Date submitted (Mountain Standard Time): 10/31/2017 2:09:51 AM
First name: Nancy
Last name: Hilding
Organization: Prairie Hills Audubon Society
Title: President
Official Representative/Member Indicator:
Address1: P.O. Box 788
Address2:
City: Black Hawk,
State: SD
Province/Region:
Zip/Postal Code:
Country: United States
Email: nhilshat@rapidnet.com
Phone: 605-787-6779
Comments:
Nancy Hilding to Forest Service.

I am attaching the Norbeck Society comment letter and an original letter by PHAS. In our original letter we agree with most of the Norbeck Society's comment letter and incorporate most of it by reference.

Nancy Hilding
President
Prairie Hills Audubon Society
P.O Box 788
Black Hawk, SD 57718
October 30th, 2017

Black Hills Forest Service
Custer, SD 57718

Comment letter # 2 Black Hills Resilient Landscapes (BHRL)

Dear Forest Service Staff,

We have downloaded the attached letter of the Norbeck Society from your web site and we agree with most of the Norbeck Society concerns, with an exception at the scenery section as specifically explained below.

We will review their points beginning on page 3 of their letter and agree with all of them, except scenery. By agreeing with each section we incorporate that section's concerns by reference.

I. The Administrative Structure Governing Action in the BHRL Project
We concur that the BHRL is not consistent with the HFRA as the mountain pine beetle epidemic is over and much of the plans of the BHRL Project won't address catastrophic fire or beetle risk, but instead will damage forest health.

II. Project Location, Design Criteria, Mitigation Measures, and Monitoring
We concur that the BHRL is too large and too vague and an extension is needed.
We concur that the Design Criteria and Mitigation Measures are missing and that this creates problems with implementation.

III. The Purpose and Need of the Project
We concur with the Norbeck Society's criticisms of the purpose & need.

IV. Recommended Actions to improve Resilience of the Black Hills National Forest
A. Water quality must be improved:
We concur with the Norbeck Society's water concerns
B. The relationships between ponderosa pine forests, fire, and timber harvest must be revisited:
We concur with the Norbeck Society's wish to revisit relationships of pine forests, fire & timber harvest
C. Roads must be reconsidered
We concur with the Norbeck Society's wish to reconsider roads
D. Rethink overstory removal, commercial harvests, thinning:

We concur with the Norbeck Society's wish to rethink overstory removla, commercial harvest and thinning.

E. Deal seriously with known threats of noxious weeds:

We concur with the Norbeck Society's wish to deal seriously with threats of noxious weeds.

F. Tend to forbs and native plant communities:

We concur with the Norbeck Society's wish to tend forbs and native plant communities.

G. Eliminate mechanical site preparation (MSP) from the plan (proposed tool on up to 4,000 acres in a 47,200 area in west-central Black Hills):

We concur with the Norbeck Society's wish to eliminate mechanical site preparation.

H. Foster aspen, birch, and bur oak:

We concur with the Norbeck Society's wishes with respect to aspen, birch and oak.

I. Protect old and large trees:

We concur with the Norbeck Society's wishes to protect large trees.

J. Leave spruce alone:

We concur with the Norbeck Society's wishes to leave spruce alone.

K. Update the scenery management system:

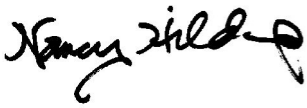
We share the Norbeck Society's concern for scenery and thank them for their concern for it, but we wish to improve on the Norbeck Society's comments on scenery, as we think they don't fully understand the Scenery Management System (SMS) as applied to the forest in 1996. We agree that the public cares deeply about the scenery on the forest. We believe that the Forests SMS was created about 20 years ago by Joby Timm, in 3 days on a computer at the SOs office. It was never ground truthed. To come up with
1 scenic attractiveness, Joby inputted values to the computer such as cover type and structural stages, values that have changed in the last 20 years, often making the 20-year old SMS analysis outdated. The sensitivity levels chosen by Joby, pay too much attention to areas with high motor vehicle travel and not enough to hikers in the back-country areas. Basically the whole SMS is outdated and needs to be redone...in the meantime planners should ground truth and review it's directives in each project.

