United States Department of Agriculture

Forest Service

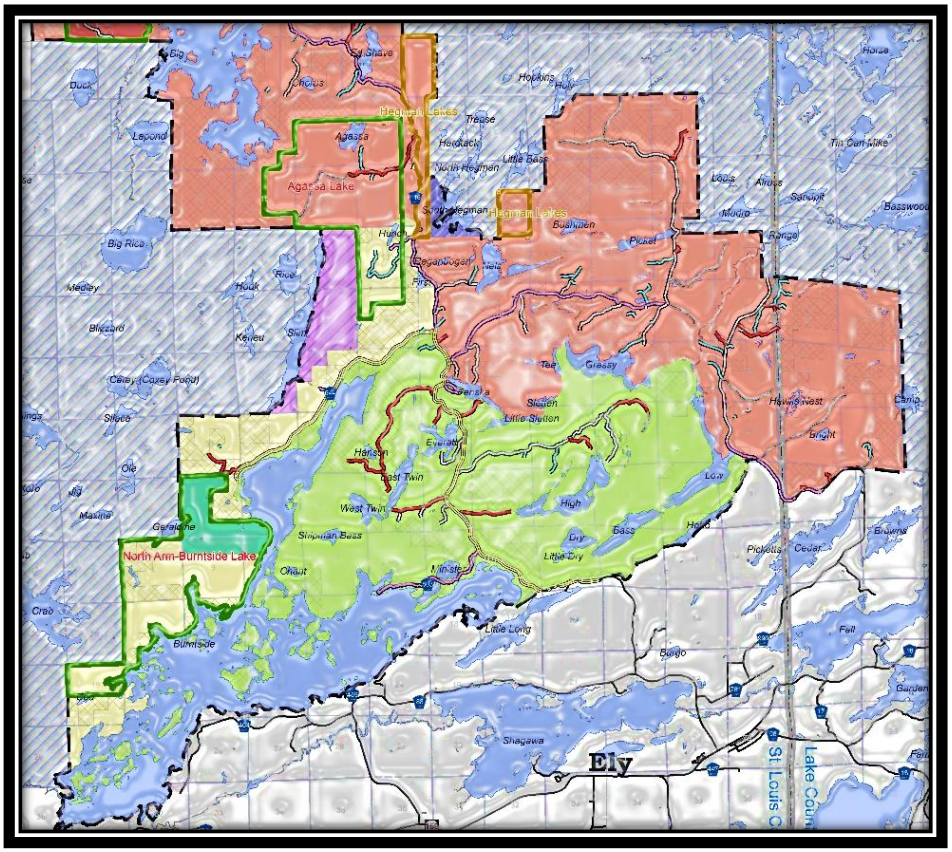
SCOPING REPORT

Hi Lo Project

August 2016

Kawishiwi Ranger District, Superior National Forest
St. Louis and Lake Counties, Minnesota

Townships 63 - 65 North, Ranges 11 - 14 West



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KAWISHIWI RANGER DISTRICT

SUPERIOR NATIONAL FOREST

AUGUST 2016

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I. INTRODUCTION

This scoping report identifies the purpose and need for action, the extent of the project area, and describes the proposed management activities (also called the proposed action). Adjacent landowners, tribal representatives, State and county land management entities, and others who have an interest in how this area is managed were notified. The reasons for distributing the scoping package are to inform the public of the Proposed Action and to provide people with an opportunity to submit comments.

SUMMARY OF PROJECT

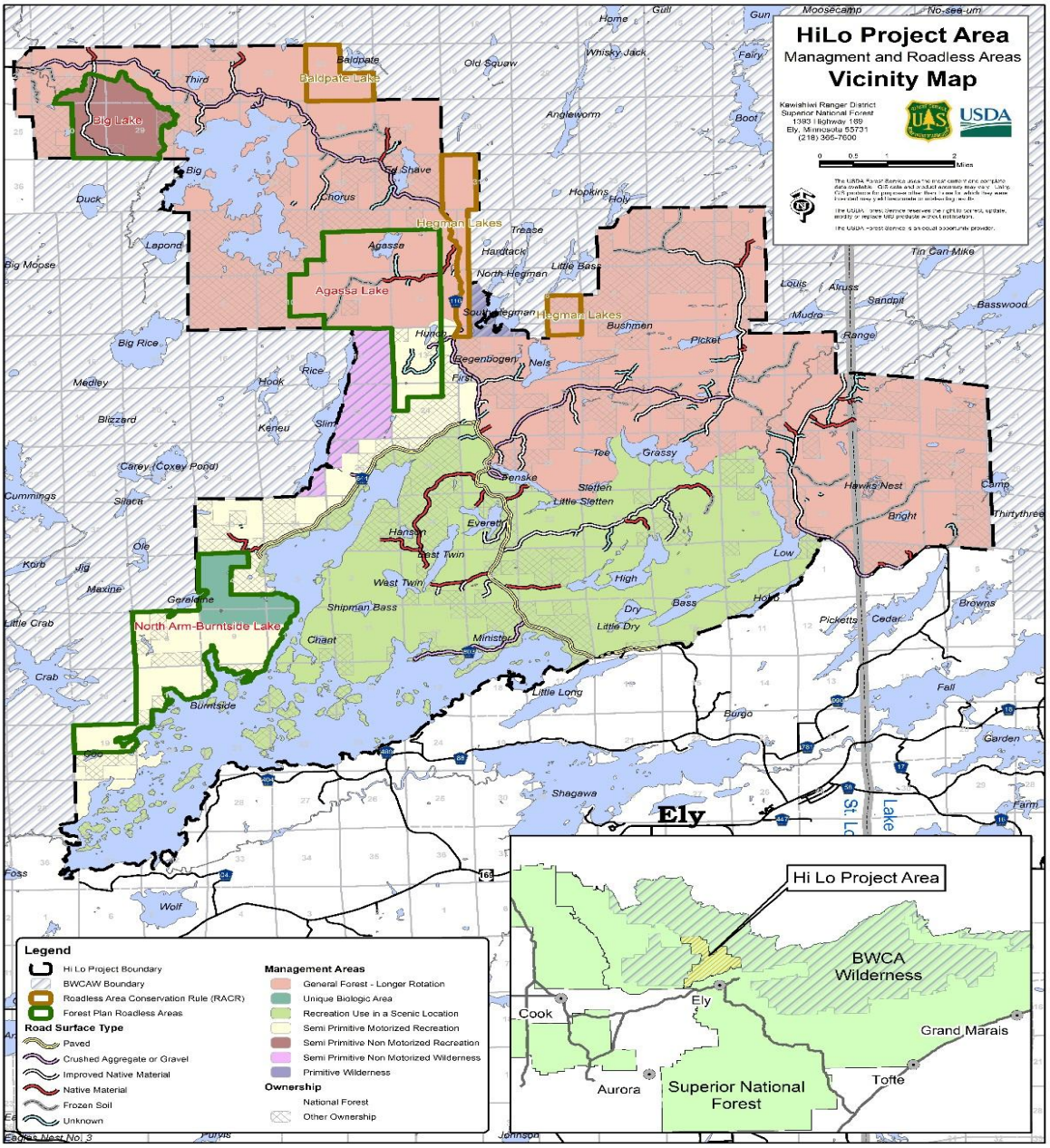
Who: The Kawishiwi Ranger District of the Superior National Forest is proposing management activities within the Hi Lo Project Area.

Where: The Hi Lo Project Area is a forested landscape bounded on the north, east, and west sides by the Boundary Waters Canoe Area Wilderness (BWCAW), with high recreation value, homes, resorts and summer camps in Wildland Urban Interface (WUI) areas, as well as a diversity of ownerships.

This project area is primarily located in St. Louis County with a small portion of Lake County, approximately four miles north of Ely, Minnesota (Figure 1). The legal description of the general area is Townships 63, 64, and 65 North, Ranges 11, 12, 13 and small portion of 14 West. The project area boundary encompasses approximately 63,428 acres of land with mixed ownership. Approximately 33,805 acres (53 percent) of the project area is National Forest System (NFS) lands located primarily on the Kawishiwi Ranger District (less than 200 acres fall within the LaCroix Ranger District) of the Superior National Forest, 11,184 acres (18 percent) are lakes greater than 40 acres, 6,990 acres (11 percent) are State of Minnesota lands, 5,681 acres (9 percent) are private lands, 3,917 acres (6 percent) are industry owned lands, 1,187 acres (2

percent) are owned by St. Louis County, and 664 acres (1 percent) are owned by Lake County. Approximately 1,265 acres fall within the Boundary Waters Canoe Area Wilderness. Proposed activities are only located on National Forest System (NFS) land and are shown on the Proposed Action Map.

Figure 1. Hi Lo Project Vicinity Map



Why: Purposes for the Hi Lo Project include improving and restoring existing stand conditions to promote long-term healthy, productive, diverse ecosystems with an emphasis on wildlife habitat; reducing impacts and risks of an uncharacteristic wildfire impinging on populated and high use recreation areas; providing and granting reasonable access requests to other landowners; and increasing and enhancing recreation opportunities consistent with the desired conditions outlined in the Forest Plan.

The project area is bordered by the Wilderness on nearly three sides resulting in a relatively narrow band in the middle of the project area. Proposed actions along the BWCAW boundary would be focused and thoughtfully planned and implemented to achieve the objectives and desired conditions, such as protecting lives and private property, allowing lightning fires in the Wilderness to play their natural role, promoting forest conditions that are resilient to future wildfires, and creating a mosaic of fuel treatments that increase the complexity of future wildfire burn severity and fire effects. Proposed actions would also retain the high recreation value and wildlife habitat, provide forest products to struggling wood fiber markets, and provide work for businesses dependent on recreation and forest products.

What: Proposed activities include:

- Merchantable timber harvesting (thinning, group selection, clearcut with reserves)
- Non-harvest stand improvement – temporarily reducing certain brush and shade tolerant species in the understory (such as balsam fir and mountain maple) to promote pine and spruce regeneration and to reduce continuity of hazardous fuel loadings
- Reforestation activities (such as planting, site preparation, and tree release)
- Management ignited fire
- Construction of new and improvement of existing hiking trails
- Transportation needs, including temporary roads needed for access and special use authorizations to access other ownership

When: If a decision is made to implement these activities, proposed actions would be implemented beginning in 2017. Implementation of primary treatments would be expected to occur over ten to fifteen years.

