



United States
Department of
Agriculture

Forest
Service

August 2015



SUPERIOR NATIONAL FOREST

Forest-Wide Roads Study Report (Travel Analysis Report)

For more information, contact:

Superior National Forest
8901 Grand Avenue Place
Duluth, MN 55808
218-626-4300

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Executive Summary

Introduction

This report documents the data, issues, analysis procedure and findings for the SUPERIOR NATIONAL FOREST (SNF) roads analysis. This analysis was designed to provide decision-makers with critical information to plan road systems that are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, are in balance with available funding for needed management actions, and meet the objectives of the Forest Plan.

This analysis and report is not a decision document. All road-related decisions must go through an additional NEPA process with public involvement. This report is intended to be an update of the Forest-Wide Roads Analysis Process (RAP) completed in 2002 and for this reason detailed information on setting, economic and social information is not repeated in this document.

Analysis Process

Roads analysis as defined in FOREST SERVICE HANDBOOK 7709.55, CHAPTER 20-TRAVEL ANALYSIS is a six-step process. This report is organized by sections following the process steps.

1. Setting up the analysis
2. Describing the situation
3. Identifying the issues
4. Assessing benefits, problems and risks
5. Describing opportunities and setting priorities
6. Reporting findings

The Travel Analysis Process (TAP) identifies opportunities for the national forest transportation system to meet current and future management objectives, and provides information that allows integration of ecological, social, and economic concerns into future road-related decisions. The TAP is tailored to local situations and landscape/site conditions as identified by forest staff members and coupled with public input.

The outcome of the TAP is a list of potential opportunities to change how certain parts of the forest transportation system are managed to address administrative and public issues and interests. A thorough travel analysis informs subsequent National Environmental Policy Act (NEPA) decisions, allowing individual road-related projects to be more site-specific and focused, while still addressing cumulative impacts associated with the entire transportation system. The TAP results will assist the Superior National Forest in addressing issues related to the size of the transportation system. It will be used to inform future analyses, decisions, and specific actions.

The working group assigned to this project met to discuss the TAP. After reviewing the Roads Analysis Report (RAP) for this unit, and considering available resources, it was determined that the appropriate scope of analysis was all roads within the Superior National Forest System. The analysis period is set at twenty (20) years outlook on needs and impacts.

Summary of Issues

The key issues that addressed the Superior National Forest transportation system were identified through public comments, other public agencies, tribal groups as well as from input from Forest Service personnel. The following road-related issues were identified:

- Insufficient resources for maintenance of the existing system roads
- Need for access to private lands for landowners
- Need for access to other public land owners
- Need for access to the public for recreational purposes
- Need for access for Tribal Use/Traditional Cultural Property
- Need for access for general forest administration
- Need for access to firewood and other forest products gathering areas
- Need for access to gravel, rock and mineral resources
- Increased risk of human-caused fire
- Potential impacts on Wildlife Habitat
- Potential impacts to Watershed Conditions
- Road Deterioration and Closure Can Impact Local Economy

Summary of Recommended Actions Responding to Issues

- Prioritize roads that are good candidates for transfer of jurisdiction to counties or state (Note: Forest has identified priorities and is working toward improvements for future transfers).
- To stretch current funding, identify higher priority roads to receive maintenance and reduce maintenance intervals (Note: Forest has been implementing these practices over the past 4 years). Focus maintenance funds on the high priority roads identified to provide long-term service on the roads that are needed the most for public use.
- Reduce maintenance level to reduce accompanying maintenance needs (Note: Forest has been implementing this practice for at least 4 years).
- Maximize road maintenance that can be completed under stewardship and timber sale contracts.
- Review current special use permit fees and adjust upward where warranted.
- For roads providing access for multiple private landowners, evaluate transferring road jurisdiction to the county.
- Enter into a special use agreement with the landowner, stipulating that the permittee has maintenance responsibilities.
- Assist property owners in the formation of road maintenance associations.

- Review and update State and County road maintenance agreements to address sharing maintenance responsibilities fairly.
- Prioritize reduction of number of roads and trails located in habitat for species-of-concern and species-of-interest.
- Place seasonal restrictions on roads going through critical habitat.
- Reduce the road width and maintenance level to minimum needed for safe vehicle passage and to meet the intended need in sensitive wildlife areas.
- Maintain road grading to minimize potential runoff and sedimentation.
- Plowing snow on forest roads can result in drainage barriers along the sides of the roads and cause washouts. For roads that are plowed by the county or private parties, require that whoever does the plowing to coordinate with the Forest Service to cut through shoulder snow banks to allow snow melt and rain to drain off of the roads.
- Implement the guidelines for mitigating road risks to reduce soil and drainage impacts from roads.
- Provide information and education about motor vehicle regulations and responsible use of motorized vehicles on the National Forest. Install information boards at area trailheads, recreation sites, and parking areas.
- Install route numbers on all system roads at junctions with system and unauthorized routes to assist users with compliance of motor vehicle use regulations.
- Educate the public to create an understanding of the problems created by off road driving. Implement an ongoing effort to educate forest users of the motorized travel policy.
- Utilize enforcement to curtail off-road driving. Implement patrols and field presence at appropriate times of year (such as hunting season, holidays, weekends, etc.) in identified areas. This effort is also used to educate users of the travel policy.
- Rehabilitate areas damaged by off-route driving.
- Maintain access to recreation sites that are provided by the Forest Service for public use.
- Maintain and update the Motor Vehicle Use Map.
- Maintain road signage in accordance with handbook direction.
- During the NEPA process for management activities, consider decommissioning ML1 and other open roads in the project area where a reduced maintenance cost would be realized.
- During the NEPA process, maximize identification of temporary roads and minimize adding new roads to the system.

Risk and Benefit Analysis

The analysis process resulted in a forest-wide examination of risks and benefits summarized below.

Benefits

- 99% of all roads are needed for vegetation management in the next 20 years. Therefore the Forest doesn't have a lot of roads that are not needed to accomplish the Forest Service mission. Most roads in place are needed in the next 20 years for harvesting or some sort of silvicultural treatment access.
- Over 30% of the roads are required to access administrative or recreational sites.
- Over 10% of SNF system roads are needed to access non-federal public land.
- Almost half (45%) of the roads rate high in scenic value.
- Approximately 30% of the roads have some portion of the route also used as a designated trail.

Risks

- Approximately 59% of the roads have some portion of the road that crosses poor soils. This includes wetland type areas and thin soils over bedrock. The maintenance level 3-5 roads have been designed to cross these soils. Some of the roads are limited to winter only travel to limit degradation of wetland areas.
- Approximately 37% of the roads have some portion that falls within an area designated as a Lynx Analysis Unit where the sum of road and trail density exceeds the Forest Plan guideline of 2 miles per square mile.
- Less than 30% (28%) of the roads or road segments fall within 100 ft of a lake, river or stream.

Recommendations For Road Disposition

All 2500 miles of road on the SNF were assessed on the basis of risks and benefits. Based on the findings, recommendations for future need of the road and future disposition were identified.

- 50 roads totaling 16 miles in length were recommended as not likely needed in the future;
- 52 roads totaling 85 miles were recommended for decreasing the maintenance level;
- 18 roads, 10 miles were recommended to consider for special use authorization;
- 8 roads totaling 43 miles were recommended to consider for change in jurisdiction; and,

- 7 roads totaling 4 miles in length were recommended to be converted to trails.

Road Funding

On the Superior National Forest, road maintenance funding has decreased by over 60% since 2000 without a similar decrease in total mileage. At the current funding level we are not able to properly maintain the road system. Based on a model developed by the Region 9 Regional Office the total estimated funding needed to maintain the 2500 mile road system is approximately \$2,000,000 per year for basic road maintenance. Additional funds are needed for bridge replacement and replacement of surfacing on maintenance level 3-5 roads. We currently have a backlog of approximately \$15,000,000 for surfacing replacement. The past few years we have been receiving \$500,000 to \$600,000, approximately 30% of the amount needed. The analysis completed for this TAP did not result in identifying a significant number of roads or miles that are likely not needed in the future.

At the current funding level, roads can not be maintained to standard and the Forest is not able to meet the Forest Plan Desired Conditions of providing safe traveling conditions for the public and providing reasonable access to private land and other public lands.

The Forest recognizes that the trend of decreasing funding will most likely continue. To address, while balancing balance mission requirements and public needs the Forest will continue to implement the following strategies:

- Seek other sources of funding to apply to road maintenance
- Take advantage of opportunities for road maintenance work to be completed under timber sale contracts and stewardship
- Work with the State of Minnesota and local counties to share maintenance activities
- Maximize opportunities to turn road maintenance and jurisdiction over to State and counties
- Where practical, reduce maintenance levels to reduce needed maintenance
- In NEPA analysis for vegetation management, maximize use of temporary roads, minimize addition of new system roads and maximize opportunities to reduce system roads

SECTION 1 - Setting up the Analysis

Purpose

The purpose of this section is to:

- Identify project area, scope and scale of the analysis
- Identify interdisciplinary team and the specialties relevant to the intended analysis
- Identify planned approach
- Identify information needs

Project Area and Objectives

The travel analysis process (TAP) was conducted for all Maintenance Level (ML) 1 to 5 roads on the Superior National Forest. The objective was to apply a science based approach in an assessment of future need and disposition of a road system that is safe and responsive to public needs and desires, is efficiently administered, has minimal negative ecological effects on the land, and is in balance with funding available for needed management actions.

