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Forest Service

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Decision Notice and Finding of No Significant Impact

North Shore Restoration Project

Gunflint and Tofte Ranger Districts, Superior National Forest
Cook County, Minnesota

Township 63 North, Range 4 East; Township 62 North, Ranges 2, 3 & 4 East; Township 61 North, Ranges 2 & 1 East and Ranges 1 & 2 West; Township 60, North Ranges 2, 3 & 4 West; Township 59 North, Ranges 4 & 5 West

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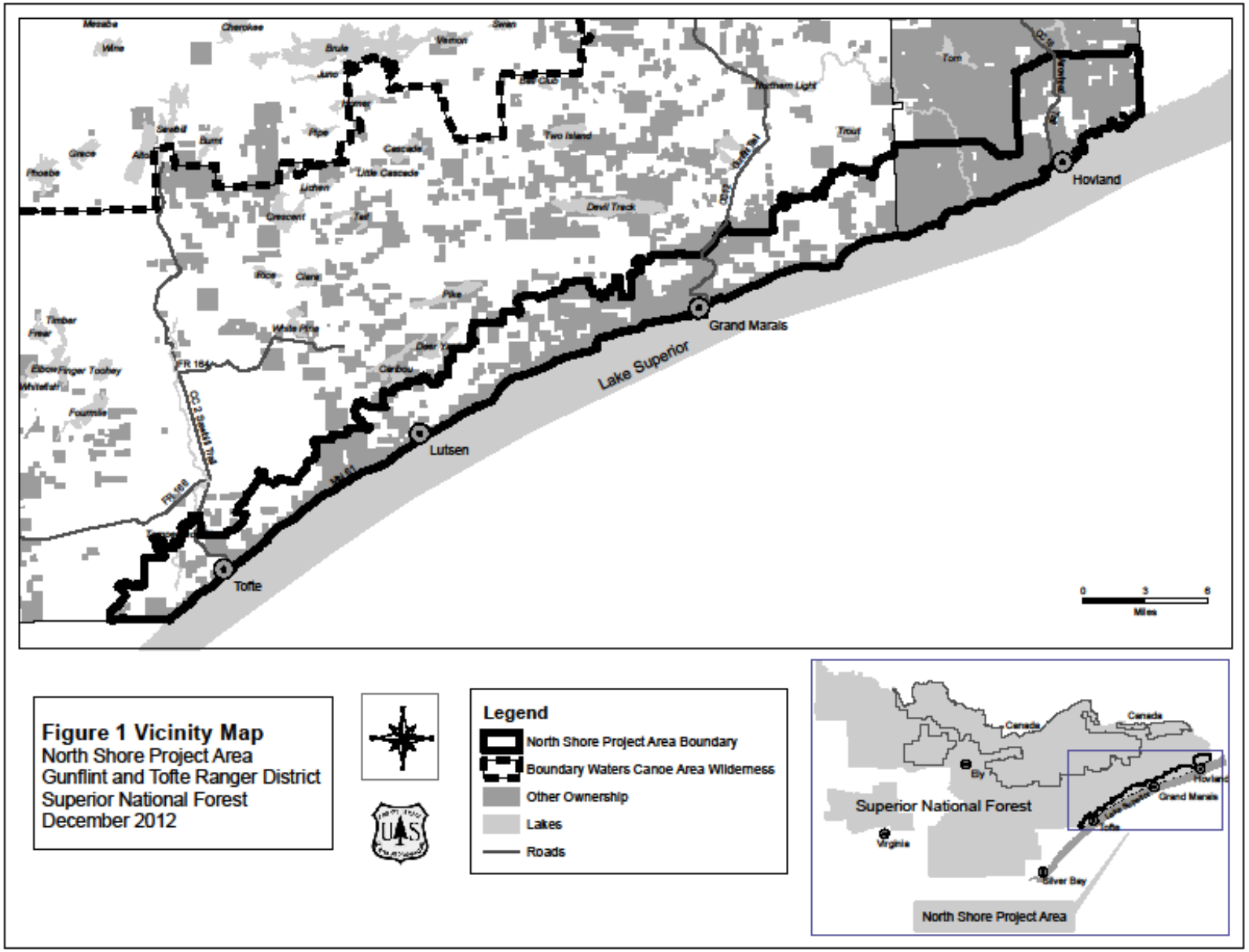
Table of Contents


Hovland
Grand Marais
Lake Superior
Lutsen
Tofte
FR 164
CC 2 Swamp Trail
Devil Track
Two Island
Little Cascade
Cascade
Pike
White Pine
Caribou
Trout
Northern Light
Legend
North Shore Project Area Boundary
Boundary Waters Canoe Area Wilderness
Other Ownership
Lakes
Roads
Figure 1 Vicinity Map
North Shore Project Area
Gunflint and Tofte Ranger District
Superior National Forest
December 2012
Superior National Forest
Canada
Ely
Virginia
Silver Bay
North Shore Project Area
Miles

INTRODUCTION

This document describes our decision to implement vegetation management activities in the North Shore Project Area on the Gunflint and Tofte Ranger Districts of the Superior National Forest. We describe our rationale for selecting Alternative 2 and our consideration of public input throughout the environmental analysis and in our decision. We describe our finding of no significant impact and how this project meets applicable laws, regulations and policies. This Decision Notice concludes with information on implementation of the project.

Our decision and findings are based on our expertise and knowledge of the area, the North Shore Restoration Project Environmental Assessment (EA), the North Shore Biological Assessment (BA), the North Shore Biological Evaluations (BE), the North Shore Project Record, and the 2004 Superior National Forest Land and Resource Management Plan (Forest Plan). Our decision also follows instructions provided to us by the Forest Supervisor in a written response to an objection in accordance with 36 C.F.R. § 218.12.

Project Area

The North Shore Project Area is located in Cook County, Minnesota, along the north shore of Lake Superior. The Vicinity Map (Figure 1) shows the general location of the North Shore Project Area. Townships included in the project area, from east to west, are: Township (T) 63 North (N), Range (R) 4 East (E); T62N, R4E, R3E, R2E; T61N, R2E, R1E, R1West (W), R2W; T60N, R2W, R3W, R4W; T59N, R4W, R5W. The North Shore Project Area encompasses approximately 102,400 acres, of which, about 39,900 acres are National Forest System land. Proposed activities would occur only on National Forest System lands. The project is located on both the Gunflint and Tofte Districts of the Superior National Forest and therefore both the Gunflint and Tofte District Rangers are deciding officials.

Background Information

As we discuss our decision for the North Shore Restoration Project, it is important to remember that the purpose of the North Shore Restoration Project is to implement objectives in the Superior National Forest Land and Resource Management Plan (Forest Plan). The Forest Plan promotes management of the Forest for multiple benefits by setting goals and objectives in numerous resource areas such as managing for wildlife and fisheries habitat, providing recreation opportunities, and promoting ecosystem health through vegetation management. The Forest Plan takes a strategic look at our landscape ecosystems and describes desired resource conditions that will provide resilient ecosystems and ensure ecosystems are capable of providing a sustainable flow of beneficial goods and services to the public.

Each project on the National Forest begins with a review of the Forest Plan and an assessment of the existing condition of the resources within the project area. In 2012, we asked an interdisciplinary team of natural resource specialists to compare the existing resource conditions of the North Shore Project Area with Forest Plan desired conditions and objectives. The resource specialists documented their comparisons in “mid- level assessments”.

Some of the predominant characteristics of the North Shore Project Area where existing conditions do not meet desired conditions are:

- High percentage of decadent birch and lack of regeneration of conifer and other species: A majority of the current stands of birch and aspen have reached their typical age limits, and, spurred by drought and other events have been in accelerated decline for more than five years. Although regeneration of white pine, white cedar and other conifer species would be expected at this successional stage, conifer regeneration has been limited because of multiple factors, including: fewer older pine and cedar trees to provide seed, an increase in bluejoint grass which out competes young conifer seedlings, and heavy deer browse of select seedlings. As a result, some areas have little forest canopy or tree regeneration.

Figure 2. Declining birch stand with little conifer or hardwood regeneration.

- Some components of diverse wildlife habitat are lacking: The lack of conifer and other components in the ecosystem means all wildlife habitat components are not present. For example: white pines are an important species for bald eagle nest sites and large raptor perches providing large, long lasting cavities for the many cavity nesting and denning species of northern Minnesota. A major bird migration corridor exists along the north shore of Lake Superior and a lack of diversity in the forest, including the understory, provides less than optimal habitat.
- Low amount of long-lived confers in riparian areas: This area has a high density of streams, all flowing into Lake Superior. Long-lived trees are critical to riparian area functioning and aquatic habitat conditions of these streams. For example: conifer trees in riparian areas provide shade for aquatic species and ecosystems and thermal cover for wildlife. In addition, species such as red and white pine contribute coarse woody debris to streams and lakes over the long term. Natural regeneration of long-lived species such as white pine, white cedar, and white spruce in riparian areas has been hindered by the same conditions described above: lack of seed trees, heavy browse by deer, and competition from some grass and brush species.
- Many acres of tightly spaced white spruce and red pine plantations. At the time these plantations were established, the practice was to heavily scarify the site and plant with one (or occasionally two) species. As a result, there is little structural or species diversity

in some plantations. As the trees have grown, they have become more tightly spaced with little growing room for the planted trees or light for any other forbs, shrubs or other tree species.