II. PURPOSE AND NEED FOR THE PROPOSED ACTION

The Forest Plan guides all natural resource management activities for the Superior National Forest. It provides management direction to ensure that ecosystems are capable of providing a sustainable flow of beneficial goods and services to the public (FP, p. 1-2). The Forest Plan identified the goals, desired conditions, objectives, standards, and guidelines that the Hi Lo Project has used to determine the need for change, purpose and need, and proposed actions.

The Hi Lo Project proposes to address needs for change identified in the Forest Plan related to improving and restoring stand conditions to maintain and promote long-term diverse, productive, healthy, and resilient plant communities and wildlife habitats; improving conditions that minimize undesirable effects of wildfire; providing sustainable forest products; increasing and improving motorized and non-motorized recreation opportunities; and granting access to other land ownerships across National Forest System lands.

These needs were identified by comparing the existing condition of the project area with desired conditions described in the Forest Plan through an assessment by resource specialists (interdisciplinary team). In this analysis called the Hi Lo Mid-level Assessment[1], the interdisciplinary team considered all resources (vegetation, wildlife, watershed, transportation, heritage resources, etc.) and recommended possible activities or opportunities to move the project area toward desired conditions. Using this assessment, the District Ranger selected which needs would be addressed in the Hi Lo Project.

As defined in the Forest Plan, **desired conditions** describe what the Forest should look like in the future if the Forest Plan is successfully implemented. They are general statements describing the end result and tend to be timeless and not measurable.

A. NEED TO IMPROVE WILDLIFE HABITATS BY PROMOTING DIVERSE, PRODUCTIVE, AND RESILIENT VEGETATION COMMUNITIES

The forested ecosystem of the Hi Lo Project Area does not resemble historic forest conditions because of a century of fire suppression and lack of vegetation management to mimic natural disturbances. A diverse, productive, and healthy ecosystem needs forest stands containing the full distribution of age classes, vegetation composition, structure, and diversity. The Hi Lo midlevel assessment identified areas where Forest Plan Landscape Ecosystem (LE)[2] and wildlife habitat objectives are currently not being met, primarily due to the lack of low- to moderate intensity fire, including stand replacing fire. Resource specialists collaboratively identified opportunities to move existing vegetation conditions closer to long-term desired conditions established in the Forest Plan. Objectives are identified in the Forest Plan for each resource, landscape ecosystems, and certain management areas.

Forest Plan **objectives** are measurable steps taken within a specified timeframe to move towards a desired condition, generally achieved through a site-level activity.

The Hi Lo Project will target the Jack Pine Black Spruce, Dry Mesic Red and White Pine, and Lowland Conifer LEs; each having objectives for vegetation composition, age class, tree species diversity, and Management Indicator Habitats[3] (MIH). More detailed landscape ecosystem information can be found in the Additional Information section in this document.

[1] The mid-level assessment is an intermediate analysis between forest land management planning and project planning. The process provides the team with a systematic way to compare desired conditions and objectives from the Forest Plan, to the existing condition of the midlevel assessment area, and to develop management recommendations that are based on specific ecosystem and resource needs of the midlevel area. It is an opportunity to assess all or a broad range of resources to gain an overall look at an ecosystem. The mid-level assessment process facilitates better project-level decision making by: considering all resources needs upfront; developing the basis for the Purpose and Need of subsequent NEPA projects; and compiling resource data that can be used for effects analysis.

[2] Landscape ecosystems are the land and vegetation systems that occur naturally on the landscape. Landscape Ecosystems are one or more Landtype Associations grouped together. Landscape Ecosystem units were specifically developed for assessing and analyzing ecosystems in northern Minnesota for Forest Plan revision on the Chippewa and Superior National Forests (Chapter 2).

[3] Management Indicator Habitats are a component of landscape ecosystems and represent habitats used by a wide variety of native plants and animals, including management indicator species and sensitive species. Management Indicator Habitats provide a means of monitoring and evaluating the effects of actions on biotic resources including specific species, communities, habitats

The overall vegetation objective is to move conditions from the existing condition in Hi Lo (based on data collection and conditions identified in 2015) toward the long-term desired composition, structure, age, spatial patterns, and within-stand diversity (FP O-VG-1, p. 2-23). This would increase the diversity, productivity, health, and resiliency of vegetative communities, and improve wildlife habitats. (FP, D-VG-1, p. 2-22). Healthy forested ecosystems are more resilient and able to recover more quickly in the event of a wildfire or insect and disease outbreak (FP p. 2-19, D-ID-1; O-ID-1). Historically, this was maintained by natural disturbances; such as fire and windstorms; but now includes management actions like timber harvesting, prescribed fire, and reforestation (planting or seeding) to reduce the magnitude and severity in landscapes occupied by and used by people.

Wildlife are beneficiaries of disturbance and forest management treatments that alter forest structure, composition, and distribution of forest age classes on the landscape. While some wildlife species benefit from the lack of disturbance and the existing conditions, other species do not. Our activities within Hi Lo are targeted at restoring conditions, within the context of today's users, to more closely resemble the natural range of variation that would have been present. The intent of the proposed actions is to provide and improve habitat to allow many rare and declining species to increase or remain stable. Wildlife species within Hi Lo evolved within a strong natural disturbance regime, including frequent wildfires, windthrow, and insect outbreaks and disease, which created a mosaic of forest types and ages on the landscape. This mosaic of large and small patches provided a landscape with foraging habitat in young, early successional stands, and thermal cover in dense conifer stands for moose and mature aspen provided nesting cavities for boreal owls. Several of our management techniques can mimic these disturbances (For example thinning mimics low intensity burning; clearcuts mimic high-intensity stand-replacing fire).

Implementing proposed actions to meet these desired conditions for age class, composition, and diversity would begin to bring individual stands and landscapes closer to a healthy, more resilient forest. Forests that are well-adapted and healthy may be better poised to persist or even thrive under future conditions including climate change and climate variability, which meets the goals for forest management. Vegetation communities with greater diversity can tolerate a wide range of conditions and disturbances and have a greater chance of persisting under a range of plausible future climate conditions (Minnesota Forest Ecosystem Vulnerability Assessment and Synthesis: A Report from the Northwoods Climate Change Response Framework Project, GTR-NRS-133, 2014).

Management Area (MA) desired conditions were also considered when identifying the proposed actions. These objectives reflect the social and multi-use aspects for the project area (FP, p. 3-2). The seven different MAs within Hi Lo are: General Forest – Longer Rotation, Recreation Use in a Scenic Landscape, Semi-Primitive Motorized Recreation, Semi-Primitive Non-Motorized Recreation, Unique Biologic Area, Semi-Primitive Non-Motorized Wilderness, and Primitive Wilderness. More detailed information can be found under the Additional Information section of this document as well as the Forest Plan.

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and interrelationships among organisms. Managing for Management Indicator Habitat objectives is a key component for providing for the full diversity of desired wildlife habitats.

The following items A1 through A6 would be addressed in the Hi Lo Project. All are specific components of a diverse, healthy ecosystem, with emphasis on wildlife habitat improvement and increasing vegetation complexity to reduce potential undesirable effects from wildfire, insect and disease, and climate change.

A1. MINIMIZE EFFECTS FROM UNCHARACTERISTIC WILDFIRE

Fire suppression and a lack of vegetative management in certain locations over the past 50 years have resulted in a high percentage of forest communities that are on altered successional pathways from their historic composition, structure, and function. Without some type of disturbance or active management these communities will continue on their current successional path, which is and will continue to be less resilient to wildfire, insects and disease, and climate change. The landscape is also at a higher risk of losing key ecosystem components due to disturbances outside the natural range of variation as well as succession. More specifically, fire suppression and lack of management has allowed shade tolerant/fire intolerant species, such as balsam fir, to establish and proliferate in the understory of upland forest types such as old aged pine, spruce, and in some cases pine dominated stands. Another potential hazard could exist in dense, overstocked red pine and spruce stands as they are more susceptible to insect and disease. Accumulation of hazardous (natural and activity) fuel can increase the intensity and thus the risk of unwanted wildland fire causing damage to values within the Wildland Urban Interface (WUI) areas or valuable ecosystem components. It is a desired condition in the Forest Plan to enhance ecosystem resiliency and to maintain desired fuel levels by treating accumulations of natural and activity fuels (D-ID-4, p. 2-19).

The primary objectives related to fire are: 1) treat around the boundaries of the Boundary Waters Canoe Area Wilderness to reduce fire intensity and rate of spread, so that fires can continue to play their nature role in Wilderness, 2) to treat hazardous fuels around WUI areas and natural and cultural resources at risk of high severity fire, 3) to increase the complexity of the vegetation across the landscape so that subsequent fires burn with high complexity, and 4) to increase the amount of forest restored in a healthy condition to reduce the severity and magnitude of fires, insects, and disease (O-ID-1, FP p. 2-19).

During the mid-level analysis, a fuel hazard and risk assessment identified approximately 10,000 acres in the high risk hazard area, because of vegetation condition, location, or both. A strategic approach is needed to treat areas of high priority, which are located in the WUI areas adjacent to private homes, cabins, camps, and other human development. Areas adjacent to Wilderness are also high risk since the vegetation within the Wilderness has not had any management or wildfire disturbance in decades. There is a need reduce the amount of balsam fir across the project area, especially in these high risk areas. Left untreated, the continuity and combination of understory and overstory fuel loading creates a continuous path for fire to spread from the ground into the canopy, creating high severity crown fires, which are more difficult and dangerous for firefighters to safely suppress or manage. Breaking up continuity and reducing the fuel loading would create more defensible space around private property or other values at risk in the event of a wildfire. To meet that desired condition, the Forest Plan gives guidance to treat areas of highest fire risk to minimize effects of unwanted wildland fire (O-ID-3, FP p. 2-19). These objectives could be accomplished through various means, including; cutting of understory trees by hand or mechanical means, commercially thinning dense stands, removing biomass off site, chipping on site, pile burning on site, and potential underburn to maintain the fuels reduction.

