South Dakota and Wyoming Cooperating Agencies
Detailed and Technical Comments
On
Draft Environmental Impact Statement for the Phase II Amendment
Black Hills National Forest Land and Resource Management Plan.

January 3, 2005

Introduction and Summary

Structural Stage Diversity

In simplest terms, the Black Hills National Forest (BHNF) is overstocked with ponderosa pine, most of which are small to medium size between the ages of 90 to 120 years old. This situation is often described as the "wall of wood". This imbalance is the root of many of the current problems that we face on this Forest. Without change, many of these problems will continue to get worse. The BHNF is growing 100 million board feet more than combined impacts of natural mortality and human management.

Noxious Weeds

The treatment of noxious weeds should be an integrated priority throughout all forest management activities. We support the effort to increase treatment of noxious weed infested areas to at least 6,000 acres per year during the next 10 years. However, a single treatment will not eradicate a problem infestation. The Forest should treat 6,000 new acres each year with additional treatments as necessary on previously treated areas.

Research Natural Areas

We oppose Research Natural Area designation of Geis Springs, Cranberry Springs, Upper Sand Creek, Sheep Nose Mountain, Canyon City, Fanny Boles and Lemming Draw. We are neutral on RNA designation of Iron Mountain North and North Fork Castle Creek.

Structural Stage Classification

We do not think that the current Structural Stage classification is sufficient to correctly manage for the habitat needs of species that depend on large trees. We would like to see a new structural stage that would identify stands with larger diameter class trees. The cooperators have specific suggestions on how a new stand classification might be structured to better address viability concerns.

Fire Risk

Alternative 6 is the only alternative presented that addresses the dangerous fire conditions in the Black Hills. We therefore support the proposed plan to reduce wildfire risk around At Risk Communities (ARCs) and the Wildland Urban Interface (WUIs). However, we cannot condone ignoring the lack of diversity in the balance of the forest. Ignoring the lack of structural stage and species diversity in the remaining forest area will only exacerbate the growing bark beetle problem and other habitat needs in the future. Treatments within the ARCs and WUIs should be applied in a variety of prescriptions to allow diversity.

Hardwood Restoration
We support efforts to increase hardwood restoration as described in alternatives 3 and 6.

Bark Beetle
Because none of the alternatives adequately addresses the need for increased diversity, none of the alternatives adequately addresses the growing bark beetle infestation problem on the Forest. Any "hands off" approach to high density structural stage 4C stands, as suggested by the static acreage in this structural stage over the next 10 years, will render the Forest ineffective at managing the growing bark beetle infestations in these stands, potentially dooming them to stand replacement disturbance. We encourage use of all management tools to address the Mountain Pine Beetle explosion.

Burned Areas
We do not support Objective 11-03 as written for Alternatives 3 and 6. We believe that treating burned over forests is beneficial in many ways beyond just value recovery. We recommend the Forest consider each fire area on a case-by-case basis and collectively to determine the best course of action with regard to forest rehabilitation and snag retention for species needs.

Detailed and technical comments from the cooperators

Thank you for the opportunity to provide comment on the Draft Environmental Impact Statement (DEIS) for the Phase II Amendment to The Black Hills National Forest Land and Resource Management Plan (LRMP). The following agencies have worked as a group to provide these comments on the DEIS: State agencies of South Dakota, and Lawrence, Meade, Pennington, Custer, and Fall River Counties in South Dakota, Lawrence County Conservation District and the State agencies of Wyoming and Crook and Weston Counties in Wyoming and are referred to hereafter as cooperating agencies. These agencies are a subset of government agencies that were granted cooperating agency status for the development of this amendment.