L. Understand the full economic picture:

We agree with this section

We agree with the conclusion.

Thanks to the Forest Service and the Norbeck Society,



Nancy Hilding,
President
Prairie Hills Audubon Society

1 attachment - Norbeck Society letter dated October 23rd

Norbeck Society
P. O. Box 9730
Rapid City, SD 57709

October 23, 2017

Mark Van Every, Supervisor
Black Hills National Forest
1019 North 5th Street
Custer, SD 57730

Re: Black Hills Resilient Landscapes Project

Dear Mark Van Every,

As an advocate for sustainable use of public lands, the Norbeck Society bases its comments on the desire to support a management approach for the Black Hills National Forest (BHNF) that recognizes the imperative of protecting and enhancing the biocomplexity of forest ecosystems that serve and support growing numbers of people.

On the following pages, you will find our comments on the Draft Environmental Impact Statement of the Black Hills Resilient Landscapes Project.

Thank you for the opportunity to provide input to the USFS about the management of the Black Hills National Forest.

Sincerely,
Bob Burns, President

On Behalf of the Norbeck Society
robert.burns.sd@gmail.com
cell 605-390-6037

cc: Sen. J. Thune, Sen. M. Rounds, Rep. Kristi Noem

Norbeck Society Comments
On the Draft Environmental Impact Statement (DEIS) of the
Black Hills Resilient Landscapes Project
Black Hills National Forest

October 23, 2017

With a vision to manage the Black Hills National Forest over the long term in a sustainable way, we make the following comments:

We are fortunate to have, in the Black Hills National Forest, such a grand resource from which so many people draw a multitude of benefits. The cultural, recreational, commercial (timber, forage, minerals), spiritual, watershed protection, and other benefits have enriched us in many ways and for a long time. The Norbeck Society's purpose is to insure these benefits flow perpetually to those who come after us. Generations of people in the future will need the Black Hills National Forest too.

In taking stock of recent events both locally and globally, we believe the conservation and strengthening of this living resource today is paramount when examining and choosing management options. We know our forest is very different in character now than it was historically. We know the past century's management focus of logging and fire suppression has not resulted in a more safe and resilient forest. And we know that the forces of climate change will not only test the local ecosystems in and of themselves, but will also likely bring heavy pressures from those moving here in search of refuge from lands that can no longer support them.

The weight of the responsibility of insuring the continuing ability of the land to provide so much, and in so many ways, is great. The issues surrounding management of this resource are deeply complex. The Black Hills Resilient Landscapes project could be an essential tool in restoring time-proven structures and processes to the forest, and building resilience into the landscape that provides so much.

<u>Restoration</u>: the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. Ecological restoration focuses on establishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience and health under current and future conditions.

<u>Resilience</u>: the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.

I. The Administrative Structure Governing Action in the BHRL Project

The Healthy Forests Restoration Act:

The Healthy Forests Restoration Act (HFRA) seeks to "reduce the risk or extent of, or increase the resilience to, insect or disease infestation" in areas experiencing declining forest health (defined in the Act as "a forest that is experiencing substantially increased tree mortality due to insect or disease infestation…"). The Act states that "the Secretary shall, if requested by the Governor of the State, designate as part of an insect and disease treatment program one or more landscape-scale areas…" The clear priority of the Black Hills Resilient Landscapes Project (BHRL) must be to reduce the risk and extent of, and increase the resilience to mountain pine beetle infestation and the incidence of catastrophic wildfire in that portion of the Black Hills National Forest identified by the Governors of South Dakota and Wyoming and designated by the Secretary.