A2.RE-INTRODUCE FIRE INTO FIRE DEPENDENT ECOSYSTEMS

Historically, fire has been the major disturbance agent affecting forests of northeastern Minnesota (Heinselman, 1996). Along with wind, insects, and disease, fire helped establish, maintain, and convert vegetation communities of the area depending on the frequency, intensity, and patch-size of the fire event. Fires occurred in the area with regularity, as evidenced by the frequency of pine types within the project area and the presence of fire scars and char throughout the project area. The presence of wildland fire on the landscape is appropriate and desirable, but unwanted wildland fire is actively suppressed where necessary to protect life, investments, and natural resources (D-ID-6, FP p. 2-19).

There is a need to establish, maintain, or improve the condition of vegetation using prescribed fire, mechanical treatments, and other tools (O-ID-2, FP p. 2-19). Conducting low intensity prescribed burns in white and red pine stands reduces ladder fuels, duff accumulations, and more prolific shade tolerant species (balsam fir, maple, and hazel) which outcompete pine, spruce, and the herbaceous layer. Broadcast burns and secondary burns would be used to regenerate jack pine stands. Jack pine forest is the icon of a fire dependent ecosystem with serotinous cones that need intense heat to open, and exposed mineral soil for seeds to germinate. Introducing fire into these systems helps to maintain and increase this forest type on the landscape.

Introducing fire back into lowland shrub, wet meadow, and oak-blueberry habitats would benefit a wide variety of wildlife and their habitats. Historically, lowland shrub and wet meadow areas were maintained by frequent fires, flooding, or beaver dam blowouts which kept woody vegetation from encroaching on open wet meadows while reinvigorating the sedge communities. Oak and oak-blueberry habitats also were maintained by frequent fire intervals and would greatly benefit by having fire reintroduced to the ecosystem to keep them thriving and maintain or increase the size of these areas where opportunities exist.

Introducing fire back onto the landscape would contribute to reaching certain Forest Plan desired conditions for vegetation and wildlife habitat; as well as reducing negative effects of an unwanted wildfire. A Forest Plan desired condition states that fire is present on the landscape, restoring or maintaining desirable attributes, processes, and functions of natural communities (D-ID-5, FP p. 2-19). Applying fire to the landscape would be most effective while following Forest Plan guideline G-ID-3, which states "Utilize existing natural or man-made barriers, such as drainages, cliffs, streams, roads, and trails instead of constructed firelines for prescribed fire and suppression activities where practical and safe for firefighters and the public." (FP, p. 2-19). A small portion of the Wilderness area would be included in the analysis to ensure a more effective and safe prescribed burn area to utilize lakes, streams, and other natural boundaries instead of constructing a fireline thorough vegetation along the wilderness boundary.

A3. INCREASE STAND HEALTH AND DIVERSITY WITH HARVEST

Some stands in the Hi Lo Project Area are densely stocked and overcrowded, with little structural (vertical configuration of vegetation), age, or species diversity as a result of techniques used during establishment and their locations within designated roadless areas (D-VG-6, FP p. 2-22). There are also a large number of red pine dominated stands within the project area which would provide opportunities to improve individual tree growth, enhance old growth characteristics, and improve the health and resiliency of those stands. As the trees have grown, they have become more tightly spaced with little growing room for regeneration of trees, forbs, or shrubs.

There is a need to treat red pine, white pine, and spruce stands at various ages, with some type of uneven age management (creating gaps in the canopy). This would diversify age-class structure, vertical and horizontal structure, and tree species diversity which is a Forest Plan objective (O-VG-8, O-VG-9). Maintaining the health and vigor by having a diverse mix of species and ages is important to keeping vegetation resilient to future disturbances (O-GS-6) as well as climate change. Reducing the density or creating gaps in the canopy would provide more opportunity to diversify the stand with desirable tree species.

Specific objectives include:

- Restore the diversity of tree species within stands to conditions more representative of native vegetation communities by increasing the component of white pine, jack pine, red pine, and birch (Forest Plan O-VG-6, p. 2-23).
- Maintain and restore long-lived and/or conifer species on nutrient sensitive soils (Forest Plan D-WS-3, O- WS-1, O-WS-9, & O-WS-10, pp. 2-10 and 2-12).
- Maintain and increase, where possible, tree species diversity (for total percentage of trees, not total acres of forest type) (Forest Plan O-VG-6, p. 2-22).

A4. CREATE YOUNG FOREST

Disturbance is a natural and vital part of ecosystems which create young forest in all the landscape ecosystems (LE) within Hi Lo. Historically, the Jack Pine Black Spruce, Dry Mesic Red and White Pine, and Lowland Conifer LEs were influenced by fire in varying degrees. Jack pine and black spruce were dependent on disturbance, primarily stand replacing fire to create young stands. Low frequency, high intensity stand replacing fires would also create young in red pine, white pine, and spruce fir stands. Higher frequency, lower intensity fires would create gaps in the canopy and provide a seedbed, allowing shade intolerant species to naturally seed in, adding species and structural diversity. Since fires are suppressed as quickly and as small as possible outside of the Wilderness, there is a need to create young stands on a regular basis to maintain a diversity of age, structure, and habitat classes.

Young forest created through disturbance contributes to a healthy, diverse ecosystem; providing wildlife habitat needs for moose and deer, snowshoe hare, and some songbirds. Additionally, creating young and pole sized jack pine near lowland black spruce and tamarack would improve spruce grouse habitat.

The interdisciplinary team identified opportunities to move the area toward desired conditions by increasing the amount of young (0 to 9 years) age class within the project area. Currently, this age class makes up less than five percent of the project area and Forest-wide amounts are below the Forest Plan objective. There are opportunities to decrease the amount of mature and old aspen and increase the amount of young jack pine across the landscape which would contribute to Forest Plan objectives for species and age class distribution in the Jack Pine Black Spruce LE (Forest Plan O-VG-2, -13, -16).

A5. WILDLIFE INCLUDING THREATENED, ENDANGERED, AND SENSITIVE SPECIES

Forest Plan objectives for most wildlife species is included in landscape ecosystem objectives and management indicator habitat objectives. Most wildlife habitat needs would be met by implementing actions that meet landscape ecosystem objectives previously described in sections A2 – A4. Habitat would be maintained and improved for a variety of species, including but not limited to, lynx, northern long-eared bat, goshawk, moose, and other species where opportunities and needs are present.

During routine wildlife surveys in July 2016, a newly discovered goashawk territory was identified within the Hi Lo Project Area. All Forest Plan standards and guidelines will be adhered to and adjustments will be made to provide varying degrees of protection around the nest, along with a post-fledgling buffer.

B. ENHANCE RECREATION, TRAIL, AND SCENERY OBJECTIVES

The Hi Lo Project Area contains dispersed and developed recreation opportunities. There is one developed campground and a large number of dispersed campsites along shorelines and trail systems. This area includes popular hiking, running, and cross-country ski trails. There is also a section of long-distance snowmobile trail crossing the project area. There are many areas with high to moderate scenic integrity objectives[4] (SIO) as well as recreation activities along the roads, especially the Echo Trail. The management areas throughout the project area emphasize scenery objectives favoring large tree characteristics with relatively high visibility from recreation and forest users.

Management areas encompassed in the project emphasize the setting and opportunities for dispersed recreation including campsites, trails, and water accesses. There are opportunities where recreation facilities need improvement to accommodate current visitor use patterns, assist the State with fish and lake management, and create a non-motorized trail connection between the Cloquet Line and the Echo Trail, two popular recreation corridors. The Forest Plan desired condition for recreation and trails provides for:

- A range of quality motorized and non-motorized recreation opportunities to satisfy diverse public interest while maintaining sustainable ecosystems (D-REC-1, FP p. 2-40);
- Developed sites, facilities, trails, water access sites, and other recreation opportunities (D-REC-3, FP p. 2-40);
- A range of quality hunting, trapping, and fishing opportunities in conjunction with State Regulations (D-REC-10, FP p. 2-40);
- Trail systems offering a range of activities and experiences necessary to accommodate recreation users while minimizing environmental and social impacts (D-RTL-1, FP p. 2-43);
- Non-motorized trail opportunities in a variety of forest settings (D-RTL-3, FP p. 2-43)

[4] Scenic Integrity Objectives guide the amount, degree, intensity, and distribution of management activities needed to achieve desired scenic conditions (Forest Plan p. 2-45 to 2-47).

Additionally, the desired condition in high or moderate SIO areas is to enhance views, create vistas, encourage vegetative diversity and seasonal color contrast, and enhance big-tree appearance (D-SC-2, FP p. 2-45).

C. PROVIDE SUSTAINABLE FOREST PRODUCTS, GRAVEL, AND SAND

C1. PROVIDE SUSTAINABLE FOREST PRODUCTS

Vegetation management in the Hi Lo Project Area has the opportunity to provide wood products for businesses and mills in northern Minnesota. Treatments to meet the other project objectives could be accomplished through the sale of marketable wood products, including tops and limbs of trees for biomass. Nearly 8,000 acres of forest within the project area have been identified as needing some type of treatment to improve stand condition or create young age class with harvest. Timber harvest on suitable forestlands within the project area would meet the needs of sustaining a healthy forest and providing an economic opportunity to local communities. Forest Plan desired conditions include:

- D-TM-1. The amount of commercial timber sales available for purchase is at a level that is sustainable over time. Mills operating in northern Minnesota can depend on a consistent level of timber harvest on the National Forest.
- D-VG-4. Tree vegetation is present in amounts, distributions, and characteristics that allow contribution to a sustained yield of timber and pulpwood products.
- D-SE-1. The Forest provides commodity resources in an environmentally sustainable and acceptable manner to contribute to the social and economic sustainability and diversity of local communities.

C2. GRAVEL PITS

There are six existing pits throughout the project area; five of these pits need a change in designation and a pit plan. The Forest Plan states that the Forest Service will provide sand and gravel for public and private use (FP, S-MN-9, p. 2-10). The proposed action is to designate four of these pits as continuous use and one pit would be decommissioned. There is a need to ensure the gravel pits are maintained to meet land management objectives (D-TS-1 and O-TS-1, Forest Plan pp. 2-47 and 2-48.) The North Arm Pit is the largest and most heavily used pit in the project area and has a current pit management plan and no need for change identified at this time.

