.

The DEIS alerts us that “[m]ost watersheds do not meet Forest wide Standard 2301 for the number of snags 10” and greater” [DEIA at 131]. Apparently, despite the alleged “insect epidemics” in the project area, the Forest Service couldn’t be bothered to actually collect any field data on existing snags. Moreover, the snag recruitment assumptions presented in the Elk Bugs and Fuels DEIS must be discarded as more of the “digital apologists” that have been proclaiming that logging will enhance long-term habitat characteristics on the Black Hills. This junk science began with the rosy projections in the 1983 Forest Plan that logging of “decadent” over-mature stands would lead to such increased vigor that ever-increasing timber harvest levels would ensue. This, of course, is without scientific merit.

We urge the Forest Service to carefully review appeal(s) of the 1997 LRMP and the Phase I Amendment for more realistic determinations of needed green tree recruitment levels. In addition, the Elk Bugs and Fuels DEIS environmental analysis must:

- present actual soft snag densities on the Elk Bugs and Fuels DEIS Project Area and explain how these densities were calculated;
- ensure an adequate density of soft snags is provided;
- ensure sufficient large diameter snags for snag-dependent species such as the northern flicker, black-backed woodpecker, three-toed woodpecker, Lewis’ woodpecker, common flicker, and pygmy nuthatch are provided across the Elk Bugs and Fuels DEIS Project Area;
- provide snag diameter requirements for all snag dependent species to ensure the USFS is protecting snags of adequate diameter;
- present snag height requirements for all snag dependent species in order to adequately support any adopted snag height requirement;
- ensure sufficient snag densities for snag-dependent species such as the black-backed woodpecker and common flicker are provided across the Elk Bugs and Fuels DEIS Project Area;
- provide snag density requirements for all snag dependent species to ensure the USFS is providing an adequate density of snags;
- establish a sufficient snag density standard that meets the documented needs of snag-dependent species of wildlife on the Elk Bugs and Fuels DEIS Project Area in order to ensure snag dependent species viability on the BHNF;
- provide the required information and analysis to support any snag density standard that is developed for any proposed Forest Plan amendments; and

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- establish soft snag retention standards for the Lewis' woodpecker and other snag dependent species of wildlife in order to ensure viable populations of these species (these retention standards must take into consideration the needs of the Lewis' woodpecker and other snag dependent species of wildlife).

03-13

This information must be presented in the Elk Bugs and Fuels DEIS environmental analysis. In addition, the Elk Bugs and Fuels DEIS environmental analysis must provide information and analysis to support the adequacy of any HABCAP or FVS analysis completed for snag dependent species of wildlife.

03-14

## 5. Watershed, Riparian Area, and Grazing Impacts

The Elk Bugs and Fuels DEIS environmental analysis must fully analyze the effects of livestock grazing to sensitive plant species, and must provide and/or cite information and analysis that supports any conclusions regarding the effects of livestock grazing to sensitive plant species. There is no need to develop water resources for cows. Proposals to steal water from fish and wildlife only underscores the need to reform grazing on public lands and underscores the fact that livestock grazing is not sustainable on public lands.

03-15

The EIS must fully analyze and assess the potentially significant effects to water quality both within the Elk Bugs and Fuels DEIS timber sale area and downstream from the timber sale area to ensure compliance with the Clean Water Act, State of Wyoming Water Quality laws, and Executive Orders 11988 and 11990. The EIS must fully analyze the effects of the Elk Bugs and Fuels DEIS timber sale on sedimentation, flow regimes, water temperature alterations, and streambeds and banks. When analyzing the effects of the Welcome-Sand timber sale to water resources, the Forest Service cannot simply rely on a list of best management practices ("BMP's") in place of analysis, disclosure, and assessment as required by the National Environmental Policy Act. For instance, if sedimentation will occur as a result of the timber sale, the agency must analyze and disclose how much sedimentation will occur in order to adequately assess the significance of any and all sedimentation. A mere listing of BMP's is a wholly inadequate assessment and does not provide the public or the agency with any kind of understanding of the potentially significant effects of the Elk Bugs and Fuels DEIS timber sale to water resources.

03-16

The EIS must fully disclose the existence, extent, and vegetative composition of all riparian areas within the Elk Bugs and Fuels DEIS timber sale and fully analyze and assess the potentially significant effects to these riparian areas. The revised EIS must disclose the existence of riparian areas on maps included with the Elk Bugs and Fuels DEIS timber sale analysis area and provide information documenting the vegetative composition of riparian areas in the timber sale area.

03-17

The EIS must fully disclose the location and extent of all historic meadows, including wet meadows supporting beaver colonies, in the Elk Bugs and Fuels DEIS timber sale area so that reviewers of any environmental analysis can fully understand the extent of pine encroachment. An EIS must also disclose the acres desired to be meadows in the project area to compare with the acreage of meadows that may be created by the Elk Bugs and Fuels DEIS timber sale. This disclosure is necessary so that reviewers of any environmental analysis can fully understand the extent of the potentially significant effects of the timber sale, including the historical loss of aquatic habitat due to past inappropriate activities in formerly wet meadow areas.

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Comment	Response
03-11	Snag and coarse woody debris resources are discussed in Chapter 3 under analysis of effects for a number of sensitive species, including black-backed woodpecker, Lewis' woodpecker, and pygmy nuthatch. In addition, a separate analysis of snags and down logs is provided in Chapter 3, Biological Environment – Wildlife Habitat.
03-12	<p>Estimates of existing snag density are based on the best available information: stand-level RMRIS tree data collected through R2 stand examination. Existing snag densities are discussed in Chapter 3, Biological Environment – Forest Vegetation – Affected Environment – Snags. Snag density standards are set by the Phase I Amendment (USDA Forest Service 2001 [1]). Green-tree retention for pine sites was modeled using Black Hills National Forest protocol: Landscape Level Snag and Green Tree Retention Modeling (USDA Forest Service 2001 [4]).</p> <p>See also response to Comment 03-11.</p>
03-13	See response to Comment 03-12.
03-14	See responses to Comments 03-06 and 03-12.
03-15	<p>See response to Comment 02-03.</p> <p>Information specific to livestock grazing and sensitive plants in this proposed project area can be obtained from the 1997 Livestock Grazing Environmental Assessment for the Spearfish/Nemo (now Northern Hills) Ranger District. In addition, see the Washington Office Interim Direction for Livestock Grazing on Sensitive Plant and Snail Sites (Monitoring Report 2000).</p> <p>The Elk Bugs and Fuels Project includes no livestock water development proposals. Existing management of the grazing program is outside of the scope of the Elk Bugs and Fuels Project.</p>
03-16	The EIS fully analyzes and assesses potentially significant effects to water quality, both within and downstream of the project area, to ensure compliance with the Clean Water Act and Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands). Analysis and assessments of sediment are found in Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects – Streamflow, Water Quality, Channel Morphology, and Riparian Zones and Wetlands. Downstream effects are discussed under the Cumulative Effects introduction associated with Table 28, and in the Cumulative Effects in the Analysis Area section. Downstream effects have been clarified in the FEIS. Responses to Comments 01-20, 01-21, and 01-23 address