Norbeck Society questions the validity of HFRA authority for BHRL since:

- Tree mortality via insect infestation in the Black Hills National Forest is slightly below endemic levels and decreasing.
- A large portion of the remedies presented in the proposed project, namely the harvest of 185,000 acres of Structural Stage 4A stands and the associated road-building, will do very little-to-nothing in the way of reducing the risk and extent of, and increase resilience to mountain pine beetle infestation and the incidence of catastrophic wildfire. We assert that, along with the proposed mechanical site preparation, these harvest activities will actually damage forest health and increase risk and extent of insect and wildfire problems via ground disturbance, the resultant ponderosa pine regeneration, road-building, and –importantly -- the lost opportunity to leverage real resilience on the forest.

II. Project Location, Design Criteria, Mitigation Measures, and Monitoring

Norbeck Society considers it distinctly incongruent that the "Location" of this Project is basically everywhere. The "Project Location" is over a million acres. Within the Black Hills there is much regional variation. It is virtually impossible for anyone reading this broad, vague plan to know just what you will do and how and where you will do it. Because of the size of the project, an extension for comments beyond the current deadline of October 30th should be seriously considered.

A related issue is we expected but did not find a section of the DEIS devoted to descriptions of Design Criteria and Mitigation Measures. It is entirely unacceptable that the public has no way of determining the standards to which you will hold the project, or some notion as to how you will monitor the outcomes of the project. How will the Design Criteria, Mitigation Measures, and Monitoring be implemented? We have no clue.

III. The Purpose and Need of the Project

A good foundation of any type of project is a sound purpose and need; it is necessary to have clear direction when embarking on large projects.

The main tenets of the Purpose and Need for the BHRL Project state: "Recent mountain pine beetle infestation and response actions have changed forest conditions. The forest is more open and there are many dead trees. Forest structure has moved away from Forest Plan objectives." (The NEED), and "The project's purpose is to reduce hazards, move forest structure and composition toward objectives, and increase resilience to disturbance." (The PURPOSE).

A. Need:

The Need falsely implies that before the recent Mountain Pine Beetle (MPB) epidemics, the Black Hills National Forest was somewhere near meeting Structural Stage Objectives. This could not be farther from the truth. In fact, the MPB epidemics coupled with several large fires in 2001 have been the most influential drivers in the forest moving so rapidly toward the Structural Stage (SS) Objectives of the 1997 Forest Plan. Forest managers and timber industry advocates imagine that they are the main force when it comes to shaping the forest, and yet we've recently seen dramatic evidence to the contrary.

Another underlying implication of the stated Need is that the Structural Stage Objectives (laid out in a Forest Plan made 20 years ago when the forest was in a significantly different condition) represent some sort of natural or native order. This also is not true.

The Forest Land Resource Management Plan (FLRMP) in accordance with 16 U.S. Code § 1604 - National Forest System land and resource management plans requires that "In developing, maintaining, and revising plans for units of the National Forest System pursuant to this section, the Secretary shall assure that such plans— (5) be revised (A) from time to time when the Secretary finds conditions in a unit have significantly changed, but at least every fifteen years, and (B) in accordance with the provisions of subsections (e) and (f) of this section and public involvement comparable to that required by subsection (d) of this section."

A new Forest Plan will be 6 years overdue in 2018 and the BHRL Project implementation would take place over the next 10 years – that is 16 years past time for a new Forest Plan. Add that to the fact that forest conditions have significantly changed. This is a significant issue for the BHRL project and brings into question the credibility of all actions described in the Draft EIS and the mandate of the Project.

In reality, there is no solid guidance in the FLRMP for the direction of Black Hills National Forest.

B. Purpose:

Without a valid Need, it is difficult to find Purpose. That said, there are likely things of good purpose that can be done to promote resilience on the forest (see IV. below).

