Norbeck Society

Toni Strauss, Deputy Forest Supervisor
Matt Daily, Natural Resources Staff Officer
Black Hills National Forest
1019 N. 5th Street
Custer, SD 57730

September 23, 2023

Re: Spruce Vegetation Management Project draft Environmental Assessment

Dear Deputy Supervisor Strauss and Natural Resources Staff Officer Daily,

As part of our mission to advocate for sustainable use of public lands, Norbeck Society comments reflect a 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. A vision for long-term sustainability of all aspects of the land is paramount.

The Norbeck Society wishes to ensure that a multitude of benefits flow perpetually from this resource to those who come after us. People in the future will rely on the graces of the Black Hills National Forest just as we do. In times like these, double-checking the standards and ethics of one's profession can help ensure that good is being done.

On the following pages, you will find our comments on the Spruce Vegetation Management Project draft Environmental Assessment.

As always, we appreciate the opportunity to provide input to the USFS about the management of the Black Hills National Forest.

Sincerely,

Mary Zimmerman, President
On behalf of the Norbeck Society
P. O. Box 9730
Rapid City, SD 57709
info@norbecksociety.com

Norbeck Society Comments

Spruce Vegetation Management Project
draft Environmental Assessment
Black Hills National Forest

September 23, 2023

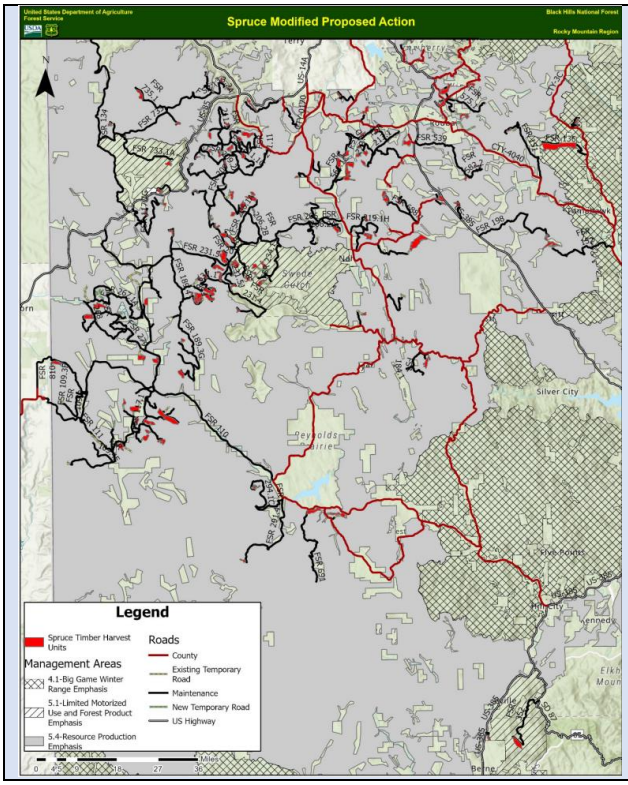


Table 1. Acres of proposed silvicultural prescriptions

Proposed Silvicultural Prescriptions	Acres
Overstory Removal with Reserves (retains <20 residual basal area)	493
Shelterwood Establishment Cut (retains 20-40 residual basal area)	831
Commercial Thin (retains 40-80 residual basal area)	888
Group Selection	720
Restoration (precommercial treatments restoring stands to pine)	682
Total acres proposed for treatment	**3,614**

Undetermined acres of Pine planting; 150 seedling per acre.
41 m. of temporary road construction and closure of same.
22 miles of road reconstruction and 315 miles of road maintenance.

Overlaps with:
BHRL, MPBRP, Chimera, Zeppelin, Artemis CE, Pactola CE, future planning-Westside

Purpose and Need for the Proposal The purpose and need for this project are derived from the differences between the existing forest vegetation conditions as described above and the desired forest vegetation conditions [as described in the Forest Plan including:] Forest-wide Objectives: To manage for species diversity including 92,000 acres of aspen and 20,000 acres of spruce (Vegetative Diversity (LVD) – 201 and Landscape Vegetative Diversity (LVD) – 239); Management Area Goals and Objectives: Manage forest cover types to provide variety in stand sizes, shape, 9 crown closure, age structure and interspersion (Goal 4.1-202; Objective 5.1-202; Objective 5.1-203; Goal 5.4- 201; and Goal 5.6-202); and Desired future conditions: Management emphasizes a vegetative mosaic, with natural and created openings and diverse sizes, ages, and heights of tree stands. Species diversity is evident, including aspen, bur oak and mountain mahogany, as well as ponderosa pine and white spruce. Occasionally, small patches of old trees of various heights can be found (MA 4.1; MA 5.1; MA 5.4; and MA 5.6).