Comment	Response
	<p>potential effects to riparian areas and wetlands (Executive Order 11990).</p> <p>The Elk Bugs and Fuels Project is located entirely within the State of South Dakota. Wyoming state laws regarding water quality do not apply.</p>
03-17	<p>The EIS fully analyzes the effects on flow regimes, water temperature alterations, and streambeds and banks in Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences and Cumulative Effects. Additional discussions occur in the Fisheries section of Chapter 3. Potential sediment volumes and their possible effects on sedimentation are addressed in response to Comments 01-08, 01-10, 01-14, 01-15, 01-16, 01-17, 01-18, 01-19, 01-22, and 03-16.</p> <p>Analyzing the effects of the Welcome-Sand timber sale on water resources is beyond the scope of this project.</p>
03-18	<p>Existing impacts on riparian zones and wetlands are documented in the EIS in Chapter 3, Physical Environment – Hydrology and Soils – Existing Conditions – Riparian Zones and Wetlands. Additional detail on existing impacts on riparian areas and wetlands is found in the Roads Analysis Report in Section D of the Project File. Potentially significant hydrologic effects on riparian resources are analyzed in Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Direct and Indirect Effects – Riparian Zones and Wetlands. Further analysis and discussion of effects is in Chapter 3, Physical Environment – Hydrology and Soils – Environmental Consequences – Cumulative Effects – Floodplains, Riparian Zones, and Wetlands.</p> <p>See also response to Comment 01-20.</p>
03-19	<p>The extent of all historic meadows is unknown. The area proposed for meadow enhancement is displayed in Table 3 and the map set. Meadows are discussed in Chapter 3, Biological Environment – Wildlife Habitat – Affected Environment and Environmental Consequences.</p>

In addition, the Elk Bugs and Fuels DEIS environmental analysis must:

- analyze the impacts of livestock grazing on sensitive plants and their habitat;
- provide management objectives for weed management;
- provide standards and guidelines that specifically address the impacts of noxious weeds to sensitive plant species and their habitats;
- specifically present a consistent and well-supported analysis of the effects of livestock grazing to Bloodroot;
- utilize, cite, and reference available scientific literature describing the effects of livestock grazing to sensitive plant species;
- provide monitoring requirements that quantify the impacts to sensitive plant species in order to ensure livestock grazing does not conflict with the values for which Botanical Areas may be designated;
- utilize and cite available scientific literature in order to analyze the indirect and cumulative effects of livestock grazing to sensitive plants;
- consider the effects of livestock to the viability of sensitive plant populations on the BHNF utilizing available scientific literature; and
- adequately disclose the effects of livestock grazing to sensitive plant species in order to meet the standards of analysis required by 36 CFR § 219 and FSM 1920.

03-20

## 6. Sensitive Plant Species

The Elk Bugs and Fuels DEIS must fully analyze and assess the potentially significant effects to the following plant species of concern and their habitats:

Autumn coral-root (*Corallorrhiza odontorhiza*), Autumn willow (*Salix serissima*), Blunt-broom sedge (*Carex tribuloides*), Dwarf scouring rush (*Equisetum scirpoides*), Foxtail sedge (*Carex alopecoidea*), Giant Helleborine (*Epipactis gigantea*), Great-spurred violet (*Viola selkirkii*), Large roundleaf orchid (*Platanthera orbiculata*), Prairie dunewort (*Botrychium campestre*), Southern maidenhair-fern (*Adiantum capillus-veneris*), Spinulose shield fern (*Dryopteris carthusiana*), Trailing clubmoss (*Lycopodium complanatum*), Moschatel (*Adoxa moschatellina*), Maidenhair spleenwort (*Asplenium trichomanes*), Green spleenwort (*Asplenium viride*), Elegant sedge (*Carex bella*), Bristly-stalk sedge (*Carex leptalea*), Longstalk sedge (*Carex pedunculata*), Dog cryptantha (*Cryptantha cana*), American rock-brake (*Cryptogramma acrostichoides*), Large yellow ladies-slipper (*Cypripedium calceolus* var. *pubescens*), Beaked spikerush (*Eleocharis rostellata*), Woodland horsetail (*Equisetum sylvaticum*), Variegated horsetail (*Equisetum variegatum*), Showy prairie gentian (*Eustoma russellianum*), Secund Bladderpod (*Lesquerella arenosa* var. *argillosa*), Broad-leaved Twayblade (*Listeria convallarioides*), Stiff clubmoss (*Lycopodium annotinum*), Treelike clubmoss (*Lycopodium dendroideum*), Marsh muhly (*Muhlenbergia glomerata*), Gray's lousewort (*Pedicularis procera*), Arrow-leaved sweet-coltsfoot (*Petasites sagittatus*), Mountain holly-fern (*Polystichum lonchitis*), Hoary willow (*Salix candida*), Bloodroot (*Sanguinaria canadensis*), Woolrush (*Scirpus atrocinctus*), Thinleaved blueberry (*Vaccinium membranaceum*).

03-21

We also request the EIS present information and maps showing the occurrence of high quality and non high quality plant habitat, as well as documentation of the results of plant surveys conducted in these habitats. We also request the Forest Service fully analyze and assess the impacts to unique vegetation communities within the Elk Bugs and Fuels DEIS timber sale area.

03-22

Comment	Response
03-20	<p>Management objectives for noxious weeds as they relate to sensitive plant species are addressed in the Elk Bugs and Fuels EIS. Further information can be obtained from the Black Hills National Forest Noxious Weed Management Plan (2003) and associated EA.</p> <p>See response to Comment 03-15 regarding effects on R2 sensitive plants.</p> <p>Noxious weeds are addressed on page 168 of the DEIS.</p> <p>Bloodroot is addressed on page 158 of the DEIS and in the botany Biological Evaluation.</p> <p>Effectiveness monitoring for R2 sensitive plants is listed in Appendix C .</p>
03-21	<p>The project botanist considered all R2 sensitive plant species in the botany Biological Evaluation. Those sensitive plant species known to occur, potentially occurring, or with suitable habitat in the project area were analyzed in detail. Forest Service Manual 2672.4 requires that R2 sensitive plant species be addressed in Biological Evaluations:</p> <p>“WO 2672.4 - Biological Evaluations. Review all Forest Service planned, funded, executed, or permitted programs and activities for possible effects on endangered, threatened, proposed, or sensitive species. The biological evaluation is the means of conducting the review and of documenting the findings. Document the findings of the biological evaluation in the decision notice. Where decision notices are not prepared, document the findings in Forest Service files. The biological evaluation may be used or modified to satisfy consultation requirements for a biological assessment of construction projects requiring an environmental impact statement.”</p> <p>“R2 2672.4 - Biological Evaluations. As part of the NEPA decision making process, review proposed Forest Service programs or activities in sufficient detail to determine how an action or proposed action will affect any species which is listed under the Endangered Species Act, proposed for such federal listing, or designated in Region 2 as sensitive.”</p> <p>And the following objective states:</p> <p>“WO 2672.41 - Objectives of the Biological Evaluation...3. To provide a process and standard by which to ensure that threatened, endangered, proposed, and sensitive species receive full consideration in the decision making process.”</p> <p>This direction applies to threatened, endangered, proposed, and sensitive species.</p> <p>Most of the species mentioned in this comment are not R2 sensitive species. Most are not known to occur in the project area, and habitat for many does not exist in the project area or adjacent areas.</p>