Given the current condition of vegetation in the North Shore Project Area, it is clear that restoration of native vegetation communities along with wildlife habitat improvement and watershed restoration are critical needs in this area. Fuel reduction and providing merchantable timber were also important needs identified during the mid-level assessment.

Although fuels reduction is not a large driver of this project, we asked the interdisciplinary team to incorporate fuel reduction into proposed activities. The increase in fuel load at the landscape level is tempered by Lake Superior's influence on the shore's climate, moderating the potential for large fires. However, there are many towns, as well as private and commercial development, along the shore that would be at risk from a wildfire. Additionally, changes in the climate that increase temperatures and/or decrease moisture may alter fire regimes. Therefore, minimizing hazardous fuels would move towards conditions that minimize undesirable fire and would help accomplish our objective of making the ecosystem more resilient.

We asked the interdisciplinary team to include consideration of harvesting timber both because it provides economic benefits and it also is a valuable tool for managing ecosystems. Some of the species which are declining, such as paper birch, regenerate better after a disturbance. Our ecosystems evolved with some young age class and we use harvest (instead of wildfire) to create young age class. Likewise harvesting is effective at increasing the growing space in plantations for larger trees and more species diversity.

The project area is in a Recreational Use in a Scenic Landscape Management Area (as defined in the Forest Plan (FP) p. 3-14) which means that we want to manage the vegetation to enhance recreation and scenic objectives as well as achieving Landscape Ecosystem objectives and enhancing wildlife habitat. Unfortunately the current condition of the forest is not one that can be sustained in the future. Almost 80% of the birch on National Forest System land is old/mature and is dying. Birch is an early successional species, regenerating more vigorously after a disturbance where there is more sunlight and less competition. Therefore, current conditions dictate there will be an impact to scenery in the North Shore Project Area regardless of the alternative selected, even the No Action Alternative.

There has been an extensive amount of collaboration, consultation and public involvement with this project. These efforts started in the preliminary development stage of this project, continued throughout the environmental analysis and, we expect, will continue well into the implementation of this project.

The District Rangers and the interdisciplinary team consulted with tribal representatives from 1854 Treaty Authority, Grand Portage Band of Lake Superior Chippewa, Fond du Lac Band of Lake Superior Chippewa and Boise Forte Band of Chippewa at various stages throughout the development of the North Shore Restoration Project. Contacts were made during data collection, formulation of the North Shore Forest Collaborative, pre-scoping (developing the purpose and need and proposed action), and scoping. The North Shore Project Area is of interest to the tribes,

particularly the Grand Portage Band of Lake Superior Chippewa. The forests in the North Shore Project Area have a higher percentage of paper birch and white cedar than other areas on the district; both of these species are valuable to the bands for cultural and traditional practices.

Prior to proposing the North Shore Restoration Project, we knew there was a huge need for restoration along the North Shore, well beyond the needs on National Forest System land. So we worked with others to develop the North Shore Forest Collaborative. As described in Environmental Assessment (EA pp. 1-6, 1-14), this group of tribal, federal, state and county agencies, non-profit organizations, and private land owners has been meeting regularly since 2011. In that time the Collaborative has: developed goals, objectives, and desired conditions for the collaborative area; solicited, received, and implemented grants to remove non-native invasive species; shared expertise on restoration techniques such as installing exclosures; and hosted two private landowner workshops on restoration activities. It is truly a remarkable effort and we appreciate the time of tribal, federal, state and county agency personnel, non-profit organization personnel, and private land owners who have contributed to the effort.

Working with the North Shore Forest Collaborative is only part of the collaboration the Forest Service has done for this project. We hosted two open houses for the public, have met numerous times with trail partners, and have corresponded/talked with different area landowners to answer questions. We describe what we have heard in more detail under the Public Involvement section of this document. Whether meeting with Tribal and State personnel or discussing treatments with the public at open houses, we have tried to make this project responsive to public concerns. Members of the public have a broad range of concerns from protection of scenic quality and recreation opportunities, to providing timber products for the local economy. We have attempted to find a balance between these, sometimes conflicting, needs.

Purpose and Need

As mentioned in the background section, we asked an interdisciplinary team to compare the existing resource conditions of the North Shore Project Area with the desired conditions and objectives of the Forest Plan. Where the resource specialists' assessments found a difference between the existing and desired conditions, a purpose of and need for action was identified. The purpose and need we selected for this project is described in more detail in Chapter 1 of the North Shore Restoration Environmental Assessment and includes the following:

A. Restore native vegetation communities
B. Improve wildlife habitat
C. Improve watershed health
D. Provide sustainable timber products
E. Reduce hazardous fuels in areas of concern

DECISION

Our decision and findings are based on our expertise and knowledge of the area, the North Shore Restoration Project Environmental Assessment (EA), the North Shore Biological Assessment (BA), the North Shore Biological Evaluations (BE), the North Shore Project Record, and the 2004 Superior National Forest Land and Resource Management Plan (Forest Plan).

After reviewing all of the alternatives, the environmental analysis, and public input, we selected Alternative 2 with the following changes:

- Drop units 194.059, 196.027, 202.002, 204.005, 196.020, 226.033, 225.073 because additional reconnaissance of the units showed the current stocking level does not indicate a need for thinning. Drop units 230.031 and 230.048 because of difficult access and other factors.
- Change treatment in 227.019 from underburn to thinning followed by an underburn to provide additional growing space for trees to develop big tree character and to capture the value of the timber; change treatment in 234.018 from a clearcut to a mechanical site preparation to preserve the mature trees; change regeneration method in unit 240.011 to underplant; add underplant to treatment of unit 238.008.

These changes are reflected in Appendix A, Unit Treatment Table and are necessary based on additional field reconnaissance. The scope of the changes is small and the effects of Alternative 2 with the modifications are within the effects analysis as presented in the North Shore Restoration Environmental Assessment.

Table 1 summarizes the vegetation management actions under Alternative 2 with the modifications listed above. All acreages stated in this Decision Notice are best estimates and we expect small differences in actual on-the-ground treatment acreages.

Table 1: Summary of Action by Primary Treatment Type

Primary Treatment Description	Unit Acres	Treatment Acres
Restoring stands through a variety of non-harvest activities		
Underplant	5,112	2,500
Mechanical Site Preparation	1,205	600
Exclosure	562	120
Single Tree Felling	306	306
Single Tree Exclosure	109	109
Release	93	90
Under Burn	24	20
Hand Shearing	63	60
Improving stand conditions through intermediate harvest treatments		
Thinning	2,609	2,000
Variable Thinning	298	240
Creating young forest through even-aged harvest treatments		
Clearcut with Reserves	1,157	850
Creating or maintaining two or more age classes through uneven age harvest		
Selection Cut	147	100
Total of all Treatment Types	**11,685**	**6,995**

Table 2: Summary of Secondary Treatment and Reforestation

Treatment Description	Unit Acres
Secondary Treatment	
Exclosure	11
Mechanical Site Preparation	201
Mechanical Site Preparation/Slash Disposal and Pile Burn	112
Shearing	56
Single Tree Exclosure	332
Slash Disposal and Pile and Burn	1,586
Under Burn	39
Underplanting	252
Regeneration Method	
Natural Regeneration	489
Interplant	1,049
Plant	1,036
Underplant	5,467

Table 3 shows the acres of different planting combinations. These include interplanting, underplanting and interplanting after any primary treatment, and in some cases are in addition to natural regeneration.

Table 3: Acres of Tree Species Planting Combinations

Tree Species	Unit Acres
Cedar	39
Cedar, Yellow Birch, Tamarack and Black Spruce	147
Paper Birch	851
Paper Birch and Yellow Birch	70
Red Oak and Bur Oak[1]	250
White Pine	74
White Pine and Paper Birch	54
White Pine and White Spruce	5,854
White Pine and Yellow Birch	244
Yellow Birch	108
Yellow Birch and Cedar	134
Yellow Birch, Paper Birch and White Pine	25

[1] Specific units have not been identified for planting these species. The planted oak may be in addition to, or instead of, the other planned regeneration species.

The following list of appendices describes where to find the site-specific treatment and mitigation measures. Please refer to these important details to get a more complete picture of our decision.

- Appendix A lists the specific stands, treatments and mitigation measures that will be implemented with this decision.

- Appendix B gives a general definition for each of the treatment types and mitigation measures.
- Appendix C lists the Operational Standards and Guidelines that apply to all units. Operational standards and guidelines, based on the Forest Plan and Minnesota Forest Resource Council guidelines, are an integral part of the actions and are designed to minimize adverse effects.
- Appendix D is the Decision Map which displays the locations of the selected treatments.
- Appendix E describes the Adaptive Management Strategy we will use with this project and required monitoring.

Under Alternative 2, adaptive management can be used where one of three primary treatments has been prescribed: 1) underplanting, 2) mechanical site preparation, or 3) clearcut with reserves. (Appendix A lists what primary treatment is prescribed for each unit that is included in this decision.) Appendix E describes the overall adaptive management process we will use including the items we will monitor and trigger points that may indicate a need to adjust prescribed treatments. Any adaptive management actions (i.e. change in treatment types) would not increase total treatments beyond those shown in Tables 1 and 2.

