

DECISION MEMO

Moose Line Spruce Salvage

USDA Forest Service, Eastern Region, Superior National Forest
Laurentian Ranger District
St. Louis County, Minnesota
(T.57 N, R.14 W, Section 30)

I. DECISION

A. Description of Decision

My decision is to allow the salvage of the white spruce plantation (174 acres) that is dead and/or dying as a result of a spruce budworm infestation. In addition to the salvage of the dead/dying trees, I will allow the sanitation (thinning) of the white spruce plantation (11 acres) that is less affected by the current budworm infestation. This thinning will allow for improved health and will maintain growth rates in the stand.

I am also allowing the thinning of two red pine plantations (29 acres) that are located adjacent to boundaries of the white spruce plantations. While these plantations are not susceptible to attack from the spruce budworm, it is economically efficient to thin these stands while conducting operations in the adjacent areas. These red pine stands are overstocked, and thinning them will allow them to maintain or increase growth, which in turn will make them less vulnerable to attack from other diseases and insects. See map for location of stands proposed for treatment.

According to field observations and aerial forest health monitoring surveys, these spruce plantations were infested with budworm in the summer of 2006. In addition, northeastern Minnesota experienced a significant drought during the summers of 2006 and 2007. Unit 96-67 was hit particularly hard, which has resulted in its rapid decline. Mortality within the stand is currently at 40 percent, with another 40 percent of the stand having live crown ratios of less than 30 percent. Unit 96-41 has also been impacted by budworm, but to a lesser extent, and therefore will be thinned to improve stand quality. Portions of each stand already have considerable amounts of trees been blown over, which will contribute to down woody debris. This material would provide ecological benefits such as contributing nutrients back to the soil, along with providing potential denning habitat for wildlife such as Canada lynx, gray wolf and black bear. Dead standing timber left in reserve areas and legacy patches would provide foraging habitat for birds such as three-toed and black-backed woodpeckers.

Stand 96-67 is the largest of the four stands at 174 acres. The stand is a white spruce plantation with balsam fir scattered throughout. There are numerous clumps of aspen scattered throughout the stand. Approximately 156 acres of this unit will be clearcut, primarily targeting white spruce and balsam fir. The remaining 18 acres, located east of Forest Road 130, will be thinned to achieve desired stocking levels to maintain a healthy stand. In addition to meeting Forest Plan standards for legacy patches (5% of residual stand), aspen clumps scattered throughout the stand will be

left as reserve areas along with some adjacent spruce. Regeneration for this site will include a combination of natural regeneration from white spruce, aspen and balsam fir along with artificial regeneration from inter-planting white and red pine. During field visits to the site, numerous old white pine stumps were seen, indicating the presence of white pine in the past. The tree species mix of the new stand will return the stand to a more natural state, and will meet vegetation composition goals for the Mesic Red and White Pine Landscape Ecosystem (Forest Plan, Table MRW-1, p.2-67).

Stand 96-41 is an 11 acre white spruce plantation also impacted by budworm. This stand will be thinned. Target species include removing dead white spruce and balsam fir and also targeting dying trees of the same species in order to achieve proper spacing. Healthy trees will only be thinned in order to achieve desired stocking levels to maintain a healthy stand.

Stand 96-68 is a 14 acre red pine plantation. This will be the third thinning for this stand, which is currently on the upper end of a desirable stocking level. The thinning will provide more growing space for the remaining trees. Target species for removal will be red pine with a focus on removing less dominant trees and providing better spacing.

Stand 96-42 is a 15 acre red pine plantation. This will be the second thinning for this stand. This unit is similar in stocking to unit 96-68, and the same treatment will be applied.

These stands will be harvested during the winter, and will all be accessed from the Moose Line Road via FR-130E or FR-130EA. Portions of FR-130E are used as a snowmobile trail in the winter. Mitigations will be put in place to address the use of this road by harvesting operations. All operations will adhere to Forest Plan standards and guidelines. Additionally, management activities will be conducted in accordance to best management practices as outlined in *Sustaining Minnesota Forest Resources: Voluntary Site-level Forest Management Guidelines* (2005).

B. Purpose of Decision

This project will allow the salvage and sanitation of 185 acres of white spruce plantation on federal land that has been impacted by spruce budworm. The removal of the dead and dying trees will reduce the threat of wildfire, increase the health of residual trees, and provide forest products for mills of northern Minnesota. In addition, the thinning of the two red pine plantations will increase the health and vigor of these stands.