IV. Recommended Actions to improve Resilience of the Black Hills National Forest

It is extremely important that these deeply fundamental Black Hills Forest Health issues become top priorities of the Forest. The Black Hills Resilient Landscapes Project could be an appropriate tool for handling these issues:

A. Water quality must be improved:

- Many watershed resources are impaired in the Black Hills. Studies have shown that the primary pollution sources are cattle grazing, road construction, timbering and municipal, residential and commercial wastewater. Silt and bacteria are the major pollutants in Black Hills watersheds. Forest Management is in control of the majority of factors degrading the water resource. The BHRL proposal contains far too many acres of logging and miles of road construction and reconstruction to remotely resemble anything promoting water quality.
- Since 1960, land management on national forests has been governed by the Multiple Use and Sustained Yield Act (MUSYA). MUSYA mandates that national forests be "administered for outdoor recreation, range, timber, watershed, and wildlife/fish purposes." The Act states that these five uses are to be treated equally with no use having greater importance than any other use. They are all to be developed and administered for multiple use and sustained yield of each of these products and services. MUSYA defines the terms "multiple use" and "sustained yield" as follows:

  - Multiple use - the "management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people ...."
  - Sustained yield - "the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land."

- The huge number of trees on the forest impairs our water quantity. This in turn makes riparian health more elusive just by the fact that there is less water. Less water has dramatic effects on the ability of riparian vegetation to even exist. While one might wonder why we are then opposed to the 185,000 acres of commercial harvests, we assert that those are only done with the idea that those areas will be re-populated with millions of young pines within 5 years of the harvest. Young, fast-growing trees drink tremendous amounts of water. One action that would be much more effective than harvest in helping water quantity and riparian quality is thinning existing young pine stands to extremely low densities like 0-130 trees per acre –lower than those described in the DEIS on page 27. This could be done without the unnecessary disturbance required by overstory removal. Likewise, the roading that supports timber harvest also contributes to degradation of watersheds in the Black Hills.
- The 3 sub-issues of the failed challenge to the Pennington County septic ordinance (the near rejection of water quality monitoring at 2 stations and the

impaired headwaters from the wilderness) show the water quality part of the Multiple Use Sustained Yield part of the Forest needs attention.

- Actionable directives:
  1. Reduce the planned timber harvest.
  2. Add and reconstruct no more roads.
  3. Reduce grazing on the Forest
  4. Do more hand-thinning and prescribed burns on the forest to reduce ponderosa pine populations
  5. Restore large quantities of deciduous native tree and shrub communities on the Forest.
  6. Do more monitoring of water quality and riparian/wetland condition to better track improvements/declines and develop a knowledge and experience base that supports active achievement of high quality water resources on Black Hills National Forest.

B. The relationships between ponderosa pine forests, fire, and timber harvest must be revisited:

- History should be one of our greatest teachers -- it is difficult to know where you are going if you don't know where you have been. We need to look again at the plentiful knowledge about how ponderosa pine forest ecosystems in the Black Hills evolved with and were shaped by fire before European settlement. The Illingworth photographs from the 1874 Custer Expedition clearly show a forest where insects and fire, though occurring, were minor events relative to what we have experienced in recent times.
- The dominant factors influencing the shape of this forest in the past 143 years –the difference between 1874 and 2017 – have been fire suppression and timber harvest. In 143 years, with the idea of what we could take from this forest in mind, we have shaped it into a contortion of its former self. Fire suppression has led to a much denser forest while logging has removed naturally fire-resistant trees. Scarification and regeneration have replaced these with massive amounts of fine fuels. In the 1970's, after 20% of the forest was affected by a mountain pine beetle epidemic, there was a renewed cry to control the forest with more logging. About a quarter century later, 10% of the forest burned in one year and the most recent beetle epidemics had begun ultimately affecting another >37% of the forest.
- Fire is not what it used to be. Climate change has not only changed the length of the fire season, it has also changed the behavior of fire. If we do not reintroduce more fire to this landscape via prescribe burns, we will likely be introduced to fires beyond what we've ever experienced.
- It is important to keep in mind that moving the distribution of structural stages toward the Forest Plan objectives may be achieved as a by-product of managing for resilience, but must not be the driving force behind management activities. It will be evident that the Forest Service is making the forest ecosystem a priority when the landscape looks more like the Illingworth photos from 1874. That will not be achieved via a more vigorous application of what we have done in the past (fire suppression and logging). While more

logging may become useful at some point, there is a great need over the next decade for other actions and time for understory vegetation recovery from recent disturbances.