The environmental effects associated with Alternative 2 treatments and possible adaptive management adjustments are disclosed in Chapter 3 of the EA. Specialists analyzed the effects of primary and secondary treatments using unit (stand) acres instead of treatment acres. Treatment acres are expected to be far fewer than unit acres (Chapter 2, Table 2.1); therefore, the analysis of the potential effects using total unit acres would disclose the maximum possible impact associated with this project. We have discussed the adaptive management component with the interdisciplinary team and are confident that the EA's analysis encompassed the estimated effects associated with the adaptive management actions.

Further, implementation of the monitoring plan (Appendix E) will provide us the information necessary to decide whether to make adjustments and evaluate whether the actions and adjustments are having their intended effects and are within the scope of what was disclosed in the scope of the Environmental Assessment.

We have begun work on an Adaptive Management Implementation Guide. The guide will provide more of the nuts and bolts of how we will use adaptive management. As a technical guide for use by our timber and silvicluture crews as they implement the project, it will include more detail on the types of data (parameters) that will be collected, who will collect it, how it will be stored, as well as how we will use the data to inform future decisions.

We will work with the North Shore Forest Collaborative and other interested parties to complete the implementation guide. There may be aspects of the data we are collecting that would be useful to collaborative members. In addition, there may be a desire for monitoring similar items on other ownership to create a more extensive picture across the landscape. Working with the collaborative and other interested parties, we can incorporate current expertise and foster a

learning environment, a key components of adaptive management. We expect this implementation guide to evolve over time as we monitor and learn from our restoration actions. Any public interested in working with us on this implementation guide, can contact Becky Bartol using the contact information for her on the front of this Decision Notice.

As part of our decision, a portion of 44 units proposed for site preparation or fuels reduction (slash disposal) are on low nutrient soils where Forest Plan guidelines call for retaining slash and woody debris (G-WS-8, FP p. 2-16). A list of these units is in the North Shore Project Record. We have determined that site preparation or fuel reduction is a higher priority and the effects to the soils resource will be limited. Therefore, this part of the soil guideline will not be followed. We discuss these trade-offs in more depth later in this Decision Notice under Compliance with the National Forest Management Act. Chapter 3 describes the effects of removing slash on these sites.

Biomass removal could occur on harvest units with secondary treatments of slash disposal or site preparation, and on non-harvest units with primary treatments of mechanical site preparation. Biomass removal will not occur on units where soil mitigations call for retaining slash. Biomass removal could include tops and limbs (from harvest operations), brush and non-merchantable stems. It will not include stumps or existing coarse woody debris. Biomass removal will follow Operational Standards and Guidelines (Appendix C).

As part of our decision, temporary roads will be constructed to access units and decommissioned after use is complete. All temporary roads will be decommissioned following Operational Standard Guidelines G-TS-16 and LG-TS-1 (Appendix C). Also unnecessary roads will be decommissioned.

Table 4: Transportation Management Activities

Transportation Activity	Miles
Construction of temporary roads	13.3
Decommission unauthorized roads	1.0

REASONS FOR THE DECISION

In this section, we provide our reasons for selecting Alternative 2 by discussing how well each alternative addresses the purpose and need for the project, as well as, how each alternative responds to the different views expressed by the public throughout the analysis of this project.

Our decision is based upon our knowledge of the project area; review of field information; consideration of public issues raised during scoping; study of the project file including the Environmental Assessment; comments submitted on the Environmental Assessment; review of the interdisciplinary team's response to comments received from the public on the Environmental Assessment; discussions/meetings with tribal representatives; discussions with participants of our two open houses on the project; discussions with nonfederal landowners; consultation with the US Fish and Wildlife Service; review of relevant laws and regulations; and our years of experience working on, and managing, National Forest System land and the years that we have used and enjoyed the national forests.

We believe the decision making process for land management is rarely straight forward and usually involves making tradeoffs. As decision makers, we have to balance positive and negative effects with short-term and long-term outcomes. We would like to be able to say there are never any negative consequences, but the reality is there are always consequences. Whether they are negative or not depends on the perspective of the individual in many cases.

We heard from area landowners who are concerned about how the activities might affect them or how they can coordinate with us on restoration activities on their property; from trail partners concerned about protecting scenic quality; from environmental groups who are concerned about harvesting impacts; and from timber industry who are concerned about the economic viability of harvesting and cost of activities. There is a broad range of opinion on how the Forest should be managed and we recognize that this decision will not completely satisfy any one particular group or individual.

We know we are making a number of tradeoffs and these are discussed throughout this section and the Decision Notice. Based on our years of resource management experience, we believe the benefits of our decision outweigh the impacts which may occur as a result of the management activities in the North Shore Restoration Project.

Of all the alternatives we considered, either in detail or briefly, we think Alternative 2 will best meet the purpose of and need for action, provide the best balance between resource use and resource protection, and respond appropriately to issues raised by the public. Our rationale for selecting Alternative 2 is explained below with each of the elements of the purpose and need for the North Shore Restoration Project.

Restore Native Vegetation Communities

There is a critical need to restore the forest in the North Shore Project Area and we think Alternative 2 best addresses that need. Critical components of the ecosystem, such as long-lived conifer species, are not represented as desired or are declining in our current forest. (See the background section of this Decision Notice and Environmental Assessment pages 1-6 to1-9 for more elaboration on the need for restoration.) Of all the alternatives we considered in detail or briefly, Alternative 2 is the most complete in the amount of restoration proposed.

Many of the commenters on this project saw and confirmed the need to restore the forests along the shore. Numerous private landowners are planting and restoring their property and likewise, State of Minnesota personnel have been working to increase conifer species in their state parks. It is timely for the Forest Service to address restoration on National Forest System land.

The North Shore forests are under threat from a number of sources including, but not limited to, climate change, increased insect and disease attack, increased grass and shrub competition, and possible changes in wildfire regimes. The workshops we've attended and literature we've read all suggest that in the face of imprecise knowledge of exactly what will be in our future and exactly what the impacts from those changes will bring, our best chance for long term success is to have healthy, resilient, and diverse forests.

Alternative 2 will help contribute to healthy, resilient, and diverse forests by increasing or maintaining critical components of native vegetation communities through the following:

- Planting white pine on 6,215 acres, across the landscape in various site conditions. White pine is an important species in this ecosystem (as described in the Background section,) yet it has decreased 97% since the early 1900's. White pine is predicted to fare well under different future climate change scenarios and grows well in a variety of sites, making it worthwhile to expend the effort to restore the species.

- Planting other conifer species including white spruce (5,818 acres), black spruce (147 acres), cedar (344 acres) and tamarack (147 acres). Restoration of these species will increase diversity in the ecosystem. Regeneration of cedar and tamarack has substantially decreased from historical conditions and planting these species will help maintain these species.

- Regenerating and/or planting 979 acres of paper birch and planting yellow birch on 729 acres. Birch (and aspen) is an early successional species, meaning it regenerates and thrives after a disturbance such as wildfire, blowdown or harvest. It is important to regenerate the birch which is dying at a rapid rate.

- Reforesting areas where we are losing the tree component (estimated to be 500 – 1,000 acres). We are very concerned about the lack of regeneration in some of our stands (often birch stands) and think now is the time to act to ensure the long term productivity of these stands.

- Increasing diversity in 147 acres of ash units. Selection cuts would create openings in the stand which would be planted to a species mix that would compensate for the potential loss of black ash due to Emerald Ash Borer.

In addition, nearly 700 acres of white pine, cedar and birch would be protected from deer browsing by placement of single and large tree exclosures. These exclosures would help protect all native vegetation (not just trees) and increase the diversity of plant life in these stands. There would also be hand shearing, single tree felling and underburning designed specifically to increase stand structure or maintain native community function. All of these activities would restore structure and heterogeneity. Bringing back this complexity to the forest ecosystem now would increase the resistance and resiliency of stands.

We are not selecting Alternative 1 - No Action because it would perpetuate the decline of important desired tree species in the long term and prolong low stocking in some decadent stands. The Alternative 1 - No Action does not address obstacles to maintaining and regenerating a diversity of species such as climate change, deer and rabbit browse, increase in grass and shrub competition, and lack of seed source in the ecosystem. Subsequently, key desired species such as white pine, white cedar, and paper birch would continue to decline. The continued decline of these components of the native vegetation communities might reduce the resiliency of the forest and further compound the effects of climate change. In addition, some

stands would contain a lower stocking of trees and larger areas would be populated with grasses and shrubs.

Improve Wildlife Habitat

Through the varied and extensive restoration activities, Alterative 2 would accomplish the most improvement of wildlife habitat in the long term of any alternative considered. Under Alternative 2 protection from deer browse would increase seedling and sapling survival of white pine, white and yellow birch, and white cedar. Up to ten exclosures, 5 to 20 acres in size, would protect trees, shrubs, and forbs within the exclosures from the browsing currently taking place. Also, many planted and naturally regenerating trees would be individually protected from deer through standard methods of caging, spraying with deer deterrent, or bud capping. The diversity of tree, shrub, and forb species provides important components of habitat needed for a diversity of wildlife species.

Additionally, Alternative 2 would provide a new cohort of young trees that will improve forest structure by adding a subcanopy and a wider availability of tree leaf shapes and sizes to improve insect (prey species) diversity and abundance. Ground layer plant diversity would increase within the large exclosures, adding beneficial complexity to the forest and improving habitat for birds.