The purpose of the proposal is to 1) re-establish stands of early seral vegetation within the spruce vegetation type to ultimately increase forest resilience and long-term resistance to natural and human-caused disturbance events and 2) conduct site specific fuels reduction to protect infrastructure at risk and create defensible space. Based on the identified departure and in consideration of the applicable management direction contained in the Black Hills National Forest Land and Resource Management Plan (2006), there is a need to:
• Re-establish ponderosa pine and aspen in mixed conifer stands that are now dominated by spruce, consistent with the historic natural range of variability.
• Increase the structural heterogeneity in spruce stands that are lacking age and size class diversity.
• Conduct site-specific fuels reduction to protect infrastructure at risk and create defensible space; and • Provide economic support to local communities by providing wood fiber and creating jobs in a sustainable manner

Table 1. Spruce Vegetation Management Project.

Photo 1. Mixed Spruce-Pine Forest, Black Hills National Forest. That's not grass in the understory!

Introduction:

We have found the provided Spruce Project documents to be generally well-written and very informative, and we appreciate that the Spruce Project and its potential impacts have been greatly reduced since the scoping period in March 2022. It is becoming of an important regulatory agency serving the public, to be responsive to that public. This is a step in the right direction in terms of building public trust.

It is good that many very problematic elements of the original project were removed or changed; things like elimination of known American Marten (not Pacific Marten, as the EA states), known sensitive species habitats, non-suitable lands, etc.

It is commendable that the suggested condition-based management approach was ditched. At this point, it is important for the public to know what you plan to do, and where.

That said, we are unable to support the Spruce Vegetation Management Project. We understand the detailed process of elimination that's been used to reduce the acreage of the project, but the actions proposed are rudderless because of the following factors:

I. Unsustainable Timber Program

We are concerned the Spruce Project will contribute to unsustainable logging in the Forest. We have expressed this concern with all recent projects, and each passing year's unsustainable sales rate validates this concern. BHNF FLRMP Goal 3: "Provide for sustained commodity uses in an environmentally acceptable manner." The Black Hills National Forest is not only ignoring this Forest Plan Goal, it is currently in violation of the Multiple Use Sustained Yields Act and the National Forest Management Act.

The Forest Service should disclose to the public that the Spruce Project will potentially contribute to an ongoing depletion trend in forest inventories and increase the risk of losing more industry infrastructure and consequently render the Forest incapable of "providing sustained commodity uses…" Please see "A Scenario-Based Assessment to Inform Sustainable Ponderosa Pine Timber Harvest on the Black Hills National Forest" (RMRS-GTR-422), GTR information flyer updated with reconciliation report links updated.pdf (usda.gov), and the January 2021 Underhill report, Assessment of the National Forest Advisory Board Recommendation: fseprd949571.pdf (usda.gov)

In the Spruce Project Silviculture Report on page 12, GTR 422 is quoted: "The sustainable level of pine from suitable lands ranges from 72,400 to 90,500 CCF per year (Graham 2021)." However, it is not mentioned that the authors state this is true *if*:

1. *If* mortality rates stay below 1.04%,
2. *If* all suitable timberlands are available for harvest.

They go on to say, "History shows that allowing the forest to recover after large disturbances provides opportunities to adjust future harvest levels. Also, tending of young forests can promote recovery and produce sawtimber volume more quickly."

II. Forest Plan Revision

This project promises to short-circuit Forest Plan Revision, narrowing options for the future. In the Draft Forest Assessment "Ecological Integrity of Forested Ecosystems: Status and Trends," Need for Change is described:

The revised forest plan should:

- *Revisit the white spruce plan direction (239-LVD). This direction indicates to manage for 20,000 acres of spruce across the Forest using active management to achieve multiple-use objectives. There is a need to revisit desired conditions for white spruce and re-assess thresholds needed for species habitat. Current white spruce direction is simple and may need to be more nuanced in terms of how different types of spruce-dominate forest in different areas across the Forest is managed.*
- *Include monitoring of white spruce to keep track of what is happening to this species, given its uniqueness and vulnerability to climate change.*

So, in the face of no monitoring, and knowing current Forest Plan direction on Spruce is in need of more nuance, and thresholds needed for species habitat need re-assessment, the Spruce Project proposes management treatments on 7% of this "unique and vulnerable" habitat.