II. REASONS FOR CATEGORICALLY EXCLUDING THE DECISION

Decisions may be categorically excluded from documentation in an environmental impact statement or environmental assessment when they are within one of the categories identified by the U.S. Department of Agriculture in 7 CFR part 1b.3 or one of the categories identified by the Chief of the Forest Service in Forest Service Handbook (FSH) 1909.15 sections 31.12 or 31.2, and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative environmental effect.

A. Category of Exclusion

This project falls under two categories of exclusion. The salvage/sanitation of the white spruce stands (185 acres) is within the category of exclusion FSH 31.2 (14) for “Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than ½ mile of temporary road construction, including removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease.”

The two red pine plantations are within the category of exclusion FSH 31.2 (12) for “Harvest of live trees not to exceed 70 acres, requiring no more than ½ mile of temporary road construction.”

B. Relationship to Extraordinary Circumstances

There are no extraordinary circumstances related to this project. Heritage surveys were reviewed and no areas of concern were identified. The project area is 35 miles away from the BWCA and no impacts are anticipated from this project. Impacts to threatened, endangered, rare, and sensitive plants are addressed in the Biological Evaluation and Biological Assessment completed as a part of this project. Ground disturbance and alteration of vegetation not targeted for removal would be minimal. There would be no adverse impacts to steep slopes, highly erosive soils, wetlands, roadless areas, or wild and scenic rivers. FR-130E is used as a snowmobile trail. Harvesting operations will need to use this road on a limited basis. Mitigations for this use will include posting safety signs on both ends of the section of road being used, and also maintaining a minimum base of snow on the road at all times.

III. PUBLIC INVOLVEMENT

This project was scoped internally on November 24th, 2008. Staff consulted on this project included: Carol Booth, LaCroix Ranger District NEPA Coordinator; Chuck Cutter, West Zone Silviculturist; Casey McQuiston, West Zone Soil Scientist; Dan Ryan, Laurentian Ranger District Wildlife Biologist; Jason Brey, LaCroix Ranger District Silviculturist; and April Heesacker, West Zone Recreation Planner. Scoping letters with the draft decision memo were mailed to 154 interested individuals and groups, county and state officials and adjacent landowners on December 12th, 2008.

In addition, a legal notice was published in the December 19th, 2008 edition of the Mesabi Daily News.

We received three letters containing comments regarding the project. Our responses to those comments are attached to this decision memo in Appendix A.

IV. FINDINGS REQUIRED BY AND/OR RELATED TO OTHER LAWS AND REGULATIONS

My decision will comply with all applicable laws and regulations.

- Forest Plan Consistency (National Forest Management Act) – This act requires the development of long-range land and resource management plans (Forest Plans). The Superior National Forest Plan was approved in 2004, as required by this act. The Forest Plan has been reviewed in consideration of this project. This decision is responsive to guiding direction contained in the Plan. This decision is consistent with the standards and guidelines contained in the Forest Plan.
- Threatened and Endangered Species or Their Critical Habitat – The Endangered Species Act requires that federal activities do not jeopardize the continued existence of any species federally listed or proposed as threatened or endangered, or result in adverse modification to such species' designated critical habitat. In accordance with Section 7(c) of this act, a list of the listed and proposed threatened or endangered species that may be present in the project area was requested from the U.S. Fish and Wildlife Service. Consultation was made with the U.S. Fish and Wildlife Service, and they have concurred with the Biological Assessment completed for this project.
- Sensitive Species (Forest Service Manual 2670) – Direction from this manual requires analysis of potential impacts to sensitive species and for those species for which the Regional Forester has identified population viability as a concern. Potential effects of the implementation of this decision on sensitive species have been analyzed and documented in a Biological Evaluation. Implementation of this decision may impact some individuals of sensitive species but will not result in a loss of viability or trend towards federal listing.
- Environmental Justice (Executive Order 12898) – This order requires consideration of whether projects would disproportionately impact minority or low-income populations. This decision complies with this act. This decision is not expected to adversely impact minority or low-income populations.
- National Environmental Policy Act – This act requires public involvement and consideration of potential environmental effects. The entirety of documentation for this decision supports compliance with this act.

