



BLACK HILLS RESILIENT LANDSCAPES PROJECT

Request for Comments

August 2016

The Need for the Project

Since 1997, the Black Hills National Forest has experienced epidemic levels of mountain pine beetle infestation. Beetles have killed pine trees on approximately 215,000 acres (map 1). In some areas, there are very few live, mature pine trees remaining. In others, the beetles only attacked pockets of trees or very few trees.



Black Elk Wilderness, 2011 (Kari Greer)



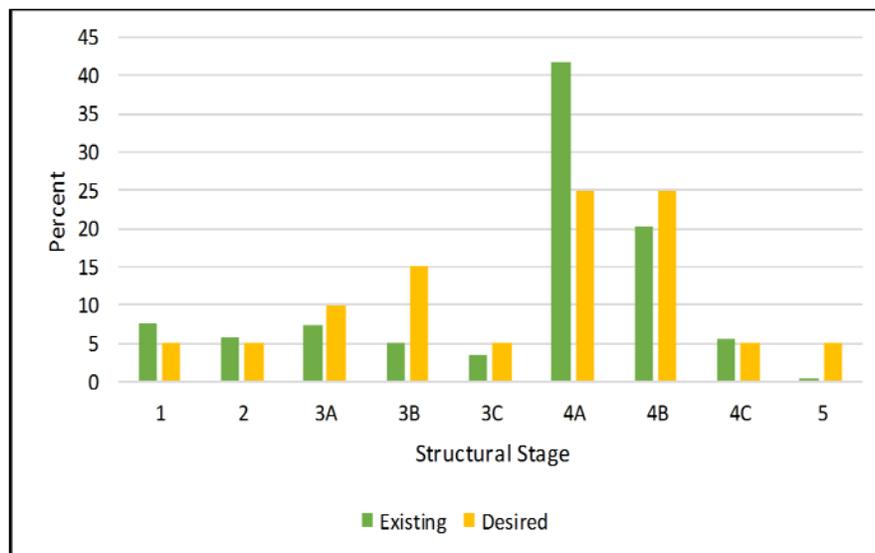
Pockets of beetle infestation in central Black Hills

All photos USFS unless otherwise specified

The Forest Service and its partners have responded to the epidemic by reducing stand susceptibility to beetle infestation, recovering the value of some of the infested trees, protecting recreation areas, and decreasing fuel build-up in certain areas (map 2).

The epidemic now appears to be slowing in most parts of the forest, but the infestation has left behind a changed landscape. Much of the forest is now more open. Distribution of pine forest structure has moved away from desired conditions. These desired conditions are described in the Black Hills National Forest Land and Resource Management Plan, as amended (1996, 2006).

Forest structure is described by “structural stage” (SS). The graph below compares existing and desired distribution of pine structural stages. Map 3 displays current distribution. Examples of structural stages are shown on the next page.



**Pine structural stages:
Typical examples**



SS1 (grass/forb)—Objective is 5% of pine forest



SS2 (seedling/sapling)—5%



SS3A (young, open)—10%



SS3B (young, moderate density)—15%



SS3C (young, dense)—5%

SS4A is well above objective levels while several other stages are below. Over time, the open and young forest structures resulting from the infestation are likely to develop characteristics that will decrease the forest's resilience to insect infestation, wildfire, and other disturbances.

In the newly open stands, natural reforestation is occurring as pine seedlings become established. Ponderosa pine regenerates prolifically in the Black Hills, and often there are so many small trees that they become crowded and must compete for limited resources. Growth slows, stems remain thin, and heavy snow can result in widespread damage. There is a need to manage these new stands to prevent stagnation and allow transition to other structural stages.

Mountain pine beetles most often infest dense pine stands. As a result of the epidemic, acreage of mature, moderately dense pine stands (structural stage 4B) has decreased below Forest Plan objective levels. Mature, dense pine stands (structural stage 4C) are still slightly above objective levels, though most of them are concentrated in a few areas that experienced less beetle infestation. There is a need to increase 4B and maintain 4C.

Late succession (old growth, structural stage 5) pine forest in the Black Hills can take various forms. These stands provide habitat diversity and enhance scenery. There are fewer late succession stands than desired, and there is a need to maintain and enhance old stands to work toward meeting this objective.