2 The stated, basic philosophic direction driving alternative development and implementation is "Management by Objective." This term is used throughout the document. However, the term is used somewhat incorrectly. Essentially, the Phase II plan alters, combines, or replaces some standards and guidelines with "objectives." True management by objective consists of five parts:

1 Assessing what are the current conditions.
2 Defining the objective to be achieved.
3 Formulating a plan to reach objective.
4 Implementing the plan.
5 Regular review to determine if actions taken have resulted in objective achievement, or are moving one towards objective.

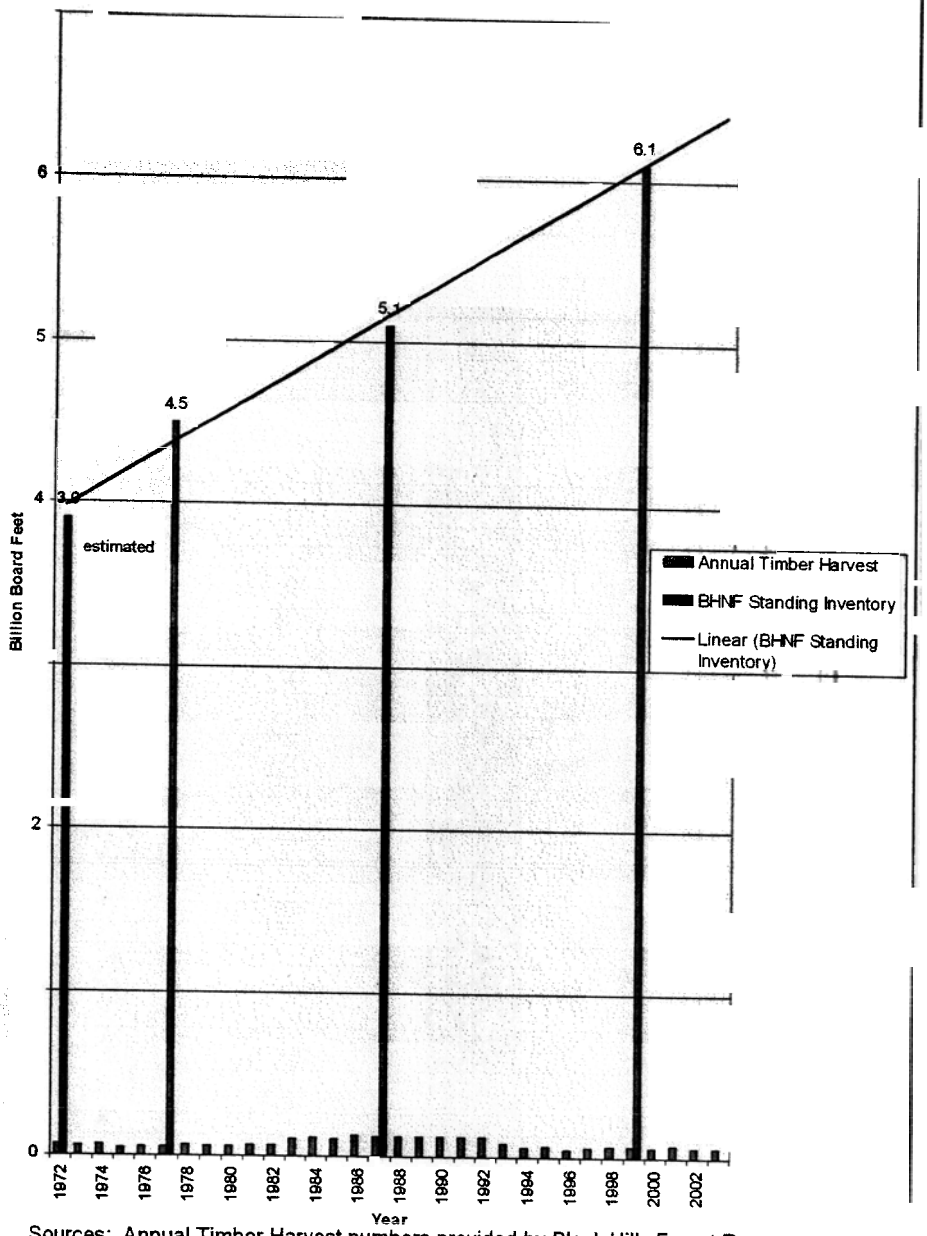
The objective of the Phase II amendment was defined in response to plan appeals, court settlements, and input from cooperating agencies. The objective of the Phase II Black Hills National Forest Plan Amendment is to ensure species viability, consider establishment of Research Natural Areas (RNA's), and reduce fire and insect hazard. A strict management by