Many hawks, eagles, and neotropical migrants, including warblers, that breed on the Superior National Forest and farther north, travel south along the North Shore. The forested habitat along the shore provides food and roosting sites during migration and is critical to the health and survival of birds traveling thousands of miles to wintering habitat in the southern United States and Central and South America. Complex forest structure, including tree species of all sizes and healthy plant biodiversity as would be promoted in Alternative 2, would provide a wide diversity of food and shelter during migration.

The Alternative 1-No Action does not meet this part of the purpose and need as well as Alternative 2. In Alternative 1 there would be deer browse on small, regenerating white pine, white and yellow birch, and white cedar resulting in very few trees of those species surviving into sapling-size trees. These trees species provide valuable wildlife habitat throughout their growth stages and would continue to decrease in abundance under Alternative 1 - No Action. Ground-layer plants would also continue to be heavily browsed by deer, reducing plant diversity in all areas of the project area.

Improve Watershed Health

Forest Plan management direction tells us to improve watershed health by actively managing vegetation to enhance or restore the functional linkage between aquatic and terrestrial ecosystems, and to favor long-lived desired trees species (such as white pine, red pine, black spruce or tamarack) suitable for the site, and at stand densities suitable for the site (FP, p. 2-8).

Alternative 2 would increase the amount of long-lived conifer in riparian areas. Approximately 1,353 acres in the riparian area of units would be underplanted with northern white cedar, red pine, white pine or white spruce. (Only a portion of each unit would be planted so actual implementation acres would be less; underplanting would occur in other non-riparian areas,

therefore these acres do not match the acres shown in Table 1). The conifers would eventually grow into an overstory of trees creating shade for aquatic and wetland ecosystems, thermal cover for wildlife and nest sites for riparian associated species such as eagles and osprey, and inputs of future coarse woody debris and fine litter to provide in-stream/lake structure and nutrient input to the aquatic system.

Long-lived tree species would not be planted within the riparian areas under Alternative 1 – No Action. Without any disturbance, balsam fir or shrubs would begin to dominate some of these areas. We see this in many of the riparian areas now. Balsam fir is a short-lived species and would not contribute as much large woody debris to the riparian ecosystem over time when compared to longer-lived species.

Provide Sustainable Timber Products

Alternative 2 better meets this portion of the purpose and need because it provides approximately 14.1 million board feet of timber versus Alternative 1 – No Action which does not provide any forest products to the local economy. Alternative 2 provides raw materials for local mills at a sustainable level. Harvesting the units proposed in Alternative 2 offers immediate economic returns to federal and local governments and to the timber industry. It also produces better potential future economic returns by increasing tree production in the area.

Fuel Reduction

Alternative 2 provides the most fuel reduction of any alternative considered briefly or in detail. Alternative 2 would reduce fuel hazards on 218 acres and would reduce activity fuels (fuel created as a result of implementing proposed treatments) on about 1,700 acres. The fuel reduction treatments within Alternative 2 (including treating activity fuel) would be located primarily near forest boundaries with private land, near roadways, and near areas of high recreational use. By treating near these areas, defensible space would be increased. Defensible space is the area between a fire and values at risk where firefighters are able to take suppression actions. Additionally, removing hazardous fuels near high travel corridors, would improve the safety of travel for forest visitors and local residents during a wildfire.

Two understory burns would occur in red pine units in Alternative 2. In one unit the burn would be the primary treatment, and in another unit, the burn would be a secondary treatment following thinning. These treatments would reduce surface and ladder fuels in this area, reducing potential resource impacts by decreasing potential wildfire behavior. These treatments would also work towards the objective of restoring native vegetation communities by restoring the historical fire regime of pine stands.

If we did not treat fuels on National Forest System land, such as under the No Action alternative, fuel volumes would increase throughout most forested land within the project area. This is due to dead, dying, and/or wind thrown trees and successional trends toward spruce-fir forest types. This increase fuel loading can result in intense wildfires. Subsequently, values at risk, such as private property and recreation resources, could potentially be negatively impacted in the event of wildfire within the project area. Currently Lake Superior moderates the potential for large wildfire, but any changes in the climate where temperature increased and/or moisture decreases may alter fire regimes in the future.

Other Actions

Alternative 2 decommissions a total of one mile of road in three different locations. We have determined these three sections of road are not needed now or in the foreseeable future for forest management. Decommissioning these roads will have resource benefits such as: reducing road density, thereby increasing lynx security in the areas where closure occur; reducing the risk of spreading non-native invasive plants in road closure areas; and allowing the area occupied by road to be returned to a productive status.

We are including an adaptive management strategy in the North Shore Restoration Project because it will help us improve our success at accomplishing restoration objectives. The adaptive management will be an iterative process, using monitoring data to inform and adjust implementation of the decision, rather than simply eliminating areas from treatment when conditions at the time of implementation do not match conditions at the time of the decision. We have many years of experience with restoration and reforestation activities but we are facing more environmental challenges (such as a changing climate and increasing non-native invasive species) these days. This project builds on what we currently know about restoration and promotes learning in the future.

We realize that limited funding may affect the degree to which we can implement restoration. Timber harvests would not generate enough funding for all of the restoration included in the decision (see Economic Analysis Appendix, North Shore EA). We intend to pursue other sources of funding through grants, stewardship projects, etc. to fully fund and implement the restoration activities in this decision.

We know that, for some people, taking no action or taking less action seems more appealing than taking action because of concerns about impacts to recreation opportunities or other resources. However, regardless of which alternative we select, the forest along trails and roads will change as a result of natural succession. Changes in the forest from natural succession are beginning to be noticeable, and in the long-term, the composition of the forest will change more noticeably. Without disturbance or any management actions, there would be less white pine, white cedar, tamarack, paper birch and yellow birch across the landscape. We think taking the actions in Alternative 2 are justifiable given all the threats the forest is currently facing. We think now is the time to restore some of the forest and create some new young, vigorous tree regeneration for the future. We know these treatments have potential effects and risks as described in the Environmental Assessment. However, we have sufficient knowledge and experience to make the treatments successful.

OTHER ALTERNATIVES CONSIDERED

When deciding what management action to take in the North Shore Project Area, we considered five alternatives. Of the five alternatives, two were analyzed in detail, two were analyzed briefly in the North Shore Restoration Project Environmental Assessment and one was analyzed in an addendum to the Environmental Assessment. We determined this range of alternatives developed is adequate and follows Forest Service environmental analysis regulations at 36 CFR 220.7 for consideration of alternatives.

We reviewed and reconsidered the alternatives that are addressed in Chapter 2, Section 2.4 of the North Shore Restoration Project EA, Alternatives Analyzed Briefly to determine if any of them should be analyzed in further detail. None of these alternatives meets the purpose and need for the project as well as the alternatives analyzed in detail. Therefore, we did not find rationale for analyzing any of these in further detail. (See Chapter 2, Section 2.4 of the EA for further discussion on reasons not to analyze these alternatives in further detail.)

Alternative 1 – No Action

The Alternative 1 - No Action provides a baseline for comparison for the action alternatives. In this alternative, the Proposed Action would not take place and there would be no new proposed vegetation management actions at this time. Existing management actions such as previously approved timber sales or road projects would be allowed to continue. Forest succession processes would transpire naturally. Existing road uses and recreational activities would also continue.

We did not select Alternative 1- No Action because it would not meet the purpose and need for the project. Alternative 1- No Action would have eliminated some effects, but several opportunities to achieve Forest Plan objectives would be lost. We think there is a critical need to restore the forests along the North Shore to improve their resiliency for the future and to maintain their iconic status as a cherished landscape. We provided additional rationale for not selecting Alternative 1- No Action under the section Rationale for Decision.

Alternative 3- Proposed Action from Scoping Report

This original Proposed Action was not carried forward for detailed analysis and was not selected because the interdisciplinary team conducted further field reconnaissance and analysis and made modifications to the proposal that would better meet project objectives (purpose and need).

Alternative 4 – No Logging, No Roads, No Fuel Reduction Treatments

Alternative 4 was developed to respond to the comment:
"To restore native vegetation communities plant the areas with native species and if existing trees must be felled in the process leave the felled trees where they lay to serve their purpose in the ecosystem. Please implement all planned actions except logging and road construction… Please analyze an alternative in detail that implements Dr. Cohen's fire risk reduction methods. Fuels reduction is ineffective." (D. Artley Scoping Comment, Project Record)

Alternative 4 was not considered in detail and was not selected because it would not meet the purpose and need: it would not provide sustainable timber products; would increase fuel hazard instead of decrease it; and would limit restoration of native vegetation communities.

Alternative 5 –No New Roads

Alternative 5 responds to the comment: "Please analyze an alternative in detail that does not construct any new roads (temp or system). The no new roads alternative stands out among the infinite number of alternatives because it reduces the adverse environmental effects of the proposed action while still meeting the purpose and need for the project even though slightly less output would be generated…New road construction is an activity that causes damage to some important natural resources in the sale area. This activity is particularly detrimental to aquatic

and wildlife resources." (Artely Comment, Jan 2014, Project Record)

The analysis provided in the Addendum to the Environmental Assessment discloses the most salient difference between Alternative 2 and Alternative 5, describing both adverse and beneficial effects. This analysis contains sufficient detail for the Decision Maker to consider and permit a reasoned choice among all alternatives; therefore Alternative 5 will not be analyzed further. The additional analysis of this alternative does not warrant an additional comment period on the Environmental Assessment because the alternative was not analyzed in detail. The alternative was developed in response to a comment on the Environmental Assessment and we have considered it as part of making a decision. Modifications to alternatives or additional alternatives in response to public input is a part of the NEPA process (e.g. see 40 CFR 1503.4 and (36 CFR 220.7(b)(2)(iii)).