- The silvicultural systems that have been so rigorously applied in the Black Hills are directly counter to the best interests of the Wildland Urban Interface (WUI). Thickets of young trees that are common by products of logging are far more dangerous than the old stands that were hauled to the mills. Communities, homes and businesses in the WUI will be best served with a focus on removing the understory pine growth as much as possible. This can be accomplished by understory thinning/removal or prescribed burning. Prescribed (Rx) burning has some advantages that hand thinning does not -- there is no community safer from fire than one that has had fire. The consequence of not addressing fire to an adequate degree in the WUI is overtly leaving those communities subject to wildfire that will inevitably occur.
    - Actionable directives:
        1. The BHRL Project should include more acres for annual Rx burning maximums and should include the area currently proposed for Mechanical Site Preparation in Rx burn acres.
        2. The amount of commercial harvest in BHRL should be dramatically reduced and limited to stands where harvest activities are directly in support of ecological processes and where the harvest can be achieved without inciting a massive regeneration event.
        3. The Black Hills National Forest should require something like "Tread Lightly" for logging practices in an attempt to minimize disturbance and reduce the regeneration of pines.
        4. Thinning or removing understory pine should be increased from the proposed 7,000 acres per year to at least 10,000 or even more acres per year, while minimizing the disturbance footprint.
        5. Strive for even more heterogeneity than the Structural Stages advised in the outdated FLRMP. This would move forest conditions more towards the historical conditions as noted in the recent work of Russell Graham.
        6. Engage and partner with communities and people. They will benefit from that engagement and will potentially be able volunteer to help make the forest safer to live and work in.

C. Roads must be reconsidered:

- The road template on the Black Hills has nearly tripled in the last 40 years. It is time to reverse that as part of an active plan (BHRL) to restore native processes and increase resilience on the forest. Roads are a well- known vector for invasive species.
    - Actionable directives:
        1. Add no new roads and limit reconstruction.

D. Rethink overstory removal, commercial harvests, thinning:

- The ability of the Forest Service to effectively manage resilient ecosystems on this forest have long been hampered by the demands of the timber industry. Much falls by the wayside when timber production is the focus. Sure, Black Hills National Forest is a working forest, but now we are paying for the unintended consequences of timber management in the form of poor water quality, diminished recreation opportunities, the danger of catastrophic wildfires and crippled native plant communities. Does the Black Hills National Forest propose that we solve the ecological issues caused by logging by doing more logging? It is interesting to read on page 25 of the BHRL DEIS that " The purpose of overstory removal and subsequent thinning is to concentrate the site's resources in the new stand so that its growth rate may increase, contributing to sustained timber yield over time and more rapid development of moderately dense, mature forest." The massive amount of logging proposed will do very little in the way of promoting resilience especially when the statement above points to perpetuating the rapid growth into the moderately dense stands that are the bane of this forest. Please explain how the forest will be in better shape after more logging treatments will occur where the KV funds coming back will not cover necessary weed and thinning treatments. Clearly, this system is unsustainable.
- The ecological impacts of soil disturbance are serious detriments to forest resilience. These impacts are not adequately addressed in the BHRL DEIS.
- We hear about the importance of retaining the timber industry here in order to use harvest as a tool. Were the Allowed Sale Quantity (ASQ) recalculated today to reflect the standing inventory on the forest, current harvest levels would not be allowed. Soon, industry will have to shrink and it seems prudent to draw out harvests over a longer time period in order to insure their presence.
- Structural Stage Objectives are a weak reason for over-harvesting the forest. It is somewhat likely that wildfire will affect the forest in a big way in the future. Continuing with the large logging program will do little to help prepare for that.
- We would like to know why the Mountain Pine Beetle Response Project (MPBRP) is continuing now that the epidemic is over. MPBRP has negative effects on the potential for resilience on the forest for all the reasons mentioned above. Again, funds returned to the forest for restorative actions are inadequate, resulting in movement of the forest even farther from resiliency.
- We would like to see harvest activities scheduled in a way that is more congruent with the life cycle of pines which conservatively is well over 200 years. There would be many benefits to this… less disturbance to soils and understory vegetation, fewer weeds, relative safety from wildfire, much improved aesthetics, etc. Slowing growth of ponderosa pine would make management of the forest far less expensive economically and environmentally, and it would provide a great amount of resilience.