V. ADMINISTRATIVE REVIEW OR APPEAL

This decision is subject to appeal pursuant to 36 CFR 215.11(a). Those individuals or groups that expressed interest in the project during the 30-day comment period (ending Jan. 20, 2009) are eligible to file an appeal. The appeal must be filed within 45 days of the date that the notification of this decision is published in the Mesabi Daily News, the official newspaper of record published in Virginia, Minnesota. The publication date of the legal notice is the exclusive means for calculating the time to file and appeal. The Notice of Appeal must be sent to:

James W. Sanders, Appeal Deciding Officer
Attn: Appeals & Litigation
USDA Forest Service, Eastern Region
626 E. Wisconsin Avenue
Milwaukee, WI 53202

Faxed Notices of Appeal must be sent to James W. Sanders, Appeal Deciding Officer / Moose Line Spruce Salvage DM / Superior National Forest, Attn: Appeals & Litigation at: (414) 944-3963. Business hours for hand delivered Notices of Appeal are: 7:30AM to 4:00PM Central Standard Time, Monday-Friday, excluding holidays.

Electronic appeals should be directed to: appeals-eastern-regional-office@fs.fed.us subject: Notice of Appeal: Moose Line Spruce Salvage DM / Superior National Forest. Acceptable formats for electronic appeals are: text (.txt), MSWord 6.0 or higher (.doc), portable document format (.pdf), or rich text format (.rtf). All email submissions should contain "Notice of Appeal: Moose Line Spruce Salvage DM / Superior National Forest" as the first words on the subject line.

VI. IMPLEMENTATION DATE

If no appeal is received, implementation of this decision may occur on but not before five business days from the close of the filing period. If an appeal is filed, implementation may not occur for 15 days following the date of a decision on the appeal.

VII. CONTACT PERSON

Further information about this decision can be obtained by calling Jason Brey at the LaCroix Ranger District at (218) 666-0020, or by contacting the Laurentian Ranger District Office at (218) 229-8800.

VIII. SIGNATURE AND DATE

I have concluded that this decision may be categorically excluded from documentation in an environmental impact statement or environmental assessment as it is within one of the categories identified by the Chief of the Forest Service in Forest Service Handbook (FSH) 1909.15 sections 31.12 or 31.2, and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative environmental effect. My conclusion is based on information presented in this document and the entirety of the Project Planning Record.

/s/ Stephen J. Kuennen
STEPHEN J. KUENNEN
District Ranger

February 20, 2009
Date

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APPENDIX A: Response to Comments

We do not believe that the Agency should categorically exclude this action or proceed with using this land as a tree farm, due to its habitat potential for two federally listed species; the gray wolf and the Canada lynx. (page 1, paragraph 4)

By definition, a tree farm is a privately owned woodland in which the production of wood fiber is a primary management goal. While the Superior National Forest Plan does have one of its objectives as providing a sustainable flow of wood products to northern Minnesota mills (Forest Plan, O-TM-1, p. 2-20), fiber production is one of many goals and objectives. The current stand (Unit 96-67) is predominately a single species white spruce stand, however, after harvest, the new stand would be a multi-species stand of white spruce, balsam fir, aspen, white pine, and red pine.

We believe that this land (the white spruce plantation and the red pine plantations) should be returned to its historical range of natural diversity and should no longer be used as a plantation. (page 1, paragraph 4)

After the white spruce plantation is harvested, it will be reforested with a more natural mix of tree species such as white spruce, aspen, and balsam fir through natural regeneration, and red pine and white pine through planting. During field visits to Unit 96-67, evidence of old white pine stumps were present, hence the planting of white pine to return the site to a more historical range of natural diversity. The new stand will not be a plantation, rather, planting of red and white pine will be used in concert with natural regeneration to achieve a more natural, fully stocked stand.

We would like to see this area return to normal forest land versus its current use as a plantation, so that it may contribute to the diversity and health of the Superior National Forest. (page 1, paragraph 4)

By planting two species of pine, in addition to the natural regeneration of white spruce, balsam fir, and aspen, the new stand will be more diverse and less vulnerable to outbreaks of insects and disease that do occur.

By planting one tree species and eliminating all other plant species, changes in the nutrient cycle and in the original soil structure may occur and may be irreversible. (page 1, paragraph 5)

We intend to plant two species of pine (red & white). In addition to planting, we anticipate natural regeneration of white spruce, balsam fir, and aspen. The natural regeneration of tree species and planting of red and white pine will not eliminate all other plant species. Herbicide will not be used on the site, and nutrient cycling and soil structure will not be impacted.

Does the Agency use fertilizers and herbicides on these plantations? (page 1, paragraph 5)

The Superior National Forest does not use herbicide except in a few instances such as for control of non-native invasive plants. We do use fertilizers on a limited basis, as needed to assist tree growth on nutrient poor sites. We do not anticipate using fertilizers on this site. Also, when

fertilizers are used, a small fertilizer pack is deposited with each individual tree, rather than broadcasting fertilizer on the entire site.

