

Chapter 1: Purpose and Need

1.1 Introduction

The activities in the Border Project Proposed Action are intended to implement some objectives of the Superior National Forest Land and Resource Management Plan (Forest Plan). The Proposed Action activities would contribute to creating desired conditions of the Forest Plan by managing the age, composition, structure, and spatial pattern of forest vegetation. The proposed activities would also modify the transportation system both to facilitate vegetation activities and to address the short-term and long-term needs of various publics, private individuals, and agencies. Proposed activities would:

- Use final harvests (clearcuts with reserves, shelterwoods, and seed tree cuts) to create young forest stands.
- Use intermediate harvests (thinning and group selection cuts) to improve stand structure and within-stand species and age diversity.
- Restore stand conditions (without harvest) by planting long-lived tree species to enhance scenery and aquatic habitat.
- Restore stand conditions by conducting prescribed burns (or mechanical techniques) to reduce hazardous fuels and the future risk of wildfire.
- Construct, close, decommission, and maintain National Forest System (NFS) roads in order to create the minimum transportation system needed administratively by federal, State, county, and tribal agencies.
- Modify and maintain the minimum transportation system needed for private access.

On January 28, 2008 the Responsible Official, LaCroix District Ranger Nancy S. Larson, filed a Notice of Intent to prepare an Environmental Impact Statement (EIS) for the Border Project (Federal Register: Vol. 73, No. 18, pages 4776 – 4777). This EIS was prepared by an interdisciplinary team of resource specialists in order to inform the District Ranger (the Responsible Official) and the public about the potential effects of the Border Project proposed activities.

An important consideration in the preparation of this EIS was to reduce paperwork as specified in 40 CFR 1500.4. The objective was to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental effects of the proposals and how any adverse effects could be mitigated or avoided. Additional information is available at the LaCroix District office and upon request.

The entire project planning record files will be available at the LaCroix Ranger District Office in Cook, Minnesota, upon issuance of the Record of Decision. Other reference documents, such as the Superior National Forest Land and Resource Management Plan (Forest Plan) and associated Record of Decision and Final Environmental Impact Statement, are available at libraries around the region as well as at all Superior National Forest offices and on the Forest website.

1.2 Organization of the Environmental Impact Statement

This Environmental Impact Statement (EIS) is organized into a summary, four chapters, and appendices. The EIS follows the format established by the Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508) for implementing the National Environmental Policy Act (NEPA). The major sections of the document are outlined below:

Summary - Summarizes the EIS.

Chapter 1

Purpose and Need - Provides introductory material that explains the purpose of and need for the Proposed Action, provides background information about the Project area, and describes the significant issues used for alternative development and analysis.

Chapter 2

Alternatives - Describes the No-Action Alternative and the action alternatives (including the Proposed Action) that are analyzed in detail in Chapter 3. Summarizes and compares environmental effects that would result from implementation of the alternatives. Includes a brief description of alternatives considered and not analyzed in detail.

Chapter 3

Affected Environment and Environmental Effects - Describes the affected environment and the direct, indirect, and cumulative effects of the alternatives.

Chapter 4

Lists - provides the following information:

- **Contributors:** Lists the people who contributed to the development and preparation of this EIS.
- **Distribution List:** Lists the people who received copies of this EIS.
- **References:** Lists the references cited in this EIS.
- **Acronyms and Abbreviations:** Explains the abbreviated terms used in this EIS.
- **Glossary:** Defines the technical terms used in this EIS.
- **Index:** Lists the page numbers where key items are addressed.

Appendices

- **Appendix A:** Vegetation Treatment Definitions and Information
- **Appendix B:** Forest Plan Operational Standards and Guidelines
- **Appendix C:** Stand Treatments and Stand Specific Implementation Direction
- **Appendix D:** Monitoring Plan
- **Appendix G:** Past, Present, and Reasonably Foreseeable Future Actions
- **Appendix H:** Scoping Comments Summary
- **Appendix I:** Management Indicator Habitats 1 – 10 Forest-wide

The EIS does not include Appendices E and F because the information was incorporated into the main document.

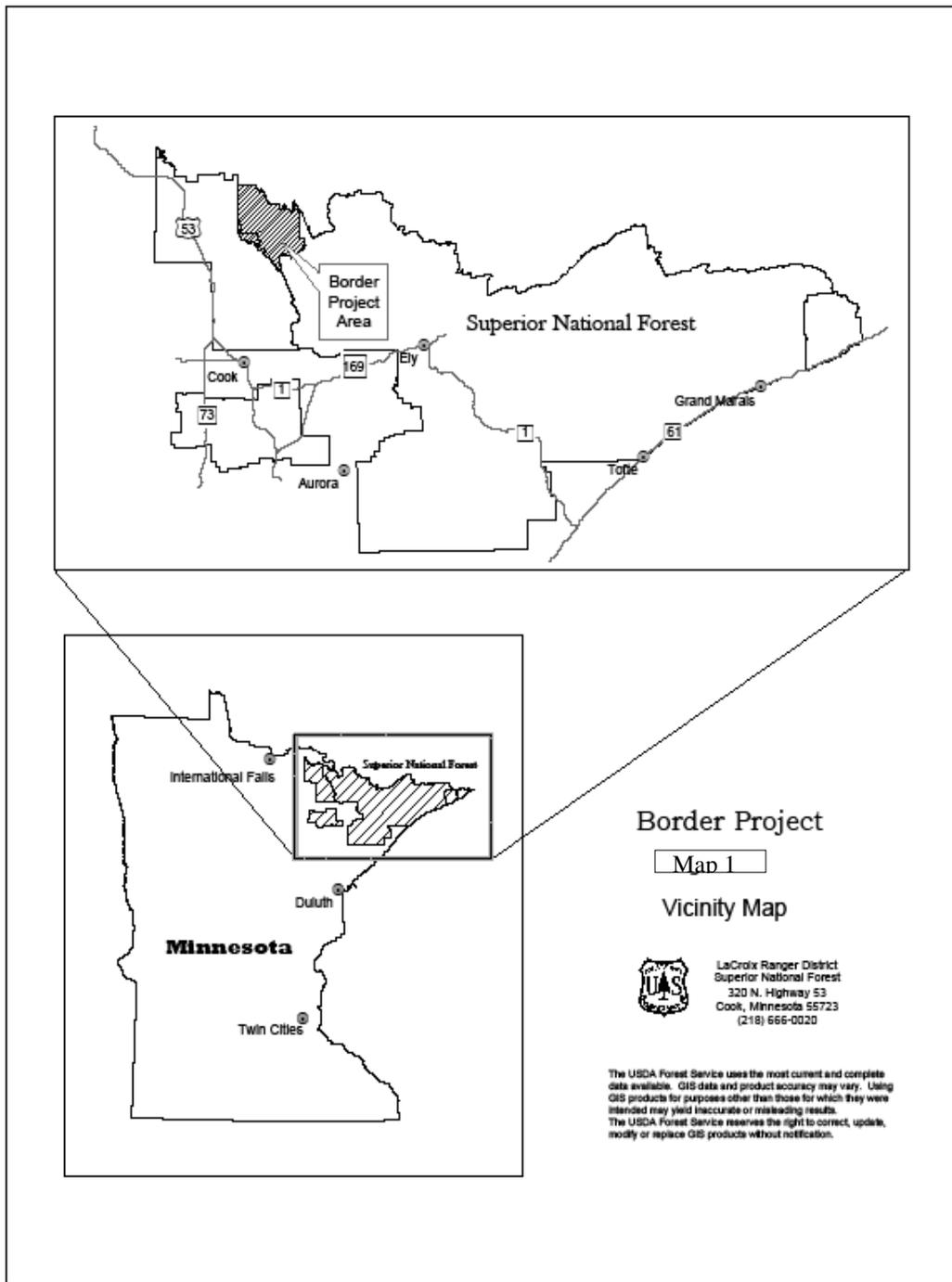
1.3 Project Location

The Border Project area, located in northern St. Louis County, encompasses about 93,700 acres of land with mixed ownership. Approximately 57,600 acres (61 percent) of the Project area includes National Forest System land located on the LaCroix Ranger District of the Superior National Forest. Activities would be located in portions of Townships 65 to 68 North, and Ranges 16 to 19 West, and are proposed on National Forest System land only. The Vicinity Map (Map 1) displays the general location of the Project area.