The forest has undergone massive changed in the past 25 years. The for-now-untouched stands in the Spruce Project proposed action are like islands of biodiversity surrounded by logged over land.

Other examples of short-circuiting Forest Planning include: if it is decided that a finer mosaic of habitat structural stage objectives across the Forest is desired, then the spruce project would render that difficult to achieve in the next 70-100 years. Also, if it is decided to move towards more uneven-age management, the shelterwood establishment cuts in the Spruce proposal will have negated the possibility on 831 acres.

Photos 2 and 3. Eastern-most proposed Spruce project treatment area (long horizontal in middle). Treatment would result in less of a mosaic and reduce the possibility of ecological recovery in surrounding areas. The Spruce project leads to contiguous disturbed, cut-over forest.

III. High Potential for Loss of Ecological Integrity and habitat, destruction of edges

We note that non-native species across the Forest are on the rise due to a number of factors, many within the control of management, i.e., too much disturbance (logging), and too little and/or ineffective mitigation of weeds. The proposed treatment areas currently have some of the highest ecological integrity on the forest. The Spruce Project Botany and Wildlife reports clearly state the project will result in a decline in ecological integrity and a loss of important wildlife habitat. Where will the Forest Service stand up for ecological integrity and quality habitat if not here?

We note that much of the plant survey data used is at least 10 years old, surrounding stands have been altered dramatically (by Mountain pine beetle or by logging), and plants - including R2 sensitives and SOLCs- move; they ebb and flow. What we knew a decade ago has probably changed.

Although the Spruce Project EA lists "affected" management areas, it fails to disclose one that most certainly will be impacted; the Black Fox Botanical Area. Botanical Areas were set up with no buffers except the existing multiple use forest surrounding them. The Spruce Project can put them at greater risk because the botany and wildlife in the Botanical Area will be affected by the changes in stands around them.

Because so much logging has occurred in areas around the proposed Spruce Project stands, the shelter they provide is now critical (see Photos 2 and 3) and the edges they provide are part of that. Edges can be an important part of fire control as well.

Spruce are doing well here on the Black Hills National Forest. They contain areas of the highest ecological integrity. They are unsusceptible to Mountain Pine Beetle and may even protect Pines from attack.

IV. **The Uncompelling Rationale of "Historically dominated by ponderosa pine and aspen"**

In the draft EA, this statement is made as if there is a reason or even a desire to move these stand's conditions back to a certain period in history. We believe it is important to understand the past, but you don't get to choose which conditions and time-frames support your proposal while ignoring the glaring absence of historical conditions like large Pines and old growth.

Perhaps at one time these stands were dominated by pine, perhaps not. Who selected the historical reference you are pointing to? What was the criteria for selection? At one time 20,000 years ago, these stands were pure spruce. Now they are a mix of spruce and pine and some birch or aspen.

The current Forest Plan (which was made for a very different forest than the Black Hills National Forest that exists today) has no provisions for a restoration of conditions to a time in history. In fact, the "return-the-forest-to-historic-conditions" alternative was rejected by industry because it was known that it would not produce the volumes they wanted. Likewise, very recent Black Hills National Forest projects have resulted in timber sales that have exacerbated the very condition that Black Hills National Forest proposes to "solve" with the Spruce Project. Industry proponent Bill Coburn said it on South Dakota Public Radio – that one reason there are more Spruce is that industry doesn't want it and so they leave it behind when they log.

Here are some examples:

Photo 4. Whitetail #17, east side (unauthorized by BHRL but sold under that project). Spruce trees remain.

Photo 5. West side of Whitetail #17.

Photo 6. Maverick #19 (unauthorized by BHRL, but sold and cut) the quintessential open park-like old growth Pines stand cut (LTMG), young coning Spruce were left behind.

V. Disturbance: Slash piles, Roads and their impacts, Damage to soils, Weeds

In addition to the compaction and skidding associated with the logging equipment, the proposed action has 63 miles of road work including 9 stream crossings. This is excessive.