- Actionable directives:
  1. Reduce harvested acres in BHRL dramatically.
  2. Take into account the ecological needs of each stand to be treated and have clear objectives about how actions will improve the land.
  3. Implement leave-no-trace practices for logging.
  4. Consider a much longer cycle of time between harvests.

E. Deal seriously with known threats of noxious weeds:

- BHRL DEIS indicates that the Proposed Action is likely to increase noxious weeds due to soil disturbance and opening the forest canopy. BHRL DEIS states that costs of needed treatment for those noxious weeds could exceed available funding. Due to the high value of native species and native plant communities in landscape-level resiliency, it is unacceptable to knowingly spread invasive, noxious weeds without treatment.
  - Actionable directives:
    1. Funding/actions that accomplish noxious weed management must be treated as limiting factors to BHRL activities rather than ceilings to break through.

F. Tend to forbs and native plant communities:

- The integrity of understory vegetation needs special attention. Conversion of native plant communities to non-native grasses and weed species spells trouble for the future forest on many fronts. One only needs to understand the cost of the 4,000 acres of "Mechanical Site Preparation" called for in this DEIS to know that we do not want the forest understory to convert to non-native species. Opening up canopies further and scarification designed to decrease competition of forbs with pine regeneration is likely to bring in the highly unwanted element of invasive species and increase the already large number of acres affected with weeds and non-native rhizomatous grasses.
- Likewise, these plant communities are worthy of preserving in and of themselves. In particular, the Black Hills Montane (BHM) Grassland plant community type that is endemic to (that is, only found in) the Black Hills is ranked G1 (globally critically imperiled) by NatureServe. It is inadequate that the best BHRL can contribute to management of BHM Grasslands is to attempt to be neutral to known occurrences. BHRL is an excellent opportunity to begin research and action on supporting greater area and quality of BHM Grasslands so as to move its conservation ranking in the direction of less imperilment.
  - Actionable directives:
    1. At least in the nearer term while invasive species are brought under control-- limit disturbance in areas where the understory is an intact native plant community or composed primarily of native species.

2. Develop a knowledge and experience base to support rehabilitation and restoration of BHM Grassland plant communities.
3. Add no new roads and limit reconstruction.

G. Eliminate mechanical site preparation (MSP) from the plan (proposed tool on up to 4,000 acres in a 47,200 area in west-central Black Hills):

- We are aware of no research in the Black Hills indicating that disking, raking, and scarifying non-native grasses actually works to allow ponderosa pine seedlings to establish. This would be an experiment.
- The description and rational for this activity is so sparse. Which species of non-native grasses? The DEIS implies that there are 47,200 acres that could be candidates for this treatment which rings dissonant when we've heard the District Ranger say there are "10-12,000 acres of thick sod". 47,200 acres sprawling over an area of about 80,000 acres is not a "defined" area.
- In 2008, the Forest Supervisor issued a memo specific to mechanical site preparation. The memo states that MSP is generally not necessary and should occur only in rare situations.
- Some of our most common non-native grasses are also rhizomatous; chopping up their roots kicks asexual reproduction into overdrive, so they would be invigorated, not distressed/suppressed.
- High levels of soil disturbance and weed establishment are certainties with MSP.
- In the past, similar actions were considered to enhance development of aspen stands but a main objection involved inadequate protection of archeological resources. Is the same concern still relevant?
- The "defined area" has some of the best potential for the endemic Black Hills Montane (BHM) Grassland plant community. This is a case where it would be appropriate to get serious about restoration. Instead of invigorating non-native grasses and/or converting non-native grassland to ponderosa pine forest, serious restoration would focus on decreasing non-native grass species and increasing native grass species (including Black Hills Montane Grassland plant communities where appropriate). As author Robin Wall Kimmerer asks, "why is management focused only on what we can take from the land (e.g. converting non-native grassland to forest so there is more pine to harvest) rather than what we can give back to the land (e.g. restoring native grasses and BHM Grasslands, now at conservation risk for survival, to currently non-native grasslands in the west-central Black Hills)?"
    - Actionable directives:
        1. Eliminate MSP from the Project.
        2. Consider applying prescribed burning to a least part of this area.