This study is intended to be a broad scale comprehensive look at the transportation network. The main objectives are to make recommendations that:

- Balance the need for access while minimizing risks by examining important ecological, social, and economic issues related to roads and trails;
- Develop maps, tables, and narratives that display transportation management opportunities and strategies that address current and future access needs, and environmental concerns.
- Identify the need for changes by comparing the current road system to the desired condition;
- Make recommendations to inform travel management decisions in subsequent NEPA documents.

The analysis area for this study encompasses the entire Superior National Forest.

The analysis includes all roads under SNF jurisdiction, Maintenance Level 1 through Maintenance Level 5. Motorized and non-motorized trails were not included in the analysis except where they were coincident with a road. The analysis was completed with data that was readily available and some of the data sources may have been incomplete or not up to date. The analysis was completed in an office setting and little field verification was completed.

The period of analysis for the study is 20 years and the scale of the analysis is Forest-Wide.

Core Team

Since the purpose of this analysis was information gathering and not decision making, a small, compact Core Team was identified to lead the analysis process and coordinate with specialists.

Name	Role
Lori McIntyre, Civil Engineer	Team Leader
John Olson, Civil Engineer	Transportation System Support
Judy Ness, Resource Information Specialist	Recreation Support
Kathy McTighe, Silviculturist	Natural Resources Support
Tom McCann, GIS Specialist	GIS Application Support

Consulting Resource Specialists

A multi-disciplinary consulting group of forest resource specialists were assigned to the Transportation Analysis Process. The team members and their primary analysis role are listed below:

Resource	Name
Cultural Resources	Lee Johnson
Minerals	Eric Wirz
Lands & Special Uses	Liz Schleif
Tribal Rights and Interests	Lisa Radosevich-Craig
Wildlife/TES	Susan Catton
Timber Management	Mark Akeson
Soils	Casey McQuiston
Aquatic Species	Jason Butcher
Watershed/Hydrology	Emily Creighton
Fire/Fuels	Patty Johnson
Sensitive Plants/Invasive Species	Jack Greenlee
Recreation/Scenery	Judy Ness
Environmental Planning	Peter Taylor

District Teams

Verification of data analysis results was completed with field based Ranger District Teams. Team members included Timber, Natural Resource and Recreation representatives.

Approach

Roads were assessed on the basis of risks and benefits associated with the roads to determine recommended future need and disposition.

Future Need

- Likely Needed
- Likely Not Needed

Disposition

- No Change
- Modify Maintenance Level
- Change to Special Use Permit
- Change Jurisdiction
- Decommission

Benefits were associated with administrative and public access. Risks were generally associated with potential ecological impacts.

Analysis Plan

The Core Team, with assistance by the Resource Specialists, followed these steps in order to carry out the analysis:

- Identify Risk and Benefit Issues
- Determine data requirements
- Review and assemble existing spatial data
- Complete geospatial data analysis
- Populate summary matrix
- Review and assemble existing data
- Identify preliminary access and resource issues, concerns, and opportunities
- Identify road safety issues.
- Identify additional issues, concerns, and opportunities through public involvement and internal resource staffs.
- Truth out data analysis results with field based District teams
- Recommend potential modifications to the road system based on the findings of this analysis to be examined in more detail in a future NEPA type analysis

Information Needs

Data used in analysis was current as of March 2014 reflecting a “snap shot” in time. Any updates since that time are not reflected in the analysis.

The following spatial data was used to complete the analysis.

1. Forest Service INFRA Data base roads and trails
2. Property ownership (Forest Service, State of Minnesota, Cook County, Lake County St Louis County, Other Public, Private)
3. Locations of Administrative Sites
 - offices
 - communications towers
 - heliports
 - gravel pits

4. Recreational site or facility such as
 - campground
 - trailhead
 - BWCA entry point
 - boat access or
 - dispersed recreational site
5. Special Use Permit areas
6. Unique Biological Area (UBA) Management Area; Candidate Research Natural Area/Research Natural Area (cRNA/RNA) Management Area; Wild Segments of eligible Wild and Scenic Rivers (eWSR) Management Area; 2001 Roadless Area Conservation Rule Areas (RACR Areas, also known as RARE II Areas); Forest Plan Inventoried Roadless Areas
7. Watershed feature locations
 - streams and lakes
 - State listed 303(d) impaired stream, lake, or other water body
 - road crossings that are characterized as barriers to aquatic passage (fragmentation) along rivers and streams
 - trout streams
 - infested waters
8. Sensitive Species locations (mussel population = creek hillsplitter, blacksandshell or dragonflies (Quebec emerald and ebony boghaunter); Nipigon and Shortjaw Ciscoes
9. Locations of somewhat poorly, poorly, or very poorly drained soils & shallow soils (ELTs 1-6, 12, 18)? (1-6 mostly wetlands)
10. Designated trails that are routed on roads
11. Areas "high" in the scenic integrity mapping
12. Areas for future silvicultural or restoration activities in the next 20 years
13. Proposed land exchange (school trust) areas
14. Locations of SPM Recreation Opportunity Spectrum areas
15. Wildlife Related data:
 - road density in area of lynx analysis units (LAU)
16. Plant Populations
 - Threatened and Endangered Species plant populations
 - high priority non-native invasive plant
17. Boundary Waters Canoe Area Wilderness boundaries

SECTION 2 – Describing the Situation - Existing Superior National Forest Transportation System

Purpose

The purpose of this section is to:

- Describe the existing forest transportation system
- Describe the existing land and travel management direction
- Describe road maintenance levels

Existing Road System

The Superior National Forest has an extensive system of roads and trails. The motorized and non-motorized trails are not addressed in this report. The existing road system is shown on Maps A1 and A2.

As shown on Map B7, there are many areas of the forest that have patchwork distribution of ownership that includes the SNF, State of Minnesota, counties, townships and private. Forest roads cross and provide access to the non-Federal ownership and some State and County Roads serve as arterial roads throughout the Forest.

More detailed information on the SNF Road System and its interconnection with State and County Roads can be found in the 2002 Roads Analysis Process Report (RAP).

Current Land Management and Travel Management Direction

A. General

Travel analysis is focused on identifying needed changes to the size of the forest transportation system; identifying the existing management direction is an important first step.. Restrictions, prohibitions, and closures on public motor vehicle use are part of the existing direction. Existing direction (i.e., laws and regulations, official directives, land management plans, forest orders, and forest-wide or project-specific road-related decisions) governs the motorized routes and areas open to public use. This information about the managed transportation system is documented in road management objectives, maps, recreation opportunity guides, tabular databases, and other sources.

B. Motorized Trails

Currently, the designated motorized trails (and roads to motor vehicles) on the Superior National Forest are shown on the Superior National Forest Motor Vehicle Use Maps that were updated in 2015.

C. Areas

There are no designated motorized areas on the Superior National Forest.

D. Previous Travel Analysis

The Forest-wide Roads Analysis completed in 2002 addressed Maintenance Level (ML) 3, 4, and 5 roads and has been used as information by the Superior National Forest Line Officers to inform their understanding of the transportation system on the Forest.

Modifications to the transportation system are often made as a result of part of project-level NEPA decisions.

Designations of roads open to different types of public motor vehicles, including off-highway vehicles, are made as a result of implementation of 36 CFR 212, Subpart B – Designation of Roads, Trails, and Areas for Motor Vehicle Use.

Road Maintenance Levels

The Forest Service differentiates forest roads into five maintenance levels, which define the level of service, and maintenance required. A brief description of the maintenance levels is shown below. Refer to Appendix G for a more detailed description of the maintenance levels.

- Road Maintenance Level 5 (ML5) – roads are managed and maintained for a high degree of user comfort. These roads are generally paved and are suitable for passenger vehicles.
- Road Maintenance Level (ML 4) – roads are managed and maintained for a moderate degree of user comfort. These roads are generally surfaced with rock and are suitable for passenger vehicles.
- Road Maintenance Level (ML3) – roads are managed and maintained for a moderate degree of user comfort. These roads are native surface roads and are suitable for passenger vehicles.
- Road Maintenance Level 2 (ML2) – roads are managed and maintained for use by high-clearance vehicles; passenger car traffic is not a consideration.
- Road Maintenance Level 1 (ML1) – roads that are closed to vehicular traffic intermittently for periods that exceed 1 year.

SNF Forest Road Inventory

The Superior National Forest has an approximately 2500 miles of system roads. Table 1 below shows the distribution of roads by Maintenance Level. Maps of existing roads are shown in Appendix A.

Table 1 - Road Summary of Miles by Type for the Analysis Area*

Maintenance Level	Number of Roads	Miles of Road	% of Total Miles
1 – Basic Custodial Care (Closed)	1168	912	36%
2 – High Clearance Vehicles	860	984	39%
3 – Suitable For Passenger Vehicles	122	216	9%
4 – Moderate Degree of User Comfort	90	315	13%
5 – High Degree of User Comfort	<u>23</u>	<u>72</u>	3%
Totals	2263	2499	

*As of March 2014.

ML 3 through ML 5 roads are generally considered suitable for passenger cars and provide access to administrative sites and higher use recreation sites and serve as arterial and collector roads throughout the forest. On the Superior National Forest, the highest level, ML 5 roads are high use arterial roads that generally have two lanes and are gravel surfaced. ML 5 also includes paved parking lots and roads at the administrative sites and a few campgrounds.