We are not selecting Alternative 5 because it does not accomplish the purpose and need as well as Alternative 2. Alternative 5 would increase species diversity by planting different mixtures of white pine, white and black spruce, yellow and paper birch, cedar and tamarack on approximately 6,900 acres whereas Alternative 2 would increase species diversity on approximately 7,600 acres. Alternative 5 would do little to restore or maintain paper birch in the ecosystem, harvesting and regenerating about 186 acres of paper birch compared to 712 acres of birch regeneration under Alternative 2. Birch trees are an icon along the north shore and yet over 80% of the birch stands in the North Shore Project Area (on National Forest System land) are mature and dying. These stands are early successional species, so by harvesting some of the stands it allows for a needed disturbance to get a new cohort of trees established. Further, Alternative 5 would thin about 2,000 acres less than Alternative 2 and would not meet objectives to improve habitat and stand diversity on those acres. Finally, Alternative 2 does a better job meeting the objective in the Purpose and Need to provide sustainable forest products by providing 15.7 million board feet of timber versus 5.4 million board feet under Alternative 5.

Based on the analysis in the Addendum to the Environmental Assessment and our professional judgment, the added restoration possible under Alternative 2 outweighs the limited, mitigated and known adverse effects of temporary road construction that would be avoided under Alternative 5.

TRIBAL CONSULTATION

The District Rangers and the interdisciplinary team consulted with tribal representatives from 1854 Treaty Authority, Grand Portage Band of Lake Superior Chippewa, Fond du Lac Band of Lake Superior Chippewa and Boise Forte Band of Chippewa at various stages throughout the development of the North Shore Restoration Project. Contacts were made during data collection, formulation of the North Shore Forest Collaborative, pre-scoping (developing the purpose and need and proposed action), scoping and environmental analysis.

The North Shore Project Area is of interest to the tribes, particularly the Grand Portage Band of Lake Superior Chippewa. The forests in the North Shore Project Area have a higher percentage of paper birch and white cedar than other areas on the districts and both of these species are valuable to the bands for cultural and traditional practices.

The District Rangers and the interdisciplinary team have been collaborating on proposed restoration activities with Tim Miller, Grand Portage forester, individually and through the North Shore Forest Collaborative. Discussions have centered around sharing expertise and ideas on how to retain birch and cedar in the ecosystem. Additionally, opportunities for landscape level projects across ownership boundaries (such as where National Forest System land is adjacent to the reservation boundary) were discussed.

Under the selected alternative, treatments on 1,000 acres will strive to maintain those stands as paper birch forest type through natural regeneration as well as through planting paper birch. Other species such as white pine and white spruce will also be planted. In addition, there will be a limited amount of natural birch regeneration by seeding or stump sprouting from harvest and mechanical treatments in all units that had at least some component of paper birch.

The selected alternative will increase the amount of cedar in stands. There will be 330 acres of variable thinning, selection cut, hand shearing, underburning and large exclosures that will be planted to cedar. Since cedar is so desirable to deer, single tree exclosures or hard tubes would be used to protect the seedlings.

Tribal interests also include access to the forest for exercising treaty rights. All of the roads proposed for decommissioning in the North Shore Restoration Project are currently grown-in. Closing roads that are currently grown-in would not be expected to reduce tribal access. When decommissioning temporary roads, a parking area would be left when feasible to provide hunters and gatherers a place to park.

Alternative 1-No Action would not be responsive to tribal interests to maintain birch and cedar in the ecosystem. Both species are declining in the ecosystem and this trend would continue under the Alternative 1-No Action. (See Environmental Assessment Section 3.3 Vegetation for more discussion on vegetation changes in the ecosystem.)

PUBLIC INVOLVEMENT

There has been an exceptional amount of public involvement on this project. We have worked with members of the public, community organizations and agency personnel throughout the development of the purpose and need, proposed action, issues and alternatives and environmental analysis for the North Shore Restoration Project. In this section we describe all of the public involvement as well discuss some of the concerns we've heard and how we addressed them.

One avenue used to garner public, community and agency involvement is through participation in the North Shore Forest Collaborative. The North Shore Forest Collaborative, started in 2011, is comprised of tribal, federal, state and county agencies, non-profit organizations, and private land owners working to restore the North Shore's forests. Through work with the North Shore Forest Collaborative and its working groups, we have gained expertise useful to the North Shore Restoration Project.

Through the Collaborative, and throughout the project, we have worked closely with Minnesota Department of Natural Resources personnel including Dave Ingebrigtsen, Assistant Wildlife Manager; Chel Anderson, Plant Ecologist; and Harley Hanson, North Shore Resource Specialist

Division of Parks and Trails. They shared data on Native Plant Community classifications and biodiversity rankings in the area, expertise on success of different treatment methods and knowledge of the history of the area. Taking a landscape look, we have considered and developed opportunities to work collaboratively across ownerships to restore the north shore forests.

We involved the public in the North Shore Restoration Project through the following means:

- We utilized several methods to inform the public about the scoping comment period for the North Shore Restoration Project. In December 2013, a scoping package requesting comments was mailed to over 1,300 individuals, groups, and agencies who either own land within the project area or who have expressed an interest in these types of projects. The scoping package was also available online. The North Shore Restoration Project was listed in the Superior Quarterly (a Schedule of Proposed Actions for the Superior National Forest) starting in January 1, 2011. A local news release was issued; information about the project was also aired on local radio and Minnesota Public Radio.

- During the scoping period, the District Rangers and interdisciplinary team hosted an open house (January 11, 2013). This provided an opportunity for members of the public to learn more about the project and to discuss the proposal with the District Rangers and other staff members who developed the proposal. Members of the North Shore Forest Collaborative were on hand to help answer questions. About thirty people attended and provided comments.

- After the scoping period, there have been ongoing discussions with private landowners, trail partners and Collaborative members. The purpose of these conversations has been to understand concerns and, if possible, resolve concerns through mitigation or better explanation of actions.

- All interested parties on the North Shore Restoration Project mailing list were sent a letter or email notification in May 2013 that provided an update on the project, as well as information on a North Shore Forest Collaborative workshop for private land owners.

- We (the District Rangers and interdisciplinary team) reviewed and analyzed all comments received. We provided a written response to each person or group who had submitted a scoping comment in Appendix A of the Environmental Assessment.

- In December 2013, the North Shore Restoration Environmental Assessment was completed and the public was notified of the start of the 30-day comment period. We notified the public through the Superior National Forest website and a legal notice published in the Cook County News Herald. Everyone who had submitted scoping period comments or asked to remain on the mailing list received a copy of the EA or notification of its availability.

- We hosted another open house in December 2013 concurrent with the release of the Environmental Assessment. The open house provided the public an opportunity to

provide comments and discuss the Environmental Assessment with interdisciplinary team members. In addition, members of the North Shore Forest Collaborative were on hand to offer technical assistance and resources about performing restoration on private property. About 50 people attended the open house.

Over 125 written and verbal responses were received from individuals, groups, and agencies. This includes comments received during the scoping period, either open house, the official 30 day comment period, or any time throughout the project. The responses ranged from simply wishing to remain on the project mailing list to detailed pages of comments about different aspects of the project.

We asked the interdisciplinary team to review and analyze comments submitted on the December 2013 Environmental Assessment and to provide a written response to each person or group who provided a comment. The comments received did not raise any new issues that the interdisciplinary team had not addressed within the North Shore Restoration Environmental Assessment. One comment suggested an additional alternative regarding roads and we completed a brief evaluation of this alternative in the Addendum to the EA. Our response to all comments received is in Appendix F of this Decision Notice.

The comments we received were varied. There were no salient issues that came up in comments but there are a couple topics we'd like to address. The topics are also addressed in the EA and the Response to Comments Appendices of the EA and the Decision Notice.

First, we want to say how impressed we are with the amount of restoration work occurring on private land in the project area. We heard from numerous people about how they have been planting conifer on their property for years (and struggling to keep the deer from them). It is encouraging to hear about the amount of care and concern there is for the forests of the North Shore.

A question asked by a commenter was why there was harvesting in a restoration project and other commenters said they did not think harvesting should be in a restoration project. We do not agree that harvesting and restoration are mutually exclusive. Harvesting is a valuable tool to accomplish some of our ecological goals. For example, birch and aspen are early successional species, meaning they regenerate and thrive after a disturbance such as wildfire, blowdown, or harvest. Harvesting allows us to regenerate birch and aspen as well as create young age class, an important part of the ecosystem.

Additionally, thinning (harvesting) some plantations will allow us to increase with-in stand diversity. The interdisciplinary team considered other techniques to increase species diversity in plantations, such as cutting the trees and leaving them on site or mulching them on site. While this technique would create more room for the remaining trees to grow in size, the large amount of slash left on site would inhibit growth of other species (either shrubs or trees). Removing the trees from the site through harvesting would provide more growing space for new species in the understory, as well as increase the size of the remaining trees.