We estimate the Spruce project will result in 4-500 acres of new weedy wasteland because of temporary roads, slash piles, and skid trails.

Additionally, OHVs will use the temporary roads and skid trails exacerbating the damage. Forest Service can call them "temporary," but they are not. OHVs will have new access into important plant and wildlife habitat putting them at further risk of displacement, degradation, and even death. Forest Service has a track record of being unable to control OHV abuse, rehabilitate abused land, and of not being able to keep up with the weeds that vegetation management projects are producing.

This is a recipe for a weed dispersal bomb.

It is hard to ignore the fact that more than 10% of the project will be turned over to this typed of substantial ecological devastation. This, at a taxpayer cost of $4 million.

VI. Heritage

Black Hills Spruce is the state tree for the State of South Dakota. These are beautiful trees that people love.

VII. Hydrology and Soils

The Spruce Project Hydrology report contains good information to know. There are many red flags and the report contains cautionary language that speaks for itself:

Page 8: "…because road densities are already moderately high, slight increases in road density are opposite the trend recommended for watershed health."

Page 10: "Twelve of the 19 subwatersheds containing project units also contain harvest units (totaling 71 acres) that overlap with aquatic management zones."

Page 12: "There are 18 springs and 13 acres of wetlands within the Spruce harvest units."

Page 12: "Over 1500 of the 3600 harvest acres are within the Stovho-Trebor complex which has a moderate erosion hazard rating and a severe potential for compaction." We note ~2900 acres of the 3600 acres are rated moderate to severe Erosion Hazard Potential and over 3200 of the 3600 acres has a severe potential for compaction.

Page 16: We note because longer term data is not available, assumptions are made about watershed condition.

Page 17: We note that table 13 does not include disturbance in these watersheds via tree loss from Mountain pine beetle.

Page 18: We note that Park (43%) and Boulder Creek (30%) watersheds exceed disturbance thresholds.

Pages 19-20: Environmental Consequences (of the Proposed Action): "The Spruce EA units are mostly spread over 19 6th level subwatersheds with minimal project acreage in any subwatershed. **The record of disturbance in these watersheds is not available for the full recovery period of 20 to 30 years but the**

last ten years and current planned projects indicate a level of moderate disturbance within these forest subwatersheds. The Spruce EA contributes only a small portion of watershed disturbance in any of these 19 sub-watersheds **however this incremental increase in disturbance, when combined with the moderate harvest history and the currently planned projects, may be moving these watersheds close to a threshold for impairment in hydrologic function.** Although project design features and the dispersed units help reduce impacts for the Spruce project, **the cumulative disturbance eventually may result in watersheds with an impaired hydrologic regime unable to properly handle precipitation events. This would lead to an increase in quantity of runoff in a reduced amount of time, which could reduce channel stability and impair the ability of the watershed to store and slowly release water, with impacts to water supply, water quality and aquatic habitat.**

Road densities in the Spruce subwatersheds currently fall within the classification of impaired function (16 of the 19 subwatersheds) or functioning at risk (3 of the 19 subwatersheds) and none are functioning properly. Similar to watershed disturbance the Spruce transportation network alone does not result in significant impacts to watershed resources but **the trend presented by the slight increase in road density is opposite of what is required to move these subwatersheds out of the impaired or at risk classifications.** This should be a short-term impact as road decommissioning is required by project design features."

Page 18: Environmental Impacts of the No Action Alternative: "This alternative proposes no vegetation treatments or prescribed fire actions. There would be no ground disturbance resulting from timber harvest, road construction and pile burning. Forest canopy cover would remain at current levels and watershed function would not be impacted. There would be no reduction of fuels on the landscape."

Damage to soils and water tables can take a century or more to recover from logging. Logging disturbance is of a magnitude greater than historical disturbances on the forest. The Black Hills have been recently logged at an unprecedented rate in a heavily mechanized fashion that is also unprecedented.

There is colloquial evidence that water tables in the Black Hills are dropping. Loss of forest has been linked to drops in water tables. According to a 40-year veteran of pipe and well installation in the Black Hills, many residents are needing to lower their pumps in order to get water that was more accessible in the past. There are reports of creeks having less of a response to rainfall.

Loss of forest has been linked to less rainfall and consequently, more fire.

Water tables and aquifers in the Black Hills are complex and poorly understood. A word to the wise is "First, do no harm."