ML 3 and ML 4 are also suitable for passenger cars, gravel surfaced but generally narrower than the ML 5 roads and a maintained to a lower standard than ML 5.

ML 1 roads are in storage for a future use, frequently blocked and are not maintained. Many ML 1 roads allow use by motor vehicles less than 50 inches in width.

The highest percentage of roads are ML 2 which are generally regarded as requiring high clearance vehicles to navigate. These are generally single lane and may have a rough driving surface.

Forest Service Administrative Access Needs

The Forest Service requires a road system to access the Forest for timber and silvicultural activities, recreation management, watershed and wildlife research and management and Forest Plan monitoring activities,

Other Agency Access Needs

Within the general forest area, there are forested areas owned by the State of Minnesota and managed by the Department of Natural Resources (DNR). Some Forest Service roads provide access to these areas. The DNR also uses SNF roads for wildlife and fisheries management and research.

Public Access Needs

The public uses Forest Service roads to access their private seasonal or year-round homes, commute to areas within the forest, access to recreational sites and dispersed recreation areas and to travel to the Boundary Water Canoe Area Wilderness access points. The roads on the SNF also have a fair amount of commercial traffic traveling between various areas within the forest and to areas outside of the forest.

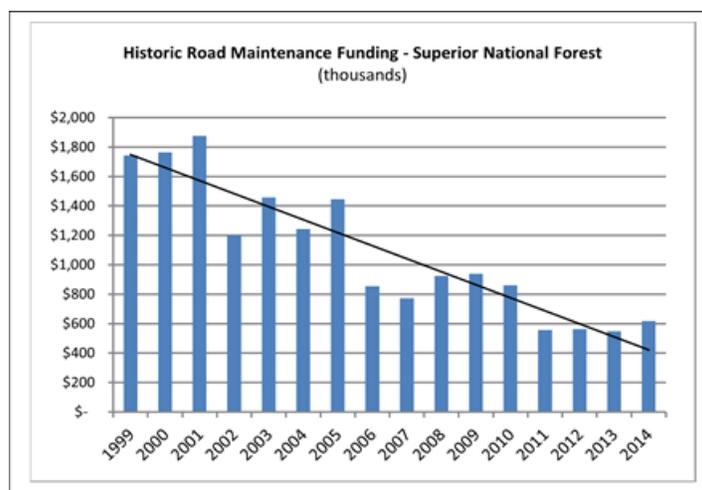
Current Resources to Maintain and Operate the Forest Transportation System

Budget

Road operations and maintenance is funded primarily by CMRD allocations. As shown in Figure 2.1 below, the road maintenance funding has decreased by over 60% since 2000 without a similar decrease in total mileage. Road maintenance is accomplished by contracting with local small companies. As the overall budget has decreased, fuel and costs of maintenance have increased resulting in funds are spread thinner over the same network of roads and the ability to maintain roads to standard is significantly less than 10-15 years ago.

The Forest has mostly eliminated expenditure of road maintenance funds on ML 2 roads and the reduced amount of funding is focused on higher traveled ML 3, ML 4, ML 5 roads.

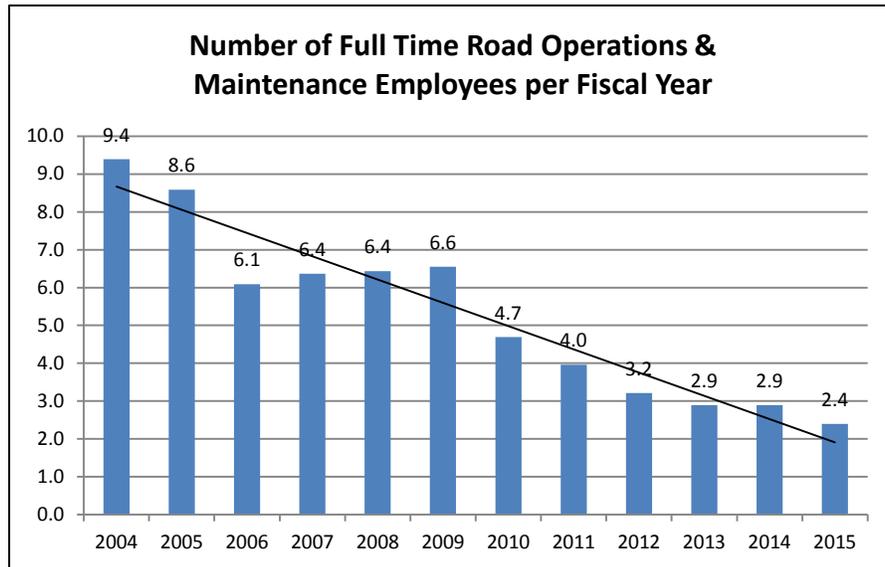
The current budget does not allow for funds to replace or complete significant restoration of road bridges. Over 50% of our 46 structures are over fifty years old and at least 15 will require replacement or closure in the next 10 years.



(costs adjusted to year 2014)

Staffing

Similar to a decrease in funding levels, the number of employees that the Forest is able to support for roads operations and maintenance has also decreased by over 70%. Employees are spread thin and are put in a situation of being reactive to road repair emergencies rather than being proactive in preventing problems in the road conditions.



SECTION 3 - Identifying Issues

Purpose

The purpose of this section is to:

- Identify public concerns related to travel management
- Identify primary management concerns related to travel management
- Identify data needed to analyze the key issues and whether the data are available or must be obtained.

Public Concerns Related to Travel Management

The Forest solicited comments from the public early in the study and again after the results were published. Comments addressed need for access and many commented on observed decrease in adequate road maintenance. The following is a summary of received comments.

Maintenance

- Insufficient maintenance on roads including; potholes, lack of gravel surfacing, infrequent brushing, infrequent grading
- Maintaining roads that provide summer access to winter ski trails
- Ethical control of the beaver population to prevent road washouts
- Private parties not able to maintain the roads themselves
- Reduced maintenance or limiting access could result in reduced property values
- No maintenance on a road is a closure by default.

Access and Multiple Uses

- Year round access to private property
- Roads needed to access private property and businesses
- Keep MVUM roads open for fire and rescue, public recreational use,
- There is a history (since early 1900's) of providing benefits to variety of motorized and non-motorized users
- Recreational opportunities within the forest are key drivers of tourism; degradation of the road system will adversely affect the attractiveness of the area
- Road system supports the Multiple Use Sustained Yield Act of 1960
- Boundary Waters Canoe Area Wilderness Act of 1978 directs Secretary of Agriculture to "expedite and intensity the program of dispersed outdoor recreational development outside the BWCAW area.
- Maintaining roads that provide access for gravel, firewood, lakes and rivers for fishing and hunting, mushing
- There is a shortage of motorcycle trails on the forest and continued access to Level 2 roads is important.

- Level 1 and 2 roads are especially important for users of older ages and lesser physical capability, a large part of the demographic population to provide a wilderness type experience without the rigors of travel associated with BWCAW.
- Concern about roads that dead end at the wilderness boundary which would allow for motor trespass, contribute to degradation of wilderness character, could introduce non-native invasive species.
- Would like to see a significant decrease in 2500 miles of road.
- Consider additional revenue through Special Use Permits.
- Roads contribute to human-caused fires, bring in non-native species
- Forest road system is critical for emergency access escape routes for private individuals
- Local area economic impact if roads are closed or access is limited
- Volunteer organizations may be able to provide support in road and trail maintenance
- Off Highway Motorcycle (OHM) under represented group on the forest. Would like to keep roads open that provide loops and connections between destinations.
- Years of neglect in maintenance is starting to reduce viability for recreational use
- When BWCAW was created millions of acres of wilderness became off limits for motorized use. Because of this, keeping forest roads open provides for enjoyment of the natural environment similar to the wilderness areas.
- Some of the ML2 roads recommended to be reduced to ML 1 roads are currently used by OHV riders.
- Allowing motorized use can keep vegetation down
- Motorized use planning should be balanced with promoting ecosystem health and conservation, soil, air and water resources
- Roads that cross wetlands and lowlands should be evaluated for closure
- Road density in Lynx Analysis Units is a concern

State, City and Township Concerns

- Roads maintained for passenger cars (ML 3-4) are important as they provide a route as an alternative to Hwy 61 for accessing the North Shore of Lake Superior.
- Focus on maintaining higher level roads close lower maintenance level roads.
- Keeping roads open for public recreational use, rescue calls, firefighting and USFS forest management
- FS responsible for keeping roads open to support the biggest industries of tourism and logging.
- Roads provides access for tourism, logging, private homes which in turn support the local economy

Other Land Management Agencies' Concerns

- USFS roads and routes are a very critical part of the OHV general tourism and outdoor recreation component for NE MN. As such, without the capable use of these routes and roads managed by the USFS there are few (if any) alternatives for the public to access to the hundreds of thousands of acres of forested lands and hundreds of waterways (lakes, streams and rivers). Such public access is needed to support the outdoor recreation missions of both the Minnesota Department of Natural Resources and USFS (connecting people with the outdoor natural environment).
- Forest roads provide access to state owned lands; lakes to maintain fisheries resources, stocking and surveys; stream trout lakes and streams; Scientific and Natural Area;

- Provision of these roads and routes in sustainable condition is especially critical given the outdoor recreation trends of increased interest in off highway vehicles, cyclo-cross and mountain biking and dual sport motorcycling

Tribal Concerns

- Changes or loss of access opportunities impacts exercise of treaty rights
- Maintaining or improving access to lakes for fishing and wild rice harvesting

General Management Concerns Related to Travel Management

Although the Forest road system benefits the agency and the public in providing access to forest lands for administration and a multitude of other uses, roads can also be a source of risks such as human caused fire by allowing travel into remote areas; can impact sedimentation and water quality in lakes and streams; facilitate spread of non-native invasive plant species; provide a route for unauthorized access, theft of resources and illegal access to the wilderness area; and, have the potential of impacting wildlife. Balancing the need of the road system with the potential impacts is a management challenge faced by the forest. Adding to this challenge is the significant decrease in funding for road operations and maintenance and adequate number of personnel for oversight.