D. TRANSPORTATION SYSTEM

Forest Plan desired conditions for transportation systems specify that National Forest System roads provide for safe and affordable administrative and public access while maintaining the minimum road densities needed (Forest Plan D-TS-1, D-TS-2 p. 2-47). The interdisciplinary team identified that the primary needs for changes within the project area involves modifying the transportation system for short-term timber access, providing long-term access to other ownerships, and decommissioning roads no longer needed for management.

There would be a need to construct new temporary roads where there is no existing road or road bed to access some locations for vegetation management. Temporary roads would be decommissioned after their use is completed (O-TS-3, FP p. 2-49).

D1. NEW ROADS AND CHANGES IN STATUS TO EXISTING ROADS

The Superior National Forest made a concerted effort to identify all existing unauthorized roads on the Forest during the Travel Management Project (TMP). Roads that are being addressed in that project will not be included in this project unless a change to those decisions was identified. Recently however, District staff identified two unauthorized roads that were not identified in TMP or other project decisions. These roads were identified because they would be needed to meet the purpose and need for access.

D2. SPECIAL USE AUTHORIZATIONS

There is a need to provide short- and long- term access across National Forest System lands to allow State and St. Louis County access for vegetation management (D-TS-5 FP, p. 2-47, O-SU-2 p. 2-52). State and county land managers were contacted during the internal planning process to identify their access needs. A meeting was held with State, county, and forest representatives to coordinate and review all access requests. Access roads were discussed individually and viewed using a geographic information system (GIS) with all parties to determine the need and duration. Efforts were made to eliminate duplications, minimize the amount of new road construction, and general coordination of how and when the access routes would be used.

III. PROPOSED ACTION

The interdisciplinary team identified potential actions to accomplish the purpose and need for the Hi Lo Project. The team used vegetation, soils, and other resource data as well as field reconnaissance by foresters, biologists, fuels technicians, engineering technicians, and other resource specialists to develop the proposed action. The team strived to develop actions that would meet multiple objectives and best meet the purpose and need.

While developing the proposed action, the interdisciplinary team consulted with Band representatives from 1854 Authority, Grand Portage, Fond du Lac, and Bois Fort Bands of the Lake Superior Chippewa. Letter and emails were sent to all representatives in October 2015 and June 2016 requesting feedback and consultation in regards to the Hi Lo Project Area and proposed actions. Fond du Lac corresponded with the Hi Lo wildlife biologist about improving moose habitat. Specifically, interest was expressed to manage vegetation with fire or timber harvest for large patches of young hardwood or mixed forest, especially in the northern portions of the project area.

The collaborative effort was utilized to ensure similar forest management activities would occur across ownership boundaries and access needs would be met. The State of Minnesota DNR, St. Louis County, and Lake County land managers were informed of the project via email and letter. The project area within Lake County is minimal and no collaboration was needed, per Lake County land management staff. Representatives from St. Louis County and MN DNR met with core members of the interdisciplinary team to discuss road access needs, potential treatment areas, and the need to continue coordination throughout the planning and implementation of the Hi Lo Project. All parties agreed that managing lands in the same location at the same time would have a cost savings as well as minimize effects from long term or repeat temporary road use.

When developing the proposed action, the interdisciplinary team considered the best available information on observed and projected climate trends and anticipated impacts to forests. The team worked with staff from the Northern Institute of Applied Climate Science to consider

adaptation strategies or incremental adjustments for the project. These strategies or adjustments help put forests in a better position to adapt or become more resilient to continued climate change. More information on climate change trends can be found in the Additional Information section of this document and in Attachment 5.

SUMMARY OF ACTIONS

A. VEGETATION MANAGEMENT

The proposed action for vegetation management includes a variety of activities. Table 1 provides an overview of how the proposed action addresses promoting diverse, productive, and resilient vegetation communities as part of the purpose and need. A summary of the acres proposed of each treatment type are shown in Tables 2 and 3. Actual treatment acres would likely be reduced because of reserve areas, legacy patches, sensitive soils, inoperable areas, and other limiting factors. More detailed information on the proposal can be found in the attachments to this report. Proposed treatment locations are displayed in Attachment 6, Proposed Action Map; a list of proposed units and treatments can be found in Attachment 1; a description and example photograph of each treatment can be found in Attachment 2; background information and direction for managing in roadless areas, landscape ecosystems, management areas, and climate change considerations can be found in Additional Information section of this report.

The proposed action map shows the primary treatments, which are treatments to be accomplished prior to any secondary or tertiary treatments. Follow-up treatments proposed are summarized in Table 3.

Depending on the content of public comments and further analysis by the interdisciplinary team, the team may look at alternative ways to address the proposed action and may recommend additional stands for treatments, changes in treatment types, or stands to drop from treatment. This is likely to happen once the extent of blowdown from the July 2016 storm is fully assessed and mapped.

Table 1. Proposed Action: Promote Diverse, Productive, and Resilient Vegetation Communities

Proposed Action	Acres*
Minimize Undesirable Effects of Wildfire	17,013
Reintroduce Fire into Ecosystems	13,571
Increase Stand Health and/or Diversity with Harvest	8,856
Create Young Forest	1,212
Wildlife Habitat Improvement	4,093

*Some proposed treatment acres may be included in multiple categories.

Table 2. Summary of Proposed Action: Vegetation Management Primary Treatments

Treatment Description	Acres	
Create young forest with harvest		1,211
Coppice Cut	135	
Clearcut with reserves	1,051	
Seed Tree	25	

Table 2. Summary of Proposed Action: Vegetation Management Primary Treatments	
Treatment Description	**Acres**
Improve stand health and/or diversity with harvest	6,553
Thinning	2,109
Variable Density Thinning	1,871
Group Selection Thinning	2,553
Improve stand health and/or diversity without harvest	1,818
Release Desired Trees from Competition	467
Broadcast Prescribed Burn	197
Underburn	204
Control Understory Vegetation (Prescribed Burning)	359
Control Understory Vegetation (Other than Burning)	591
Re-introduce fire and reduce potential effects of wildfire	8,932
Hand cut and pile (balsam fir)	494
Broadcast Prescribed Burn	397
Underburn	8,041
Total Acres Treated	18,514

Table 3. Summary of Proposed Action: Vegetation Management Secondary Treatments and Reforestation	
Treatment Description	**Acres**
Secondary Treatment	5,968
Broadcast Prescribed Burning	789
Control Understory Vegetation (Other than Burning)	1,227
Hand cut and pile (balsam fir)	59
Underburn	3,893
Tertiary Treatment	1,114
Control Understory Vegetation (Other than Burning)	1,114
Reforestation	5,367
Interplant or Diversity Plant	754
Underplant	3,838
Full Seeding	343
Jack Pine Conversion	432

B. RECREATION, TRAIL, AND SCENERY OBJECTIVES

High Lake Carry Down Access: Since the early 1990s the Superior NF and the MN DNR have had plans to provide carry down access to High Lake via the High Fen Road, FS 460. Current access is across portages from Bass Lake and Dry Lake or crossing private property. High Lake is a popular trout lake and public access is important to both MN DNR and the public. MN DNR currently supports this access from High Fen Road for fisheries management and

public access. Access would consist of resurfacing U546002 for one-half mile and changing its designation to an operation maintenance level (OML) 2 road. At the end of this road a small four-spot parking area would be created. The turnaround parking area would leave the last quarter mile of access as a non-motorized carry down trail. Both U546002 and the carry down trail currently have existing roadbeds; thus, minimal brushing and tread surfacing would need to occur. It is estimated that no merchantable trees would need to be cut or removed for this project. This project aims to provide access for wildlife viewing, boating, fishing, hunting, and trapping as mentioned in Forest Plan desired condition, D-REC-10.

Low Lake Trail Connection: The Bass/High Lake/Dry Falls Hiking trails are one of the more popular trail systems in the area for nature and wildlife viewing, hiking, biking, camping, and trail running. The trail system is currently eight miles in length. This trail would be designed and designated for non-motorized use and would add another one and one-half miles to the trail system, linking the existing Bass Lake Trail to the Cloquet Line Road (County Rd 1036) at the Low Lake Public Boat access parking lot. The lesser developed Cloquet Line would then be connected to County Road 116 (Echo Trail) providing a longer distance hiking, running, and biking experience. The trail head at Low Lake and the eastern quarter mile of trail lie on MN State land. There were no concerns or issues identified when the State was consulted and they will continue to be informed throughout the project.

Camp Lake Access Route: Camp Lake is located north of Ely on the Wilderness boundary. It is currently accessed by hiking or ATVs over a private Lake County hunting leases or a two mile canoe in from Newton Lake. Lake County has recently contacted the Kawishiwi Ranger District and the MN DNR to determine if there is a need for a permanent easement to Camp Lake across these leased parcels, which are being sold and becoming private ownership. The proposal being put forward in the Hi Lo Project is to designate a class one trail route connecting the Cloquet Line and Camp Lake. The route is three-tenths of a mile long and crosses federal and State lands; connecting U5SU51036061 and trail 51066.

Additionally, there would be two new hunter/hiking trail loops constructed off this route. One would be approximately 0.5 miles and the other trail would be approximately 0.7 mile loop, of which 0.3 miles would be new constructions.

C. GRAVEL PITS

Five of the six pits within the project area require a change in designation, four would be changed to continuous use and one pit would be decommissioned. Gravel pits would be approved for future use and expansion, depending on administrative and public needs. Continuous use pits are considered a large deposit that is continuously mined by many users over a long period of time. Disposals are by administrative, free use, or sales. All users including the Forest Service contribute to the reclamation fund. Table 4 displays the current and proposed designations for gravel pits within the Hi Lo Project Area.

Table 4. Proposed Action: Gravel Pit Actions					
Pit Name	**Pit Location**	**Current Designation**	**Proposed Designation**	**Current Acres**	**Potential Acres**
Spawn Creek	T64NR12W SEC 24	Community	Continuous Use	0.3	13
LaCroix Trail	T65NR13W SEC 19	None	Decommission – low use/overgrown	0.4	NA
Portage River	SE 1/4, NE 1/4 T65NR13W SEC 19	None	Continuous Use	1.5	3
Spring Creek	T64NR13W SEC 12	None	Continuous Use	2.3	7
Grassy Lake	SE 1/4, NE 1/4, SEC 22, T64N, R12W	Community	Continuous Use	2.8	21

D. TRANSPORTATION SYSTEM

The interdisciplinary team proposes changes to the existing transportation system in the Hi Lo Project Area. These changes are summarized in Table 5 and displayed in Attachment 6-Proposed Action Map.