SS4A (mature, open)—25%



SS4B (mature, moderate density)—25%



SS4C (mature, dense)—5%

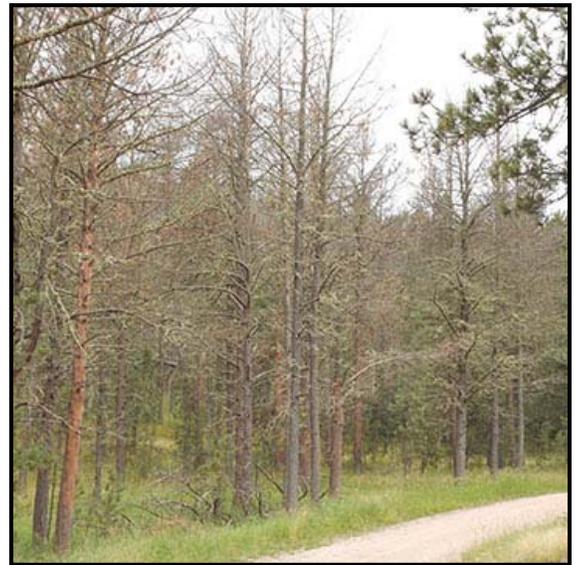


SS5 (late succession)—5% (dense, left; open understory, right)



The beetle infestation also has resulted in hazardous fuels in the form of dead trees (map 2). The trees usually fall within a few years of being infested and can pile up and cause uncharacteristically high fuel loadings. These fuels are unlikely to ignite easily, but if they do catch fire they can burn intensely, damaging soils and causing problems for firefighters. In addition, the dead trees pose an increased hazard to public health and safety, infrastructure, and communities. There is a need to reduce this hazard, especially near populated areas and critical infrastructure.

Mature ponderosa pine are often resistant to fire, especially if there is some space between trees or if they have had periodic exposure to low-level fire. Small pine trees are not resistant to fire, and dense patches can allow a fire to spread both vertically and horizontally. There is a need to thin out these small trees to prevent development of a fire hazard.



Beetle-killed trees along Forest Service road



Horsethief Lake fuel break, before and after implementation

Historically, fire was a major force shaping the composition and distribution of Black Hills plant communities and ecological processes. Fire suppression over the last 140 years has altered plant communities and allowed fuels to accumulate, especially in less accessible areas. There is a need to use prescribed fire to efficiently reduce fuel buildup while providing the ecosystem benefits of a disturbance process that native species evolved with.

In 2014, the Black Hills National Forest completed a Wildfire Risk Assessment. This assessment evaluated potential effects of wildfire on a specific set of “highly valued resources and assets” (HVRAs) identified by Forest Service specialists as well as interagency cooperators. The HVRAs are tied to values described in the Forest Plan. In support of the goals of the National Cohesive Wildland Fire Management Strategy, this assessment assists in prioritizing future vegetation and fuel treatments. The assessment also ensures that funding is used where wildfire risk and hazard are greatest. The Black Hills Resilient Landscapes Project incorporates the results of the assessment to help us prioritize fuel treatment areas. Wildland-urban interface, including at-risk communities and other private property, is one of the criteria for prioritizing treatment. This is consistent with Community Wildfire Protection Plans (CWPPs), which are in place for all counties in the Black Hills National Forest. The CWPPs stress the importance of fuel treatment in interface and identify areas of concern.

Ponderosa pine covers most of the Black Hills. Other tree species and grasslands diversify habitat and scenery while increasing ecosystem resilience to disturbance. Hardwood trees such as aspen and oak are resistant to fire and to the insects that infest pine. Aspen stands recover quickly from disturbance. Over time, however, these areas can become overgrown with conifers. This encroachment can cause old hardwood stands and grasslands to lose vigor and gradually disappear. There is a need to maintain and perpetuate these ecosystem components.

In response to these needs, we are proposing actions to move landscape-level vegetation conditions in the project area toward objectives of the Forest Plan in order to increase ecosystem resilience to insect infestation and other natural disturbances, contribute to public safety and the local economy, and reduce risk of wildfire to landscapes and communities.



Fall aspen along Warren Peak Highway

Project Location

The project area includes National Forest System lands that are managed by the Black Hills National Forest within the areas designated by the Secretary of Agriculture under the amended Healthy Forests Restoration Act (see page 7), as shown on map 4. The project area includes approximately 1,098,000 acres of NFS lands.

The project area includes 10 “management areas”, as set by the Forest Plan (map 4). Each management area has a different management emphasis, which defines where different kinds of resource and use opportunities are available and where various management practices may occur. This project proposes activities in accordance with management area (MA) direction.

Any of the proposed activities may occur in:

- MA 4.1—Limited motorized use and forest products (41,374 acres)
- MA 5.1—Resource production (558,693 acres)
- MA 5.4—Big game winter range (388,761 acres)
- MA 5.43—Big game and resource production (10,083 acres)
- MA 5.6—Forest products, recreation, and big game (34,043 acres)

Only fuel and hazard tree treatments may occur in:

- MA 3.31—Backcountry motorized recreation (6,857 acres)
- MA 3.32—Backcountry non-motorized recreation (8,913 acres)
- MA 3.7—Late succession landscapes (18,453 acres)
- MA 5.1A—Southern Hills forest and grassland (27,865 acres)
- MA 5.2A—Fort Meade VA Hospital watershed (3,299 acres)

Proposed Action

We are proposing to conduct the following land management activities in the project area, starting in approximately 2018 and continuing for about 10 years.