The alternative we have selected uses a variety of tools to accomplish those objectives. Treatments include underplanting (used on the largest amount of acres); mechanical site preparation and reforestation; exclosures; and harvests such as clearcut with reserves, selection or thinning. All of these actions will contribute to maintaining and restoring native vegetation communities in the project area in the long term.

We received a number of comments about possible impacts to the scenery along area trails or other impacts to trail users. We have had discussions and met with our trail partners to ensure we understood their concerns and to find ways to minimize possible impacts. We know there will be impacts to area trails from some of the mechanical treatments but we have put in place mitigation measures that will minimize effects to the greatest extent practical. For example, where possible we will perform the work in the low use season but there are instances where that will not be possible because of other resource constraints. In these cases we feel the benefits of the activity outweigh the impacts.

We received an objection from the Sierra Club on the North Shore Restoration Project during the objection period. Their objection was focused on adaptive management; they felt we did not provide enough information regarding various aspects of the adaptive management component of the project. A team from another National Forest reviewed the objection issues and project documentation to ensure the proposed decision would comply with applicable laws, regulations, and agency policies. After consulting the review team, discussing the objection issues with the Sierra Club and interested parties, and reviewing the project documentation, the Forest Supervisor affirmed that the level of detail provided on adaptive management in the Environmental Assessment was adequate to appropriately display the scope and range of effects and the decision on the project could move forward contingent on providing the public with information on the implementation guide and an opportunity to be involved. Earlier in this Decision Notice we explained how we will use the Implementation Guide and have given the public the opportunity to work with us on finalizing the guide.

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

Our decision complies with all applicable laws and regulations. We have summarized some pertinent ones below.

Compliance with the National Forest Management Act

The Forest Service is currently operating under the 2012 Planning Rule. As required by section 219.15(d) of the 2012 Planning Rule, this project is consistent with the direction found in the 2004 Forest Plan.

We considered the best available science in making our decision. The project record demonstrates a thorough review of relevant scientific information, consideration of responsible opposing views, and, where appropriate, acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. In addition, the North Shore Restoration Project complies with the 2004 Superior National Forest Plan as required by the National Forest Management Act.

The purpose and need for the North Shore Restoration Project identified five areas where actions could move the area towards Forest Plan desired conditions (EA pp. 1-5 to 1-9). Of all the alternatives we considered, the actions we selected (Alternative 2) will best meet the purpose and need and move the forest towards Forest Plan desired conditions (Section 2.5.3 of the EA). In our rationale for the decision we have explained why we think that is so.

The North Shore Restoration Project Area overlaps three Forest Plan management areas: Recreation Use in a Scenic Landscape, Unique Biological Area, and Eligible Wild, Scenic and Recreational River (EA p.1-3). The Forest Plan includes the desired conditions, objectives, standards, and guidelines for each management area (MA). Following is a brief summary of the desired vegetation for each management area and how the North Shore Project works towards that desired condition.

The desired condition of vegetation in the Recreation Use in a Scenic Landscape Management Area, which covers most of the project area, consists of managing ecosystems to provide a predominantly natural-appearing landscape that may be slightly modified by management activities and to enhance wildlife habitat. This management area emphasizes a large tree and old forest character and viewsheds are managed for scenic beauty and big-tree character.

The alternative we selected uses various harvest methods and non-harvest methods to restore native plant communities in this management area. Alternative 2 emphasizes treatments such as underplanting or site preparation followed by regeneration to increase diversity of native vegetation species with limited short term impacts to scenery and recreation. The majority of harvests are thinning with smaller amounts of clearcutting to increase stand diversity, restore vegetative conditions, or reach ecological objectives. Increasing regeneration of long-lived conifer through harvest and non-harvest methods promotes a scenic, healthy forest with big tree character in the future. The treatments in our selected alternative provide diverse native plant communities and enhanced wildlife habitat.

The area one-quarter mile on either side of the Temperance and Brule Rivers are in the Eligible Wild, Scenic and Recreational River Management Area; however, no management actions are planned in the area adjacent to the Brule River. The segment of the Temperance River in the North Shore Restoration Project Area is classified as Scenic. With a Scenic classification, vegetation management practices are to enhance the recreation experience and maintain the near natural environment of the corridor. The vegetation changes produced by the underplanting and other treatments in the selected alternative would move the area toward Forest Plan desired conditions, including development of a big tree character in the river corridor by retaining the existing larger-sized trees and increasing the longer-lived conifers. The alternative we selected will not adversely affect the river's free flow, water quality and outstanding values (EA p. 3-56).

In the Unique Biological Areas Management Area, management emphasis is on conserving or enhancing areas of unique biological interest. The North Shore Restoration Project Area includes the Fall River Patterned Fen Unique Biological Area. Vegetation management practices in the selected alternative will restore native plant communities by increasing native species diversity and will not adversely affect the Unique Biological Area's quality and value (EA p. 3-56, 3-57).

All relevant standards and guidelines have been incorporated in Operational Standards and Guidelines listed in Appendix C; site specific mitigation measures are listed in Appendix A and Appendix B. Standards and guidelines will be met with this project except in a limited number of units. In specific units, where fuel hazard is a high concern or site preparation for restoration of conifer is critical (listed in the North Shore Restoration Project Record), slash will not be retained on the site as recommended in guideline G-WS-8. Deviations from guidelines may occur (FP p. 1-8) and we believe in this case, a deviation is needed to accomplish the fuel reduction or reforestation work.

Nutrient sensitive soils are present throughout the North Shore Restoration Project Area and to meet the objective of reducing hazardous fuels, treatment on these sites is unavoidable. However, for several reasons we believe that our decision will protect soil resources. Aspects of the treatments that reduce effects to the soil resource include leaving a portion of biomass on site, retaining an overstory on some of these units, and managing for longer rotations between harvests. These factors will minimize effects to the soil resource and there will not be irreversible damage to soil, slope or other watershed conditions.

Intense wildfire can result in the destruction of most of the topsoil, which would be a much greater impact than the mitigated effects of our decision. Fuel reduction in our decision will decrease the probability of topsoil destruction by severe wildfire. We believe that the tradeoff of deviating from G-WS-8 to accomplish fuel reduction and reforestation is acceptable. For further discussion on effects to soils and mitigation measures, see Section 3.6 of the EA.

Road management in Alternative 2 is consistent with the desired condition, objectives, standards and guidelines for transportation systems in the Forest Plan. These actions will result in the minimum amount of roads needed to accomplish forest management objectives.

Suitability for Timber Production

Harvest of this timber will contribute toward an annual and sustainable timber program (FP p. 2-37, O-SE-2), as expected in the Forest Plan. All commercial timber removal will occur on forest land that is suitable for timber production. This conclusion is based upon on-the-ground examination of the stands proposed for harvest by resource specialists, review of the maps and facts provided in the North Shore Restoration Project EA, and information provided in the project record. Based on our experience and the knowledge and expertise of the interdisciplinary team, we find there is reasonable assurance that harvested lands will be adequately restocked within five years. None of these lands have been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture, or the Chief of the Forest Service.

Optimality and Appropriateness of Harvest Methods

The National Forest Management Act states, “When timber is to be harvested using an even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made, and where clearcutting is to be used, it must be determined to be the optimum method.”

To determine the optimum harvest method for regenerating a unit, we considered the objectives for the stand, silvicultural requirements of the vegetation species on the site, existing stand

conditions, issues raised during the analysis, prior experiences in the area, and the Forest Plan direction. A silvicultural prescription describing the harvest method was written for each unit based on the biological requirements of the unit and project objectives. This prescription was reviewed and modified by the interdisciplinary team of foresters, biologists, plant ecologists, recreation planners, and fuel specialists, with special consideration given to the issues raised by the public. Prescriptions were designed to mitigate resource concerns such as visual quality, water quality, or vegetation composition guidelines. In all units, the harvest method is sufficient to ensure regeneration of the unit. The selected silvicultural methods for each unit, listed in Appendix A, will accomplish the purpose and need for this proposal.

Clearcutting is appropriate for each of the forest types where it has been prescribed in the North Shore Restoration Project. Forest Plan (FP pp. 2-20 to 2-21) states: "G-TM-2 – Clearcutting may be used to regenerate the following forest types: jack pine, red pine, spruce-fir, oak, aspen, aspen/spruce/fir, paper birch, and lowland conifers." This is further documented in Table G-TM-7 "Type of Timber Management Practices by Forest Type Group." The use of clearcutting is the optimum method for regenerating aspen, aspen/spruce/fir and paper birch as prescribed in the North Shore Restoration Project because they are pioneer forest tree species and shade intolerant. The increase of sunlight and growing space by the mechanical removal of the overstory, and subsequent mechanical site preparation, when necessary, will allow areas to be planted with white pine, white spruce and paper birch or to regenerate naturally. Use of the clearcut method optimizes management objectives in the project while ensuring successful regeneration. Stocking and regeneration surveys show we have been successful in regenerating clearcut units.

The use of even-aged management is consistent with the direction provided in Table G-TM-7 of the Forest Plan (FP p. 2-21). There were units where we wanted to maintain a greater residual component of trees for multiple objectives and they will be treated with a selection method of regeneration. Therefore, clearcut harvest is used when it is needed to reduce fuel hazards, meet age-class and patch size objectives, create wildlife habitat, and regenerate shade intolerant species.