There were 19 requests for access across federal land by St. Louis County and Minnesota Department of Natural Resources. MN DNR requests would be approximately 6.1 miles, of which five miles would be considered new construction. St. Louis County requests would be approximately 2.5 miles, all considered new construction. One of the requests, one half mile of new construction (Map ID SU9) would be needed by both State and county. There are several instances where the Forest Service would need to use these same routes as temporary roads for vegetation management. Most of these requests would be short-term access, five years or less, and not become a permanent forest transportation system road. Efforts would be made to coordinate the timing and use of these routes, to minimize the construction and duration of use.

Road decommissioning is defined in the Forest Plan as activities that result in the stabilization and restoration of unneeded roads to a more natural state. This includes existing and future temporary roads, as well as unneeded unclassified roads or current Forest system roads.

Currently there are two unclassified or undetermined roads within the project area that require a decision. Road U546002 (Table 5) would be added to the system as an Operational Maintenance Level (OML) 2 road that would terminate in a small, four vehicle parking area for a carry-down access to High Lake. The second unclassified road would be used as a temporary special use access by MN DNR and the Forest Service for short-term management activities and upon completion by both parties the road would be decommissioned.

Table 5. Proposed Action: Transportation System Management		
Proposed Action	**Miles**	**Map ID**
Existing unclassified road miles to be added to the system as OML2 (U546002)	0.52	
Special use road authorization (new construction)	7.51	SU1-SU4, SU5-11, SU13 – SU19
Special use road authorizations (existing unclassified)	0.82	SU5
Special use road authorization – short term (unclassified	0.24	SU12

Table 5. Proposed Action: Transportation System Management		
Proposed Action	**Miles**	**Map ID**
route to be decommissioned under Echo Trail Decision)		
Non-motorized trail – new construction	2.17	

Some temporary roads would also be needed for accessing USFS stands to carry out forest vegetation management activities. Temporary roads would only be used for short periods of time, would not become part of the permanent forest transportation system, and would be closed between management activities and decommissioned after all management activities have been completed. Some temporary roads would use existing road corridors and some temporary roads would be new construction. Some of the existing temporary road corridors are planned for decommissioning under the Echo Trail EIS and upon completion of management activities in Hi Lo they would still be decommissioned.

Table 6. Temporary Road Use	
Construction Type	Miles
Existing corridors/Roadbeds	10
New construction	12.5
Total Temporary Roads	22.5

IV. FOREST PLAN OPERATIONAL STANDARDS AND GUIDELINES

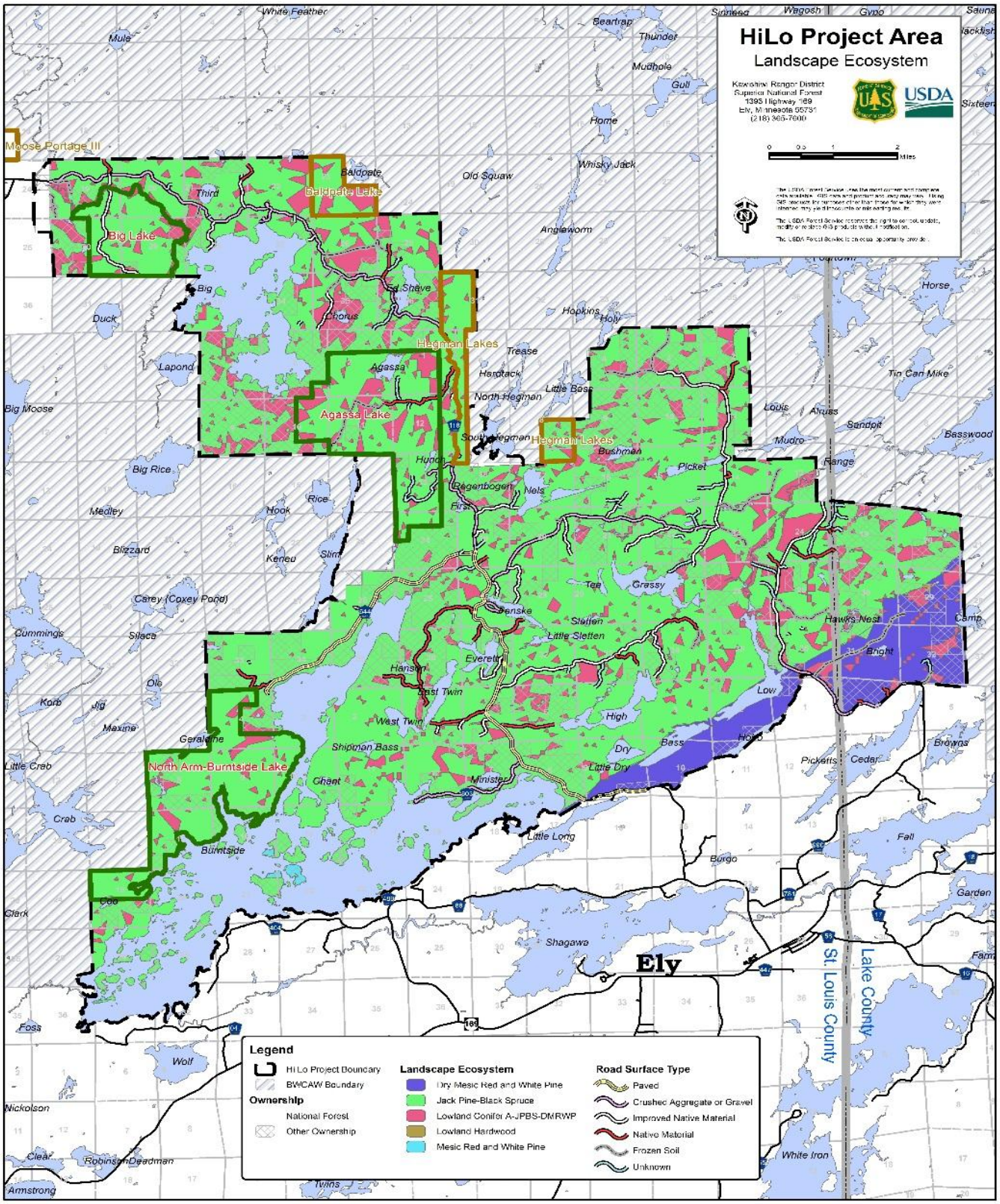
Operational Standards and Guidelines, based on the Forest Plan and Minnesota Forest Resource Council Guidelines, are an integral part of the proposal and are designed to minimize adverse effects. These practices would be adhered to while designing treatment boundaries, administering contracts, and implementing activities. Additional specific mitigation measures may be developed based on public comment or further effects analysis. Operational Standards and Guidelines that would be implemented with the proposed actions found in Attachment 3.

V. ADDITIONAL INFORMATION

A. LANDSCAPE ECOSYSTEMS

Landscape ecosystems are ecological areas characterized by their dominant vegetation communities and patterns as a result of local climate, glacial topography, dominant soils, and natural processes such as succession, fire, wind, insects, and disease. Forest Plan objectives for each landscape ecosystem are designed to maintain or restore the forest to conditions more representative of native plant communities. Figure 2 displays landscape ecosystems in the Hi Lo Project Area.

Figure 2. Hi Lo Landscape Ecosystems



The dominant upland landscape ecosystem in the Hi Lo Project Area is the Jack Pine Black Spruce (JPB) LE (FP p. 2-61), which covers approximately 80 percent of the National Forest System lands within the project area (Table 7). Of the remaining forested areas, 10 percent are in the Lowland Conifer A (LLC-A) LE, and five percent in the Dry Mesic-Red and White Pine (DRW) LE (FP p. 2-76 and 2-64, respectively). Tables 8-10 display the composition of these landscape ecosystems Forest-wide and within the project area. Figures 3-5 display the age class distribution Forest-wide and by the Hi Lo Project Area. Forest Plan objectives for age class and composition are applicable to an entire landscape ecosystem, and therefore are not directly applicable to smaller project areas. However, management actions in project areas such as the Hi Lo Project contribute to meeting Forest-wide landscape ecosystem objectives based on opportunities in the project area.

Table 7. Landscape Ecosystems Within the Hi Lo Project Area

Landscape Ecosystem	Acres	% of Project Area
Jack Pine-Black Spruce (JPB)	25,080	78
Dry Mesic Red and White Pine (DRW)	1,712	5
Lowland Conifer A (LLC-A)	3,363	10
Cedar (CED)	17	< 1
Lowland Hardwoods (LHW)	174	< 1
Non-Forested LEs (LNF)	1,992	6
Total Acres	32,338	100

Table 8. Jack Pine Black Spruce Landscape Ecosystem Vegetation Composition

	Project Area Existing Condition		Forest-Wide Condition		Forest Plan Objectives
Forest Type	Acres	2015 (%)	2015 (%)	2020 (%)	2020 (%)
Jack Pine	5,109	26	23	25	32
Red Pine	2,656	16	11	11	10
White Pine	2,326	1	4	4	3
Spruce-Fir	3,087	11	13	12	16
Northern Hardwoods	42	<0.1	0.5	0.5	0
Aspen	10,177	42	45	44	35
Paper Birch	972	5	4	4	4
Total	24,369	100	100	100	100