Fuel Reduction and Prescribed Fire

To increase ecosystem resilience and reduce wildfire hazard to landscapes and communities, the project includes mechanical fuel treatments (ranging from 3,000 to 7,000 acres per year) and prescribed burning (up to 10,000 acres a year). Total acres implemented annually will depend on budget constraints and, for prescribed burning, weather conditions. Priority criteria for treatment include wildland-urban interface (specifically, within one-half mile of at-risk communities and within 300 feet of other private property) and areas adjacent to arterial and collector roads



Lighting a prescribed burn

and critical infrastructure (map 5).

Fuel treatments may include piling of fuels followed by burning or chipping of the piles; scattering, shredding, or chipping of unpiled fuels; cutting or using other techniques to bring down standing beetle-killed trees in interface areas and along roads; and removal of dead trees for use as fuelwood. Activities described in the following sections (commercial and precommercial thinning, removing encroaching pine, etc.) also would contribute toward fuel reduction goals.

Map 6 displays proposed prescribed burn areas. In the large block west of Rapid City, fire/fuels specialists would select smaller areas for burning based on field examination. No new

prescribed fire proposals are shown in the northern part of the forest because burning was previously authorized in a number of areas and has not yet been completed.

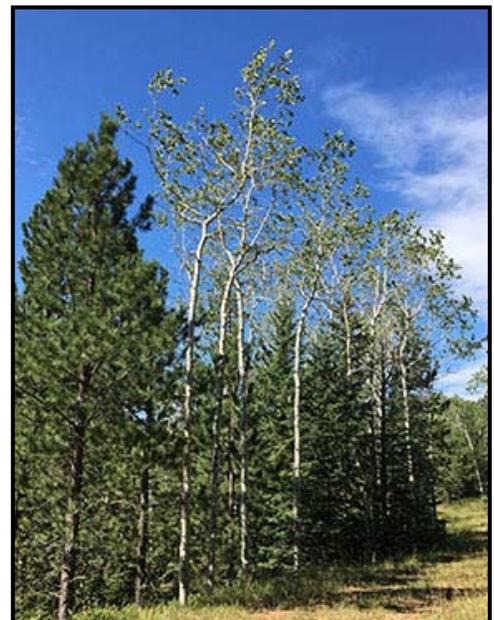
Enhancement of Hardwoods and Grasslands

We are proposing to cut encroaching pine from areas of hardwoods and grasslands. Pine removal from aspen would take place on up to 6,000 acres in the areas shown on maps 8 and 8a. Pine removal from oak stands would take place on up to 3,000 acres in the areas shown on map 7. Pine would be cut from encroached grasslands on up to 5,600 acres.



Pine growing into grassland

Regeneration of declining aspen stands would occur on up to 5,000 acres in the areas shown on map 7.



Conifers growing into aspen inclusion

Pine Structural Stage Modification

Mature, open pine forest (SS 4A): Currently, approximately 43 percent of project area pine stands are in structural stage 4A, while the objective is 25 percent. In order to move toward Forest Plan objectives for this and other structural stages, we are proposing to convert some of these mature stands to young stands. To do this, we may remove some or all of the mature trees if there are enough pine seedlings and saplings to make a new stand.

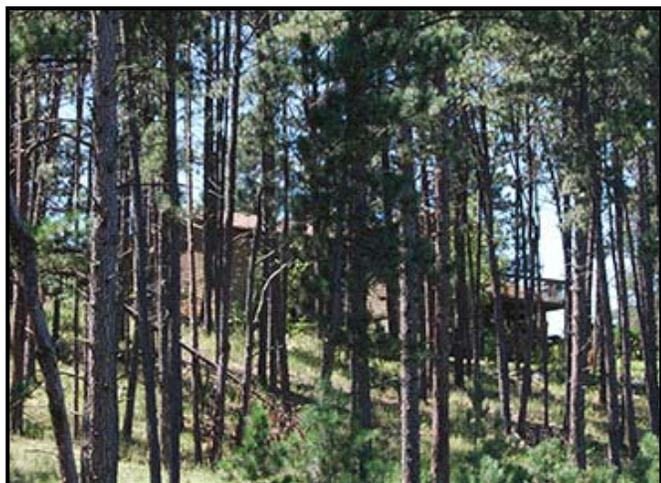
This may occur in any of the areas shown on maps 8 and 8a, up to a total of about 100,000 acres out of the total 300,000 acres of open, mature pine forest in management areas 4.1, 5.1, 5.4, 5.43, and 5.6. Foresters would determine which of the stands to convert after on-the-ground assessment of the condition of the small trees and characteristics of adjacent stands. Field assessment is needed because understory conditions have changed more rapidly during the mountain pine beetle epidemic than regularly scheduled surveys can track.