Key Issues

The key issues that addressed the Superior National Forest transportation system were identified through public comments as well as from input from Forest Service personnel. The following road-related issues were identified:

Insufficient resources for maintenance of the existing system roads

Inadequate maintenance reduces access for National Forest users and management. Funding for road maintenance is not adequate to maintain the entire existing transportation system and perform appropriate monitoring. See Appendix E for more information on Road Maintenance Costs.

Need for access to private lands for landowners

Many of the private lands on the Superior National Forest are currently accessed by transportation system roads. In recent years forested lands owned by private companies have been split up and sold in smaller parcels to private parties. As a result, roads that were previously needed for timber management and access are now needed for seasonal or year round private access. The new property owners expect the Forest Service to maintain the roads to a higher standard than previously required.

Need for Access to other Public Land Owners

The State of Minnesota, Lake and St Louis Counties all have land within the forest boundaries. The SNF road system provides access for management of these public lands.

Increased risk of human-caused fire

Roads are used by the public to access public lands. The more public use of an area equates to a higher probability of human caused fire starts. In the event of a public emergency such as a wildfire, the need for good egress/ingress is important for public safety.

Known Cultural Resources and Tribal Use/Traditional Cultural Property

Tribal access to areas where tribal treaty rights are exercised such as ricing and fishing should be maintained and improved.

Potential impacts to on Wildlife Habitat

Reduced maintenance, new construction, improper user rerouting of eroded road portions, and non-compliance with road closures have the potential to cause a reduction of habitat productivity.

Potential impacts to Watershed Conditions

Erosion and sediment from inadequately maintained roads has the potential to diminish watershed conditions and introduce sediment into streams.

Roads provide access to the public for recreational purposes

Forest roads provide access to developed recreation sites, and are used for a variety of recreational purposes such as camping, hunting, fishing, hiking, mountain biking, motorcycle riding, etc. The roads also provide access to the Boundary Waters Canoe Area Wilderness. Since the wilderness area is off limits for motorized travel it is important to maintain an adequate road system outside the wilderness for multiple uses.

Access for general forest administration

Access to the forest is needed by the agency for general forest management reasons such as vegetation management, recreation management and forest monitoring.

Roads Provide Access for Gravel and Mineral Sources

In some areas of the forest Forest Service gravel pits serve as main sources for state, county and commercial projects.

Roads Provide Access to Power Lines and Communications Networks

Power lines and broadband cable is routed along forest roads. Forest roads provide access to emergency services towers and power for the towers.

Need for access to firewood and other forest products gathering areas

Firewood, traditional materials, and plant gathering are all activities that are important for the public and for Native American communities. Decommissioning, closing roads or reducing the maintenance level could affect access for traditional gathering activities.

Road Deterioration and Closure Can Impact Local Economy

Many of the communities within and near the Superior National Forest depend upon the tourism based economy generated by the public multiple uses of the forest lands, lakes, streams and roads.

SECTION 4 - Assessing Benefits and Risks

Purpose

The purpose of this section is to:

- Describe the analysis process
- Describe the criteria used in the risk and benefit analysis process
- Describe the scoring and rating of existing motorized routes
- Summarize the risk and benefit of existing motorized routes

The Analysis Process

The analysis process used on the Superior National Forest included the following steps:

1. Identify Risk and Benefit Issues
2. Assemble and review existing spatial data
3. Assess road risks and benefits using geospatial data analysis
4. Populate summary matrix
5. Truth out data analysis results with field based District teams
6. Make recommendations on future need and disposition

Identify Risk and Benefit Issues

In conjunction with the specialists identified in Section 1, risks and benefits of roads were discussed and a set of risks and benefits was collaboratively identified for analysis of the road system.

Benefits. Generally road benefits are associated with providing access for a multitude of purposes including the following.

- Recreation
 - Dispersed - Hunting, fishing, camping, hiking, birding
 - Developed – Campgrounds, picnic areas, accessible fishing piers
 - Wilderness access – canoe entry points, hiking trail access
- General Forest Administration
 - Resource management
 - Recreation site management
- Private lands and special use permit areas
- Other public lands
- Resources
 - Timber
 - Gravel/rock
 - Minerals
 - Boughs, cones

- Tribal exercising of treaty rights
- Communication towers
- Public Safety
 - Wildfire access
 - Emergency medical and evacuation

Risks

Roads and travel on roads can impact:

- Erosion, hydrology, water quality
- Aquatic species
- Wildlife/TES habitat
- Cultural resources
- Spread of invasive species
- Vegetation

Criteria Used in the Risk and Benefit Analysis Process

Roads provide access for many uses. They also provide the infrastructure to facilitate motorized recreation and other mission-critical work (such as, watershed restoration and vegetation management). However, their presence has possible negative effects on the natural and cultural resources of the Superior National Forest. The following questions for risks and benefits were developed to focus on the most important resource issues for managing the forest transportation system.

The “benefit” questions that were identified by the team and answered for each road segment included the following.

BENEFITS

ACC1	Does the road provide access to an administrative or recreational site or facility such as an office, communications tower, campground, trailhead, BWCA entry point, boat access, heliport, gravel pit or a dispersed recreational site?
ACC2	Is the road needed to access other public lands (state, county..)?
ACC3	Is the road needed to access private lands?
ACC4	Is the road needed to access special use permit areas on FS Land?
ACC5	Is the road needed to access RNAs, Wildlife Research & monitoring areas, Silvicultural Research & Monitoring areas, UBAs, etc.?
FIRE1	Would the road be used to access federal land for firefighting activities?
REC1	Is the road or portion of road also used as a designated system trail? (>20%)
REC2	Was the road rated "high" in the scenic integrity mapping?
VEG1	Does the road provide access for future silvicultural or restoration treatments on suitable lands?
LANDS1	Does this road provide direct access to or fall within a proposed land exchange (school trust)?

The “risk” questions that were identified by the team and answered for each road segment included the following.

RISKS

FP1	Is the road located inside the following areas Unique Biological Area (UBA) Management Area; Candidate Research Natural Area/Research Natural Area (cRNA/RNA) Management Area; Wild Segments of eligible Wild and Scenic Rivers (eWSR) Management Area; 2001 Roadless Area Conservation Rule Areas (RACR Areas, also known as RARE II Areas); Forest Plan Inventoried Roadless Areas ?
FP2	Is this road within the Semi-Primitive Non-Motorized Recreation Opportunity Spectrum”?
WS1	Do streams, lakes, and reservoirs fall within 100 feet of the road or road segments?
WS2	Is the road within 100 ft of a state listed 303(d) impaired stream, lake, or other water body?
WS3	Does the road have a crossing that is characterized as barriers to aquatic passage (fragmentation) along rivers and streams and between lakes and reservoirs?
WS4	Does the road provide access to infested waters?
WS5	Does the road have a crossing upstream from a RF Sensitive Species (mussel population = creek hillsplitter, blacksandshell) or dragonflies (Quebec emerald and ebony boghaunter)?
WS6	Does the road cross a Trout stream?
SOILS1	Does the road cross somewhat poorly, poorly, or very poorly drained soils & shallow soils (ELTs 1-6, 12, 18)? (1-6 mostly wetlands)
WL1	Does road density in area of lynx analysis units (LAU) exceed forest plan standard?
NNIS1	Does the road have a high priority non-native invasive plant within 50 feet?
TES1	Are there TES plant populations within 25 ft of the road?
BWCA1	Does the road fall, cross or end within 200 ft of the BWCAW boundary?

Analysis Process

The ultimate goal of this analysis was to identify future need of and future disposition of all roads. Roads were assessed on the basis of risks and benefits associated with the roads to determine recommended future need and disposition.

Future Need

- Likely Needed
- Likely Not Needed

Disposition

- No Change
- Modify Maintenance Level
- Change to Special Use Authorization
- Change Jurisdiction
- Decommission

All system roads, ML1 through ML5 were evaluated on the basis of the questions above. To pare down the number of roads that were examined in more detail the following assumptions were made:

1. If the road was a ML 3, 4, or 5 and needed for administrative/recreational access (Administrative site roads and parking lots; Gravel pit access; Boat ramp access; Campground roads, Etc.), then the
 - Recommended Need: Likely Needed
 - Recommended Disposition: No change from existing
2. If the road is a ML 2 and was analyzed under Previous NEPA based Environmental Assessment (since 2004), then this study would not reevaluate or change the EA decision.
3. If the road is a ML2 and if needed for timber in next 20 years and had a low number of risks identified (1-2), then
 - Recommended Need: Likely Needed
 - Recommended Disposition: No change from existing
4. If the road is a ML2 and needed for timber in next 20 years and a higher number of risks were identified (3 or more), then the process would be to look at road/segment in more detail with District Team.
 - Recommended Need: Likely Needed
 - Recommended Disposition – Review with District Team, possibilities include:
 - No change from existing, mitigate risks
 - Reduce Maintenance Level, possibly to ML 1 and put into storage until needed
5. ML2 roads with a length less than 0.5 mi were also reviewed.