The Border Project area includes National Forest System land south of Voyageurs National Park (VNP), west of the Boundary Waters Canoe Area Wilderness (BWCAW), northwest of Echo Lake, and east of the National Forest proclamation boundary. Some of the larger lakes and rivers in or near the Project area are Crane Lake, Johnson Lake, Little Johnson Lake, Moose Lake, Long Lake, Echo Lake, and the Vermilion River. The Project area is outside the Boundary Waters Canoe Area Wilderness (BWCAW); actions are not proposed to take place within the BWCAW.



Figure 1-1. Typical forest stand in the Border Project area.



1.4 Purpose and Need for Action

In 2006 and early 2007 an interdisciplinary team of natural resource specialists compared the Border Project area existing resource conditions with Forest Plan objectives and desired conditions. The resource specialists documented their comparisons in “mid-level assessments”. Some existing vegetation conditions in the Border Project area do not meet Forest Plan desired conditions. Differences between the existing and desired conditions were used to develop the purpose and need for the Border Project.

In the mid-level assessments, resource specialists also made recommendations for possible management actions that would move the Border Project area toward Forest Plan desired conditions. The recommendations identified a need to address forest vegetation and the associated transportation system in the Border Project area. LaCroix District Ranger, Nancy S. Larson, chose to address forest vegetation management as the primary purpose and need.

Past land uses (including harvesting and exclusion of wildfire) influenced the vegetation composition and structure in the Border Project area. Since the early 1900’s fire suppression and a lack of forest vegetative management actions that address historical native communities have resulted in a high percentage of forest vegetation communities that are altered from their Range of Natural Variability (RNV). RNV is the range of forest composition and stand structures that would occur across the landscape under the influence of natural conditions and processes such as weather and fire.

The purpose of the Border Project is to maintain and promote native vegetation communities that are diverse, productive, healthy, and resilient by moving the vegetation component toward Landscape Ecosystem objectives described in the Superior National Forest Land and Resource Management Plan (O-VG-1, Forest Plan page 2-23,). There is a need to manage the amount, distribution, and characteristics of vegetation to be more representative of the historical Range of Natural Variability (D-VG-3, Forest Plan page 2-22). The associated transportation system (including gravel pits) needed for long-term vegetation management in the Border Project area is addressed. The transportation system needed in the long-term for non-federal and public access is also addressed.

The Border Project area can generally be described as having a large percentage of old stands, a large proportion of aspen stands, and few recently harvested areas. Jack pine, red pine, and white pine can be found within many stands. Over 55 percent of the forested stands in the Border Project area are at or older than the recommended age for harvest (S-TM-5, Forest Plan page 2-21) and the majority of these stands are aspen. Less than 5 percent of the stands in the Border Project area are in a young (age 0 to 9 year) age class.

While developing activities in the Proposed Action, the interdisciplinary team collaborated with and reviewed data from the State of Minnesota, St. Louis County, Tribal representatives, Voyageurs National Park, and Forest Capital Partners LLC. The primary reason for this collaboration was to design similar forest management and to coordinate other activities that would occur across ownership boundaries. The interdisciplinary team also proposed road management activities that would address the multiple resource needs and social concerns of land owners and forest visitors.

1.4.1 Purpose and Need for Managing Vegetation

The purpose of the Border Project is defined by the Landscape Ecosystem objectives of the Forest Plan. The need to address the Forest Plan vegetation desired conditions also includes opportunities that address other Forest Plan objectives in the Border Project area. The Proposed Action developed by the interdisciplinary team of resource specialists therefore addresses not only Forest Plan direction for Landscape Ecosystems but also Forest Plan direction for soils, wildlife habitat, vegetation spatial patterns, scenery, fuels reduction, aquatic habitat enhancement, and forest products.

1.4.1.1 Landscape Ecosystems

Landscape Ecosystems (LE) are ecological areas characterized by their dominant vegetation communities and patterns that are a product of local climate, glacial topography, dominant soils, and natural processes such as succession, fire, wind, insects, and disease (Forest Plan page 2-55). Vegetation composition, age class, tree species diversity, and Management Indicator Habitat objectives are specified for each Landscape Ecosystem on the Superior National Forest (Forest Plan pages 2-55 to 2-78). See Sections 1.6.2 and 3.7 of this EIS for information on the LEs in the Border Project area.

Management Indicator Habitats (MIH) represent the major biological communities on National Forests that are affected by management. Any given MIH is used by a wide variety of native species (all terrestrial and aquatic animals, plants, fungi, and other organisms that are part of the Superior NF's ecosystems) including threatened species, management indicator species, many sensitive species, and other species of management concerns. Use of MIH provides an efficient means of monitoring and evaluating the effects of actions on biotic resources including specific species, communities, habitats, and interrelationships among organisms. Managing for MIH objectives is a key component of developing the full diversity of desired wildlife habitats. MIH are described in Appendix C to the Forest Plan.

Some current vegetation conditions in the Border Project area do not meet the Forest Plan desired conditions for species composition, age class, tree species diversity, and MIH for Landscape Ecosystems. Differences between existing and desired conditions were used to develop the Border Project purpose and need. The interdisciplinary team of resource specialists addressed the following opportunities in developing the Proposed Action.

Landscape Ecosystem Objectives:

Dry mesic Red and White Pine Landscape Ecosystem

- Decrease the amount of aspen (MIH 4).
- Increase the amount of spruce-fir (MIH 6).
- Increase the amount of red pine and white pine (MIH 7).
- Increase acres in the 0-9 year age class and decrease acres in the 50-99 year age class.

Jack Pine-Black Spruce Landscape Ecosystem

- Decrease the amount of aspen (MIH 4).
- Increase the amount of jack pine (MIH 8).
- Increase acres in the 0-9 year age class and decrease acres in the 80-109 year and 110-179 year age classes.

Lowland Conifer within the Dry mesic Red and White Pine and Jack Pine-Black Spruce Landscape Ecosystems

- Increase acres in the 0-9 year age class and decrease acres in the 80-159 year and 160 year plus age classes.
- Maintain and/or improve the condition of lowland black spruce forest types to increase forest health (MIH 9).

Tree Species Diversity

- Maintain and increase, where possible, tree species diversity (based on total percentage of trees, not total acres of forest type).

Soils

- Favor long-lived and/or conifer tree species on nutrient sensitive soils (D-WS-3, O-WS-1, O-WS-9, O-WS-10, Forest Plan page 2-10 to 2-12).