objective approach is not taken with respect to these stated objectives. Instead, species-specific viability is dealt with in an overbroad manner by ascribing habitat capability to structural stage alone. Current conditions are neither well known, nor adequately described in many instances. Habitat treatments and alterations are not proposed on a site-specific basis (with the exception of Wildland Urban Interface (WUI) and near At Risk Communities (ARCs), and RNAs). Moving portions of the Forest towards given structural stage percentages is put forth as the target, but no monitoring is put in place to ensure structural stage percentages in different areas are obtained. Project funding and implementation realities are not well addressed. This document does not represent true management by objective, but rather a management philosophy best described as, "Management by individual objectives to be set on a project basis with the hope that the forest moves towards desired condition." While recognizing these imperfections, cooperating agencies support the approach of management by objectives, but encourage the Forest Service to adopt and implement the necessary monitoring to track the success or failure of efforts to implement the objectives on a project level.

Standing Inventory

4. The problem with lack of diversity and many other problems on the Black Hills National Forest begin with the fact that there are too many trees on the Forest and they are growing much faster than what is being harvested and lost to natural mortality. According to Table 3-8 on pages 3-12 and 3-13 of the DEIS the standing inventory of commercial sawlog trees is increasing at a net rate of 100 million board feet per year, or 1 billion board feet per decade. The annual timber harvest over the last 32 years has been roughly 80 million board feet. The relationship of increase in standing volume and harvest over time is illustrated in Figure 1.

Figure 1 - BHNF Standing Inventory vs Annual Harvest



Sources: Annual Timber Harvest numbers provided by Black Hills Forest Resource Association. Standing Inventory numbers provided by BHNF.

Livestock

5. New Forest-wide Objectives 200-10 and 200-03, Guideline 2505, and Standard 2505e: The Forest Service should pay for construction and maintenance of any livestock exclusions or enclosures designed to protect habitat or species in keeping with the open range precedent that it is the landowner's responsibility to keep livestock from encroaching upon areas to be protected. Such project work should be paid for out of range management funds.

6. Standard 2207: The Forest Service should also pay for relocation of watering facilities. The range program should take the lead on these projects in both funding and project work.

Wildlife

7. Section 2-3.6, Alternative Comparison: Discussion and consideration of the juxtaposition of habitat types and edges are lacking for all species considered. Two species on the BHNF for which there exists a great deal of research data addressing precisely this topic and its management implications are white-tailed deer and elk. These species spend the majority of their time within several hundred meters of cover / open area edges. No consideration of this edge effect is given in any of the plan's discussion. Instead, generally opening up the forest is considered beneficial. This is erroneous. Most species need a patchwork of different habitats and microhabitats along with their associated edges to thrive. This basic ecological concept is neither addressed in viability discussions, nor compared between alternatives. In fact, the preferred alternative specifically states the opposite. In Table 2-2 the statement is made that "...Alternative 6 will likely create more open stand conditions in more homogeneous patterns than the other alternatives. Alternative 6 is expected to have the least risk of wildfire habitat loss." If you manage towards a homogeneous forest, then you manage away from diversity, ecological stability, and species viability, which is precisely the current condition on the BHNF, albeit a more homogeneously dense forest.