Figure 3. Jack Pine Black Spruce Landscape Ecosystem Age Class Distribution

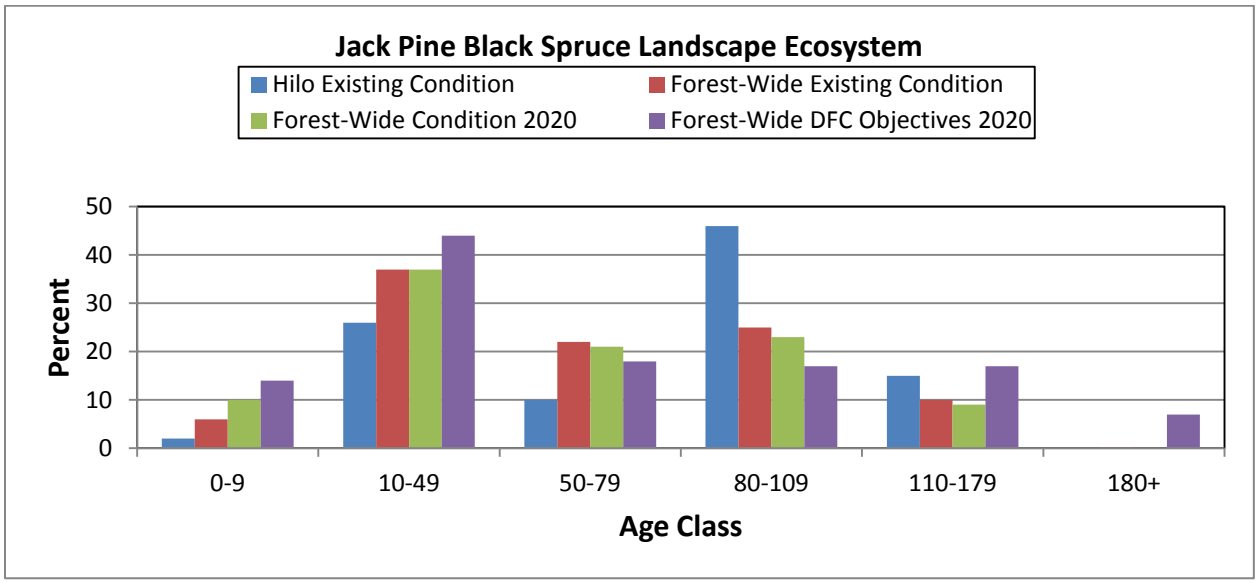


Table 9. Dry Mesic Red and White Landscape Ecosystem Vegetation Composition

	Project Area Existing Condition		Forest-Wide Condition		Forest Plan Objectives
Forest Type	**Acres**	**2015 (%)**	**2015 (%)**	**2020 (%)**	**2020 (%)**
Jack Pine	44	3	9	9	10
Red Pine	117	7	13	13	13
White Pine	0	0	10	10	12
Spruce-Fir	26	2	8	8	13
Northern Hardwoods	7	0	1	1	1
Aspen	1,267	74	52	50	43
Paper Birch	242	14	8	8	9
Total	1,703	100	100	100	100

Figure 4. Dry Mesic Red and White Pine Landscape Ecosystem Age Distribution

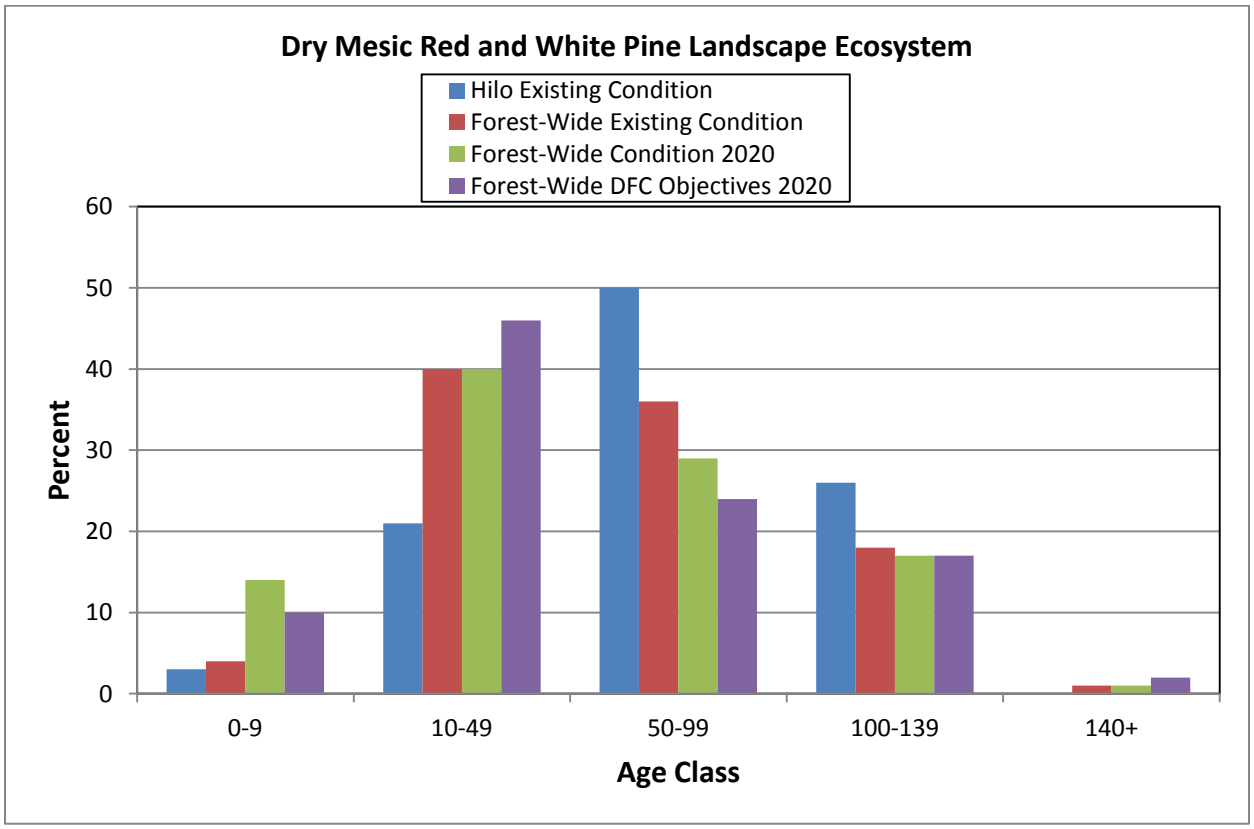
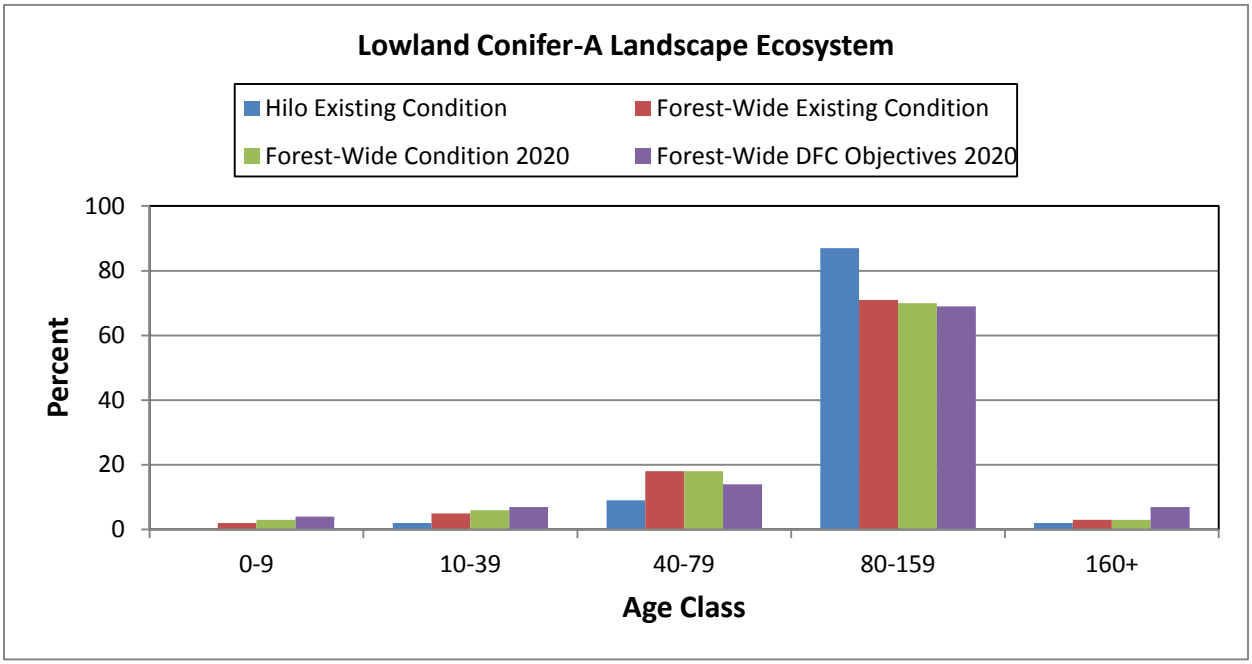


Table 10. Lowland Conifer A Landscape Ecosystem Vegetation Composition				
	Project Area Existing Condition		Forest-Wide Condition	
Forest Type	**Acres**	**2015 (%)**	**2015 (%)**	**2020 (%)**
Black Spruce and lowland conifers	3,350	95	82	82
Tamarack	0	0	3	3
Northern White Cedar	14	0	0	0
Lowland Hardwoods	174	5	6	6
Total	1,703	100	100	100

Figure 5. Lowland Conifer A Landscape Ecosystem Age Class Distribution



B. MANAGEMENT AREA DIRECTION

Management Area direction provides the framework to manage vegetation by considering multiple uses along with what is desired socially and economically within a given area (FP p. 3-2). Chapter 3 of the Forest Plan includes desired conditions, objectives, standards, and guidelines for each management area. The Hi Lo Project Area includes seven different management areas, which overlaps three Forest Plan Inventoried Roadless Areas (FP IRA), and two Roadless Area Conservation Rule (RACR, formerly RARE II) Areas, herein referred to as roadless areas. See Table 11 for management areas found in Hi Lo Project Area, as displayed on the Vicinity Map (Figure 1).