Wildlife – game species habitat

- Maintain habitat for game species (D-WL-2, D-WL-3g, Forest Plan pages 2-27 to 2-28 and O-WL-39, Forest Plan page 2-36):
 - Create young habitat within lowland brush areas to enhance moose and woodcock habitat along the Echo River.
 - Enhance uncommon oak habitats found southwest of Crane Lake (red oak) and along the Vermilion River (burr oak) to improve habitat diversity and mast production (fruits and nuts from trees) for wildlife.

Public Information

- Provide forest management information at public areas with high visitation, such as the Vermilion Fall Recreation Area, to increase public understanding of forest processes and associated management. (O-SE-1, Forest Plan page 2-37)

1.4.1.2 Vegetation Spatial Patterns

According to the Forest Plan, the desired condition of vegetation spatial landscape patterns is the restoration of diversity in size, shape, and distribution of forest patches. (D-VG-7b and c, Forest Plan page 2-22) A forest patch is defined as a group of forest stands of similar aged forests that may be made up of different forest cover types. Restoring diversity of forest patches would gradually re-establish conditions that more closely emulate landscape scale patterns which would result from natural disturbances and other ecological processes.

The majority of the Border Project is in Spatial Zone 3 (Forest Plan page 2-25). Forest Plan direction (O-VG-24, Forest Plan page 2-27) for Spatial Zone 3 is: “strive to minimize the decrease in acres and numbers of patches of mature or older upland forest in patches greater than 300 acres. Age and composition objectives will be considered the primary drivers of forest condition in this zone. When determining which large upland mature patches will be retained, take into consideration the contribution of BWCAW acres and other unmanaged lands within the same ecological setting and proximity.” In the Border Project area current spatial landscape patterns (primarily the size of young patches and the size of mature/old patches) are smaller than what would result from natural disturbances and other ecological processes. In developing the Proposed Action, the interdisciplinary team addressed the following points related to spatial patterns:

- Create larger patches of young forest stands relative to the patches that currently exist; these patches would then provide for future mature/old patches (O-VG-21, Forest Plan page 2-26: “Increase average size of temporary forest openings. Reduce amount of forest edge created through vegetation management activities, while still retaining a range of small patches and edge habitat.”)
- Strive to minimize reducing the number of patches greater than 300 acres in upland mature forest in Spatial Zone 3 within the Border Project area (O-VG-24, Forest Plan page 2-27).

1.4.1.3 Scenery Enhancement

In high Scenic Integrity Objective (SIO) areas (such as along the Echo River, Vermilion Falls Road, Vermilion Falls Recreation Area, and Johnson Lake Road) the desired condition is a landscape “displaying little or no evidence of management activities” (D-SC-1, Forest Plan page 2-45). “Areas that do not currently meet SIO’s will be considered for scenic enhancement and rehabilitation” (O-SC-1, Forest Plan page 2-45).

In the vast majority of the Border Project area the existing conditions meet the desired scenic integrity conditions. However, there are some locations in high SIO areas where management activities are visible from the roads. For the Border Project there may be opportunities in specific locations where vegetation management such as thinning, under planting, harvesting, or any combination could do the following, in concert with proposed vegetation management units:

- Create or enhance views, or help accelerate the process of developing views of larger trees in the landscape along scenic corridors.

1.4.1.4 Fuels Reduction

There is a need to restore forest health and reduce hazardous fuel levels in forest communities by changing the vegetative condition through vegetative management. The Forest Plan (O-ID-3, page 2-19) states “Treat areas of highest fire risk based on Fire Regime and Condition Class to minimize effects of unwanted wildland fire”. Balsam fir, a large component in the understory of many stands, would increase the occurrence of active crown fire which would decrease firefighter effectiveness to suppress fires. High intensity fires would put firefighters’ safety at an added risk versus suppressing a surface fire. High intensity crown fires could also increase the chance of losing ecosystem components such as species composition, stand age, fuel location, and fuel composition. The interdisciplinary team looked at opportunities near the Town of Crane Lake, East Bay of Crane Lake, Vermilion Falls Recreation Area, and the south portion of Johnson Lake to:

- Reduce the risk of wildfire to protect life and property.
- Create landscape conditions that are similar to ecological conditions associated with the historical natural fire regime.

1.4.1.5 Aquatic Habitat Enhancement

Forest Plan direction generally encourages favoring long-lived tree species such as white pine and red pine to benefit both lake and stream riparian and aquatic habitat conditions (Riparian direction in Forest Plan page 2-8, D-WS-10, Forest Plan page 2-10, O-WS-3, 4, 5, Forest Plan page 2-12). The interdisciplinary team reviewed riparian habitat surveys that indicated there are some opportunities to:

- Enhance aquatic conditions in the Border Project area by promoting recruitment, growth and longevity of long-lived trees species by controlling understory vegetation and planting pine, white spruce or other desirable species.

1.4.1.6 Forest Products

Forest Plan direction includes providing commodity and non-commodity resources in an environmentally sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities (D-TM-1 and O-TM-1, Forest Plan page 2-20). Vegetation management in the Border Area has the opportunity to:

- Provide wood products (including biomass) for businesses and mills in northern Minnesota.

1.4.2 Purpose and Need for Managing the Transportation System

The current road system, portage trails, and recreation access parking do not fully meet current or future administrative and public access needs. In some locations, the existing roads/portage trails are not adequate to meet access needs in areas where management activities are proposed or recreation use occurs; and some roads/portages have safety and/or have resource concerns. In other locations, there is an excess of roads and some of the roads may not be needed for many years. Existing gates need to be reviewed to determine if their past purposes for installation are still valid. Access to nonfederal land for management interests or uses also needs to be addressed. The number of gravel pits for the road system should match the road needs and there may be a lack of gravel to meet long-term needs west of the Vermilion River. There is a need to ensure the minimum National Forest Road System and associated gravel pits are maintained to meet land management objectives (D-TS-1 and O-TS-1, Forest Plan pages 2-47 and 2-48).

The transportation system design needs to consider environmental, social, and health concerns (D-TS-1, D-TS-2, and O-TS-1, Forest Plan pages 2-47 and 2-48). Road densities relating to wildlife and stream crossings relating to aquatic conditions are some of the specific environmental concerns the interdisciplinary team addressed in developing the Proposed Action. Some of the social concerns addressed include public and tribal access using existing roads, proposed new roads, and historically gated roads. The interdisciplinary team integrated the following opportunities and direction from the Forest Plan into the Border Project's Proposed Action to address the transportation system needs.

1.4.2.2 TES: lynx

- Reduce road density of classified roads in the Border Project area (D-WL-5, O-WL-7, O-WL-11, and O-WL-13, Forest Plan pages 2-28 and 2-29).

1.4.2.1 Road network

- Provide the minimum miles of existing or new classified roads that may be needed for long-term vegetation management purposes (D-TS-2, D-TS-3 and D-TS-4, Forest Plan page 2-47).
- Respond to State, county, and other land owners’ needs for construction or use of roads on National Forest System land (D-TS-5, Forest Plan page 2-47).
- Determine the gravel pits to maintain and if additional gravel resources are needed (D-MN-1, Forest Plan page 2-9).

1.4.2.3 Recreation

- Increase and improve parking for the Johnson Lake boat access site. In addition, provide parking for ATVs along the Johnson Lake access trail (D-RWA-1 and G-RWA-3, Forest Plan page 2-44).
- Reconstruct sections of the Johnson Lake ATV portage trail to address resource and maintenance concerns (D-RTL-1 and D-RTL-2, Forest Plan page 2-43).