8. In Table 2-4 the following rationale is given for dropping mule deer from the list of management indicator species: "Not selected in Alternatives 3, 4, and 6 because it has similar habitat use to white-tailed deer, and white-tailed deer has larger research base." While it is true these species are sympatric in many locations on the BHNF, it is incorrect to state they use similar habitat. Mule deer are an open, arid country adapted deer species, and white-tailed deer are associated more with mesic, dense forests with openings for foraging. One need only look at the areas on the BHNF where these species occur together, and separate to see this.

9. On page 3-206, there is discussion of White-tailed Deer (WTD) as a Management Indicator Species (MIS). The most current, post-season population estimate (2004) for the Wyoming Black Hills White-tailed Deer Herd is slightly over 38,000 (Sandrini 2003, Job Completion Report, WGFD). The population model for this herd has been revised since it was drafted. However, in all likelihood the actual population is significantly above that stated in Sandrini (2003), based on the fact current levels of buck harvest would not be sustainable at this population level. This brings up a critical point with regard to using WTD as an MIS. Population estimation is very difficult with this species given the interstate movement of this herd. Movement occurs between MT, WY, and SD. The WTD population on the BHNF and within the Black Hills proper is not a closed population. Immigration on to the BHNF and emigration off the Forest occurs regularly. Further, the actual number of deer in this population is affected annually by disease (notably epizootic hemorrhagic disease), vehicle mortalities, predation, and legal harvest. Habitat plays a critical role in productivity and winter survival, influencing annual population levels more indirectly. Hence, WTD numbers are not an appropriate MIS. If the USFS decides to stay with WTD as a MIS for the BHNF, then a measure of productivity and survival rather than total population should be used. It is

suggested that preseason fawn:doe ratios and yearling-buck:doe ratios be monitored on the BHNF to better gauge habitat conditions.

10. In Section 3-5, Demand Species, Mule deer are completely ignored, while elk, turkey, and three species of trout are considered. In Wyoming, mule deer hunting and associated recreation are significant on portions of the BHNF. In Wyoming, hunters harvest many more mule deer annually than elk, and probably turkeys as well. Habitat changes on this forest over the past century have greatly affected the number and distribution of mule deer, and each alternative could affect the mule deer population to different extents.

    The DEIS also states that Wyoming's current population objective for elk in the Black Hills Herd Unit is 500 head. While this is technically correct, WGFD field personnel cannot derive a valid estimate for this population given data collection limitations. It is believed this herd is currently four or five times above objective, and the objective is unreasonably low. Consequently, this herd is not being managed towards its numerical objective, but rather to minimize depredation and maximize recreation.

12. In Section 3-5, Demand Species (wild turkeys): In both SD and WY, the majority of wild turkeys winter at lower elevations on Federal lands and private property associated with agricultural operations. No mention of this is made in this section, and its impact is not evaluated. Instead, the discussion about the range of alternatives effects assumes turkeys are wintering only on the BHNF, which is not necessarily true.

13. On page 3-30, Grassland Ecosystems, it is stated, "sharp-tailed grouse... only use mixed grass prairies." This statement is incorrect. Sharp-tailed grouse will use open grassy areas in the Forest, but these are usually restricted to areas near the Forest perimeter. They will also roost in ponderosa pine trees. Some examples of areas where they occur in these habitats on the WY portion of the BHNF include near Mallo Camp in Weston County, Sheep Nose Mountain in Crook County, and near the mouth of Boundary Gulch in Lawrence County, SD. These birds are found throughout the SD portion of BHNF and are increasing in abundance in the major fire areas such as the Jasper and Battle Creek Fires.

14. On page 3-196, Effects of Fire-Hazard and Insect-Hazard Management on Ruffed Grouse: All aspen patches are not created equal. The location, size, age, density, and proximity of aspen stands to other elements on the landscape can alter this habitat's effectiveness for ruffed grouse. Thus, size, location, and proximity of aspen stands will impact the number and viability of grouse on the forest in addition to total aspen acres. Further, grouse populations tend to be cyclic, and harvest data from Wyoming suggests this cycle occurs over about a 10-year interval in the Black Hills. Consideration is not given to this aspect of the ruffed grouse's life history in the monitoring approach chosen.