	<p>The National Forest Management Act requires the Forest Service to maintain diversity of all species in the planning area (the National Forest). To meet this direction, all known sites of unique plant species were excluded from treatments proposed under any alternative.</p>
03-22	<p>Survey data and maps of plant habitat are in the project record. Effects on sensitive and other unusual plants are discussed in the EIS. No mechanical treatments are proposed under any alternative in any known, high-potential R2 sensitive plant habitat.</p>

The Forest Service must also fully protect all unique vegetation communities and sensitive and/or rare plants in the Elk Bugs and Fuels DEIS timber sale area, and must utilize the following sources of scientific information to gain an adequate understanding of the Elk Bugs and Fuels DEIS timber sale and render an informed and environmentally considerate decision:

The Elk Bugs and Fuels DEIS environmental analysis must analyze the effects of forest management to sensitive plant species and cite and identify source documents to support the effects analysis. In addition, the Elk Bugs and Fuels DEIS environmental analysis must:

- provide specific standards and guidelines for sensitive plant species in all management areas on the BHNF;
- provide sufficient and specific standards and guidelines that assure the protection and viability of sensitive plant species;
- utilize sensitive plant monitoring data in the development of the Elk Bugs and Fuels DEIS to support effects determinations made in the Elk Bugs and Fuels DEIS environmental analysis;
- develop specific goals and objectives for monitoring populations of sensitive plants;
- develop a sensitive plant monitoring plan that provides quantitative, consistent, unbiased, and defensible data in order to determine what effects management activities are having on populations of sensitive plants;
- provide standards for sensitive plants in their full range of habitats in order to protect sensitive plant species from all land management activities; and
- provide documentation and scientific evidence to support the effects determination for the Autumn coralroot.

03-23

## 7. Sensitive Animal Species

### A. Northern Goshawk

An EIS must be completed to fully analyze and assess the potentially significant effects to the northern goshawk using quantitative population information as a context for the assessment (i.e., how many individuals out of the population will be impacted).

Collection of such necessary data is mandatory under NEPA, and an EIS is the proper vehicle for finally disclosing the direct, indirect, and cumulative effects on this species to the public and Forest Service decision makers. The EIS must also fully analyze and assess the potentially significant effects to potential goshawk nesting habitat (i.e., ponderosa pine vegetation structural stages 5 and 6) regardless of whether the habitat exists within a known territory, the potentially significant effects to goshawk post fledging habitat, and the significant effects to goshawk foraging habitat. We request that all late successional habitat and stands of structural stage 4C and 4B be deferred from any treatments in order to ensure an adequate amount of goshawk nesting habitat is protected.

The Elk Bugs and Fuels DEIS environmental analysis must provide the necessary information and analysis that supports any measure designed to protect the northern goshawk and its habitat, and must ensure protective measures are enforceable and not contradictory. In particular, the Elk Bugs and Fuels DEIS must:

- define the size of goshawk habitat as it relates to any measure designed to protect the northern goshawk and its habitat on the BHNF;
- present BHNF-specific information and analysis that supports any size determination for goshawk habitat;

03-24

- provide measures that ensure goshawk nesting habitat is well represented and distributed on the BHNF and that respond to the habitat needs of the goshawk on the BHNF;
- analyze the specific effects to goshawk nesting habitat, as well as all other aspects of goshawk habitat and individual goshawks;
- provide standards and guidelines that maintain goshawk viability in accordance with the NFMA, its implementing regulations, and FSM direction; and
- provide the necessary information and analysis that supports any viability determination.

03-24

Comment	Response
03-23	<p>Creation of standards and guidelines is outside the scope of this analysis. Existing Black Hills National Forest standards and guidelines for R2 sensitive plants were use in developing the Biological Evaluation and proposed activities.</p> <p>Sensitive plant monitoring: See Black Hills National Forest annual monitoring reports. Monitoring requirements are found in EIS Appendix C.</p> <p>Autumn coralroot (<i>Corallorhiza odontorhiza</i>) is addressed in the EIS and botany Biological Evaluation. Autumn coralroot is a rare, eastern deciduous forest orchid with a disjunct distribution in the Black Hills of South Dakota. It is known from one confirmed occurrence on the Black Hills National Forest in Lawrence County, South Dakota, in 1971, when it was found in pine forest habitat southeast of Deadwood. An exact location was not recorded for the collection, and the species has never been located again despite repeated attempts. Specific habitat for the species in the Black Hills is not known (including the range of optimal and suitable habitat).</p> <p>Intensive survey for autumn coralroot alone has not been implemented on the BHNF, but this species is on the BHNF list of R2 sensitive species (1994) for which to search and document locations during all general botanical surveys. No individuals or populations of this species have been found since 1971. Consequently, it is unknown whether a viable population exists on the Forest. Because this species has not been documented to exist on the Black Hills National Forest for over 30 years, it is not possible to evaluate the potential effects of management activities on its habitat(s), individuals, or populations.</p> <p>The comprehensive lack of information on autumn coralroot has been acknowledged in the process for updating R2's sensitive species list. The draft of the new list includes autumn coralroot in the category of Insufficient Information. If the new list is approved as written, this species would no longer be designated "sensitive" and would remain in this status until adequate information is collected to determine its presence and habitat requirements on the Black Hills. The species would also become a BHNF species of Insufficient Information. Surveys and monitoring for occurrence and quantifiable population information will continue on the Forest, and individuals will be documented and protected if found.</p>
03-24	<p>No suitable goshawk nesting habitat is proposed for treatment that would alter stand characteristics. See Chapter 3, Biological Environment – Wildlife Habitat.</p>

## B. Sensitive Woodpecker Species

We are very concerned over the impacts of the Elk Bugs and Fuels DEIS timber sale to sensitive woodpecker species. Various scientific sources have clearly established the relationship between healthy woodpecker populations and wood-boring beetles and late successional habitat, which makes it difficult to believe the Elk Bugs and Fuels DEIS timber sale will not further jeopardize the viability of sensitive woodpecker species and diversity on the Black Hills. The EIS must therefore fully analyze and assess the potentially significant effects of the Elk Bugs and Fuels DEIS timber sale to the three-toed woodpecker, black-backed woodpecker, and Lewis's woodpecker. The EIS must fully analyze and assess the impacts of reducing, eliminating, or otherwise attempting to control in any way, any and all mountain pine beetle or other insect within the project to sensitive woodpecker species populations in accordance with 36 CFR § 219.19(a)(5).

03-25

We request the Forest Service allow mountain pine beetle outbreaks to occur in a large part the Elk Bugs and Fuels DEIS timber sale area to provide sensitive woodpecker habitat. We also request the Forest Service analyze and assess the potentially significant effects to red-headed woodpecker, downy woodpecker, hairy woodpecker, and red-naped sapsucker.

03-26

The Elk Bugs and Fuels DEIS environmental analysis must provide standards and guidelines that ensure habitat capability for these woodpecker species does not decrease in order to provide for the viability of this species. In particular, the Elk Bugs and Fuels DEIS must:

- provide standards and guidelines, supported with the necessary analysis and information that maintains the viability of the three-toed, black-backed, and Lewis' woodpecker;
- allow natural fires to occur at some level on the BHNF in order to benefit the three-toed black-backed, and Lewis' woodpecker;
- present information and analysis stating how many acres might be expected to burn in wildfires on the BHNF; and
- analyze the effects of Objectives 224 and 225, or any other similar objectives, standards, guidelines, or requirements, to the three-toed, black-backed, and Lewis' woodpecker.