The intent of this project is not to create very large areas of forest that is all alike, since this would mean less diversity of habitat and scenery and increased susceptibility to widespread fire and insect infestation in the future. Therefore, we would limit the maximum contiguous acreage of any one forest condition that this project could create.

Existing roads provide access to most of the stands shown on maps 8 and 8a. To conduct proposed activities in areas without existing roads, it may be necessary to construct up to 15 miles of permanent roads and 44 miles of temporary roads in the approximate locations displayed on the maps.



Mature pine stand with pine sapling understory



Dense pine forest adjacent to structure

Mature, dense pine forest (SS4C): We are proposing fuel treatments in some of these stands as described above. Because the objective is to increase moderately dense mature forest, we would generally not cut mature trees in these stands. There would be exceptions, such as removing beetle-infested trees or thinning to reduce hazardous fuels adjacent to homes.

Late succession pine forest (SS5): The forest is below objectives for late succession (old growth) pine forest. We

have reviewed the beetle epidemic's effects on previously identified late succession stands and are considering additional stands to manage as existing or future late succession. In some stands, we are proposing to thin or burn understory vegetation to enhance late succession characteristics and increase stand resilience.



Late succession pine after prescribed burn

Pine Structural Stage Modification, continued

Young pine forest: Removing some of the small trees in young stands (precommercial thinning) increases the vigor of the remaining saplings and prevents stagnation. In recent years, the Black Hills National Forest has received enough funding to precommercially thin about 13,000 acres of small trees per year. The need for thinning is much higher, and this need will only increase as a result of the beetle infestation. If additional funding becomes available, we expect to be able to accomplish up to 25,000 acres of precommercial thinning per year. This would occur mainly in the areas shown on maps 8 and 8a.

Healthy Forests Restoration Act/Farm Bill

Every five years, Congress passes a bundle of legislation (commonly called the "Farm Bill") that sets forestry, conservation, national agriculture and nutrition policy. Among the 2014 Farm Bill provisions that pertain to the Forest Service, Section 8204 amends Title VI of the Healthy Forest Restoration Act (HFRA, 16 U.S.C. 6591) by adding section 602 (Designation of Treatment Areas) and section 603 (Administrative Review) to address qualifying insect and



Precommercially thinned pine

disease infestations on National Forest System lands. On May 20, 2014, Department of Agriculture Secretary Vilsack announced the designation of approximately 45.6 million acres of National Forest System lands across 94 national forests in 35 states to address insect and disease threats that weaken forests and increase the risk of forest fire. As requested by the Governors of South Dakota and Wyoming, this designation includes the majority of the Black Hills National Forest.

The Black Hills Resilient Landscapes Project will be carried out in accordance with HFRA Title VI, Section 602 (d) - Insect and Disease Infestation. This section provides for expedited National Environmental Policy Act (NEPA) reviews, pre-decisional objection review, and guidance on judicial review. This authority for expedited NEPA review, as directed by Congress, does not change or exempt the Forest Service from complying with any other existing law, regulation, or policy such as the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Clean Air Act, National Historic Preservation Act, agency Roadless Rules, or any other applicable law, regulation, and/or policy that affects the project area.

The Black Hills National Forest Advisory Board has agreed to serve as the formal collaborator for this project under HFRA authority.

Objection Process

Projects authorized by HFRA are subject to a Pre-decisional Administrative Review ("objection") process pursuant to 36 CFR 218, Subparts A and C. Objections will only be accepted from parties who have submitted written comments specific to the proposed project during the scoping or comment period or other public involvement opportunities where written comments are requested by the responsible official (36 CFR 218.5).

How to Comment

Comments on this proposal will be accepted until **Sept. 23, 2016**. Comments received in response to this solicitation, including names, addresses, email addresses, and phone numbers of those who comment, will be considered part of the public record for this project and will be available to the public if requested.

Comments may be submitted online by going to <http://tinyurl.com/BHRLProjectComment>. Send written comments to: BHRL Project, Black Hills National Forest, 1019 North 5th Street, Custer, SD 57730, or via facsimile to 605-673-9350, c/o BHRL Project. Written comments also may be hand-delivered to the above address between 8:00 a.m. and 4:30 p.m. Mountain time, Monday through Friday except federal holidays.

For further information, contact Rhonda O'Byrne, Project Manager, phone 605-642-4622, or visit <http://tinyurl.com/BHRLProject>.

Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the Agency with the ability to provide the respondent with subsequent environmental documents.



Custer Peak Lookout (Kari Greer)

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