VIII. Planting Pine

The Spruce Project proposes that pines will be planted in unregenerated areas for future Pine harvests. However, Forest Service has recently committed to replanting trees in Alvin, Simon, and Theodore Projects: 3500 acres, Artemis Project: 2000 acres, Moskee Burn Project: 250 acres, and the Fish Fire Project: 600 acres, *for **a total of about 6350 acres***. This is in addition to the ongoing Jasper Fire (2000) replanting. We are doubtful that planting of pine in the Spruce Project area will happen for a long time because of a deficit of seedlings, infrastructure, and personnel.

IX. Carbon and Climate Change

Cutting down carbon storage using fossil-fuel-intensive methods is not a solution to climate change – it is the problem.

X. Recreation

It is more and more difficult to find places to hike that are not impacted by logging. Much of this project is located in some of the "last best places." It promises to bring noisy OHV traffic into places people still an go to enjoy nature – the plants and wildlife and the quiet.

XI. Social Justice

Please explain why there is no discussion here of tribal uses of the project area and the claims made by local tribes concerning the Fort Larmie Treaties. How does this project affect tribal members, their interaction with the land and the plants and wildlife, and their ability to seek spiritual solace?

XII. Lost Opportunity Costs

For the $4 million anticipated cast, the Forest service could do 10-20,000 acres of prescribed burning, or treat weeds on many acres needing attention.

Conclusion:

The purpose of NEPA is to disclose the effects of a proposed project to the public, and the Forest Service has done a good job of that. The process of development for the Spruce Vegetation Management Project is a great example of NEPA serving the public interest.

"Why here? Why now?" It is baffling when many recent projects are held under the same light. According to Forest Service, we need meadow where there are large Pines (so they will have to be removed by logging) and we'll need to plant pines where there are openings. We need to make openings where there are large Pines, and then we'll need to plant Pines there. In the WUI big trees need to be removed, but never mind the little trees left behind, or the ones that we'll plant. And we need pine trees where there is spruce (but some large trees will need to be logged). One project will move the Forest toward Structural Stage Objectives, while another destroys them. Is there anything the Forest Service deems to be correct about the Black Hills National Forest? Something that doesn't need "management" because it's okay the way it is? It seems there is always a way to justify more logging – until the trees are gone.

We are unable to support the Spruce Vegetation Management Project. No action is our preference because there is not enough benefit, and in fact harm, that is proven in the Forest Service documents provided. Perhaps the project could be revisited once monitoring and forest plan revision are done.

If Forest Service determines the Spruce project must proceed, we recommend eliminating Overstory Removal, shelterwood establishment cuts, and Pine planting from the project. Please leave large and very large trees and old growth.

The situation of today has been recognized and written about for hundreds of years, if not longer.

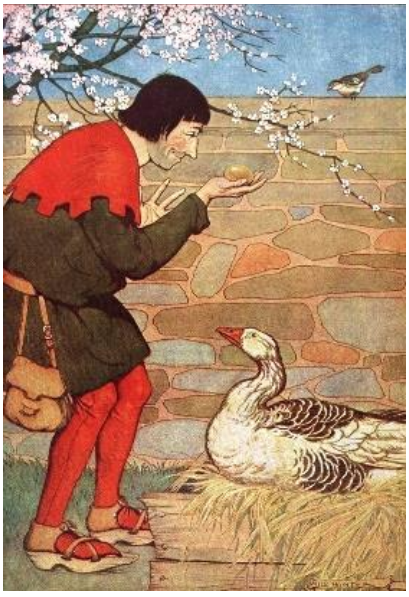
The Goose that Laid the Golden Eggs" is one of the best-known Aesop's Fables. It's the tale of a valuable resource that provides a consistent stream of benefits. Then, because of greed and impatience, it was destroyed. The last line of the fable is the moral: "*Those who have plenty want more and so lose all they have."*

The tale has given rise to the idiom 'killing the goose that lays the golden eggs', which refers to the short-sighted destruction of a valuable resource, or to an unprofitable action motivated by greed.

The same lesson is taught by Ignacy Krasicki's fable:
"The Farmer"

A farmer, bent on doubling the profits from his land,
Proceeded to set his soil a two-harvest demand.
Too intent thus on profit, harm himself he must needs:
Instead of corn, he now reaps corn-cockle and weeds.

Illustration by Gustave Doré



It's time to care for the Goose.