The North Shore Restoration Project Environmental Assessment provides a thorough analysis of effects from even-aged management. The analysis documented in Chapter 3 of the Environmental Assessment includes potential effects to treaty rights, vegetation, threatened and endangered species, Regional Forester's Sensitive Species, soils, non-native invasive species, water quality, Boundary Waters Canoe Area Wilderness, and scenic quality. Each of these resources will be adequately protected through Operational Standards and Guidelines (Appendix C) and mitigation measures.

Regeneration harvest units meet the Forest Plan standard for culmination of mean annual increment and minimum rotation ages (S-TM-5, FP p.2-20).

Vegetation Manipulation

All manipulation of vegetation complies with the seven requirements of the National Forest Management Act (NFMA) Regulations. This conclusion is based upon the following:

1. The actions in Alternative 2 fit the goals stated in the Forest Plan for the landscape ecosystem objectives and management area objectives.
2. The lands being treated can be adequately restocked within five years after final harvest as discussed under Suitability for Timber Production in the previous section.
3. These activities were not chosen primarily because they give the greatest dollar output or the greatest output of timber. We selected Alternative 2 because it best meets the goals and objectives in the Forest Plan.
4. These activities were chosen after considering potential effects on residual trees and adjacent stands. The effects are disclosed throughout the North Shore Restoration Project Environmental Assessment and are within the effects analyzed in the Forest Plan Final Environmental Impact Statement. In all cases the effects are acceptable when considering the purpose and need of the North Shore Restoration Project and the goals, objectives, and desired conditions in the Forest Plan.
5. The selected activities will avoid permanent impairment of site productivity and will ensure conservation of water resources (Sections 3.6 and 3.8 of the North Shore Restoration Project Environmental Assessment). The prescriptions and mitigations will adequately protect these natural resources.
6. The selected activities will provide the desired effects on water quality, wildlife and fish habitat, regeneration of desired tree species, recreational uses, aesthetic values, and other resource needs. The effects of the actions are fully disclosed in the environmental assessment. The vegetation management prescriptions and, in particular, the Operational Standards and Guidelines and mitigations will adequately protect the other resources.
7. The selected activities are practical in terms of transportation and harvesting requirements, preparation costs, logging and administration, reforestation and release needs. We are basing this determination on the fact that the selected activities are similar to those which have been practiced on the Superior National Forest and the Gunflint and Tofte Ranger Districts in areas similar to the North Shore Project Area. We will be able to adjust activities during implementation based on our adaptive management process and funding to allow for the most efficient actions possible to meet management objectives.

Wilderness Act

In our professional view, Alternative 2 complies with the Wilderness Act and the 1978 BWCA Act. Due to the considerable distance and limited spatial scale of effects, the interdisciplinary team determined no effects to wilderness are anticipated from the project and an analysis of wilderness effects in the Environmental Assessment was not warranted. We agree with this determination.

Clean Water Act

Analysis in Sections 3.6 (Soil Productivity and Wetlands) and 3.8 (Water Quality) of the Environmental Assessment indicates that there would not be significant effects to water resources. Operational Standards and Guidelines listed in Appendix C of the Decision Notice will adequately protect water resources. Our decision complies with the State Water Quality Standards and the Clean Water Act.

Threatened and Endangered Species Act

As discussed under item nine of the Finding of No Significant Impact, our decision complies with the Threatened and Endangered Species Act. The determination made, based on the Biological Assessment, is that the North Shore Restoration Project "may affect but is not likely to adversely affect" Canada lynx or their critical habitat. As of October 2013, the northern long-eared bat has been proposed for federal listing under the Endangered Species Act; no critical habitat has been proposed at this time. The determination of effects made, based on the Biological Assessment, is that the North Shore Restoration Project "may affect, but will not result in jeopardy" to the northern long-eared bat. In accordance with requirements, the Forest Service consulted with the U.S. Fish and Wildlife Service who concurred with this determination on May 2, 2014.

Clean Air Act

In Minnesota, the Clean Air Act is addressed through the State Smoke Management Plan. Prescribed burning will be carried out in compliance with the State's Smoke Management Plan, the Superior National Forest Fire Management Plan and the Forest Plan. These plans outline how prescribed burning will be carried out so that the resulting smoke minimally affects air quality.

Based on the burning done over large burn units and in heavy blowdown fuels during the fall of 2002 in the Boundary Waters Canoe Area Wilderness, the Forest has developed a good record for managing smoke impacts during large scale prescribed burns. The National Ambient Air Quality Standards have not been exceeded to date during large-scale prescribed burning on the Forest. Therefore, we expect the small prescribed burn areas in Alternative 2 will not exceed air quality standards.

Based on the provisions set forth in the State Smoke Management Plan and Forest Plan and the results of past projects, we determined that Alternative 2 will be in compliance with the Clean Air Act.

Migratory Bird Treaty Act

Our decision complies with the Migratory Bird Treaty Act and the 2008 Memorandum of Understanding on migratory birds between the Forest Service and the U.S. Fish and Wildlife Service. The North Shore Restoration Project Environmental Assessment and Biological Evaluation disclose effects to birds, focusing on species of management concern, and on habitat used by birds. As discussed in item nine of the Finding of No Significant Impact section, there will be no significant effect to birds or other wildlife under Alternative 2.

Shipstead Newton Nolan Act

Our decision complies with the Shipstead Newton Nolan Act. No harvest of timber will occur within 400 feet of any lake or stream covered under the Act.

FINDING OF NO SIGNIFICANT IMPACT

We have reviewed both the context and intensity of the selected alternative and its environmental consequences, which are disclosed in the environmental assessment and project record. Based

on our experience with similar projects and practices, we conclude that the selection of Alternative 2 does not constitute a major federal action, individually or cumulatively, and will not significantly affect the quality of the human environment.

The level of analysis conducted for the North Shore Restoration Project Environmental Assessment (EA) is adequate and documents no significant effects. Therefore, an environmental impact statement is not needed. This determination is based on the following factors:

Context

40 CFR 1508.27 states "The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting. In the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant."

The North Shore Restoration Project Environmental Assessment is tiered to the 2004 Forest Plan Environmental Impact Statement (FEIS) which analyzed effects of these types of actions at the Forest and regional scale. Where appropriate, the North Shore Environmental Assessment has referenced analysis and conclusions from the Forest Plan FEIS.

The North Shore Project is a site-specific action that does not have international, national, regional, or statewide importance. The physical and biological effects of the selected actions were analyzed at appropriate scales, such as within the project area, adjacent to the project area, or across a larger landscape. The analysis area differs for each resource and rationale for each analysis area is provided in Chapter 3 of the North Shore Environmental Assessment.

As discussed in more detail below for the factors of significance, the context of this proposal is limited to the locale of the North Shore Restoration Project Area. Even in a local context, this proposal would not pose significant short- or long-term effects. The proposal's relatively small scale limits its effects of the natural resource values and uses. Mitigations included in this project minimize and avoid adverse impacts to the extent that such impacts for some resources are not measurable, even at the local level.

Intensity (severity of impact)

40 CFR 1508.27b lists ten factors to consider in evaluating intensity. We have considered them as follows:

1. **Impacts may be both beneficial and adverse. A significant effect may exist even if on balance, effects are believed to be beneficial.**

Both adverse and beneficial impacts of harvesting, fuel reduction, reforestation, road construction and other related actions are analyzed and disclosed in the North Shore Restoration Project Environmental Assessment in Chapter 3, Appendix E and Appendix G of the Environmental Assessment, and in the Biological Assessment and Biological Evaluations. We described some of these differing impacts earlier in this decision notice. In determining whether this project would have significant effects, we did not use the beneficial effects to compensate

for, or offset, adverse effects. We have given careful consideration to both the beneficial and adverse impacts and believe that neither is significant.

2. The degree of effect on public health or safety.

The safety of forest users (visitors and residents) would be protected under Alternative 2 by operational standards, guidelines and mitigation measures. Specific mitigations for treatments have been identified. For example, prescribed burning mitigation measures for safety have been identified, such as posting prescribed fire warning signs at appropriate recreational areas including roadways, and contacting nearby residents and businesses. In addition, we expect the prescribed burns in the selected alternative will not exceed air quality standards. The National Ambient Air Quality Standards have not been exceeded to date during large-scale prescribed burning on the Forest and the North Shore Restoration Project will use similar smoke management techniques to minimize effects to public health.

The fuel reduction treatments within Alternative 2 (including treating activity fuel) would be located primarily near forest boundaries with private land, near roadways, and near areas of high recreational use. By treating near these areas, defensible space would be increased. Additionally, removing hazardous fuels near high travel corridors would improve the safety of travel for forest visitors and local residents during a wildfire. All fuels reduction treatments within Alternative 2 would reduce hazardous fuels to a level in which fire behavior from a wildfire would be decreased. The combination of increasing defensible space and decreasing fire behavior would increase the likelihood that fire suppression activities can be conducted to minimize impacts to values at risk and provide for public safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

We have considered the unique characteristics of the area and determined there will be no significant effects to these resources. There are no park lands or prime farmlands within, or adjacent to, the project area. Also, the project area does not include, nor is adjacent to any, Candidate Research Natural Areas as designated in the Forest Plan. There are no Roadless Area Conservation Areas or Forest Plan inventoried roadless areas within the North Shore Project Area. Potential effects to historic or cultural resources are described under item 8, below.