1.4.2.4 Water Quality and Watershed Health

- Improve stream crossings on roads associated with the Proposed Action to enhance aquatic conditions (D-WS-8, O-WS-2, Forest Plan pages 2-11 and 2-12).

1.4.2.5 Tribal

- To address motorized access for hunting and gathering activities, keep some roads and turnouts (for parking) open in areas such as east of the Vermilion River within past timber sale areas and/or behind historically gated roads (D-TR-2, Forest Plan page 2-37).

1.4.3 Purpose and Need as it relates to Forest Plan Management Area Direction

The Forest Plan “zones” the Superior National Forest outside the Boundary Waters Canoe Area Wilderness into ten management areas (MAs). Each MA has its own management desired conditions, objectives, standards, and guidelines, which were outlined in Chapter 3 of the Forest Plan. Sections 1.6.3 and 3.10 of this EIS describe the Forest Plan Management Areas within the Border Project area. Many of the Management Areas within the Project area emphasize a large tree and old forest character. Many forest stands within these Management Areas are comprised of relatively short-lived tree species and have reached maturity and are not transitioning to long-lived tree species as desired. The interdisciplinary team integrated the Management Area direction into the Proposed Action by including activities that would increase species diversity and long-lived species.

1.5 Modified Proposed Action

The Border Project’s Responsible Official, District Ranger Nancy S. Larson, distributed a scoping package on January 24, 2008 to inform the public of the Border Project and invite them to submit comments. The scoping package included a “Proposed Action” which outlined the management activities the interdisciplinary team had determined would move the Project area towards the desired future conditions described in the Forest Plan.

In November and December 2007, the interdisciplinary team of resources specialists developed the Proposed Action using the most up-to-date stand and road data available.

As described previously, proposals were based on opportunities identified in mid-level assessment reports. The distribution of forest patches (young and old, large and small) was a primary consideration during review of stand opportunities. Resource specialists involved in recreation, scenery, aquatics, riparian, soils, wildlife, fuels, and forestry worked together to develop the optimum prescription for stands.

The interdisciplinary team not only used their technical expertise and knowledge in developing the Proposed Action, they also made use of Forest and District monitoring information. Monitoring and evaluation have shown that past projects with the kinds of activities proposed can effectively meet the Border Project's purpose and need. Examples include: Superior National Forest Plan Monitoring and Evaluation Reports, 2002 LaCroix Ranger District Monitoring Report, and project file site-specific monitoring such as for planting and reforestation success.

The interdisciplinary team modified the Proposed Action based on review of comments received from public scoping, further evaluation of the existing condition, and analysis using Forest Plan direction. The intent of the Proposed Action remained intact with the modifications. The primary modifications are:

1. Minor corrections and edits to the road and stand inventory maps and data.
2. Inclusion of stands with specific wildlife habitat treatments such as lowland brush shearing for moose habitat and oak enhancement for species diversity.
3. Identification of one gravel pit with potential for future development and one pit that would be rehabilitated.
4. Identification of one possible reciprocal easement for mutual access needs (FR 484), identification of one special use access permit for private road access, and one more temporary special use road authorization for St. Louis County land management access.
5. Relocation of a gate on road FR 487A (to a location just past the last private entity) and a gate on road FR 487AB (to the beginning of FR 487 ABA) that accesses the Goldmine State Migratory Waterfowl Refuge area; thereby reducing the number of special use road access permits needed. However, one special use access permit would still be needed for a St. Louis County lease holder.
6. Elimination of the fuels treatments by East Bay Crane Lake based on further field work and addition of fuels treatments near private land based on a public comment.
7. Reduction of total harvest acres (that would create young stands) in order to meet the Forest Plan lynx standard S-WL-1 (Forest Plan page 2-30).

1.5.1 Vegetation Management

The Modified Proposed Action for vegetation management is summarized in Tables 1.1 and 1.2 and is displayed on Map 2, Modified Proposed Action. Acres, miles, and other measures provided for the Modified Proposed Action are estimates. Table 1.2 provides an overview of how the Modified Proposed Action addresses the purpose and need. Some acres are "double-counted" because, for example, the vegetation acres treated may not only increase aspen, the same acres may also address the fuels considerations. Table 1.1

summarizes the primary treatments based on total acres in the three treatment categories described below:

1. ***Creating young forest stands with harvest:*** Treatments that create young forest stands with harvests such as clearcut with reserves and shelterwood cuts would create young forest in the 0-9 year age class. The majority of existing trees would be removed; however, some trees would not be cut and would be left standing for wildlife, aquatic, scenery, and other resource purposes. Such treatments are generally proposed adjacent to recent past harvests in order to create large patches of similar age classes.
2. ***Improving stand conditions with harvest:*** Treatments such as group selection cut and thinning would improve stand conditions and maintain the existing age class of the stand.

Both of these treatments, creating young forest and improving stand conditions, would likely result in commercial wood products or biomass.

3. ***Restoring stand conditions without harvest:*** Restoration treatments without harvest would create conditions for either the existing trees, or trees proposed for planting, to grow under improved conditions based on the restoration activity. The restoration activity may include removing less desirable species, creating ground disturbance to establish a seedbed in order to enhance natural regeneration of long-lived tree species, creating enhanced conditions for existing desired trees to grow, and planting and/or seeding desired trees species to offset the on-going natural succession of older stands to less desirable young spruce-fir stands. These treatments would generally not result in a commercial wood product but may have potential for resulting in woody biomass depending on market conditions.

One of the public comments requested further definition of “treatment”. Treatment refers to the kind of activity planned such as harvesting with thinning or planting with conifers. Appendix A contains definitions for all proposed vegetation treatments. Secondary treatments such as preparing sites for reforestation along with the reforestation activities (i.e. planting, seeding, and natural) are also defined in Appendix A. The sequence of proposed treatments for specific stands is shown in Appendix C.

A key part of the preliminary prescription is whether or not the stand age would change. Nuances of the prescription could change during implementation based on site-specific resource conditions. For example, a clearcut with reserves treatment could change to a seed tree cut if further field reviews indicate that is the preferred treatment because the stand may have numerous young pine that could be left standing to increase conifer regeneration. Secondary treatments may also change if they still meet the intent.

For example, site preparation may be accomplished in a mechanical manner (crushing) or with prescribed fire.

Depending on the content of comments on this Draft EIS, the interdisciplinary team may recommend alternate stands for treatments in modified alternatives. All stands recommended for treatment would fit within the context of the Border Project’s purpose and need, analysis, Forest Plan direction, and agency regulations.

Management actions are proposed within the Vermilion Falls Recreation Area to enhance the recreational visitor’s experience. These actions include hazardous fuels reduction and enhancements to the scenery, vegetation composition, and vegetation structure. Following these actions, funding would be requested (in the Knutsen-Vandenberg plan associated with timber sales) to design, construct, and install interpretative signs near the parking lot and along the hiking trail in the Recreation Area. The interpretative signs would explain the renewable resource aspect of the area and past management activities, as well as provide historical facts about the Vermilion River area.

Table 1.1 Modified Proposed Action: Vegetation Management Primary Treatments	
Proposed Action Primary Treatment Category	Acres
Creating young stands with harvest (<i>such as clearcut with reserves</i>)	8,236
Improving stand conditions with harvest (<i>such as thinning</i>)	2,815
Restoring stand conditions without harvest (<i>such as diversity planting</i>)	2,082
Total Acres Treated	13,133



Figure 1-2: Forest management interpretive signs are proposed in the Vermilion Falls Recreation area.