03-27

## C. Northern Leopard Frog

The Elk Bugs and Fuels DEIS environmental analysis must describe population and habitat status, trends and objectives for the northern leopard frog. In particular, the Elk Bugs and Fuels DEIS must:

03-28

- provide monitoring objectives specific to the northern leopard frog;
- provide an estimate of population and habitat status and trend for the northern leopard frog to provide a context for the effects of management actions in light of dramatic declines in some populations;
- provide information and analysis that supports the effectiveness of mitigation measures designed to protect the northern leopard frog and ensure this species viability; and
- ensure viable populations of northern leopard frog are maintained on the BHNF.

03-29

Comment	Response
03-25	Analysis of impacts on sensitive cavity-nesting species is provided in Chapter 3, Biological Environment – Wildlife Habitat.
03-26	Analysis of impacts on sensitive cavity-nesting species is provided in Chapter 3, Biological Environment – Wildlife Habitat.
03-27	<p>Analysis of impacts on sensitive cavity-nesting species is provided in Chapter 3, Biological Environment – Wildlife Habitat.</p> <p>Potential fire size and occurrence in the Fire Management Zone specific to the project area was analyzed using the Probacre program. See Chapter 3, Physical Environment – Fire Hazard and Fuel Loading.</p>
03-28	Analysis of impacts on the northern leopard frog is in Chapter 3, Biological Environment – Wildlife Habitat.
03-29	Analysis of impacts on the northern leopard frog is in Chapter 3, Biological Environment – Wildlife Habitat.

## D. Snail Species of Concern

The EIS must fully analyze and assess potentially significant effects to all known snail colonies and all potential snail species of concern habitat. An EIS must also fully disclose the location of all snail species of concern colonies within the Elk Bugs and Fuels DEIS timber sale area to ensure protection measures adequately protect all known and potential colonies. The EIS must also fully disclose the cumulative impacts to snail species of concern due to past water developments and spring diversions within the project area, including draining of wet meadows and elimination of beaver colonies.

We request that the Forest Service implement at least a 1,000- foot buffer to adequately protect all known snail colonies. This buffer is to ensure that colonies, which are known to shift over time, are fully protected and to ensure their habitat is adequately protected. The Elk Bugs and Fuels DEIS environmental analysis must describe the current population and habitat status of snail species of concern. In particular, the Elk Bugs and Fuels DEIS must:

- fully address the findings of the 1993 and 2002 Frest and Johannes reports;
- disclose the status of existing habitat for snail species of concern using the 1993 and 2002 Frest and Johannes reports; and
- develop clearly stated population and habitat objectives and develop a species specific monitoring plan with specific monitoring objectives for snail species of concern.

This analysis and information is necessary to ensure the Elk Bugs and Fuels DEIS provides for viable populations of snail species of concern.

03-30

## E. Aquatic Species

The EIS must fully analyze and assess the potentially significant effects to native fish species. Numerous concerns have been expressed over native fish viability on the BHNF (see e.g., Chief's 1999 Appeal Decision for Appeals of the 1997 BHNF Revised Forest Plan) and therefore, the agency is obligated to ensure the Elk Bugs and Fuels DEIS timber sale does not adversely affect these fish species. The Elk Bugs and Fuels DEIS must document the level of suitable habitat for the finescale dace, lake chub, and mountain sucker in order to satisfy the disclosure requirements of NEPA. The EIS must also fully disclose the cumulative impacts to aquatic and native fish species of concern due to past water developments and spring diversions within the project area, including draining of wet meadows and elimination of beaver colonies.

Of particular concern is the potential existence of finescale dace within the DEIS analysis area. We therefore request that the Forest Service conduct surveys for finescale dace to determine whether or not the fish still exists. Survey data will also enable the Forest Service to better analyze and assess the impacts of the Elk Bugs and Fuels DEIS timber sale to native fish species. We request that all native fish species be fully protected.

The Elk Bugs and Fuels DEIS environmental analysis must clarify which species of fish on the project area are native and exactly where these native fish species currently exist on the BHNF, and must present historic and current distribution, habitat condition and trend, population status and trend, and the effects of proposed actions to native fish species on the BHNF.

03-31

03-30	Analysis of impacts on sensitive snail species is provided in Chapter 3, Biological Environment – Wildlife Habitat.
03-31	<p>Lake chub has not been documented in the project area. In the Black Hills, lake chub is currently known to occur only in Deerfield Reservoir. In the South Dakota portion of the finescale dace range, no populations have been documented on the Black Hills National Forest (Isaak et al. 2003). Due to these factors, suitable habitat for these species was not further quantified for this project. Suitable habitat for mountain sucker is identified in Chapter 3 based on this species' presence.</p> <p>The EIS tiers to the Revised Forest Plan FEIS, which describes the past and present effects of water developments and spring diversions, including draining of wetlands and elimination of beaver. The Revised Forest Plan FEIS also incorporates by reference "A Century of Change in Black Hills Forest and Riparian Ecosystems" (Parrish et al. 1996), which further describes past and present effects on riparian and aquatic habitats.</p> <p>The South Dakota Department of Game, Fish and Parks conducted fish population surveys. The Fisheries report in the Project File describes the areas that were surveyed and MIS that were found. No finescale dace were found within the project area or its cumulative effects boundary.</p> <p>The Revised Forest Plan identifies aquatic MIS to represent the aquatic communities in the Black Hills National Forest. Native fish species selected as MIS include lake chub, finescale dace, and mountain sucker. Survey information, distribution, habitat, and effects are disclosed in the Fisheries section of Chapter 3.</p>

- In particular, the Elk Bugs and Fuels DEIS environmental analysis must:
- fully disclose the affected environment and analyze the effects of proposed actions to fisheries resources on the project area;
  - provide analysis and information that supports the effectiveness of best management practices (“BMP’s”);
  - utilize habitat and population monitoring information and inventory information;
  - provide analysis and information that supports any determination that the impacts of current management to native fisheries are not significant;
  - analyze the impacts of non-native fish species to native fish species;
  - provide scientifically supported measures that protect native fisheries and ensure native fish species viability;
  - ensure viable populations of existing fish species are maintained on the BHNF; and
  - provide analysis and information that supports any measures that protect existing fish populations on the BHNF.

03-32

This analysis must also include aquatic MIS population trend monitoring data.

### 8. Culmination of Annual Increment (CMAI)

The Elk Bugs and Fuels DEIS does not even include an index entry for “Culmination of mean annual increment”, clearly failing to document compliance with this NFMA direction. We again point out to the Forest Service that the Black Hills LRMP contains no exemptions for CMAI that have been vetted through public participation processes (see again our LRMP Appeal). In addition, recent case law on the Black Hills National Forest (see Hollow litigation ruling) has declared that all stands must meet CMAI requirements, not just even-aged or timber production stands.

The Elk Bugs and Fuels DEIS fails to disclose compliance with CMAI requirements. The revised Elk Bugs and Fuels DEIS must fully disclose the CMAI attainment for all stands included for manipulation in any proposed action alternatives, regardless of the objectives of those treatments, in order to comply with case law governing the Black Hills National Forest.