How will leaving these 15 acres of legacy patches in Unit 96-67 protect soil resources on the 150 acres slated to be clearcut? (page 1, paragraph 5)

The soil resource will be protected through the implementation of Best Management Practices and Forest Plan Guideline G-WS-8. Harvest will take place in the winter during frozen ground conditions. During this time impacts to the soil resource would be minimal.

We are concerned with how this use of the land is focused solely on providing timber and is likely not contributing to the biodiversity and health of the forest. Plantations often don't provide food, shelter or opportunities for reproduction for most animal species. (page 2, paragraph 1)

The Superior National Forest has multiple resource objectives to meet as guided by the Forest Plan. While this white spruce plantation is predominantly a single species stand, it is quite common for the age of the stand, as it was planted during the CCC (Civilian Conservation Corp) era. The new stand replacing it after the harvest will be a multi-species stand that will not be solely focused on providing timber, and will contribute more to the diversity and health of the forest than the current stand. The remaining white spruce plantation (Unit 96-41) and the two red pine plantations (Unit 96-42 and Unit 96-68) will be thinned and over time will be managed to promote more natural forest conditions.

According to Harvard biologist E.O. Wilson, a single species pine plantation contains 90 to 95 percent fewer species than the forest that preceded it (Williams, Ted. "False Forests," *Mother Jones* (Magazine). May/June 2000). (page 2, paragraph 1)

While the current stand (Unit 96-67) is predominately a single species plantation, the stand that will replace it will be a diverse stand containing white pine, red pine, white spruce, balsam fir, and aspen. The new stand will be more diverse than the single species stand it is replacing.

We have read the "False Forests" article in *Mother Jones* magazine that you cited. This article refers primarily to intensively managed, single species, industrial forestry plantations in the southern United States. This type of forestry is not practiced on the Superior National Forest, as we have multiple goals and objectives to meet, not just timber.

How do these tree farms promote the recovery of lynx and gray wolf populations and other sensitive animals? We see an opportunity, with this land, for the Agency to focus attention on many of the threatened, endangered and sensitive species that could benefit from improved habitat conditions in the Superior National Forest. (page 2, paragraph 1)

As stated in previous comments, the new stand replacing Unit 96-67 will not be a tree farm. Structural diversity will be simplified initially through the clearcut, however, this will be mitigated by the legacy and reserve patches that will be left throughout the stand. In addition, tree species diversity will be greatly improved in the new stand through planting and natural regeneration. The patches of young forest will provide food for the principal prey species of the Canada lynx (snowshoe hare) and the gray wolf (deer). Legacy patches will provide areas of

possible future denning habitat for lynx and wolf. Overall, post-harvest, this stand will provide better habitat for lynx and wolf than exists currently.

The Agency claims that due to blown over trees these plantations would (are or will?) provide potential denning habitat for the Canada lynx, gray wolf and black bear and foraging habitat for birds. Is the Forest Service claiming these conditions exist now? Or will exist after the clearcutting takes place? (page 2, paragraph 2)

Very little habitat currently exists in the stand for potential denning for wildlife species. Without treatment this stand will provide some future denning habitat when larger trees die and fall over. Quality of denning habitat would be limited by the open condition of the current stand. Post-harvest the legacy patches would provide future denning habitat as the larger trees died and fell over. Overall future quality would be better because the denning habitat would be in a mosaic of denser young forest providing food and more cover.

The Agency explains that in Unit 96-67, although over 150 acres will be clearcut, 15 acres will be left as legacy patches, thus protecting soils and providing potential Canada lynx denning habitat. Will these legacy patches be surrounded by clearcuts? How big are these legacy patches? How close to each other are they? Does the Agency believe that Canada lynx would use these legacy patches for denning? Are these the kind of areas that Canada lynx prefer to den in? (page 2, paragraph 2)

Some of the legacy patches will be surrounded by clearcuts, while others will not. Legacy patches may be within the interior of the clearcut, thus surrounded by the clearcut. Some of these patches, however, may be adjacent to small interior wetlands or adjacent to other reserve areas. Legacy patches will vary in size, depending on the surrounding landscape and features. Spacing between individual legacy patches will vary depending on the surrounding landscape and features.

Lynx denning habitat is comprised of large amounts of coarse woody debris, with down logs or root wads, in sufficient amounts to provide escape and thermal cover for kittens. Legacy patches could be used for denning in the future (20+ years) as the surrounding young forest ages and provides better cover itself.