Table 11. Management Areas Within the Hi Lo Project Area

Management Area (MA)	Acres	Percent of Total Project Area	Roadless Area within MA
General Forest - Longer Rotation	32,022	50	Agassa, Baldpate Lakes, Hegman Lakes
Recreation Use in a Scenic Landscape	22,698	36	
Semi Primitive Motorized Recreation	5,502	9	Agassa
Semi Primitive Non-Motorized Recreation	1,193	2	Big Lake, North Arm Burntside Lake
Semi Primitive Non-Motorized Wilderness*	1,053	2	
Unique Biologic Area	748	1	North Arm Burntside Lake
Primitive Wilderness*	212	< 1	
Totals	63,428	100	

*Proposed actions within the wilderness areas would be management ignited fire only

The interdisciplinary team used Forest Plan Management Area direction to guide development of the purpose and need and proposed action. A brief summary of management area direction:

General Forest – Longer Rotation (LR)[5]

In the LR Management Area, the desired condition for the forest is a variety of stand sizes, shapes, crown closures, and age structures. Stands are a mix of young, even-aged and older, multi-aged vegetative growth stages. Vegetation would be managed to represent young to old (0 to 250 year old) vegetative growth stages. Timber products are still an emphasis but with a longer rotation and more uneven-age management.

A full range of silvicultural practices is used when managing the vegetation. More uneven aged and partial cut harvesting resulting in more uneven aged and multi-aged forest would occur. Clearcutting is often done at longer rotation ages.

Forest health is maintained and management investments are protected to sustain the productivity of the area. To maintain or restore vegetation communities, natural disturbances to the landscape are mimicked through the use of timber harvests and management ignited fire.

Recreation Use in a Scenic Landscape (RU)[6]

Ecosystems are managed to provide a predominantly natural-appearing landscape that may be slightly modified by forest management activities. This management area emphasizes a large tree and old forest character and viewsheds are managed for scenic beauty and big-tree character.

Management activities such as timber harvest and management-ignited fire may be used to achieve L E objectives; however, the appearance of any management techniques used would be guided by recreation and scenic integrity objectives

Forest management enhances recreation and scenic objectives and management activities may be noticeable to visitors. Dispersed recreation facilities such as campsites and trails may be provided for public use.

Semi Primitive Motorized Recreation[7]

This management areas is very similar to Recreation Use in a Scenic Landscape MA where management emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is allowed. Evidence of management actions in the Semi-primitive motorized recreation areas is relatively low, compared to the previous management areas. Large tree and older forest characteristics with a continuous forest canopy are emphasized.

Developed recreation sites such as water access and trailheads may be provided for public use. Low standard National Forest System roads may provide access for management activities and some public access.

[5] More information can be found in the Forest Plan, pages 3-9 to 3-12
[6] More information can be found in the Forest Plan pages 3-13 to 3-15.
[7] More information can be found in the Forest Plan pages 3-24 to 3-26.

Semi Primitive Non-Motorized Recreation[8] (SPNM)

The SPNM management area emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is not permitted. Forest management enhances recreation and scenic objectives and may occasionally be noticeable to visitors.

Vegetation management activities such as timber harvest and management ignited fire may be used to achieve vegetation objectives while generally maintaining or enhancing the older vegetative growth stages as well as recreation and scenic objectives. Scenic integrity and recreation objectives guide the design and implementation of these activities. Low-standard roads are permitted to accomplish forest management but would be closed to public motor vehicle use.

Unique Biologic Area[9] (UB)

The UB management area has outstanding biological values and is not suitable for timber management. Management emphasis is on conserving plant communities, associations or species of interest found here. Management practices that would alter important values are not appropriate in the UB management area. Existing old-growth or old forest will be managed to protect and maintain existing conditions with the use of prescribed fire.

Semi Primitive Non-Motorized Wilderness and Primitive Wilderness[10]

Vegetation management will be managed only to protect wilderness values or to protect adjacent property from fire or pests. Management activities strongly emphasize maintaining natural ecosystems in both management areas. Prescribed fire can be used to preserve the natural ecosystems within the wilderness (Forest Plan p. 3-60).

C. ROADLESS AREAS

This section provides more detailed information on the different roadless area designations, including Forest Plan Inventoried Roadless Areas (FP IRA) and Roadless Area Conservation Rule (RACR) areas, and how they apply to the Hi Lo Project Area.

There are five roadless areas in the Hi Lo Project Area. Three of these areas are considered Forest Plan Inventoried Roadless Areas because they met and would continue to meet specific criteria identified in the Forest Plan (see Table 13). Two of the roadless areas fall under the 2001 Roadless Area Conservation Rule (RACR), one of which also qualifies as a FP IRA and one does not qualify as a FP IRA because it did not meet the Forest Plan criteria. Table 12 summarizes the proposed actions and general summary of all the roadless areas within the project area. See Table 11, Management Areas within the Hi Lo Project Area, for the Forest Plan Management Area designation of each roadless area. Proposed actions within all roadless areas are consistent with treatments proposed throughout the Hi Lo Project Area and contribute to meeting the purpose and need of the project.

[8] Forest Plan pages 3-21 to 3-23
[9] Forest Plan pages 3-27 to3-29
[10] Forest Plan page 3-44 to 3-45

Figure 6. Roadless Areas and Proposed Actions – Primary Treatments

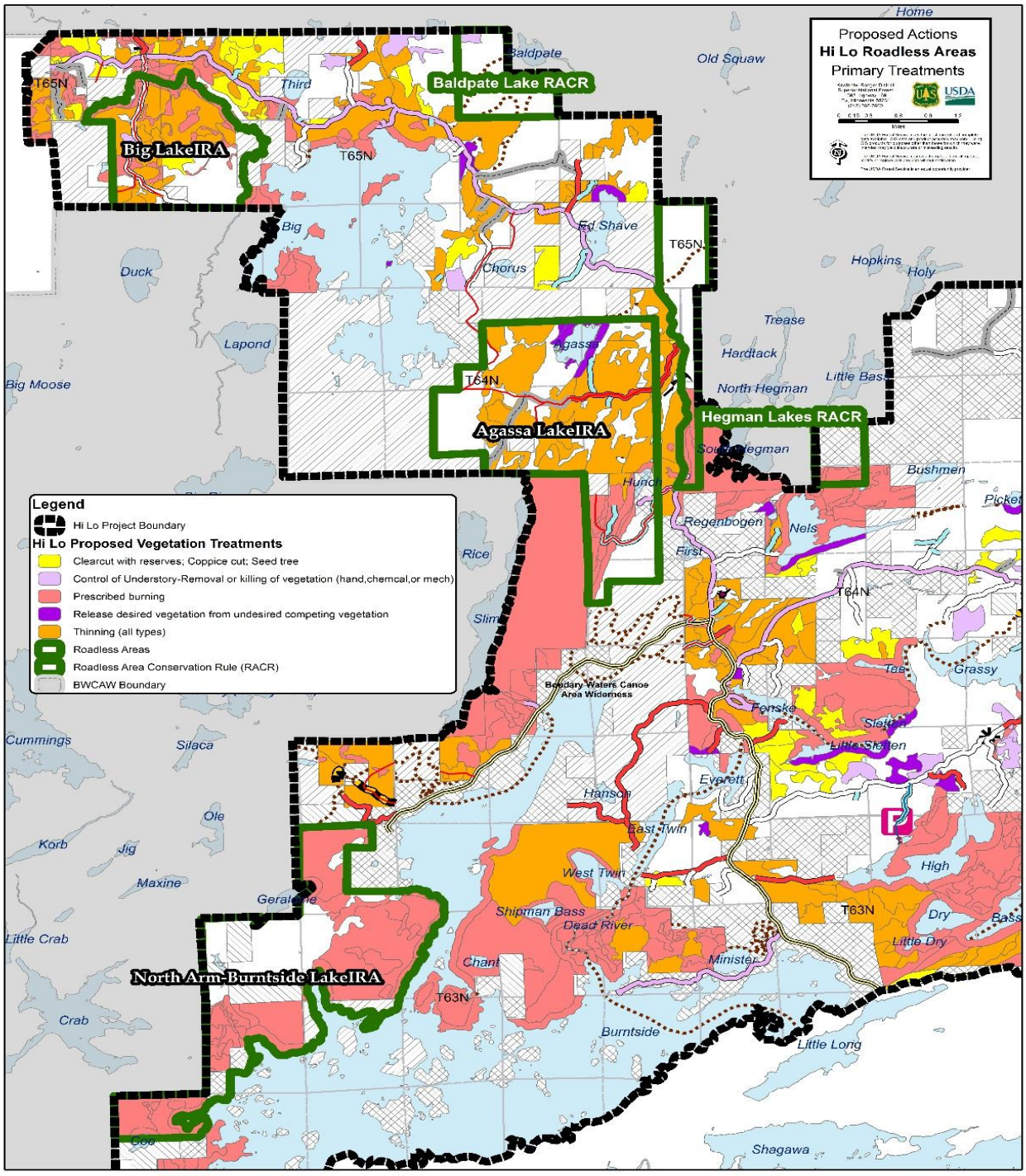


Table 12. Roadless Area Designations and Proposed Actions				
Roadless Areas	**National Forest Acres** **National Forest Percent of Total Area**	**Designation**	**Proposed Actions Primary Treatments**	**Acres of Proposed Actions**
Agassa Lake	2,641	FP IRA	Prescribed Burn	252
	92		Harvest - Uneven Age	1,277
Total Acres Primary Treatments (60 percent of National Forest System Land)				1,599
Baldpate Lake	485	FP IRA RACR	Non-Harvest - Control Understroy Vegetation	21
	100			
Total Acres Primary Treatments (4 percent of National Forest System Land)				21
Big Lake	1,079	FP IRA	Prescribed Burning	229
			Harvest – Uneven Age	530
	90		Harvest – Even Age	26
			Non-Harvest - Control Understroy Vegetation	8
Total Acres Primary Treatments (73 percent of National Forest System Land)				793
Hegman Lakes	676	RACR	Prescribed Burn	186
	81			
Total Acres Primary Treatments (26 percent of National Forest System Land)				186
North Arm Burntside Lake	2,285	FP IRA	Prescribed Burn	1,357
	83		Hand Pile and Burn	276
Total Acres Primary Treatments (71 percent of National Forest System Land)				1,634

Roadless Area Designation Background

Roadless Area Review and Evaluation (RARE II)

RARE II was an assessment of undeveloped land within national forests as potential wilderness study areas as required by the Wilderness Act of 1964. It was completed in 1979. RARE II areas in the Hi Lo Project Area include: Baldpate Lake and Hegman Lakes. See Figure 6, Roadless Areas and Proposed Action Map.

1986 Forest Plan

The 1986 Forest Plan evaluated all RARE II areas, including Baldpate Lake and Hegman Lakes. A determination was made that those portions not previously incorporated in the BWCAW were designated non-wilderness by the RARE II assessment.