03-33

### 9. Late Successional Habitat (Old Growth)

The EIS must fully analyze and assess the potentially significant effects to late successional forest habitat, including the effects upon all potential late successional habitat (i.e., the effects of the Elk Bugs and Fuels DEIS timber sale to existing old growth stands and to late successional recruitment). This analysis must also differentiate between tree species. The index entries for “old growth” all point only to the mere words “old growth” in the text, indicating that there is actually no old growth habitat assessment whatsoever contained in the Elk Bugs and Fuels DEIS. This, of course, is woefully insufficient to meet the professional and scientific integrity mandates of NEPA and the viable populations directives of NFMA.

To complete this analysis and assessment, the Forest Service must first analyze whether or not the amount of late successional forest in the project area is sufficient to meet the needs of populations of wildlife species dependent on late successional forest. The Forest Service must then analyze the effects of the Elk Bugs and Fuels DEIS timber sale to late successional habitat (including future late successional habitat) in terms of the needs of those species of wild life dependent on this specialized habitat (e.g., northern goshawk, marten, sensitive woodpecker species, pygmy nuthatch, northern flying squirrel, golden-crowned kinglet, and brown creeper). We request that all late successional habitat and all potential late successional habitat be protected.

03-34

Comment	Response
03-32	<p>The Water and Soil Specialist’s report, located in the Project File, discusses BMP effectiveness. The 2001 Monitoring Report (USDA Forest Service 2001), p. 6, demonstrates the application and effectiveness of BMPs in Wyoming and South Dakota. Monitoring of the Rednose Timber Sale found an effectiveness score of 0.82, indicating that “field practices are meeting BMP requirements”. Scores above 0.70 indicate compliance with BMPs. The 79% value referenced by the commentator is in fact an application “score” of 0.79, not a percentage of effectiveness. The effectiveness score for timber sales in South Dakota is 0.80. This is above the 0.70 threshold, and therefore indicates that field practices are meeting and occasionally exceeding state BMP requirements.</p> <p>Information on MIS and effects of alternatives are discussed in the Fisheries section of Chapter 3.</p>
03-33	See response to Comment 02-18.
03-34	<p>No activities are proposed in existing old-growth habitat. Structural stage 4C stands, which consist of dense, mature ponderosa pine, will be maintained across the landscape. Analyses of effects on northern goshawk, marten, woodpecker species, pygmy nuthatch, golden-crowned kinglet, and brown creeper are provided in the EIS (Chapter 3, Biological Environment – Wildlife Habitat). Northern flying squirrel: see response to Comment 01-51.</p>

## 10. Cumulative Effects

The DEIS is totally inadequate regarding disclosure of cumulative effects. The DEIS contains absolutely no assessment of impacts to old-growth habitat, or associated species. This despite the fact that the decline in old growth conditions from historical levels is an obvious indicator of significant adverse impacts from the past century of management manipulations and activities. After all, much of the project area was old-growth stands or beaver-occupied wet meadows that would have certainly provided suitable habitat for these species. Similarly, the past century has seen the extirpation of the grizzly and timber wolf, as well as the marten. Surely these demises represent cumulative impacts, yet the DEIS is silent on these matters.

03-35

The DEIS also pretends that the proposed logging actions will not reduce the number of large trees in a manner similar to everywhere else on the Black Hills National Forest, by omitting one or two likely reentries in the next twenty years of the projects of their Forest Vegetation Simulator. Such fraudulent presentations must be corrected with accurate disclosures of the cumulative impacts of the unsustainable logging that has occurred, and continues to occur, across the Black Hills National Forest, including on the Elk Bugs and Fuels DEIS project area.

03-36

Amazingly, the DEIS even fails to inform the decisionmaker whether the current alleged “beetle epidemic” is achieving mortality levels that exceed annual green growth, i.e., is this alleged “epidemic” resulting in an actual decline in the amount of live pine fuels in the project area. This is crucial, because if pine volume is declining, then a natural fire risk reduction is occurring that will benefit the project area in the future. The 700-acre sacrifice zone in the Forbes Gulch area authorized under the Daschle Rider is a good example of the rapid loss of fire potential of dead pines in this part of the forest, where fine fuels can be observed to be eliminated by roughly 50% per year for each year after mortality. The moister conditions found in Beaver Park also lead to rapid development of rot in the standing and downed materials, lead to “punk” logs and snags that act as sponges holding water within the ecosystem and actually reducing fire potentials. The DEIS is silent on these beneficial aspects of natural processes.

03-37

The DEIS fails to actually assess impacts to any forest resource from past, present, and reasonably foreseeable future activities. The mere listing of past and ongoing timber sales by watershed is completely inadequate under NEPA disclosure mandates. The DEIS fails to identify which of the “overstocked” stands are the result of past bulldozing of aspen stands within the project area. The DEIS fails to disclose how the past 125 years of “logging on demand” and unconstrained firewood gathering have eliminated woodpecker habitat, eliminating this natural control on insect cycles. The DEIS never explains how the current “unacceptable” situation arose, or how continuing the 60-80 basal area highgrading that has been ongoing on the Black Hills for decades now will lead to better results than it has in the past. Repeating past actions and expecting different outcomes is one familiar definition of insanity, which is what passes for forest management on the abused Black Hills National Forest.

03-38

The Forest Service also fails to disclose the continual increase in forest-wide fire risk levels with the ongoing shelterwood timber program. Each year, the trees in the forest become younger, and therefore closer to the ground, of finer fuels, and therefore more flammable. The Forest Service must fully disclose the critical role played by unsustainable logging and grazing levels on promoting ever-younger pine stands and ever-more-fire-prone landscapes. The revised draft Elk Bugs and Fuels DEIS must develop a range of alternatives that enhances the fire-retardant effects on forest landscapes of increased levels of old growth habitat, as well as increased wet meadows and beaver colonies. Road levels on the Black Hills are also so excessive that any existing road must be regarded as more of a fire threat than an aid to fire fighting (take note of the increasing incidence of arson in the last few years of fires on the Black Hills).

03-39

Comment	Response
03-35	None of the action alternatives propose treatments in old-growth stands. Prescribed thinning treatments are designed to accelerate tree growth on the landscape. Cumulative effects for old growth were not identified due to a lack of impact to existing old-growth stands under the action alternatives.
03-36	The cumulative effects analysis included all reasonably foreseeable actions. See Chapter 3, Biological Environment/Forest Vegetation/Environmental Consequences/Cumulative Effects.
03-37	Future conditions that would result from the no-action alternative are discussed in Chapter 3, Physical Environment – Fire Hazard and Fuel Loading. Downed logs contribute to fire spread by providing a suitable fuelbed for firebrands and by slowing down line construction rates (Brown et al. 2001). Reducing fuels greater than 3” in diameter reduces future fire intensities, fire persistence, burnout time, and resistance to control. Additional discussion of the effects of large woody fuels has been added to Chapter 3, Physical Environment – Fire Hazard and Fuel Loading.
03-38	<p>The cumulative effects of past actions on forest resources are disclosed in Chapter 3, Biological Environment – Forest Vegetation – Environmental Consequences – Cumulative Effects and Cumulative Effects of Public Law 107-206 Activities Outside the Project Area. “Bulldozing aspen” does not appear in project area records and is not known to have occurred in the project area, although this method has been used in other areas of R2 as a method to stimulate aspen regeneration (DeByle and Winokur). The effects of actions since 1870 are discussed in Chapter 3, Biological Environment – Forest Vegetation – Cumulative Effects. The effects of proposed thinning are discussed in Chapter 3, Biological Environment – Forest Vegetation – Direct and Indirect Effects – Forest Insects, Stand Structure and Stocking, and Stand Diversity.</p> <p>The project does not propose treatments that would alter stand structure in structural stage 4C, which include the most overstocked stands in the project area. Natural processes will continue within these stands, providing suitable habitat for several woodpecker species, including the black-backed woodpecker. Treatments that involve thinning to 60-80 square feet of basal area do not constitute “high-grading”. On the contrary, thinning treatments remove smaller trees and retain the largest trees in a given stand.</p>
03-39	Past actions that contributed to existing conditions are discussed in Chapter 3, Biological Environment – Forest Vegetation – Cumulative Effects. Proposed thinning treatments would thin from below, removing the smaller trees in the stand (Chapter 2, Alternatives Considered in Detail – Vegetative Treatments – Commercial Thinning and Non-commercial Thinning). Under the action