Summary of Risk and Benefits Analysis

Out of a total of 2813 roads and road segments, the table below summarizes the number and percentage of roads that generated a positive response. More detail is provided in Appendix C.

Question ID	BENEFITS	# of Roads	% of Total
ACC1	Does the road provide access to an administrative or recreational site or facility such as an office, communications tower, campground, trailhead, BWCA entry point, boat access, heliport, gravel pit or dispersed recreational site?	881	31%
ACC2	Is the road needed to access other public lands (state, county..)?	300	11%
ACC3	Is the road needed to access private lands?	200	7%
ACC4	Is the road needed to access special use permit areas on FS Land?	185	7%
ACC5	Is the road needed to access RNAs, Wildlife Research & monitoring areas, Silvicultural Research & Monitoring areas, UBAs, etc.?	176	6%
FIRE1	Would the road be used to access federal land for firefighting activities?	2811	100%
REC1	Is the road or portion of road also used as a designated system trail? (>20%)	906	32%
REC2	Was the road rated "high" in the scenic integrity mapping?	1253	45%
VEG1	Does the road provide access for future silvicultural or restoration treatments on suitable lands?	2787	99%
LANDS1	Does this road provide direct access to or fall within a proposed land exchange (school trust)?	118	4%

RISKS			
FP1	Is the road located inside the following areas Unique Biological Area (UBA) Management Area; Candidate Research Natural Area/Research Natural Area (cRNA/RNA) Management Area; Wild Segments of eligible Wild and Scenic Rivers (eWSR) Management Area; 2001 Roadless Area Conservation Rule Areas (RACR Areas, also known as RARE II Areas); Forest Plan Inventoried Roadless Areas ?	205	7%
FP2	Is this road within the SPNM Recreation Opportunity Spectrum?	36	1%
WS1	Do streams, lakes, and reservoirs fall within 100 feet of the road or road segments?	795	28%
WS2	Is the road within 100 ft of a state listed 303(d) impaired stream, lake, or other water body?	1	0%
WS3	Does the road have a crossing that is characterized as barriers to aquatic passage (fragmentation) along rivers and streams and between lakes and reservoirs?	33	1%
WS4	Does the road provide access to infested waters,	10	0%
WS5	Does the road have a crossing upstream from a RF Sensitive Species (mussel population = creek hillsplitter, blacksandshell) or dragonflies (Quebec emerald and ebony boghaunter)?	3	0%
WS6	Does the road cross a Designated Trout stream ?	144	5%
SOILS1	Does the road cross somewhat poorly, poorly, or very poorly drained soils & shallow soils? (ELTs 1-6, 12, 18) (1-6 mostly wetlands)	1672	59%
WL1	Does road density in area of lynx analysis units (LAU) exceed forest plan standard?	1054	37%
NNIS1	Does the road have a high priority non-native invasive plant within 50 feet?	22	1%
TES1	Are there TES plant populations within 25 ft of the road?	52	2%
BWCA1	Does the road fall cross or end within 200 ft of the BWCAW boundary?	47	2%

SECTION 5 – Management Opportunities

Purpose

The purpose of this step is to:

- Identify management opportunities to address the issues
- Compare existing motor vehicle use with desired conditions, and describe options for modifying the size of the forest transportation system that would achieve desired conditions.
- Describe options for modifying the size forest transportation system that would achieve desired conditions.

Opportunities that Respond to the Issues

The list below is intended to provide options that project leaders and decision-makers may consider when implementing changes to the size of the transportation system.

Issue 1: Insufficient resources for maintenance of the existing transportation system

Opportunity: Prioritize roads that are good candidates for transfer of jurisdiction to counties, which reduces the number of road miles requiring maintenance with NFS funds. NFS roads that provide access to private property and county property would be good candidates to transfer to county jurisdiction. Focus special funding improvements on roads that are good candidates for assumption of jurisdiction by counties to bring them up to standard. (Note: Forest has identified priorities and is working toward improvements for future transfers).

Opportunity: To stretch current funding, identify higher priority roads to receive maintenance and reduce maintenance intervals (Note: Forest has been implementing these practices over the past 4 years).

Opportunity: Reduce maintenance level to reduce accompanying maintenance needs (Note: Forest has been implementing this practice for 4 years).

Opportunity: Maximize road maintenance that can be completed under stewardship contracts.

Opportunity: Work with landowners in development of road maintenance associations.

Opportunity: Review current special use permit fees and adjust upward where warranted.

Issue 2: Need for access to private lands for landowners

Opportunity: For roads providing access for multiple private landowners, evaluate transferring road jurisdiction to the county.

Opportunity: Enter into a special use agreement with the landowner, stipulating that the permittee has maintenance responsibilities.

Opportunity: Assist property owners in the formation of road maintenance associations.

Issue 3: Need for access to State and County Lands and State resource management areas.

Opportunity: Review and update State and County road maintenance agreements to address sharing maintenance responsibilities fairly.

Issue 4: Roads have the potential to affect Wildlife Habitat

Opportunity: Prioritize reduction of number of roads and trails located in habitat for species-of-concern and species-of-interest.

Opportunity: Place seasonal restrictions on roads going through critical habitat.

Opportunity: Reduce the road width and maintenance level to minimum needed for safe vehicle passage and to meet the intended need in sensitive wildlife areas.

Issue 5: Roads can potentially impact Watershed Conditions.

Opportunity: Maintain road grading to minimize potential runoff and sedimentation.

Opportunity: Plowing snow on forest roads can result in drainage barriers along the sides of the roads and cause washouts. For roads that are plowed by the county or private parties, require that whoever does the plowing to grade the road early in the spring to remove the road surfacing from the shoulders and restore to the travelway.

Opportunity: Implement the guidelines for mitigating road risks to reduce soil and drainage impacts from roads.

Opportunity: Provide information and education about motor vehicle regulations and responsible use of motorized vehicles on the National Forest. Install information boards at area trailheads, recreation sites, and parking areas.

Opportunity: Install route numbers on all system roads at junctions with system and unauthorized routes to assist users with compliance of motor vehicle use regulations.

Opportunity: Educate the public to create an understanding of the problems created by off road driving. Implement an ongoing effort to educate forest users of the motorized travel policy.

Opportunity: Utilize enforcement to curtail off-road driving. Implement patrols and field presence at appropriate times of year (such as hunting season, holidays, weekends, etc.) in identified areas. This effort is also used to educate users of the travel policy.

Opportunity: Rehabilitate areas damaged by off-route driving.

Issue 6: Roads provide access to the public for recreational purposes

Opportunity: Maintain access to recreation sites that are provided by the Forest Service for public use.

Opportunity: Maintain and update the Motor Vehicle Use Map.

Opportunity: Maintain road signage in accordance with handbook direction.

Issue 7: Roads provide access for general forest management.

Opportunity: Focus maintenance funds on the high priority roads identified to provide long-term service on the roads that are needed the most for public use.

Opportunity: During the NEPA process for management activities, consider decommissioning ML1 and other open roads in the project area where a reduced maintenance cost would be realized.

Opportunity: During the NEPA process, maximize identification of temporary roads and minimize adding new roads to the system.

Desired Conditions

The Forest Plan for the Superior National Forest identifies the following Desired Conditions for the Transportation System.

- 1. The existing National Forest System roads that are suitable for passenger vehicles provide a safe and affordable system for administrative and public access to NFS land.*
- 2. The National Forest road system is the minimum needed to provide adequate access to both NFS and non-NFS land.*
- 3. The transportation system design considers environmental, social, and health concerns.*
- 4. The National Forest road system provides a "seamless" interface with the neighboring public road agencies based on coordinated use, function, and agency goals.*

5. *Private and non-NFS landowners have reasonable access to their land.*

Based on this TAP it is evident that meeting the desired conditions is significantly compromised due to lack of funding as identified below.

Condition 1 – Provide a safe and affordable system for administrative and public access to NFS land for Maintenance Level 3, 4 and 5 roads.

- As road maintenance funds decrease, safe travel on the roads is decreased accordingly.
- The current roads maintenance budget is not adequate to maintain the current road system.

Condition 2 – Provide minimum road system to provide adequate access to both NFS and non-NFS land.

- The findings of this analysis showed that only 16 miles out of 2500 miles (less than 1%) of roads were identified as Likely Not Needed in the next 20 years which means that 99% of the roads are needed.

Condition 3 – Design considers environmental, social and health concerns.

- The conditions of SNF system roads impact the local tourism economy.
- Reduced road maintenance funding translates to a higher probability of negative impacts to water quality.
- Reduced road maintenance impacts the safety of the public.

Condition 4 – Seamless interface with neighboring public road agencies.

- There is interface with other public road agencies, but not seamless. The condition of Forest Service roads is significantly inferior to the adjacent jurisdiction roads.