Grasslands:

5. Why are no grassland vertebrate species selected as grassland MIS? Pages 3-28 through 3-36 discloses discussion of grasslands (interior and prairie) and lists several vertebrate species associated with BHNF grasslands. Upon review of SDGFP's comments to SAIC's August

26, 2002 MIS draft, we noticed that grasshopper sparrows were listed in Table 3-2 as R2 SS list considered for MIS selection as:

Grasshopper Sparrow (*Ammodramus savannarum*)	Ground-nester that breeds in open grassland habitat with less than 35% shrubs. Feeds on insects, particularly grasshoppers (USDA-Forest Service 1981). Confirmed breeding records and numerous probable and possible breeding records on BHNF (Luce et al. 1999, SDOU 1991). Suspected downward population trend (Sauer et al. 2001).

16. Further, the August 26, 2002, Evaluation Criteria for birds (Appendix H-species of local concern) for grasshopper sparrow did not show any indication as to why it is not an appropriate MIS. We compared the grasshopper sparrow evaluation ranking to beaver, Rocky Mountain elk, and white-tailed deer selected MIS and found that the only difference was in criteria #5 for population trend. The sparrow received a "some concern" and beaver, elk and white-tailed deer received a "no concern". If a population criterion was a reason why grasshopper sparrows fell out, then beaver should be re-evaluated since their populations are lower than historical conditions and BHNF is hoping "beaver will come back in strong numbers over time throughout the Black Hills (BHNF New Release 2004 on Beaver MIS).

17. We do not understand why grasshopper sparrows were no longer mentioned in the document when one of the monitoring priorities is grassland habitat conditions.

18. We believe that the absence of a grassland MIS such as the grasshopper sparrow is an oversight in the Phase II Amendment when species viability and lack of diverse landscapes is a concern. This oversight must be corrected since the only monitoring for grassland health is vegetation surveys. Vegetation surveys alone do not indicate the overall ecological health of the grasslands found within BHNF and the very purpose of MIS is to "assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent": USDA FS-1991. We recommend that the final EIS incorporate a grassland MIS such as the grasshopper sparrow. If no grassland MIS are selected, please indicate and explain why.

19. Regarding grassland diversity and health, the New Objective 200-2 maintains 20% of prairie grasslands with a "high cover" based on the site potential. Appendix D states the rationale for this objective is that "some emphasis species need diversity in structure and composition in prairie grasslands. Grasshopper sparrows need some areas of high structure during the breeding season."

20. Objective 200-2 is too vague as to residual grass height that should remain at the end of the growing season. This does not give land managers any measurable objective and becomes instead, subjective. Managers also have no objective as to when that 20% should occur during the growing season. It is only reasonable that a measurable range of residual grass height and structure need to be present through the winter and be present the following spring for springtime nesting and through fledging. We recommend that the final EIS give a measurable range of what "high cover" means and when it should occur on the landscape.

Noxious Weeds and Pests

21. Objective 231. The Cooperating Agencies support the effort in Alternatives 3, 4, and 6 to increase treatment of noxious weed infested areas to at least 6,000 acres per year during the next 10 years. However, this is only 6% of the current 100,000 acre infestation on the Forest. Most counties require that a landowner treat the majority of their infestations or enforcement work is required. Generally, a single treatment will not eradicate a problem infestation. The Forest should treat 6,000 new acres each year with additional treatments as necessary on previously treated areas.

22. Guideline 4303. We support the prioritization of early detection, treating new invaders and new areas of infestation. The Forest should also prioritize treating infested areas close to property boundaries and waterways to prevent the spread to uninfested federal, state, and private lands. The Forest should also prioritize opportunities to work cooperatively with adjacent property owners and county weed control programs to treat cross-boundary infestations. Weeds don't know property boundaries. It is critical that cross-boundary infestations be treated by all responsible parties or the individual treatments will probably fail.