Comment	Response
03-39 continued	<p>alternatives, average canopy base heights would increase and canopy bulk densities would decrease. This reduces the likelihood of a surface fire transitioning into a crown fire (Pollet and Omi 2000). See Chapter 3, Physical Environment – Fire Hazard and Fuel Loading.</p> <p>Proposed treatments were developed in response to the purpose of and need for action or issues raised during scoping, both described in Chapter 1. Effects of the alternatives on forest structural stages are disclosed in Tables 77, 78, 79, and 80.</p> <p>Analysis of fire records (1970-1996) shows that 67% of all ignitions were caused by lightning. Recreational use accounted for less than 10 % of all fire starts on the Forest. Any increase in fire occurrence due to road development would likely be offset by the shorter response time and increased use of firefighting equipment afforded by access from developed roads (Revised Forest Plan).</p>

The Forest Service also fails to perform the continuous monitoring of species and habitats that are required under NFMA. Instead, we get only promises that some reviews (for example, for snags and sensitive species) will be conducted “following timber harvest” [DEIS at C-2], but not prior to issuance of the Final environmental analysis and decision. This completely violates both the spirit and letter of NEPA and NFMA, and must be corrected by presentation of all required monitoring data in the revised draft Elk Bugs and Fuels DEIS.

03-40

And finally, the DEIS fails to implement the Daschle Rider (PL 107-206) direction in Section 706(k), since nowhere in the DEIS are the “effect of actions authorized by this section in the proposed Elk Bugs and Fuels project cumulative effects analysis for past, present, and reasonably foreseeable future actions” actually tabulated and presented to the decisionmaker (or the Congress). The Daschle Rider is unconstitutional (but the Forest Service didn’t adopt this stance in its implementation), but it clearly does not contenance including additional actions being added on by the Forest Service. These additional activities are clearly not “actions authorized by this section” and thus pose a violation of the Daschle Rider. To comply with PL 107-206(k), the Forest Service must analyze an alternative that involves only those actions authorized under the Rider.

03-41

## 11. Range of Alternatives

Table S-5 [DEIS Summary at 16-17] presents an alleged “comparison of alternatives” from which it can be seen that the “action” Alternatives 2, 3 and 4 do not differ in any meaningful way, at least not as considered a reasonable range by NEPA. Indeed, we are informed that “Alternative 4 incorporates all of the treatments proposed in Alternative 2”. Alternatives involve road construction of 12 to 16 miles; thinning of pole stands of 8,300 to 10,000 acres; grass, forb and shrub enhancement of 10,300 to 10,900 acres; and treatments within ½ mile of private property of 8,400 to 9,900 acres. And these are not even meaningful measures of impacts, disclosing virtually nothing of what impacts will occur from the proposed actions. Only minor differences in mitigation activities differentiate these “alternatives”, which fail to provide the reasonable range of alternatives mandated by NEPA.

03-42

In addition, the Elk Bugs and Fuels DEIS completely fails to even address the future conditions that will be produced by the No-Action Alternative mandated by NEPA. What are the conditions that will result from allowing the alleged insect “epidemics” to play themselves out naturally? The DEIS is silent, even though such natural processes are the most effective way of expanding hardwood stands and allowing non-pine species literally “a chance in the sun.” The DEIS’s “direct and indirect effects” section on impacts to forest vegetation claims that Alternative 1 would “do nothing to reduce beetle populations in the project area” [DEIS at 135], yet fails to provide any scientific references or documentation of how any of the action alternatives would achieve reductions in beetle numbers. Indeed, the Forest Service has failed for many years now to provide even a theoretical mechanism of how its proposed logging activities actually impact beetle populations (bald assertions of “changing microclimatic conditions” fails to explain why aspect differences which produce the same microclimatic differences fail to register among beetle populations, e.g., north vs. south aspects). We are not even informed whether the current beetle-induced mortality actually is exceeding forest growth. The benefits of future fire reductions from pine removal by natural processes is also completely ignored in this defective DEIS.

03-43

A full spectrum of alternatives, including those “eliminated from further consideration” must be developed for assessment and evaluation in the Elk Bugs and Fuels DEIS. In accordance with the Executive Order on Environmental Justice and the associated Memorandum (30 Weekly Comp. Pres. Doc. 279), NEPA, the CEQ implementing regulations, and the CEQ Guidance, the Forest Service was required to rigorously explore and objectively evaluate a range of reasonable

03-44

Comment	Response
03-40	Bird species are monitored at the Forest level, discussed in “Monitoring the Birds of the Black Hills: Year 1” (Panjabi 2001) and “Monitoring the Birds of the Black Hills: Year 2” (Panjabi 2003), and summarized in the Black Hills Forest Plan Monitoring and Evaluation Report for Fiscal Year 2001.
03-41	<p>Tables 72 and 74 list acres of vegetation treated in National Forest timber sales between 1980 and the present, planned timber sales, and treatments planned and implemented under P.L. 107-206 (Chapter 3, Biological Environment – Forest Vegetation – Cumulative Effects and Cumulative Effects of Public Law 107-206 Activities Outside the Project Area).</p> <p>Management activities approved by P.L. 107-206 were analyzed in Alternative 1 (see Chapter 2, Alternatives Considered in Detail – Alternative 1: No Action). Actions authorized by P.L. 107-206 were included in the cumulative effects analysis for all alternatives (Tables 71, 72, 73, 74). P.L. 107-206 does not preclude the Forest Service planning and implementing activities outside of the Beaver Park Roadless Area.</p>
03-42	Table S-5, Response of Alternatives to Issues, compares the alternatives in regard to issues raised during scoping. See also response to Comment 01-61. The effects of the alternatives are displayed in Chapter 3 of the EIS, and alternatives are described in detail in Chapter 2.
03-43	Future conditions that would result from the no-action alternative (Alternative 1) are discussed in Chapter 3, Biological Environment – Forest Vegetation – Environmental Consequences – Direct and Indirect Effects – Forest Insects, Stand Structure and Stocking, Stand Diversity; and Cumulative Effects.
03-44 & 03-45	<p>See response to Comment 03-02.</p> <p>During the course of this analysis, no alternative resulted in any identifiable effects or issues specific to any minority or low-income population or community. All public input has been considered without regard to the commentator’s age, race, income, status, or other social and economic characteristic.</p>
03-46	See response to Comment 03-02. The Forest Service received no letters during the scoping process that requested a co-management alternative.

alternatives that achieve Environmental Justice for American Indian populations. Indeed, analyzing a range of reasonable alternatives that, in one way or another, achieve Environmental Justice for American Indians is entirely within the scope of the agency’s duty to ensure a reasoned and informed decision that considers all the relevant factors. Consequently, an agency’s failure to consider a range of reasonable alternatives that address the needs, concerns, and values of American Indians is entirely indicative of a failure to achieve Environmental Justice.