Table 1.2 Modified Proposed Action: Vegetation Management, Purpose and Need, and Results		
Proposed Action	Purpose and Need Section	Results
Landscape Ecosystem Objectives/MIH/Soils/Wildlife		
<i>Dry mesic Red and White Pine Landscape Ecosystem</i>		
Decrease the amount of aspen (acres)	1.4.1.1	1,856
Increase the amount of spruce-fir (acres)	1.4.1.1	1,037
Increase the amount of red pine and white pine (acres)	1.4.1.1	1,171
Increase acres in the 0-9 age class (acres)	1.4.1.1	7,239
<i>Jack Pine-Black Spruce Landscape Ecosystem</i>		
Decrease the amount of aspen (acres)	1.4.1.1	278
Increase the amount of jack pine (acres)	1.4.1.1	121
Increase acres in the 0-9 age class (acres)	1.4.1.1	838
<i>Lowland Conifer</i>		
Increase acres in the 0-9 age class (acres)	1.4.1.1	63
Lowland brush habitat treatment (acres)	1.4.1.2	125
Oak enhancement (acres)	1.4.1.2	332
Vegetation Spatial Patterns		
Number of upland mature patches \geq 300 acres in 2014	1.4.1.2	11 patches
Average size of young upland patches in 2014 (acres)	1.4.1.2	51 acres
Scenery Enhancement		
Manage scenic areas for long-lived species (acres)	1.4.1.3	503
Fuels Reduction		
Treat fuels to reduce risk of unwanted wildfire	1.4.1.4	701
Aquatic Habitat Enhancement		
Enhance riparian habitat adjacent to streams and lakes.	1.4.1.5	671
Forest Products		
Estimated volume in mmbf: million board feet (million board feet: the amount of wood contained in an unfinished board 1 inch thick, 12 inches long and 12 inches wide)	1.4.1.6	54

1.5.2 Transportation System

The Transportation System Modified Proposed Action is summarized in Table 1.3 and is displayed on the Modified Proposed Action Map 2. Table 1.3 provides an overview of how the Proposed Action addresses the Border Project’s purpose and need.

About 2.2 miles of new National Forest System road are proposed. The new system roads proposed for construction would be low maintenance level roads that would not be maintained for public motorized use. Approximately 9.7 miles of road would be decommissioned because the roads are not needed for public or administrative use in the long-term. The result is an estimated reduction of 7.5 miles of National Forest System road in the project area.

Approximately 44 miles of temporary roads would also be needed for accessing stands to carry out forest vegetation management activities. Temporary roads would only be used

for short periods of time and are not intended to become part of the forest transportation system. They would be closed after all primary and secondary management activities have been completed. The approximate miles of temporary road are shown in Table 1.3.

Ten temporary special use road authorizations would be issued to non-federal landowners such as the State of Minnesota, Division of Forestry, and St. Louis County to access land for forest management. One long-term permit would be issued to a private landowner to access his property. The approximate special use road miles are shown in Table 1.3 and the roads are shown on the Modified Proposed Action Map 2. Finally, one possible reciprocal easement for mutual access needs (FR 484) would be negotiated.

The Project area includes 8 gates on NFS roads that are maintained primarily to protect the road surfaces (reducing maintenance costs) and to protect waterfowl impoundments. In addition, 3 private gates and 2 gates associated with special use road permits exist in the Project area. The Modified Proposed Action includes moving two of the gates on FR 487 A in the vicinity of the Gold Mine State Migratory Waterfowl Refuge. Moving the gates would result in the need to issue only one special use access permit to a private individual who has a St. Louis County lease.

The existing pits are not considered adequate for long-term management of the transportation system. Eleven of the 12 gravel pits that exist in the Project area would be maintained and 3 of those existing pits have potential for expansion. One of the existing pits is proposed for rehabilitation. One new pit is proposed for development within the Project area. The existing and proposed new gravel pit locations are shown on Modified Proposed Action Map 2.

Parking capacity would be increased at the Johnson Lake access. The Johnson Lake parking area has an estimated parking capacity for 18 vehicles/boat trailers. Forest Plan direction allows a maximum of 41 parking spaces for Johnson Lake based on the size of the lake (G-RWA-3, Forest Plan page 2-44). The Johnson Lake parking space capacity would be increased from 18 spaces to 30 spaces by expanding the existing lot. In addition, a parking area for approximately 10 to 15 ATVs would be created about halfway down the portage.

Trail reconstruction and maintenance to prevent resource damage and improve trail conditions would be completed on the Johnson Lake ATV access trail. Barriers such as bollards would be placed at the portage entrance in order to restrict ATV/boat trailer use to a size the portage could withstand. In order to meet Semi-primitive Motorized MA direction, the portage will not be maintained for large boats and motors. The portage is intended for a typical 16 foot boat on a trailer with wheels tucked under the boat. Administratively imposed regulations would be implemented for resource protection.

Five stream crossings within the Project area would be improved to assure soil stability, unimpeded flow, sediment transport, and/or fish passage. The locations of stream crossings that have been identified for improvement activities are shown on Modified Proposed Action Map 2.

Table 1.4 provides a more detailed summary of the National Forest System roads in the Project area. Each National Forest System road is maintained at a level that meets the planned purpose and use of the road. The intended level of maintenance for a road is the Objective Maintenance Level (OML). OMLs are described using numbers 1 through 5, indicating increasing levels of use and maintenance. OML 1 roads have the lowest level of maintenance and are closed to passenger car vehicles. OML 5 roads have the highest

level of maintenance and may be paved. Typically OML 3, 4, and 5 roads are all-season, constructed for year-round use. OML 1 and 2 roads can either be seasonal (constructed for dry weather use) or winter (without surfacing and used only during frozen ground conditions). Refer to the Forest Plan (pages 2-43, 2-44, 2-49, and 2-50) for information on public use of roads.

Unclassified roads are roads that currently have some motorized vehicle use, but have not been designated as a National Forest System road. Decisions on unclassified roads will be made in the Forest-wide Travel Management Project. The Forest-wide Travel Management Project applies to the entire Superior National Forest and includes the Border Project area. As a result of the Forest-wide Travel Management Project, unclassified roads would either be added to the road or trail system, or be decommissioned. Decommissioning roads involves stabilizing and restoring unneeded roads to a more natural condition. Information on the Forest-wide Travel Management Project can be found on the Forest web site (www.fs.fed.us/r9/superior) under Projects and Plans. As noted, unclassified roads were not planned to be included in the Border Project. However, one unclassified road (0.1 mile) that was inadvertently omitted from the Forest-wide Travel Management Project will be included in the Border Project to be an OML 1 road.

The Border Project interdisciplinary team considered the Forest-wide Travel Management proposals in design of the Proposed Action. Border Project analyses use the assumption that the Forest-wide Travel Management decisions would be implemented. If a Forest-wide Travel Management decision is not final when the Border Project is to be implemented, the existing unclassified roads with decisions from Travel Management and needed for Border would be used temporarily for the purpose associated with the Border project. Once those purposes for the Border project are met, those segments would continue to be addressed through the Forest-wide Travel Management Project. If county or State access is needed using unclassified roads, those segments would also be used temporarily and left in their existing conditions until the Travel Management decision is final. The unclassified roads planned for decommissioning in Travel Management are not shown on the maps because these roads were confirmed not to be needed for Border vegetation or any agency vegetation management access at this time.