3. Develop a knowledge and experience base to support widespread restoration projects on native grasslands in the Black Hills.

H. Foster aspen, birch, and bur oak:

- In order to maintain 92,000 acres of aspen, the Forest should be regenerating at least 1,000 acres per year (10,000 acres over the expected life of the project), either mechanically or naturally through fire. As written, this project anticipates only 4,000 acres of aspen regeneration over the life of the project. This amount is insufficient to maintain the desired quantities of aspen in a healthy condition.
- The decline of aspen in the Black Hills can be attributed to the control of fires since European settlement. Fire was once common in the Black Hills landscape. Historically, occasional intense fires would regenerate aspen stands through sprouting.
- The use of mechanical means to remove conifers from aspen are likely to destroy beautiful aesthetics and produce negative disturbance effects that outweigh any perceived benefits.
    - Actionable directives:
        1. Set a higher number of acres of hardwood restoration per year.
        2. Do not use coppice methods to regenerate aspen.
        3. Increasing the acres of prescribed burn will help with this.
        4. Instead of cutting pine and spruce trees from within aspen stands, remove conifers in swaths around the perimeter of aspen groves to give room for aspen to spread outwards and minimize soil disturbance in existing stands. This could likely be enhanced with the addition of prescribed burning and would also more closely mimic the dynamic flow of cover types in accordance with the natural chain of succession. It would also allow the intricacies of bird habitat and understory vegetation to remain in a more stable condition.
        5. Develop a broader knowledge and experience base to support widespread restoration of aspen, birch, and bur oak plant communities in the Black Hills.

I. Protect old and large trees:

- We are very concerned about Structural Stages 4C and 5. Structural Stage 5 has not been properly classified and inventoried on the forest. Individuals and groups of older and larger trees need to be protected, not hidden from inventories so that they may be more easily cut. That is what is happening right now and we are aware of many instances.
- There is wisdom to be found in older trees and the forb communities underneath them; forest management needs to take renewed appreciation of this. Black Hills ponderosa pines are capable of living healthy lives far longer than the time frames allotted by management in recent times. These larger trees are some of the most fire-resistant trees in North America because of their thick bark and high limbs. It is absolute fallacy to say that older trees are not as strong as the younger ones; quite the contrary… their existence proves their strength. And it is the abnormal level of young tees on the forest that endanger the older trees and many other aspects of the forest.

- Many animals and plants require old and large trees. Among them are goshawks and wolf lichen.
- People aren't always able to express why they love big trees, but part of it is because of the very deep connection that the trees have with time and the persistence of an ecosystem. Their stability gives us stability. And the large trees are beautiful; People need beauty and awe to renew and inspire them. In nature we can re-create. And recreation is an important one of the purposes to be treated equally with range, timber, watershed, and wildlife/fish under the Multiple Use Sustained Yield Act of 1960. Walt Whitman said "Now I see the secret of making the best person: it is to grow in the open air and to eat and sleep with the earth." People need intact, stabile ecosystems; improving ecosystems improves our culture.
    - Actionable directives:
        1. Properly classify, inventory, and protect old and large trees.
        2. Leave the older, bigger trees in any stand being mechanically treated.
        3. Management Areas for late succession, regardless of current condition, should continue to be managed for these characteristics.
        4. Give thoughtful action towards moving stands into old and large status in a variety of ways.
        5. Using ratios, if saving 5% as old growth actually provided 1% old growth in your system, then you will need to plan for 20% to get 5%. Please point to the 20% that will be managed to become Structural Stage 5.
        6. Make a forest plan amendment for increasing the percentage of SS5 on the forest, and then make sure the condition of the rest of the forest will support that.