Condition 5 – Reasonable access for private and non-NFS landowners

- Over half of the responses received from the public from outreach for this study were comments on the poor condition of the roads accessing their property and requesting additional maintenance similar to what had been implemented 5-10 years ago. In the view of private landowners the FS is not providing “reasonable” access.

SECTION 6 – Analysis Summary

Purpose

The purpose of this step is to report the key findings of the analysis.

Findings – Risks and Benefits

Benefits

- 99% of all roads are needed for vegetation management in the next 20 years. Therefore the Forest doesn't have a lot of roads that are not needed to accomplish the Forest Service mission. Most roads in place are needed in the next 20 years for harvesting or some sort of silvicultural treatment access.
- Over 30% of the roads are required to access administrative or recreational sites.
- Over 10% of SNF system roads are needed to access non-federal public land.
- Almost half (45%) of the roads rate high in scenic value.
- Approximately 30% of the roads have some portion of the route also used as a designated trail.

Risks

- Approximately 59% of the roads have some portion of the road that crosses poor soils. This includes wetland type areas and thin soils over bedrock. Some of the roads are limited to winter only travel to limit degradation of wetland areas.
- Approximately 37% of the roads have some portion that falls within an area designated as a Lynx Analysis Unit where the sum of road and trail density exceeds the Forest Plan guideline of 2 miles per square mile.
- Less than 30% (28%) of the roads or road segments fall within 100 ft of a lake, river or stream.

Findings – Cost

Region 9 developed a model for estimating required annual maintenance budget based on the number of miles of each maintenance level. The annual costs per mile in the model were based on regional averages. The Superior road mileage was entered into the model to arrive at the values below.

As shown in the table, the SNF would need approximately \$2M to maintain system roads to standard as currently defined today. Additional funds would be required for bridge replacement and replacement of aggregate surfacing. The surfacing should be replaced at least every 20 years and the costs are high at approximately \$30,000 per mile. The Forest would need approximately \$15 million to get caught up on the backlog, and then would need an additional \$1 million per year to resurface 30 miles per year.

The allocations the last 5 years have ranged from \$500k to \$600k, approximately 30% of the estimated need for basic maintenance. If all the recommendations from this study were implemented sometime in the future, the total required budget for basic maintenance would be approximately \$1.7M. It is evident that the existing road system cannot be adequately maintained to standard without an increase of budget of approximately \$1M to \$1.4M, plus additional funds for bridge replacement and resurfacing.

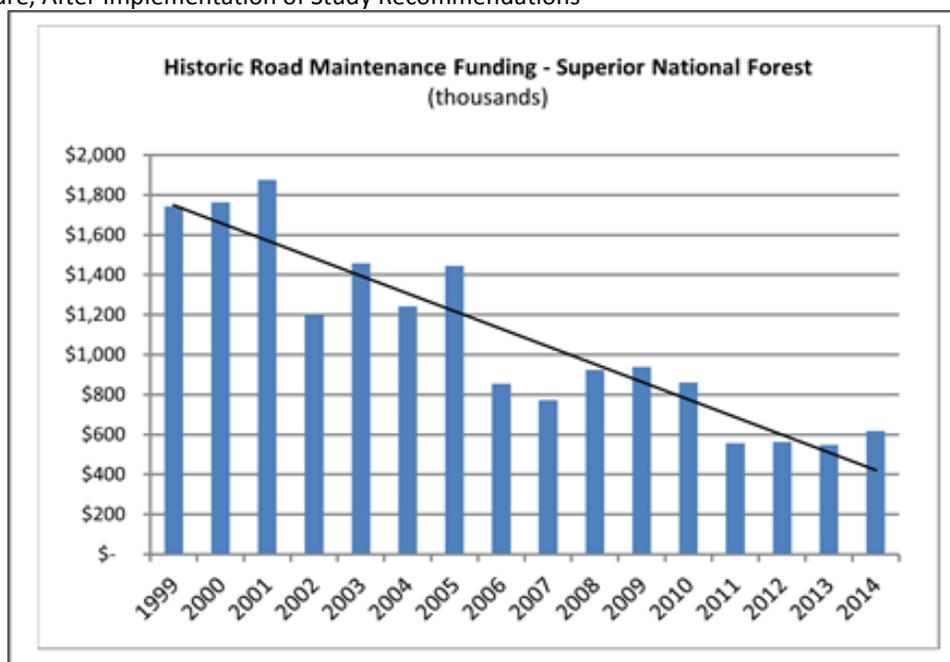
Table 2 - Estimated Costs for maintaining Superior National Forest Roads

	BEFORE*	AFTER**		BEFORE*	AFTER**
Maintenance Level	Total Length of Roads (miles)	Revised Length of roads (miles)	Regional Average Annual Maintenance Cost (per mile)	Annual Maintenance Cost	Annual Maintenance Cost
5	72	31	\$ 8,000	\$ 576,000	\$ 248,000
4	315	313	\$ 2,725	\$ 858,375	\$ 852,925
3	216	182	\$ 1,533	\$ 331,128	\$ 279,006
2	984	949	\$ 300	\$ 295,200	\$ 284,700
1	912	951	\$ 13	\$ 11,856	\$ 12,363
TOTAL	2499	2426		\$ 2,072,559	\$ 1,676,994

TOTAL NEEDED FOR MAINTENANCE OF SNF ROADS	\$ 2,072,559	\$ 1,676,994
CURRENT MAINTENANCE BUDGET FOR SNF ROADS (FY15)	\$ 617,000	
DEFICIT	\$1,455,559	\$1,059,994

*As of March 2014, Before Implementation of Study Recommendations

**In the future, After Implementation of Study Recommendations



(costs adjusted to year 2014)

Findings – “Likely Not Needed” Roads

The analysis showed that there was little opportunity for recommending roads as “**likely not needed**” in the future from roads that are maintained for passenger cars (MLs 3, 4, 5). Unless recreational sites, areas of the forest, administrative facilities and main roads are closed or eliminated, the current MLs 3, 4 and 5 will continue to be needed. These are the roads that are receiving 99% of the currently allocated roads funding. All of the roads identified as “**likely not needed**” in the future are Maintenance Level 2 and are shown on the Map shown below.

Roads Study Recommendations

The table below summarizes the resulting recommendations of the study by showing the number of roads and number of miles identified as either “**likely not needed**” or “**likely needed but with changes**”. The changes include reduced maintenance level, convert to special use, transfer jurisdiction and table also shows roads that are recommended for decreased maintenance level and convert to trail.

These recommendations will be used for future more in-depth studies and none of these recommendations will be implemented on the ground before more in-depth analysis with public comment is completed.

Table 3 - Roads Study Recommendations - Summary

	# Roads	Total Length (miles)
LIKELY NOT NEEDED - DECOMMISSION	50	16
LIKELY NEEDED - CHANGES		
• Reduce Maintenance Level		
From 4 to 3	2	2
From 3 to 2	6	36
From 2 to 1	44	47
• Change to Special Use Road	18	10
• Change Jurisdiction	8	43
• Convert to Trail	7	4