The purpose of this project seems to be to “reduce the risk of wildfire” and through harvest, allow “for the recovery of some economic value of the trees”. However, tree plantations themselves are extremely susceptible to fire, so if the Agency is truly serious about reducing this risk, than they should return this land back to its historical forest makeup. (page 2, paragraph 3)

Immediately following harvest and for the first few years afterwards, the new stand will actually provide a firebreak from the surrounding stands. Also, most of the stands immediately adjacent to Unit 96-67 are mature stands and so the new stand will provide a break in the otherwise continuous canopy of the surrounding area. There would be a period of years (10-20 years of age) where there could be increased fire risk resulting from spacing of individual trees. During this time, the stand would be evaluated to see if a hazardous fuels reduction project would be warranted.

The new stand that would replace the existing CCC era plantation would be much more diverse in species, and would not be allowed to grow as dense as the current stand. Further, the Forest Service does not manage planted stands the way you seem to imply by citing the “False Forests” article from *Mother Jones* magazine. That article refers to intensively managed, single species, industrial style forestry stands.

Your comments seeks to have the Forest Service return this stand to a more historical makeup. As noted in previous responses, when there was a field visit to the stand, evidence of large, old white pine stumps were noted, indicating that white pine were once on the site. As a result, white pine seedlings will be added to the mix of species being regenerated on the site. There is no readily available white pine seed source nearby for adequate natural regeneration, therefore we have chosen to plant white pine on the site.

How do the costs of maintaining this plantation and the costs of this proposed project compare to the economic values received from the timber? (page 2, paragraph 3)

With the current downturn in the economy and resulting lower timber prices, it could be assumed that the costs of the project may be larger than the revenue generated, however, neither the Forest Plan nor Forest Service policy require a project to generate a profit. Other goals, such as returning the forest to a more natural stand have importance as well. This project will make the stand more diverse in the long run, and will meet multiple Forest Plan objectives.

How do these tree plantations comply with the Forest Plan, the Endangered Species Act and the National Forest Management Act? (page 2, paragraph 4)

The Endangered Species Act requires Federal agencies to carry out programs for the conservation of endangered and threatened species in consultation with the U.S. Fish and Wildlife Service. A Biological Evaluation and Biological Assessment for this project was submitted to and approved by the U.S. Fish and Wildlife Service.

This project is just a small portion of the landscape, and while it meets many objectives within the Forest Plan, it cannot be expected to meet all goals or desired conditions within the Forest Plan. To meet overall objectives and goals of the Forest Plan, you need to look at the landscape as whole, rather than a group of small units, as they only provide a piece to the puzzle.

This project is in compliance with the Forest Plan, and thus in compliance with the National Forest Management Act. Specifically, it meets the following objectives and desired conditions cited in your letter.

- O-ID-1 – This project would restore nearly 200 acres of white spruce forest type that is currently in an un-healthy state as the result of being infested with spruce budworm
- D-VG-2 – The stand that would replace Unit 96-67 would be more sustainable and biologically diverse by having a diverse mix of tree species, rather than a stand that is currently dominated by white spruce. Further, over the long term, the new stand would be managed to achieve multiple goals and objectives, unlike the industrial plantations that are mentioned in the “False Forests” article in *Mother Jones* magazine.

- D-VG-3 – The new stand replacing Unit 96-67 would improve species diversity.
- D-VG-6 – This project would add a white pine component back into Unit 96-67. This desired condition also provides for even-aged forests, such as those found in Units 96-41, 96-42, and 96-68.
- D-VG-7 – This project provides for a temporary opening of 140 to 174 acres.
- D-VG-8 – The current stand in Unit 96-67 represents a white spruce forest type that would not normally exist on the landscape which allowed for the decline of the stand from spruce budworm. This project would seek to diversify the species mix in the stand, thus lessening the effects of another attack from spruce budworm or other insects and disease.
- O-VG-6 – As stated in previous comments, this project would change the largest unit in this project (Unit #96-67) from one dominated by a single species to one that will be more biologically diverse and have at least five different tree species present. Specifically, this project would increase the amount of red pine and white pine.
- O-VG-8 – This project would retain patches of live and dead trees of various sizes throughout Unit 96-67. In the units that are proposed for thinning, leaving under-represented trees within the stands will be done where opportunities exist.
- O-VG-14 – Unit 96-67 was affected by spruce budworm so badly that the stand will not recover and become an old forest. While not appropriate for this project, it would be possible for future projects to introduce new age classes of trees in the thinned units, thus beginning to create multi-aged stands.
- The Biological Assessment and Biological Evaluation document how this project complies with Forest Plan Objectives, Standards and Guidelines.