J. Leave spruce alone:

- Spruce ecosystems are naturally messy and often dense. They contain much biodiversity and biocomplexity.
    - Actionable directives:
        1. No mechanical treatments in intact spruce communities.

K. Update the scenery management system:

- The public cares deeply about the aesthetics of the forest. Visual and audio aesthetics of the forest are at the heart of much in the way of recreation enjoyment and spiritual enjoyment and fulfillment. The current method of simply using the distance from the most-travelled highways to gauge scenic value is wholly inadequate for tending to the aesthetics of the forest.
    - Actionable directives:
        1. Engage with your knowledgeable landscape architect to do better than the current system.
        2. Develop a knowledge and experience base about scenery management in BHRL that focuses on restoration and resilience.

L. Understand the full economic picture:

- Black Hills National Forest contributes to economic opportunities in local communities. Most often, this is thought of as the benefits derived from the forest by logging interests.
- Supply and demand are well understood and widely accepted dynamics of economics. The flood of timber products has depressed the price of timber to the point where, for some time now, Knutson-Vandenberg (KV) funds coming back from the sale of timber from the Black Hills National Forest are inadequate to address the ecological needs wrought upon the land because of those sales.
- Private landowners are negatively affected by the flood of timber sold by the Forest Service. Depressed timber prices make it economically difficult to manage private land in the forest.
- Local economies will best be served by having a stable timber industry, and not by one heading for a cliff in boom-bust fashion. If all or most merchantable timber is removed from the forest, it is guaranteed that industry will not remain present.
- When forest ecosystems are healthy and stabile, local communities will derive economic benefits from tourism and recreation, and from good health, clean air and water, and strong cultural ties to the land. The BHRL project must not impoverish the landscape or the people.

Conclusion

We support the duty of this Federal Agency to preserve and protect the Black Hills National Forest Land Resource which serves a multitude of uses. The actions of today must first and foremost enhance the strength and resiliency of ecosystems and decisions must be made for the good of the living systems of the forest. That is how the people are best served.

Norbeck Society finds having a project with a Purpose and Need pretending Forest Plan Structural Stage Objectives were ever in place on the ground, and carrying forward the past practices of timber harvest and fire suppression will likely to lead (again) to outcomes similar to the recent Mountain Pine Beetle epidemic and fires with severity equal to or greater than the Jasper fire. The BHRL plan as written is severely deficient. If any Decision is made, it must be for the good of the living systems of the forest and not with politics or commerce in mind.

We believe that the Black Hills National Forest is the beneficiary of competent and capable employees who care about the forest and understand the issues that we have outlined in these comments. We also understand the political and budgetary pressures that could derail possible benefits to this landscape and the people who will rely on its graces in the future. We request that you resist that derailment.

We recommend:

- Not allowing the fairy tale of “moving the distribution of structural stages toward the Forest Plan objectives” to drive the actions of this Project. Changes in Structural Stages

may be a by-product of managing for resiliency, but should not be the driving force behind management activities.

- Developing a much more detailed plan or many smaller plans that address resilience of pant species and habitats using them as the springboard for proposed actions.
- Respecting the powerful and natural roles and abilities of wildfire and insects to shape this forest. They are not evils to be withheld from the forest, but rather nature's response to the needs of the forest when it gets out of balance.
- Revitalizing the capability of this forest to maintain native processes and tending to the dire need the forest has for more burning. Stem the spread of invasive weed species and diversify native vegetation through such efforts amplifying hardwoods across the forest. It is from these efforts that we and future generations will derive the most benefit.

We look forward to and appreciate your thorough and thoughtful consideration of the issues we presented. Again, thank you for the opportunity.

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