23 Standard 4306: Cooperating agencies support the use of certified weed free seed, feed, and mulch and the added Forest seed testing as proposed for Alternatives 3, 4, and 6.

RNAs

24. Cooperating agencies will not take a position that tells researchers what areas should be set aside for Research Natural Areas (RNAs); however, the cooperating agencies have a position on areas that should be removed from further consideration.

25. The Forest Service gives no justification for encouraging the selection of the RNAs other than representative vegetative types that were not disqualified. The Upper Pine Creek RNA has existed for over 70 years, yet no clear research benefit from that site was used as justification for establishing additional research natural areas in the Black Hills. The DEIS is lacking a compelling purpose and need for the establishment of the individual RNAs being proposed. There also appears to be overlap between candidate RNAs in that many of them have the same vegetation types of interest, but there is no explanation of need for redundancy. Valid multiple uses will be adversely impacted by many of the designations, and no mitigation for those losses is offered. Even though the total area impacted by the proposed RNAs is not large from a Forest-wide perspective, the potential impacts to specific grazing permittees, motorized recreationists, other Forest users, and private landowners near the sites are significant. Because individual management plans for each proposed site are NOT developed prior to designation, and RNA management plans developed after designations would not have additional public involvement, affected communities and Forest users have no opportunity to provide appropriate and meaningful input. That appears to be exactly opposite of the NEPA process. If it is determined that a fence is needed to maintain the natural processes of designated RNAs, the cost of building and maintaining miles of fencing around those areas, "in perpetuity", would be cost prohibitive. The funding for RNAs should not shortchange other management programs on the Forest.

Candidate RNAs in WY:

26. Geis Spring: 577 acres in Management Areas 3.7 and 5.1 located in the northern portion of the Bearlodge Mountains in Crook County, Wyoming. Plant communities of interest are ponderosa pine, eastern hop-hornbeam, and riparian grassland plant series. Private property is within .25 miles of the site. Part of the 8,454 acre North Bearlodge grazing allotment – DEIS indicates that the proposed site will impact 6.8 percent of the allotment; however, the location of the site is such that the watering of cattle and their movement through the allotment will be seriously impeded and the allotment could be rendered unusable. One of the permittees indicates that his cattle will have to go three miles farther to water because of the position of the proposed site. Another significant concern to the permittees is the very real challenge of keeping cattle out of the proposed site, as they are ultimately responsible and liable for their livestock. If fenced, the integrity of the fence could be easily compromised (i.e. wildlife and human factors are known to create problems with fences in that area), and liability for any disturbance caused by livestock would then unfairly fall upon the permittee. One of the most serious concerns regarding this site's designation as an RNA is the wildland fire threat it would pose to private property in the area. Because active management would no longer take place within the proposed site, the increased risk of insect infestation and hazardous fuel buildup would pose a very serious threat to private resources. The proximity of private land combined with the use of MIST (Minimum Impact Suppression Tactics) in RNAs creates serious concern over potential impacts. Cooperating agencies oppose the designation of Geis Spring as an RNA due to potential threat to private property and to potential impacts to existing grazing allotment in the area.

27. Cranberry Springs: 1,840 acres in MAs 3.7 and 4.1, located in Crook County. Plant communities of interest are ponderosa pine, and various others. Private property is within .5 miles from the site. Part of the 21,122 acre Sand Creek grazing allotment and the 25,644 acre Willow Springs grazing allotment, impacts 4.1 and 3.8 percent of the allotment areas, respectively. This site is the largest area proposed for RNA designation. Although private property is not in as close proximity to this proposed site as some of the other sites, the potential threat to private property is even more significant. The 840-acre Upper Sand Creek site is adjacent to this site and increases the overall potential for wildland fire risk due to increased acreage being protected by MIST and not being actively managed to reduce bug and fire risk. The permittees are concerned about the potential fencing of the site and their liability related to their livestock in the area as well as impacts to livestock grazing because of the location of the proposed site in relation to their existing allotments. Cooperating agencies oppose the designation of Cranberry Springs as an RNA due to potential threat to private property and to potential impacts to existing grazing allotments in the area.