03-45

In the case of the Elk Bugs and Fuels DEIS, the Forest Service entirely failed to consider a range of reasonable alternatives that achieve Environmental Justice because the agency failed to consider a range of reasonable alternatives that respond to major issues raised by American Indians. Specifically, the Forest Service’s failure to consider alternatives that provide for comanagement, and alternatives that provide or recommend entire or partial transfers of National Forest System land to American Indian tribes is entirely indicative of a failure to achieve Environmental Justice.

### A. Co-Management With American Indians

The Forest Service failed to respond to American Indian requests for a co-management alternative, clearly indicating the agency failed to analyze a range of reasonable alternatives that achieve Environmental Justice. Co-management (*i.e.*, sharing of management responsibilities) with American Indians does not entail a “sale” or “transfer of administration” of National Forest lands. In fact, the Forest Service has entered into numerous agreements and Memorandums of Understanding with state agencies, colleges and universities, private organizations (*e.g.*, Rocky Mountain Elk Foundation, The Nature Conservancy), county governments, and grazing associations that provide for shared management responsibilities of National Forest resources. As a perfect example, the Forest Service often shares management indicator species monitoring responsibilities with state wildlife agencies, a responsibility delegated specifically to the Forest Service through the NFMA implementing regulations at 36 CFR § 219.19(a)(6). Additionally, the Forest Service shares livestock management duties with grazing associations. The bottom line is that the Forest Service can and does share management responsibilities of resources on National Forests. The Forest Service’s characterization of American Indian co-management as requiring some type of legislative or other agency action is therefore entirely flawed and refutes the agency’s claim that such an alternative is outside the scope of the current decision. Such prejudicial dismissal of an American Indian alternative clearly shows the Forest Service did not take seriously the needs, concerns, and values of American Indians.

03-46

### B. Land Transfers to American Indians

The Forest Service entirely dismisses requests for land transfers to Indian Tribes, presumably on the basis that such topics require departmental or legislative actions or come under the authority of other agencies and are outside the scope of land management planning decisions. Clearly the Forest Service does not seem to grasp what both the CEQ implementing regulations and the courts have ruled with regards to alternatives that are not within the jurisdiction of the agency. As the courts have held:

“its [NEPA’s] purpose is not to be frustrated by an approach that would defeat a comprehensive and integrated consideration by reason of the fact that particular officers and agencies have particular occasions for and limits on their exercise of jurisdiction.”

03-47

*Henry v. FPC*. In this case, the Forest Service has done exactly what the court held to be contrary to the purpose of NEPA, that is the agency dismissed alternatives purely for jurisdictional

reasons, thus precluding a “comprehensive and integrated consideration” of the impacts of its decision. Requests that the Forest Service consider alternatives that propose land transfers to American Indian tribes are entirely reflective of the potential impacts of the proposed actions to American Indian populations and their needs, concerns, and values. Additionally, these requests are clearly reflective of a “major public issue, management concern, and resource opportunity.” See, 36 CFR § 219.12(f)(5). In this context, the Forest Service clearly failed to undertake a “comprehensive and integrated consideration” of the impacts of its decisions.

In the context of comments received from American Indian governments, organizations, and individuals, sovereignty over National Forests was clearly a major issue and one that was precipitated by significant American Indian concerns over the impacts of historical and present-day management, especially the impacts of past Treaty violations that continue today. The Forest Service seems to assume that, while major public issues help determine the scope of an agency action, major American Indian issues do not factor into the NEPA process. Yet, the Forest Service made no mention of American Indian concerns and made no attempt to distinguish the fact that it was American Indians who requested the Forest Service provide an assessment of land transfers through the NEPA analysis process. The failure to consider a land exchange alternative in the context of American Indian concerns further indicates a failure to address potentially adverse and disproportional impacts to American Indian populations in accordance with the Executive Order on Environmental Justice.

03-47

## 12. Impacts to Sacred Sites

The most obvious indication that the Forest Service failed to comply with the Executive Order on Sacred Sites is that the Forest Service entirely fails to analyze and assess potentially significant effects to sacred sites in the DEIS, even though specific cultural sites have already been demolished by the road construction activities in Bull Dog Gulch authorized by the Daschle Rider (PL 107-206). Nowhere does the Forest Service actually analyze and assess the impacts of the proposed logging and roadbuilding activities to sacred sites. While this lack of analysis is glaring, it is to be expected as the Forest Service failed to obtain and present any inventory data on sacred sites. Without inventory data, it is impossible for the Forest Service to adequately assess existing conditions (*i.e.*, the affected environment) and analyze and assess potentially significant impacts to sacred sites in accordance with 40 CFR § 1502.16. The failure to analyze and assess the potentially significant effects to sacred sites shows the Forest Service failed to take a “hard look” at the impacts of the proposed actions and failed to ensure compliance with the Executive Order on sacred sites.

03-48

## 13. Civil Rights

Title VI of the Civil Rights Act of 1964 states:

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

Section 601 of the Civil Rights Act, 42 USC § 2000d. The Supreme Court has held that Section 601 of Title VI “forbids the use of federal funds not only in programs that intentionally discriminate but also in those endeavors that have a disparate impact on racial minorities.” *Guardians Association v. Civil Service Commission*, 463 U.S. 582 (1983) (emphasis added). The

03-49

Court further held that "...those charged with enforcing Title VI ha[ve] sufficient discretion to enforce the statute by forbidding unintentional as well as intentional discrimination." *Guardians*, 592.

The Forest Service is a Federal agency charged with enforcing Title VI of the Civil Rights Act of 1964. Indeed, the USDA has promulgated regulations to ensure its agencies comply with and enforce the Act. The regulations state:

"No agency, officer, or employee of the United States Department of Agriculture shall, on the ground of race, color, religion, sex, age, national origin, marital status, familial status, sexual orientation, or disability, or because all or part of an individual's income is derived from any public assistance program, exclude participation in, deny the benefits of, or subject to discrimination any person in the United States under any program or activity conducted by the United States Department of Agriculture."

7 CFR § 15d.2(a). Therefore, the Forest Service has a clear duty to ensure people who are impacted by its programs are not intentionally, as well as unintentionally, discriminated against and to ensure minorities do not experience disparate impacts from the implementation of Forest Service programs. Accordingly, the Forest Service has a responsibility to ensure the implementation of proposed logging and roadbuilding activities does not pose disparate impacts to minorities and does not discriminate against people – intentionally or unintentionally – on the basis of their race, color, or national origin. However, the Forest Service failed to do so. Not only did the Forest Service fail to ensure the logging and roadbuilding activities do not discriminate against or pose disparate impacts to American Indian populations, communities, and individuals, but the agency failed to make any reasoned and informed consideration of the relationship between the Forest Service's program of Black Hills National Forest management and the civil rights of American Indians. While such a lack of consideration toward American Indian civil rights may be construed as "an oversight," it is quite clear that the Forest Service's dismissive attitude toward civil rights in the development of the Elk Bugs and Fuels DEIS perpetuates discrimination against American Indians.