Public and Tribal concerns related to hunting and gathering access would be addressed in the following ways:

1. Table 1. 4 shows that motorized access would essentially be maintained because the seasonal road miles open to motorized use would not decrease. The roads proposed for decommissioning are winter or were on private land (0.3 miles) and need to be taken off the National Forest System road inventory. In addition, by moving the gates on FR 487 A and FR 487 AB that access the Gold Mine State Migratory Waterfowl Refuge, approximately four miles of road would be available for all public motorized use.
2. When roads are decommissioned, if possible, a parking turnout would be left in place where the closed road intersects an open road. The road would be made impassable to motorized vehicles but available for foot travel.
3. The Forest Service would provide Tribal representatives with the names of companies who are successful bidder of timber sale contracts. Tribal representatives, and other publics that may request the contractor's contact

information, would be able to work with the contractors to determine when collection of forest products such as birch bark and balsam boughs could occur.

Proposed Action	Purpose and Need Section	Results
New system OML 1 winter roads	1.5.2.1	1.6 miles
New system OML 1 all-season roads (includes the 0.1 miles of the unclassified existing road)	1.4.2.1	0.6 miles
Road to be decommissioned (predominantly winter roads)	1.4.2.1, 1.4.2.2	9.7 miles
Temporary road estimate	1.4.2.1	44 miles
Special use road authorizations (11 permits, 12 roads)	1.4.2.1	1.9 miles
Existing gravel pits to maintain (3 potential expansions)	1.4.2.1	11
Proposed gravel pit	1.4.2.1	1
Gravel pit to rehabilitate	1.4.2.1	1
Parking Area /portage improvement projects	1.4.2.3	1
Stream crossing improvements	1.4.2.4	5
Relocate gates (issue special use permit on gated road)	1.4.2.5	2

Road Type	Existing Miles	Proposed Miles	Decommissioned Miles*	Proposed Action Resulting Miles
OML 1 winter	118.4	1.6	-9.4	110.6
OML 1 winter roads (Travel Management EA)	2.7	0	0	2.7
OML 1 all-season	12.7	0.6	0	13.3
OML 1 all-season roads (Travel Management EA)	3.6	0	0	3.6
OML 2	33.2	0	0	33.2
OML 3, 4, 5, and other ownership higher maintenance level roads	57.2	0	-0.3	56.9
Total	227.8	2.2	-9.7	220.3
*The Travel Management EA also includes decommissioning 5.8 miles of existing drivable road in the Project area. These roads are not on the maps or included in this table because they are not needed for the Border project proposals.				

1.5.3 Operational Standards and Guidelines and Monitoring

Forest Plan operational standards and guidelines that would be implemented with the Modified Proposed Action are summarized in Appendix B. This appendix includes the standards and guidelines that are routinely employed during harvesting, road work, and prescribed burning operations. Personnel adhere to these practices while designing the treatment boundaries, administering timber sale contracts, conducting prescribed burns, and performing reforestation activities. Site-specific operational standards and guidelines are located in Appendix C.

In addition to identifying the appropriate standards and guidelines, the interdisciplinary team developed monitoring activities (Appendix D). The monitoring activities would be used to assess whether or not management activities were implemented as planned. In addition to resource specific monitoring such as for timber sale or reforestation contracts, project interdisciplinary teams review entire projects periodically to compare how the project as a whole meets the overall direction provided in the analysis documents. Finally, on-going Forest Plan monitoring would also be used to determine the effectiveness of standards and guidelines.

1.5.4 Decisions to Be Made

Nancy S. Larson, LaCroix District Ranger, is the Responsible Official. Decisions to be made include:

- What actions, if any, would be approved to address the purpose and need
- Where those actions would take place.
- What mitigation measures, if any, would be used.

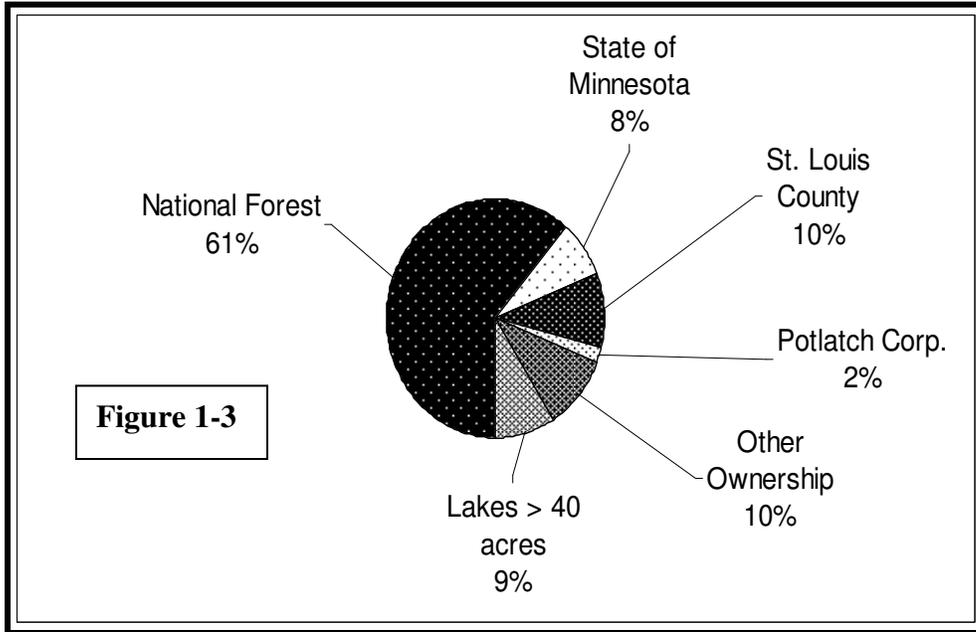
A decision is expected in 2009. If an action alternative is selected, implementation could begin in 2010. Primary treatments would start within five years of the decision and could take several years to complete. If no action is selected, the proposed activities would not occur under this analysis.

1.6 Project Area Description

See Map 1 on page 4 for the location of the Project area.

1.6.1 Land Ownership

Figure 1-3 shows the percentage of land ownership in the Project area. The Project area includes about 93,700 total acres covering multiple landowners. The Superior National Forest manages approximately 61 percent of the land located within the Project area.



1.6.2 Landscape Ecosystems

The Forest Plan uses landscape ecosystems to outline management objectives for forest vegetation composition, age class, tree species diversity, and management indicator habitats on NFS land. Landscape ecosystems are large ecological areas derived from a combination of individual or groupings of native plant communities, ecological systems, and terrestrial ecological unit inventories. Each landscape ecosystem is characterized by its own dominant vegetation communities and patterns. These characteristics are products of local climate, glacial topography, dominant soils, and natural processes such as fire, wind, insects, and disease. Management in each landscape ecosystem would maintain or restore the Forest to conditions more representative of native plant communities and landscape scale patterns. These communities and patterns emulate natural disturbance and other ecological processes.

Table 1.5 shows the acres of each landscape ecosystem in the Project area and the percentage forest-wide of the Project area in each landscape ecosystem. Map 4 depicts the Landscape Ecosystem boundaries in the Project area. Section 3.7 provides analysis of how the proposed activities address Forest direction for Landscape Ecosystems. Mesic Red and White Pine, Mesic and Birch/Aspen/Spruce-Fir, and Lowland Hardwood LEs are not analyzed in detail in this EIS because they occupy such a small percentage of land in the Project area (around 1 percent each). The Lowland Non-Forest, Upland Non-forest, and Cedar are not in a separate LE and do not have detailed Forest Plan objectives and so are also not analyzed in detail in this EIS.