2004 Forest Plan Inventoried Roadless Areas

The Forest Plan revision process, completed in 2004, required an accurate inventory to address roadless area management issues. At the time of the Superior National Forest plan revision, all national forests were required to evaluate those previously inventoried roadless areas (Roadless Area Conservation Rule), and other lands, which remain essentially roadless/undeveloped, and had not been designated for wilderness. Table 13 summarizes the criteria used during Forest Plan revision for inventorying roadless areas, and consequently must be met in order for areas to maintain roadless designation (Forest Service Handbook 1909.12). The Forest Plan Record of Decision (p. 17 and 18), describe why the areas were not recommended for wilderness study and consequently all the inventoried areas were allocated to other Management Areas. The Forest Plan Final Environmental Impact Statement (FEIS) analysis is in section 3.7 Special Designations, pages 3.7-1 – 3.7-13. Appendix C of the Forest Plan FEIS, displays the Forest Plan Roadless Area Inventory and Evaluation.

Table 13. Forest Plan Criteria for Inventoried Roadless Areas

Criteria Focus	Criteria Description	Rationale
Vegetation	No more than 20 percent of the roadless area harvested with an even-age, regeneration cut in the past 10 years.	Indicates prior activities within the area prior to and including this treatment.
Setting/Solitude	At least 2,500 acres of semi-primitive area if not adjacent to existing wilderness. No limit if adjacent to existing wilderness.	No actions are proposed to change the size or shape of current roadless areas. All Hi Lo roadless areas are adjacent to wilderness.
Ownership	At least 70 percent federal ownership. No future non-federal land access needs	There are no land changes proposed in Hi Lo.
Roads	No more than ½ mile of improved[11] roads per 1,000 acres. No roads not under Forest Service jurisdiction.	No system roads or long-term special use roads would be constructed.
Shape	Area must have a manageable shape without narrow, elongated, or gerrymandered boundaries.	No actions are proposed that would change the shape of inventoried roadless areas.

There are four Forest Plan Inventoried Roadless Areas in the Hi Lo Project Area, identified in Table 12. During the Forest Plan Roadless Area Inventory and evaluation process, the Hegman Lakes RACR was determined not to meet roadless criteria, due to the unmanageable, narrow, disjointed shape; therefore, it maintains its RACR status but not as an Forest Plan Inventoried Roadless Areas.

[11] An improved road is any constructed or existing feature created on the land for the purpose of travel by passenger vehicles which has a definable, constructed cross-section, is properly drained, may or may not be surfaced, and is useable by most vehicle types, which may only be high clearance vehicles. This includes all OML 3, 4, and 5 roads, and any OML 1 and 2 roads that meet the above criteria (FSH 1909.12 71.22a). In general the existence of OML 1 roads and decommissioned routes, or temporary roads does not preclude an area from wilderness consideration.

Roadless Area Conservation Rule

The 2001 Roadless Area Conservation Rule (RACR) Final Rule was published in the Federal Register on January 12, 2001. The 13 areas on the Superior National Forest included in the RACR FEIS rule were the roadless areas analyzed during the 1986 Forest Plan analysis. See Appendix C of the 2004 Forest Plan Revision FEIS for detailed information on the RACR. The Hi Lo Project Area encompasses two RACR areas, Baldpate Lake and Hegman Lakes, as shown in Figure 5, Roadless Areas Map. These areas are to be managed as *"large, relatively undisturbed landscapes" (Federal Register Vol. 66, No.9, 3245).* In general, there is to be no timber harvesting, road construction or reconstruction, temporary or permanent in RACR areas unless specific exceptions are met.

In May 2005, the US Department of Agriculture announced the Special Areas; State Petitions for Inventoried Roadless Area Management; Roadless Area Conservation National Advisory Committee; Final Rule and Notice. This 2005 State Petitioning Rule replaced the 2001 Roadless Area Conservation Rule described above. The 2005 State Petitioning Rule applied to 30 areas on the Superior National Forest which were inventoried as roadless areas during the Forest Plan revision. Minnesota Governor Pawlenty did not file a petition under this rule, which meant that the Secretary of Agriculture did not reevaluate the Management Area designations assigned to Forest Plan inventoried roadless areas as a result of the 2004 Forest Plan Revision FEIS and Record of Decision.

In late September 2006, a US District Court ruling in California overturned the 2005 State Petitioning Rule and reinstated the 2001 Roadless Area Conservation Rule. In August 2008, a US District Court ruling in Wyoming enjoined the 2001 Roadless Area Conservation Rule. In December 2008, the US District Court in California clarified that their ruling applied only to the Ninth Circuit Court of Appeals and New Mexico. The Superior National Forest is in the Eighth Circuit Court of Appeals; therefore, at this time, RACR regulations are not in effect on the Superior National Forest.

On March 2, 2012, Judge Brimmer (Wyoming) lifted his injunction on the 2001 Roadless Rule. Lifting of the injunction paves the way for implementation of the 2001 Roadless Rule nationwide and provides much needed consistency regarding the management of Inventoried Roadless Areas.

On May 30, 2012, Secretary Vilsack's Memorandum 1042-155 reserving review and approval of certain activities in 2001 Roadless Rule areas expired and was not renewed. On May 31, 2012, the Chief issued a memorandum and new review process for proposed management activities in these roadless areas (RACRs). This review process included Regional Forester approval for the treatments proposed in the Baldpate Lake and Hegman Lakes RACR areas. The proposed actions for these RACRs are identified in Table 12 and would include the cutting, sale, or removal of generally small diameter trees and using management ignited fire to restore ecosystem composition as well as reducing the risk of potential negative effects of an uncharacteristic wildfire, specified in 36 CFR 294.13(b)(1).

D. CLIMATE CHANGE CONSIDERATIONS

This section synthesizes the current state of knowledge regarding climate change impacts in the region, on the Superior National Forest, and in the Hi Lo Project area. No single project can develop a perfect plan to mitigate all the risks and uncertainty posed by climate change.

However, there are incremental adjustments that can be made within an individual project or across an entire landscape to put the forest in a better position to adapt or tolerate continued climate change. The Hi Lo team worked closely with researchers from the Northern Institute of Applied Climate Science and utilized the two main sources of information in their work to consider climate change. First, the team considered information in the *Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers* (Swanston and Janowiak 2012, URL: http://www.treesearch.fs.fed.us/pubs/40543). The second resource used by the team is the *Minnesota Forest Ecosystem Vulnerability Assessment and Synthesis* (Handler, et al, 2014, URL: http://www.treesearch.fs.fed.us/pubs/45939). This summary represents the current state of scientific knowledge used by resource specialists to determine what actions may be affected by cumulative and long-term climate change impacts in the Hi Lo Project.

Observed Climate Change

Northern Minnesota has experienced substantial changes in temperature and precipitation over the past 100 years, and the rate of change appears to be increasing. A great deal of observed climate information is available for the project area and for the large region. The salient climate trends include:

- Mean minimum and maximum temperatures have been increasing across all seasons, with winter temperatures experiencing the most rapid warming.
- More rain has been falling in heavy precipitation events of three inches or greater.
- Snowfall has been decreasing across northern Minnesota, although there has been an increase in large winter storms.

Projected Climate Change

Climate change projections can help us get a better sense of the range of possible futures that could be expected in northern Minnesota. Projected changes in temperature and precipitation can have cascading impacts on other ecosystem processes that are important in the project area. The salient projected climate impacts for the Hi Lo Project Area include:

- Climate models agree that temperatures in northern Minnesota will continue to increase across all seasons over the next century, with dramatic warming most likely in winter (2° to 12° F).
- Precipitation is projected to increase in winter and spring across a range of climate scenarios, but there is greater uncertainty for summer precipitation – slight increases or large decreases are possible.
- Intense precipitation events are likely to become more frequent.
- Snowfall is projected to continue to decline across the assessment area, with more winter precipitation falling as rain.
- Soils are projected to be frozen for shorter periods during winter.
- The growing season is projected to extend by several weeks.
- Climate shifts may increase wildfire activity or change the timing of the wildfire season in northern Minnesota.

- Forest pests and diseases may become more prevalent and damaging in a warmer climate.
- Less severe winters may increase deer populations in northern Minnesota.

The Hi Lo interdisciplinary team identified management objective for five areas of interest which could have the biggest impact and be impacted the most given the projected local and regional climate change trends. These areas include red pine vegetation types; fire risk and fuel loading; oak and blueberry vegetation types; aspen and jack pine vegetation types, and white pine vegetation types. Steps were taken to identify the challenges, opportunities, and feasibility to accomplish the objectives given local conditions and projected trends. These are summarized in Attachment 5.

Generally, in most climate change projections:

- Boreal species such as quaking aspen, paper birch, tamarack, and black spruce are likely to experience reduced suitable habitat and biomass across the assessment area.
- Species with ranges that extend to the south such as American basswood, black cherry, northern red oak, and eastern white pine may experience increased suitable habitat and biomass across the assessment area.
- Many species currently common in northern Minnesota may decline under the hotter, drier future climate scenario.
- Forest productivity will likely be dictated by a combination of factors such as CO_2 fertilization, water and nutrient availability, and species migration.

We determined that many activities identified to move the forest towards the desired condition outlined in the Forest Plan would also be beneficial as climate change adaptation tactics. These "win-win" opportunities were preserved.

VI. ADMINISTRATIVE OBJECTIONS

The Hi Lo Project is an activity implementing a land management plan and is not authorized under the Healthy Forest Restoration Act; therefore, the Hi Lo Project decision is subject to objections following Forest Service regulations at 36 CFR 218, Subparts A and B. Only individuals or organizations who submit timely and specific written comments as defined at 36 CFR 218.2 regarding the proposed project during a public comment period established by the Responsible Official are eligible to file an objection to the Hi Lo Project.

In addition to serving as a scoping opportunity, this time period will serve as a designated opportunity for public comment that may provide a commenter with eligibility to object to the proposed project under 36 CFR Part 218. Comments are most useful when they are specific to the proposed actions and if received by September 30, 2016. An additional public comment period will be held once the environmental analysis document is complete and comments submitted during that public comment period would also provide the commenter with eligibility to object.