Table 4 –Roads Study Recommendations - Detail

ROAD NO.	ROAD NAME	ROAD SEGMENT BEGINNING	ROAD SEGMENT END	LENGTH OF RD SEGMENT	OBJ ML	OPR ML	NEED	DISPOSITION
ROADS LIKELY NOT NEEDED AND CAN BE DECOMMISSIONED								
146C	EAST BEARSKIN SPUR C	FR146	DEAD END	0.20	2	2	LNN	DEC
159	HARMON SEVER ROAD	CC 45	FR 333	0.28	2	2	LNN	DEC
161I	MARK LANE SPUR I	FR 161	DEAD END	0.11	2	2	LNN	DEC
176C	ARROWHEAD CR SPUR C	GRAVEL PIT	MP 1.6	0.5	2	2	LNN	DEC
176CB	ARROWHEAD CR SPUR CB	FR 176	DEAD END	0.16	2	2	LNN	DEC
199C	HUNTING SHACK RVR SP C	FR 199	END NR BWCAW BOUND	1.29	1	1	LNN	DEC
203H	ELPHANT LAKE SPUR H	FR 203 STREAM XING	DEAD END	0.69	2	2	LNN	DEC
207A	CRANE LOOKOUT SPUR A	FR 207 CRANE LKOUT	DEAD END	0.1	2	2	LNN	DEC
272H	STURGEON RIVER SPUR H	FR 272	DEAD END	0.4	2	2	LNN	DEC
279E	SHANNON LAKE SPUR E	FR 279	DEAD END	0.2	2	2	LNN	DEC
304E	KIMBALL CREEK SPUR E	FR 304	DEAD END	0.20	2	2	LNN	DEC
306B	NORTHERN LIGHT SPUR B	FR 306	DEAD END	0.25	2	2	LNN	DEC
323P	BALL CLUB LAKE SPUR P	FR 323	DEAD END	0.35	2	2	LNN	DEC
329A	SWAMP LAKE SPUR A	FR 329	DEAD END	0.15	2	2	LNN	DEC
340DC	LAKE CLARA SPUR DC	FR 340D	DEAD END	0.162	2	2	LNN	DEC
340G	LAKE CLARA SPUR G	STREAM CROSSING	DEAD END	0.1	2	2	LNN	DEC
349	HOG CREEK	STREAM CROSSING	DEAD END	0.16	2	1	LNN	DEC
353	BILL CREEK	FR 354	DEAD END	1.4	1	1	LNN	DEC
376	LOIS	FR 377	DEAD END	1.5	1	2	LNN	DEC
380H	DMIR GRADE SPUR H	FR 380	DEAD END	0.42	2	2	LNN	DEC
409A	WHITE PINE PIT SPUR A	LC 15	DEAD END	0.205	2	2	LNN	DEC
424ACA	DENLEY LAKE SPUR ACA	FR 424AC	DEAD END	0.08	2	2	LNN	DEC
466A	N KESSANEN SPUR A	FR466	USC6977	0.13	2	2	LNN	DEC
469A	JEANETTE CREEK SPUR A	STREAM CROSSING	DEAD END	0.1	2	2	LNN	DEC
469C	JEANETTE CREEK SPUR C	FR 469	U6966A	0.05	2	2	LNN	DEC
471L	NIGH CREEK SPUR L	FR 471	GRAVEL PIT	0.2	2	2	LNN	DEC
483A	SPUR A	FR 483	DEAD END	0.34	2	2	LNN	DEC
483AA	SPUR AA	FR 483A	DEAD END	0.07	2	2	LNN	DEC
487AC	TAFT SPUR AC	FR487A	UPR6672	0.13	2	2	LNN	DEC
514	HIGGINS	SC 303	FOREST BOUNDARY	0.466	2	2	LNN	DEC
534L	GRAHAM SPUR L	534	Dead End	0.13	2	2	LNN	DEC
559	FISHFRY LAKE ACCESS	MN 1	FISHFRY LAKE	0.21	2	2	LNN	DEC
601CA	VERMIGRADE SPUR CA	FR 601C	DEAD END	0.08	2	2	LNN	DEC
717	FH 14 SPUR 717	SC 65	PRIVATE	0.2	2	2	LNN	DEC
725C	LOOKOUT MT SPR C	FR 725	Dead End	0.02	2	2	LNN	DEC
730	SAND LK GUARD STA ACC	SC106	Sand Lake Guard Station	0.46	2	2	LNN	DEC
730	SAND LK GUARD STA ACC	SC106	Sand Lake Guard Station	0.126	2	2	LNN	DEC
912D	VICTOR LAKE SPUR D	FR 912	DEAD END	0.17	1	2	LNN	DEC
921A	SILVER ISLAND B L SPUR A	FR 921	DEAD END	0.3	2	2	LNN	DEC
1006B	CAMP 97 SPUR B	FR 1005	Dead End	0.11	2	2	LNN	DEC
1253	SWANS	CC 2 (SAWBILL TRAIL)	DEAD END	0.5	2	2	LNN	DEC
1254	SLIP LAKE	STREAM CROSSING	DEAD END	0.1	2	2	LNN	DEC
1305	FH 5 SPUR 1305	CC 12 (GUNFLINT TR)	DEAD END	0.50	2	2	LNN	DEC
1316	FH 5 SPUR 1316	CC 12 (GUNFLINT TR)	DEAD END	1.66	1	2	LNN	DEC
1344B	THE KINGS SPUR B	FR 1344	DEAD END	0.49	2	2	LNN	DEC
1348	ERNEST LAKE	CC 12 MP 48.1	DEAD END	0.10	2	2	LNN	DEC
1351B	FH 5 SPUR 1351 SPUR B	FR 1351	DEAD END	0.30	2	2	LNN	DEC
1381	ASPEN LAKE	CC 66	DEAD END	0.15	2	2	LNN	DEC
ROADS LIKELY NOT NEEDED AS ROADS AND CAN BE CONVERTED TO TRAILS								
156B	DEVIL TRACK SPUR B	CC 57	DEAD END	0.40	2	2	LNN	TR
156E	DEVIL TRACK SPUR E	CC 57	JUNCO CREEK	0.30	2	2	LNN	TR
201	RESERVATION	FR 467	DEAD END	0.8	2	2	LNN	TR
1349	FH 5 SPUR 1349	FH 5	DEAD END	0.30	2	2	LNN	TR
1410B	WARD LAKE SPUR B	FR 1410 (WARD LK RD)	DEAD END	1.70	1	2	LNN	TR
1344	THE KINGS	CC 12	SNOWMOBILE TRAIL	0.20	2	2	LN	TR
ROADS NEEDED BUT ARE CANDIDATES FOR TURNING OVER TO THE COUNTY/STATE								
118	CAMP 26	SC 16	SC 4	9.7	5	4	LN	JUR
121	NORTHEASTERN	FOREST BOUNDARY	FR 416	2.5	2	2	LN	JUR
147A	CLEARWATER SPUR A	CC 66	DEAD END	0.19	2	2	LN	JUR
170	THE GRADE	LC 7	CC 27	8.4	5	4	LN	JUR
170	THE GRADE	LC 7	CC 27	8.4	5	4	LN	JUR
170	THE GRADE	LC 7	CC 27	12.9	5	4	LN	JUR
647	N MOOSE	SC 180	PVT664701	0.377	2	2	LN	JUR
1025A	1025 SPUR A	FR1025	State Land	0.4	1	1	LN	JUR
ROADS NEEDED BUT THE MAINTENANCE LEVEL CAN BE DECREASED								
113	HEADWATERS	FR 120	FR112 DUNKA RIVER RD	11.5	3	2	LN	ML3 TO ML2
113	HEADWATERS	FR 120	FR112 DUNKA RIVER RD	11.5	3	2	LN	ML3 TO ML2