Table 1.5. Landscape Ecosystems on National Forest System Land in the Project Area (Acres)			
Landscape Ecosystem (LE)	Acres in Border Area	% of Border Area	% of LE (Forest-wide) in Project Area
Jack Pine/Black Spruce LE	6,200	11	2
Dry-mesic Red and White Pine LE	38,300	67	21
Mesic Red and White Pine LE	400	<1	<1
Mesic Birch/Aspen/Spruce-Fir LE	50	<1	<1
Lowland Conifer A within Jack Pine/Black Spruce LE and Dry-mesic Red and White Pine LE	2,600	5	3
Lowland Hardwood, Lowland Non-Forest, Upland Non-forest and Cedar not in a separate LE	10,050	17	n/a
Border Project Area NFS Acres	57,600	100	n/a

1.6.3 Management Areas

The Forest Plan delineates the Superior National Forest outside the BWCAW into ten management areas (MAs). Chapter 3 of the Forest Plan includes the desired conditions, objectives, standards, and guidelines for each MA. The Border Project area includes five of these MAs. The emphasis for each MA in the Project area is summarized below.

General Forest MA emphasizes land and resource conditions that provide a wide variety of goods, uses, and services. These include wood products, other commercial products, scenic quality, developed and dispersed recreation opportunities, and habitat for a diversity of terrestrial and aquatic wildlife and fish. Numerous roads open to public travel provide access to resources and roaded recreation opportunities. Non-motorized recreation opportunities also occur. Compared to other Forest Plan management areas, the General Forest MA will have the most amount of young-forest and the largest sized timber harvest units. (Forest Plan, pages 3-5 to 3-8)

General Forest - Longer Rotation MA emphasizes land and resource conditions that provide a wide variety of goods, uses, and services. These include wood products, other commercial products, scenic quality, developed and dispersed recreation opportunities, and habitat for a diversity of terrestrial and aquatic wildlife and fish species. Numerous roads that are open to public travel provide access to resources and roaded recreation opportunities. Non-motorized recreation opportunities also occur. (Forest Plan, p. 3-9-12)

Recreation Use in a Scenic Landscape MA emphasizes land and resource conditions that provide a scenic landscape for recreational activities in natural-looking surroundings and also provides wildlife habitat to enhance recreational wildlife watching opportunities. (Forest Plan, pages 3-13 to 3-15)

Semi-primitive Motorized Recreation MA emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is allowed. Most recreation use occurs on lakes, trails, portages, and low standard roads. Interaction among recreational users is low. Forest management enhances recreation and scenic objectives and may occasionally be noticeable to visitors. (Forest Plan, pages 3-24 to 3-26)

Eligible Wild, Scenic, and Recreational River MA emphasizes land and resource conditions that provide for interim protection of river corridors identified as wild, scenic, or recreational. Under the interim protection, management activities in the river corridors will protect the river’s free-flowing condition, outstandingly remarkable values, and classification. The Vermilion River is classified a recreational river on the south boundary and a scenic river on the west boundary of the Project area. (Forest Plan, pages 3-16 to 3-23)

Table 1.6 shows the acres and percent of each Management Area in the Project area on all National Forest System land. This provides an indication of the Management Area allocation. Map 5 depicts the Management Area boundaries. The map shows a Management Area for all land because it is easier to see the differences. However, it is important to note that management activities are not proposed on non-National Forest System land.

Table 1.6 Management Areas (MA) within the Border Project Area		
Management Area	MA Acres in Border Project Area	Percent of Border Project Area
General Forest MA	26,500	46
General Forest - Longer Rotation MA	15,600	27
Recreation Use in a Scenic Landscape MA	6,300	11
Semi-primitive Motorized Recreation MA	5,700	10
Eligible Wild, Scenic, and Recreational Rivers MA	3,500	6
Border Project Area NFS Acres	57,600	100

1.7 Scoping and Public Involvement

The interdisciplinary team conducted scoping and public involvement activities to inform the public and to determine the significant issues associated with the Proposed Action.

The interdisciplinary team developed a Scoping Package that included information on the Project area, a preliminary purpose and need, a Proposed Action, instructions for submitting comments, and a map displaying the proposed activities. The interdisciplinary team identified about 925 individuals, landowners, and agencies considered to have potential interest in the Border Project based on their most current response to be on Forest mailing lists, or because they lived or had business interests within or adjacent to the Project area boundaries. The Scoping Package was mailed to the public on January 24, 2008.

The interdisciplinary team utilized several additional methods to inform the public about the Border Project. A Notice of Intent to prepare an EIS was published in the Federal Register on January 28, 2008 (Federal Register: Vol. 73, No. 18, pages 4776 – 4777). A news release was published in local newspapers the week of January 28, 2008. A legal notice was published in the Mesabi Daily News on February 2, 2008. The Scoping Package along with additional information was posted on the Forest web site on January 31, 2008.

The scoping period ended on March 10, 2008 and the District Ranger received approximately 65 comments on the Proposed Action. The comments were analyzed and

used to develop significant issues. Significant issues are described below. In addition, some commenters asked questions about the Border Project or other resource management. Appendix H contains the summary of public comments with Forest Service responses.

District personnel met with representatives of the Little Johnson Lake Association on May 16, 2008 to discuss the parking area expansion and ATV parking proposals. After walking the parking lot and portage trail, the representatives agreed with the concepts of the proposals.

This Draft EIS will be mailed to everyone who submitted comments or asked to remain on the mailing list and to others who have requested copies of EIS documents. The 45-day comment period will begin when the Notice of Availability is published in the Federal Register. Comments submitted during the official comment period will be analyzed and incorporated into the EIS if needed. Response to comments on this Draft EIS will be included with the Final EIS. The decision maker will review public comments prior to making a decision. The decision will be published in a Record of Decision.

1.8 Collaboration

1.8.1 Tribal

The District Ranger and IDT members met with Tribal representatives (1854 Authority and Bois Forte) during the mid-level analysis (5/18/07), prior to completing the Proposed Action (12/19/07), and during alternative development (5/22/08). The following key points were summarized during the May 22, 2008 meeting:

1. There would not be a reduction in motorized access in the area because road decommissioning is proposed on winter roads and on a segment of private road that needs to be removed from the National Forest System road inventory.
2. Moving the gates on Forest Roads 487A and 487AB provides equal access to public motorized use while still protecting the Goldmine State Migratory Waterfowl Refuge and would provide nearly 4 miles of additional public motorized road access
3. When roads (including temporary roads) are closed, a parking area would be left when possible. The road would be made impassable to motorized vehicles but available for foot travel.
4. There are no trout streams in the Border Project area and no known areas where vegetation management is needed to discourage beaver.
5. Access to popular wild ricing area is still planned to be maintained as it is now.
6. The Draft EIS will include the measure listed in the scoping package regarding notification of timber sale contractors to Tribal representatives.
7. The lowland brush shearing will continue to be included in the Modified Proposed Action. This activity would support habitat for moose.

1.8.2 State

The District Ranger and IDT members met with State personnel during the mid-level analysis (7/10/07), during review of the Proposed Action (03/13/08), and during alternative development (5/29/08). The following key points were summarized during the May 29, 2008 meeting.