28. Upper Sand Creek: 840 acres in MAs 3.7, 4.1, and 5.1, located in Crook County. Plant communities of interest are ponderosa pine, various. Private property is within .25 miles of the site. Part of the 21,122 acre Sand Creek grazing allotment and the 25,644 acre Willow Springs grazing allotment, impacts .7 and 2.7 percent of the allotment areas, respectively. Grazing permittees are very concerned about their liability for livestock potentially entering the proposed RNA site – they are not confident that fencing, if used to encompass the site, will be maintained to a sufficient standard. Increased risk of wildland fire is of great

concern for private property resources in close proximity to the proposed site as well as for an important watershed in the area. The impacts of a severe wildland fire in the area could be far-reaching. Road closure and obliteration within the proposed site (per Standard 2.2-9102 in the DEIS) could decrease access for firefighting purposes and cut off access to old trails and roads that are part of the travel network within the larger area. Cooperating agencies oppose the designation of Upper Sand Creek as an RNA due to potential threat to private property and important watershed resources and to potential impacts to existing grazing allotments in the area.

29. Sheep Nose Mountain: 1,007 acres in MAs 3.32 and 5.4, located in Crook County. Plant communities of interest include bur oak, ponderosa pine, and various others. Private property is within .25 miles from the site. Part of the 8,459 acre Ogden grazing allotment and the 7,237 acre Redwater grazing allotment, impacts 6 and 6.9 percent of the allotment areas, respectively. A permanent easement for a private water supply pipeline for a neighboring private ranch is an encumbrance on the proposed site that, in itself, should disqualify the site from RNA consideration. Currently, Sheep Nose Mountain is an important area in the Bearlodge for snowmobilers, and under current MA 3.32, over-the-snow vehicles can be allowed during the snow season. According to the DEIS, standards and guidelines for RNAs in MA 2.2 under Alternatives 3, 4 and 6 would prohibit "mechanized or motorized transport". The potential impacts to motorized winter recreation opportunities in the Bearlodge would be significant. The location of the proposed RNA site would cut off from water the north end of one of the grazing allotments. The permittees are concerned that they would not have access to water from two springs on the proposed site. The terrain on Sheep Nose is very rough and the area burned in the 1950's. There is a great deal of concern by permittees and private landowners over an increased risk of wildland fire in this area (described as a "chimney") if designated as an RNA. A fire in that area would have the potential to rage out of control, make it impossible to defend nearby private property and potentially take the whole Bearlodge. Cooperating agencies oppose the designation of Sheep Nose Mountain as an RNA due to a significant encumbrance on the site, potential threat to private property, potential impacts to existing grazing allotments and winter motorized recreation in the area.

Candidate RNAs in SD

30. Iron Mountain North: 348 acres lies entirely within the Black Elk Wilderness; no trails bisect it and grazing is not currently allowed. Plant communities of interest include ponderosa pine and riparian shrublands. The candidate RNA straddles the Custer and Pennington County line. Essentially, the land is not being managed for any productive use Cooperating agencies take a neutral position regarding the Iron Mountain North candidate RNA.

3 Canyon City: 1,018 acres of Management Areas 3.7 (Late successional), 5.4 (big game winter range), and 8.2 (developed recreation), located in Pennington County. Species of interest include montane willow, ponderosa pine, riparian shrublands, and white spruce. Private property lies about 0.20 miles from border. The area is part of a 19,184 acre Silver City grazing allotment which would impact about 5.3 percent of the allotment area. Biggest