03-49

Comment	Response
03-47	See response to Comment 03-01.
03-48	<p>1. Consultation Process with Tribal Governments</p> <ul style="list-style-type: none"> <li>• The Forest maintains a current mailing list for tribal chairpersons, tribal council members, tribal staff, and elders who have been identified by the tribes as points of contact for cultural sites and Forest management in general. These individuals were contacted for the Elk Bugs and Fuels Project as for all other undertakings. The Forest Service held two meetings with tribal representatives each of the last four years to discuss specific projects, Forest policy, and special topics such as protection of petroglyph sites. Tribal governments are asked to review meeting agendas and add any projects or topics. Specific concerns are identified through the meetings, letters, and phone conversations. These communications have led to field trips to review projects or site locations. The Forest Service clearly understands that writing a letter does not equal not consultation. Therefore, the Forest requests opportunities for face-to-face meetings on a continuous basis. The Forest feels that it is providing or requesting every opportunity to consult with tribal governments and meet its trust responsibilities with regards to cultural resources.</li> <li>• The Forest Service conducted an intensive heritage resource inventory of all areas of potential disturbance and submitted the resulting report to the SHPO and THPOs for review in March 2003. The Elk Bugs and Fuels DEIS was mailed to tribal governments for review and comment in May 2003.</li> </ul> <p>2. Impacts on Sacred Sites</p> <p>The ability to identify and protect sacred sites depends heavily on tribal representatives sharing information with the Forest. Heritage resource specialists can and do identify cultural material, but it is critical for the tribes to provide cultural information. The Forest has been made aware of sacred sites in the Elk Bugs and Fuels Project area and other parts of the Forest and is protecting these sites.</p> <p>If Defenders of the Black Hills or Native Ecosystems Council has information on sacred sites in the Elk Bugs and Fuels Project area or in other locations, please contact Dave McKee, Black Hills National Forest historic preservation officer, at (605) 673-9265. The Forest Service will work to identify and protect sacred sites.</p> <ul style="list-style-type: none"> <li>• The Forest Service conducted an inventory for the Elk Bugs and Fuels Project that reviewed all previously conducted cultural resource projects, all previously documented cultural resource sites, and the status of these sites. This current inventory also provided Level III inventory coverage for all parts of the project area that did not already have adequate cultural resource coverage. The report prepared for this inventory (March 2003)</li> </ul>

Comment	Response
	<p>determined that 94 heritage resource projects had previously been conducted in the project area. Review of these past projects indicated that adequate survey coverage did not exist for approximately 18,663 acres of NFS land in the project area. The 18,663 acres were covered during the inventory for this project (Redmond 2003).</p> <ul style="list-style-type: none"> <li>• Past heritage project reports list 290 cultural resource sites in the project area. An additional 49 cultural resource sites were documented during the current inventory. Of this total, 121 previously recorded and seven newly recorded cultural resource sites are considered eligible for nomination to the NRHP or are unevaluated (Redmond 2003).</li> <li>• A review letter for this project from the SHPO states this project will have no effect on historic properties provided the 128 eligible or unevaluated sites are avoided during ground-disturbing activities (SHPO Review Project No. 030325004F, dated April 10, 2003).</li> <li>• As stated in the DEIS, the alternatives would result in “no effect” with avoidance mitigations for all eligible, unevaluated, grave, and culturally significant sites.</li> </ul> <p>Site-specific mitigation measures are listed in Appendix B. The FEIS includes specific, detailed discussion of potential effects by alternative. The Forest Service’s objective is to avoid or mitigate any potential adverse affects to eligible, unevaluated, and culturally sensitive sites. If unforeseen conditions occur, the Forest Service will consult with the SHPO and THPOs as required by the National Historic Preservation Act.</p>
03-49	Chapter 3 includes a discussion of effects on minority or low-income communities (Chapter 3, Social Environment – Environmental Justice). See also response to Comment 03-44.

### **A. Civil Rights Impact Analysis**

The Forest Service is required by FSM to complete a civil rights impact analysis for environmental or natural resource actions as “part of the social impact analysis package in a necessary environmental impact statement.” FSM 1709.11 § 31.11. However, within the DEIS, there is no mention, let alone detailed discussion, of civil rights. This omission is especially egregious since civil rights issues were raised by numerous members of the public, and several Sioux Tribes explicitly informed the Forest Service of resolutions that they had adopted calling for protections for Beaver Park, and for the entire Black Hills National Forest to be considered as a sacred and cultural site. The Forest Service has a duty to ensure its actions do not discriminate against or pose disparate impacts to American Indians. The fact that the Forest Service’s social impact analysis in the DEIS entirely failed to discuss civil rights is entirely indicative of a failure to ensure compliance with Title VI and USDA Regulations.

The failure of the Forest Service to consider whether the Elk Bugs and Fuels DEIS timber sale may intentionally or unintentionally discriminate against American Indians is further egregious in light of claims that the current forest management is discriminatory. The Forest Service adopts the Office of General Counsel’s review of treaties, concluding incorrectly that the infamous and unlawful Act of 1877 opened the Great Sioux Reservation to white settlement. However, such a discussion has nothing to do with assessing whether or not the timber sale program is discriminatory. The failure of the Forest Service to give any adequate consideration toward its logging practices is essentially discrimination and has failed to ensure civil rights are not violated. The agency’s failure to take any affirmative action on a claim of civil rights violations is nothing short of an abrogation of responsibility and an admittance that the Forest Service has no intention of ensuring compliance with Title VI and USDA Regulations.

03-50

### **B. Environmental Justice**

The Forest Service failed to achieve Environmental Justice for American Indians in accordance with the Executive Order on Environmental Justice. The Forest Service failed to understand and respond to American Indian needs, concerns, and values, failed to adequately analyze and assess the potentially significant impacts to American Indian populations, and failed to rigorously explore and objectively evaluate alternatives that respond to American Indian needs, concerns, and values and that achieve Environmental Justice. Indeed, the Forest Service adopts the recommendations of Meade and Lawrence Counties (entities which have no legitimacy under the Fort Laramie Treaties) to support extensive logging within ½ mile of “private residences”, rather than enforcing the treaty obligations to remove these illegal occupiers of Great Sioux Reservation lands reserved for the exclusive use of the Sioux Nation. As a result, the Forest Service failed to ensure implementation of the proposed actions would not pose disparate impacts to American Indian populations, communities, and individuals in violation of Title VI and USDA Regulations.

03-51

### **C. Discrimination Against American Indians**

The Forest Service’s analysis of the economic impacts of the proposed actions entirely fails to distinguish economic impacts upon American Indians. In fact, the entire economic analysis is limited to impacts on the white settlers now trespassing on those parts of the Great Sioux Reservation referred to as Meade and Lawrence Counties. The agency failed to recognize the economic circumstances of American Indian populations, especially those on reservation lands, and therefore discriminated against American Indians in its economic analysis.

03-52

Comment	Response
03-50	See response to Comments 03-02, 03-44, and 03-49.
03-51	See response to Comments 03-01 and 03-02.
03-52	See response to Comments 03-44 and 03-49.