1. The Modified Proposed Action will continue to include the lowland brush shearing proposal in the vicinity of the State Huntingshack Moose Management Area. Also, creating large openings in the General Forest – Longer Rotation Management Area should contribute to quality moose habitat.
2. Wildlife openings: The wildlife openings in the Project area were approved in previous NEPA decisions and will not be analyzed in the Border Project EIS. No new openings are proposed.
3. Oak management: The Modified Proposed Action will continue to include the oak enhancement stand treatments.
4. Goldmine area: The State will continue to provide support for management of the Goldmine State Migratory Waterfowl Refuge. The State is interested in having the gate protect the refuge. Their suggestions for specific gate locations are discussed in Chapter 2 under Alternatives Considered and Not Carried Forward for Detailed Study.
5. Hunter walking trails and Access: Trail development is outside the purpose and need of this project. However, the following stands were discussed with the State:
 - 028-002 is immature and will not be included
 - 028-014 will be included in the Modified Proposed Action and Alternative 3
 - 028-024 will be included in the Modified Proposed ActionThe State supported the District's plan to leave parking areas available at the end of closed temporary and system roads when possible. Such closures can provide a form of unofficial non-motorized hunting access. In addition, in the Echo River Area, the State could consider developing a trail to the Forest Service stand proposed for management, if the stand (028-024) is included in the Selected Alternative. Hunters could then have remote access to new openings after project implementation.
6. Stand 034-074: This stand is adjacent to a State old growth stand. The IDT plans to include the stand (group selection cut) and work with the State on the prescription.

1.9 Draft EIS Comment Period

The Draft EIS is available for viewing on the Superior National Forest website at www.fs.fed.us/r9/superior. The Draft EIS is also available in printed form or on CDs by calling (218) 666-0020.

The public, organizations, and agencies are invited to provide comments on the alternatives and analyses discussed in this Draft EIS. Comments and agency responses to

those comments will be printed in the Final EIS. The LaCroix District Ranger will make her decision based on the EIS, review of comments, and additional information which may become available. Her choice will be documented in a Record of Decision (ROD).

The comment period on the Draft EIS will end 45 days from the date on which notice of its availability is published in the Federal Register. It is very important that those interested in the Border Project participate during this time and provide comments. To be most helpful, comments on the Draft EIS should be as specific as possible, and address the adequacy of the Draft EIS. To have appeal standing, commenters must have provided comments on the Draft EIS.

Send your written comments to:

Nancy S. Larson, District Ranger
ATTN: Border Project
LaCroix Ranger District
320 N. Hwy 53
Cook, MN 55723

You may also FAX your comments to (218) 666-0022 or email your comments to comments-eastern-superior-la-croix@fs.fed.us. Please note: If you do not respond, your name will be taken off the Border Project mailing list.

1.10 Significant Issue

Issues are a point of debate, dispute, or disagreement regarding anticipated effects of the Proposed Action. Issues were identified from comments gathered through the scoping process. Many of the public comments were addressed through project design or application of Forest Plan standards and guidelines.

The interdisciplinary team separated issues into two groups: significant and non-significant. The Council on Environmental Quality (CEQ) NEPA regulations provide this distinction in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (sec. 1506.3)..." Non-significant issues are:

- Outside the project scope (do not meet the purpose and need for the proposal)
- Already decided by law, regulations, Forest Plan, or policy
- Irrelevant to the decision being made
- Conjectural and not supported by scientific or factual evidence.

Through the analysis of public scoping comments, the interdisciplinary team identified one significant issue that drove the development of an alternative. The interdisciplinary team also developed indicators for the issue to compare the environmental impacts of the alternatives. Those indicators are identified and described in the various section of Chapter 3 of this Draft EIS.

Proposed Harvest and Road Management Activities would Affect Resource and Social Conditions in Areas of Concern to the Public.

Disagreement exists over the potential social and resource effects to areas of concern mentioned by the public such as near the BWCAW (southwest of Baylis and Herriman Lakes), near Voyageurs National Park (north of Little Johnson Lake, northwest of Crane

Lake in the Rollick Creek vicinity), along the Vermilion River, and in locations near the Echo River referred to as a Forest Plan Inventoried Roadless Area. The public expressed concerns about potential effects on the following social and resource conditions:

Social: Proposed management activities could diminish the recreation and wilderness experience through increased noise and the potential for illegal motorized access (in the BWCAW and VNP).

Resource: Proposed management activities could lead to an increase in the spread of non-native invasive species (NNIS), a decrease in water quality, an adverse effect to wildlife habitat, and a reduction in scenic quality.

The issue is addressed primarily in the following areas of this EIS:

Chapter 2, Section 2.5.2, Comparison of Effects

Chapter 3, Section 3.8, Wildlife

Chapter 3, Section 3.9, Recreation/Social

Chapter 3, Section 3.10, Scenery

Chapter 3, Section 3.11, Soils

Chapter 3, Section 3.12, Watershed

Chapter 3, Section 3.14, NNIP

Chapter 3, Section 3.19, Roadless

Chapter 3, Section 3.20, Issue Summary

1.11 Resources Analyzed

The scientific and analytic comparison of alternatives is disclosed in Chapter 3 of this EIS. The analysis focuses primarily on effects related to the significant issues. Section 3.20 summarizes where and how the significant issue is discussed in the EIS. The interdisciplinary team analyzed resources per CEQ regulations (1502.16), Forest Service Manual (1970, 1730, and 2360), Forest Service Handbook (1909), and Department Regulations (9500-3 and 5600-2). In addition to Forest Service and Departmental regulations, the interdisciplinary team of natural resource specialists complied with federal and State laws and regulations in conducting the environmental analysis in developing the EIS for the Border Project area.

Analysis in Chapter 3 includes the following resources and topics that address the potential environmental impacts of the alternatives. The EIS is tiered to the Superior National Forest Plan and its associated Forest Plan Revision EIS as supported by the National Environmental Policy Act and 40 CFR 1502.20. Relevant discussions from these documents are incorporated by reference in the EIS rather than repeated (40 CFR 1502.21).

- Adverse environmental effects which cannot be avoided should the proposal be implemented
- Relationship between short-term uses of the human environment and the maintenance and enhancement of long-term productivity
- Irreversible or ir retrievable commitment of resources which would be involved in the proposal should it be implemented
- Possible conflicts between the proposal and other agency or tribal land use plans, policies, and controls within the Project area

- Tribal communities
- Direct, indirect, and cumulative effects and their context and intensity. The resources discussed include:
 1. Vegetation
 2. Wildlife Habitat
 3. Recreation/social
 4. Scenic Quality
 5. Soils
 6. Water Quality and Watershed Health
 7. Fire Risk and Fuels (air quality)
 8. Non-native Invasive Plants (NNIP)
 9. Heritage Resources
 10. Economics
 11. Transportation System and Gravel Pits
 12. Special Use Authorizations
 13. Forest Plan Inventoried Roadless Areas
 14. Issue Summary
- Energy requirements and conservation potential
- Natural or depletable resource requirements and conservation potential
- Urban quality/historic and heritage resources
- Effects on consumers, civil rights, minority groups, women, and environmental justice
- Effects on prime farmland, rangeland, and forest land
- Optimality and appropriateness of harvest treatments
- Effects on Floodplains

1.12 Permits and Authorizations Needed

St. Louis County, the State of Minnesota, and the Forest Service generally grant each other permission to use existing roads when requested. The LaCroix Ranger District would arrange access agreements with these agencies for the Project area. The Forest Service would also secure easements or agreements prior to crossing private property.