Table 4 –Roads Study Recommendations - Detail

ROAD NO.	ROAD NAME	ROAD SEGMENT BEGINNING	ROAD SEGMENT END	LENGTH OF RD SEGMENT	OBJ ML	OPR ML	NEED	DISPOSITION
122E	LANGLEY SPUR E	FR 122	ATV TRAIL	0.37	2	2	LN	ML2 TO ML1
344	WRINGER LAKE	FR 166	FR 170	9.4	2	2	LN	ML2 TO ML1
344	WRINGER LAKE	FR 166	FR 170	9.4	2	2	LN	ML2 TO ML1
203F.1	ELEPHANT LAKE SPUR F	FR 203	DEAD END	0.21	2	2	LN	ML2 TO ML1
206	MOOSE RIVER ACCESS	SC 116	MOOSE RIVER LANDING	1.235	4	3	LN	ML4 TO ML3
256MD	HULM SPUR MD	FR 256M	DEAD END	0.04	2	2	LN	ML2 TO ML1
256P	HULM SPUR P	FR 256	DEAD END	0.4	2	2	LN	ML2 TO ML1
257	OLD ANGORA	US 53	SC 405 & FR 256	4.3	3	2	LN	ML3 TO ML2
303D	OVERBYS SPUR C	CC 60	COUNTY LANDFILL	1.3	2	1	LN	ML2 TO ML1
306G	NORTHERN LIGHT SPUR G	FR 306	DEAD END	0.40	2	2	LN	ML2 TO ML1
309J	GREENWOOD LAKE SPR J	FR309 GREENWD LK	BRUSHED IN	0.20	2	2	LN	ML2 TO ML1
309K	GREENWOOD LAKE SPR K	FR 309 GREENWD LK	SUNFISH LAKE	2.4	2	2	LN	ML2 TO ML1
309KB	GREENWOOD LAKE SP KB	FR 309K	STATE PROPERTY LINE	1.4	2	2	LN	ML2 TO ML1
327	THRASHER	FR 323	DEAD END	1.4	2	2	LN	ML2 TO ML1
332M	MISTLETOE ROAD	FR 332	SNOWMOBILE TRAIL	0.12	2	2	LN	ML2 TO ML1
332Q	MISTLETOE ROAD	FR 332	DEAD END	0.31	2	2	LN	ML2 TO ML1
337	BARKER LAKE	FR 164	DEAD END	3.246	3	3	LN	ML3 TO ML2
344C	WRINGER LAKE SPUR C	FR 344	DEAD END	0.05	2	2	LN	ML2 TO ML1
344C	WRINGER LAKE SPUR C	FR 344	DEAD END	0.05	2	2	LN	ML2 TO ML1
344E	WRINGER LAKE SPUR E	FR 344	GRAVEL PIT	0.13	2	2	LN	ML2 TO ML1
344E	WRINGER LAKE SPUR E	FR 344	GRAVEL PIT	0.13	2	2	LN	ML2 TO ML1
369H	TRAPPERS LAKE SPUR H	FR 369	DEAD END	0.172	2	2	LN	ML2 TO ML1
377IA	TOMAHAWK SPUR RA	TOMAHAWK SP I	DEAD END	0.5	2	2	LN	ML2 TO ML1
382	SAND RIVER	FR 377	BWCAW BOUNDARY	3	2	2	LN	ML2 TO ML1
408	NONE	LC 203	DEAD END	0.054	2	2	LN	ML2 TO ML1
418	SEVEN BEAVER LAKE	FH 11	RR TRACKS	5.5	3	2	LN	ML3 TO ML2
424EA	DENLEY LAKE SPUR EA	FR 424E MP 1.85	DEAD END	0.2	2	2	LN	ML2 TO ML1
424P	DENLEY LAKE SPUR P	FR 424	DEAD END	0.216	2	2	LN	ML2 TO ML1
469	JEANETTE CREEK	SC 116	U6967	2.51	2	2	LN	ML2 TO ML1
489B	KABUSTASA SPUR B	FR489	DEAD END	0.11	2	2	LN	ML2 TO ML1
489C	KABUSTASA SPUR C	FR489	Landline	0.031	2	2	LN	ML2 TO ML1
495H	POT HOLE LAKE SPUR H	FR 495	DEAD END	0.15	2	2	LN	ML2 TO ML1
607B	RR GRADE SPUR B	FR 607	DEAD END	0.12	2	2	LN	ML2 TO ML1
609K	KJOSTAD SPUR K	FR 609	DEAD END	0.32	2	2	LN	ML2 TO ML1
617EB	RAT RT CASCADE SPR EB	FR 617E	DEAD END	0.353	2	2	LN	ML2 TO ML1
640A	S ELEPHANT SPUR A	FR 640	DEAD END	0.27	2	2	LN	ML2 TO ML1
791	MOOSE LINE SPUR 791	FR 130	ST. LOUIS RIVER	3.2	3	2	LN	ML3 TO ML2
933	FH 7 SPUR 933	MN 1	EARTH BERM	0.3	2	2	LN	ML2 TO ML1
1223	CEDAR LAKE	FR 346	FR 344	1.2	2	2	LN	ML2 TO ML1
1223	CEDAR LAKE	FR 346	FR 344	1.2	2	2	LN	ML2 TO ML1
1287B	WILSON LAKE SPUR B	FR 1287	WILSON LAKE	0.4	2	2	LN	ML2 TO ML1
1442	STONY RIVER ACCESS	HWY 1	DEAD END	0.4	2	2	LN	ML2 TO ML1
1514A	FR 1514 SPUR A	FR 1514	DEAD END	0.2	2	2	LN	ML2 TO ML1
1818	NONE	SC 21	BERM	0.29	2	3	LN	ML3 TO ML2
1855	HOUGHTALING	FR 367	DEAD END	2.1	2	2	LN	ML2 TO ML1
1873	SIoux RIVER LANDING	SC 116	DEAD END	0.578	4	4	LN	ML4 TO ML3
1906	SOUTHEAST BOUNDARY	MN 1	BERM (RD CONT)	0.079	2	2	LN	ML2 TO ML1
U1SC 6509		SC 65	DEAD END	0.21	2	2	LN	ML2 TO ML1
ROADS TO BE CONSIDERED FOR SPECIAL USE AUTHORIZATION								
102C	CLOQUET LAKE SPUR C	FR 102	DEAD END	0.29	2	2	LNN	SUP
102C	CLOQUET LAKE SPUR C	FR 102	DEAD END	0.38	2	2	LNN	SUP
106F	MCDUGAL LAKE SPUR F	FR 106 MCDUGAL LK	DEAD END	0.3	2	2	LN	SUP
134L	CARIBOU TRAIL SPUR L	CC 4 (CARIBOU TRAIL)	NORTH SHORE TRAIL	0.07	2	2	LN	SUP
1354	FH 5 SPUR 1354	CC 12 MP 42.1	CC 12 MP 42.5	0.24	2	2	LN	SUP
1447	FRAN LAKE	MN 1	PRIVATE PROPERTY	0.25	2	2	LN	SUP
172E	WANLESS SPUR E	FR 172	DEAD END	0.4	2	2	LN	SUP
1900	INCO	FR 186	DEAD END (MINE SITE)	0.34	2	2	LN	SUP
309N	SOUTH GREENWD ACC RD	FR 309	PRIVATE PROPERTY	0.22	2	2	LN	SUP
325D	SOUTH BRULE RIVER SPR D	FR 325	DEAD END	0.39	2	2	LN	SUP
325D	SOUTH BRULE RIVER SPR D	FR 325	DEAD END	0.39	2	2	LN	SUP
424K	DENLEY LAKE SPUR K	FR 424	PRIVATE LAND	0.27	2	2	LN	SUP
522B	SILVER BELL SPUR B	SC 381	GATE	0.1	2	2	LN	SUP
543A	SAVAGE SPUR A	SC 487	DRIVEWAY	0.3	2	2	LN	SUP
1303	FH 5 SPUR 1303	CC 12	DEAD END	0.34	2	2	LNN	SUP
1335	BEDEW LAKE	FR 561	BWCAW BOUNDARY	4.0	2	2	LN	SUP
1347	GUNFLINT NARROWS	CC 12 MP 44.8	PRIVATE GATE	1.6	2	2	LN	SUP

ABBREVIATIONS

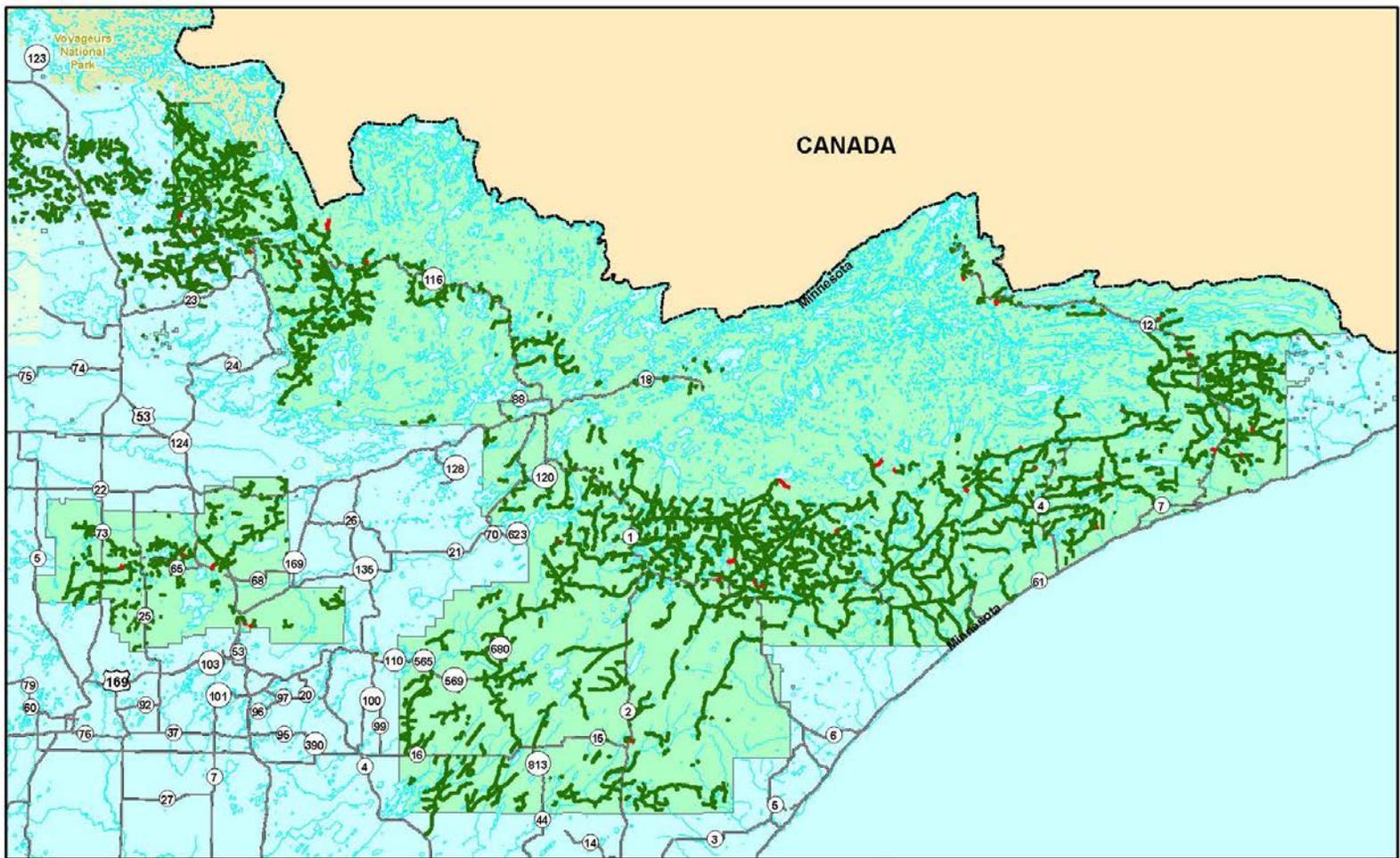
OBJ ML	OBJECTIVE MAINTENANCE LEVEL	TR	CONSIDER CHANGING ENTIRE SEGMENT OR PARTIAL TO TRAIL
OPER ML	OPERATIONAL MAINTENANCE LEVEL	JUR	CONSIDER TRANSFERRING JURISDICTION TO OTHER GOVERNMENT ENTITY
LNN	LIKELY NOT NEEDED AS ROAD	ML4 TO ML3	CONSIDER CHANGING MAINTENANCE LEVEL FROM 4 TO 3
LN	LIKELY NEEDED	ML3 TO ML2	CONSIDER CHANGING MAINTENANCE LEVEL FROM 3 TO 2
DEC	DECOMMISSION	ML2 TO ML1	CONSIDER CHANGING MAINTENANCE LEVEL FROM 2 TO 1
SUP	CONSIDER SPECIAL USE PERMIT AUTHORIZATION		

Superior National Forest Road Risk/Benefit Assessment

Date: 8/7/2015



- Likely Not Needed for Future Use
- Likely Needed for Future Use



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