The Fall River Patterned Fen, located approximately 2 miles northwest of Grand Marais, MN is classified as a Unique Biological Area (UBA) by the Superior National Forest Land and Resource Management Plan. The Forest Plan states that Unique Biological Areas are managed primarily for their outstanding biological and other special values and are not suitable for timber management. With respect to Unique Biological Areas, the Forest Plan states that, "Vegetation, habitat, soil productivity, and water quality are affected little by present human use. Native plant communities are maintained, restored, or enhanced." (FP, p. 3-28, D-UB-2) While the Unique Biological Area is not suitable for timber management, these treatments are being implemented to restore native vegetative conditions and are not designed for the purpose of timber production. Timber harvest for purposes other than timber production on unsuitable lands is allowed in the 2012 Planning Rule (36 CFR 219.11c).

The vegetation treatments selected under Alternative 2 would occur both inside and outside of the Unique Biological Area. The restorative treatments would occur in a small area of the Unique Biological Area and include underplanting and thinning to promote native plant communities. These treatments are intended to help restore vegetative conditions in the upland stands of the Unique Biological Area and would not affect the patterned fen for which the area was designated. Operational Standards and Guidelines for the North Shore Restoration Project would help minimize any potential spread of non-native invasive plants that could result from vegetative management in the Unique Biological Area.

The North Shore Restoration Project Area includes a portion of the Brule and Temperance Rivers which are both in Eligible Wild, Scenic and Recreation River Management Areas. The Forest Plan explains that within the Scenic segment of this management area, "silvicultural practices are allowed provided methods used would not have substantial adverse effect within the river corridor to the river's free flow, water quality, and outstanding remarkable values" (FP p 3-18, G-WSR-4). No management actions would occur in the one-quarter mile corridor of the Brule River. Alternative 2 does include vegetation management within the one-quarter mile corridor of the Temperance River. The majority of treatments are underplanting, where no mechanical operations would occur. The vegetation changes produced by the underplanting and other treatments would move the area toward Forest Plan desired conditions, including retaining the existing larger-sized trees and enhancing the longer-lived conifers. These types of activities are suitable within the river corridors, per Forest Plan direction (D-WSR-2, FP, p. 3-17). Since Operational Standards and Guidelines would be followed, there would be minimal resource impacts.

This project will not have significant impacts to wetland soils (EA p. 3-25). Operational Standards and Guidelines listed in Appendix C require that all mechanical operation on wetlands occur during frozen conditions (G-WS-12). Mitigation code S5 listed in the Unit Treatment Table in Appendix A of this Decision Notice identifies units where mitigations are in place protect wetlands. Under frozen conditions, effects to wetlands such as rutting or changes in hydrological flow would not occur or be minimal. All Forest Plan direction regarding wetlands was incorporated into our decision.

4. The degree of controversy over environmental effects.

We reviewed all comments and determined there were no controversies or scientific debates about the environmental effects of this project. We received a range of comments on how National Forest System lands should be managed and what values are most important. The differences in comments reflect a range of opinions, and do not of and by themselves constitute controversy. No scientific evidence was presented that displayed controversy about effects or that contradicted the conclusions presented in the North Shore Restoration Project Environmental Assessment. In addition, the effects of the selected alternative on the various resources are not considered highly controversial by resource specialists from associated fields of recreation, hydrology, wildlife biology, and forestry. Although we anticipate this decision will not be acceptable to all, we have determined that the effects, as displayed in the North Shore Restoration Project Environmental Assessment and supporting documentation in the project record file, are not likely to be highly controversial.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.**

The selected activities, including timber harvest, reforestation, fuel reduction and road construction, are similar to those that have occurred in the past in this area and similar areas across the Superior National Forest. The effects of the North Shore Restoration Project are expected to be similar to the effects of these past actions.

All actions included in this project are consistent with the Forest Plan, and all environmental effects are within the range disclosed in the Forest Plan FEIS. These types of actions and effects are monitored and the conclusions, evaluations, or recommendations of these reports have been considered in the North Shore Restoration Project. Based on our knowledge of the effects of similar past actions and the effects analysis disclosed in the North Shore Restoration Environmental Assessment, we do not believe there will be any highly uncertain effects or effects that involve unique or unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

Implementing the selected activities within this project area would not commit the Forest Service to actions on other lands either within or outside the project area. This action does not establish a precedent for future actions. All connected future actions have been included in this project and the effects disclosed in Chapter 3 of the North Shore Environmental Assessment. The reasonably foreseeable future projects disclosed under various cumulative effects analysis are those that are in the development phase and are not connected to the North Shore Restoration Project actions. Environmental analyses will be completed on these projects and site specific decisions will be made on whether or not to implement these other projects. None of the selected actions are a major departure from types of activities now common to the Superior National Forest.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.**

A cumulative effects analysis for each resource was conducted and documented in Chapter 3 of the North Shore Restoration Project Environmental Assessment. For each resource, the cumulative effects analysis boundary was determined by the resource specialist using professional knowledge of the resource affected and how effects accumulate. Past, on-going, and reasonably foreseeable future actions that were relevant to the effect being analyzed and within the analysis boundary, were considered. Appendix F of the North Shore Restoration Project Environmental Assessment describes potential cumulative actions. There are no known significant cumulative effects between this project and other projects that have occurred in the past, or are currently being implemented, or are planned for the future.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of**

Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.

The selected actions will not result in impacts to any properties listed on or considered eligible for listing in, the National Register of Historic Places (North Shore Restoration Project EA Section 3.10), nor will they cause any loss or destruction of any scientific, cultural, or historic places. Heritage Resource staff have completed a project specific inventory and they identified the known heritage sites within and adjacent to treatment sites. All sites will be avoided and protected following the standards set forth under the guidelines of the Memorandum of Agreement between the USDA Forest Service and the Minnesota State Historic Preservation Officer. Our decision complies with the National Historic Preservation Act.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973 (ESA).

The effects to threatened and endangered species are briefly summarized in the North Shore EA in Section 3.4, pages 3-18 to 3-22. The North Shore Restoration Project Biological Assessment contains the complete effects analysis and considered the existing condition information, including populations and trends and information on project area surveys, habitat needs and limiting factors; habitat trends, direct and indirect effects, cumulative effects, the determination, and mitigations. The determination made, based on the Biological Assessment, is that the North Shore Restoration Project "may affect but is not likely to adversely affect" Canada lynx or their critical habitat. In accordance with requirements, the Forest Service consulted with the U.S. Fish and Wildlife Service who concurred with this determination on May 2, 2014.

As of October 2013, the northern long-eared bat has been proposed for federal listing under the Endangered Species Act; no critical habitat has been proposed at this time. The determination of effects made, based on the Biological Assessment, is that the North Shore Restoration Project "may affect, but will not result in jeopardy" to the northern long-eared bat. The Forest Service has conferred with the U.S. Fish and Wildlife Service who concurred with this determination on May 2, 2014. The concurrence also states " if implementation of the proposed project occurs after a northern long-eared bat final listing decision is made (expected October 2, 2014), consultation will likely be required under section7 of the Act. If the northern long-eared bat is listed as federally threatened or endangered under the Act, and the proposed action "may affect" northern long-eared bat, consultation will be required under section 7 of the Act." (U.S.F.W.S. May 2, 2014, Project Record). A copy of the concurrence letter from the U.S. Fish and Wildlife Service is included in the project record.

The effects to all of the Regional Forester Sensitive Species are briefly summarized in the North Shore Restoration Project EA in Section 3.5, pages 3-23 to 3-24. The North Shore Biological Evaluations contains the complete effects analysis and considered the existing condition information, including populations and trends and information on project area surveys, habitat needs and limiting factors; habitat trends, direct and indirect effects, cumulative effects, the determination, and mitigations. See Section 3.5.2 thru 3.5.4 of the EA for a listing of species where this project may impact individuals but is not likely to cause a trend toward federal listing or a loss of viability.

Based on the North Shore Restoration Project EA, the Biological Assessment, and the Biological Evaluations, we have concluded there will be no significant direct, indirect, or cumulative effects to any Federally Threatened, Endangered, or Sensitive Species or their habitats from the selected actions.

10. Whether the action threatens a violation of federal, State, or local law or requirements imposed for the protection of the environment.

These actions will not violate any federal, State, or local law or requirement for the protection of the environment. The North Shore Restoration Project will protect the environment to the extent practical and would enhance ecological conditions through vegetation management activities to meet Forest Plan desired conditions and objectives.

IMPLEMENTATION

This decision was subject to objection pursuant to 36 CFR 218. A legal notice of the opportunity to object was published on May 10, 2014 in the Cook County News-Herald and Duluth News Tribune and sent to those who provided comments during the project's development. One objection was filed and processed by the objection reviewing officer.

This decision may be implemented any time after the date of signature.

For additional information concerning this decision, please contact Becky Bartol at the Gunflint Ranger Station, 2020 W. Highway 61, Grand Marais MN 55604 or (218) 387-3207.

DECIDING OFFICERS:

Nancy A Larson — 8/21/14

Nancy Larson
Gunflint District Ranger

Date

Kurtis E. Steele — 8/22/14

Kurtis Steele
Tofte District Ranger

Date