



United States  
Department of  
Agriculture

Forest  
Service

April 2015



# Environmental Assessment

## Northern Research Station Halfway Ranger Station Revised Building Disposition\*

Superior National Forest  
Lake County, Minnesota



**For More Information Contact:**

Richard Sindt  
Engineering & Facility Services  
USDA Forest Service – Northern Research Station  
1992 Folwell Ave.  
St. Paul, MN 55108  
Phone No. 651-649-5120  
Fax: 651-649-5107  
E-mail comments to: [rsindt@fs.fed.us](mailto:rsindt@fs.fed.us)

\*Previously released as *Environmental Assessment; Northern Research Station Kawishiwi Field Laboratory Building Disposition* in July 2010. The current iteration of this Environmental Assessment has been revised to address an adaptive reuse alternative for the site proposed after release of the 2010 EA.

Cover Photo: Oil House, Northern Research Station Halfway Ranger Station

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

## Summary

The United States Department of Agriculture (USDA) Forest Service Northern Research Station (NRS or the Station) released an Environmental Assessment (EA) in 2010 that analyzed the potential environmental impacts of permanent disposition of its buildings at the Kawishiwi Field Laboratory, located near Ely, Minnesota. In the current EA, the Kawishiwi Field Laboratory is referred to as Halfway Ranger Station (HRS), reflecting its original name when first established as a Ranger Station in the early Twentieth Century. When the 2010 EA was written, NRS sought to dispose of its buildings at HRS because the Station had no use for HRS and no future plans for the buildings. Additionally, the buildings were in poor condition and the NRS had no plans to rehabilitate them, or to continue supporting the high annual maintenance and utility costs associated with the buildings.

The proposed action identified in 2010 was demolition of the buildings after architectural documentation. That proposal garnered strong negative responses from residents of the Ely area as well as the Minnesota State Historic Preservation Officer and others, due to the structures' historic significance and popularity as a familiar feature of the forest landscape.

In response to the negative responses to demolition, the Station Director instructed NRS Engineering to explore other opportunities. This revised EA includes analysis of the alternatives developed for building disposition in the 2010, updated to reflect some changed conditions, and including a new proposed action. This proposed action is a fleshed-out update of alternative 4 from the 2010 EA, Transfer of Management, Rehabilitation and Maintenance of the HRS buildings would be completed by a non-governmental organization under a participating agreement with NRS. The non-governmental organization would receive use of the site for housing and training employees, while NRS would receive rehabilitation and maintenance of the structures at no cost.

There are eleven buildings and one structure (a poured-concrete storage cellar) on site, all which contribute to the National Historic Register eligibility of the Halfway Ranger Station Historic District. The historic significance of the buildings relates to their association with a Federal agency, the Forest Service, and a Federal program, the Depression Era Civilian Conservation Corps (CCC), as well as their superior craftsmanship and representation of nationally important styles of architecture characteristic of an historic era. If the buildings were left to deteriorate on site without adequate maintenance funds or historic documentation under the No Action alternative, or the buildings were documented and demolished per the 2010 proposed alternative, resulting impacts to cultural resources could be significant. The impacts to cultural resources from all other project alternatives can be at least partially mitigated to ensure impacts are below the significance threshold.



## Table of Contents

Summary .....	i
List of Abbreviations and Acronyms .....	vii
1 Purpose and Need .....	1
1.1 Introduction .....	1
1.2 Background .....	1
1.2.1 Proposed Action .....	4
1.2.2 Purpose and Need for the Action .....	4
1.2.3 Existing Direction and Decision to be Made .....	4
1.3 Scope of the EA .....	5
1.3.1 Public Involvement .....	5
1.3.2 Comments Summary .....	8
1.3.3 Resource Topics Dismissed from Further Analysis .....	12
2 Proposed Action and Alternative Actions .....	15
2.1 Introduction .....	15
2.2 Alternative 1: No Action Alternative .....	15
2.3 Alternative 2: Increase of Maintenance Funds .....	21
2.4 Alternative 3: Transfer of Ownership and Management .....	21
2.5 Alternative 4: Transfer of Site Management (Proposed Action) .....	22
2.6 Alternative 5: Relocation of Buildings .....	22
2.7 Alternative 6: Demolition of Buildings .....	23
2.8 Mitigation Measures .....	24
2.9 Comparison of Alternatives .....	26
2.10 Cumulative Impacts .....	28
2.11 Alternatives Considered but Dismissed .....	29
3 Affected Environment and Environmental Consequences .....	30
3.1 Introduction and Methodology .....	30
3.2 Geology and Soils .....	31
3.2.1 Affected Environment .....	31
3.2.2 Impacts of Alternative 1 .....	32
3.2.3 Impacts of Alternative 2 .....	32
3.2.4 Impacts of Alternative 3 .....	34
3.2.5 Impacts of Alternative 4 (Proposed Action) .....	34
3.2.6 Impacts of Alternative 5 .....	34
3.2.7 Impacts of Alternative 6 .....	36
3.3 Water Resources .....	36
3.3.1 Affected Environment .....	36
3.3.2 Impacts of Alternative 1 .....	39
3.3.3 Impacts of Alternative 2 .....	39
3.3.4 Impacts of Alternative 3 .....	39
3.3.5 Impacts of Alternative 4 (Proposed Action) .....	39
3.3.6 Impacts of Alternative 5 .....	39
3.3.7 Impacts of Alternative 6 .....	40
3.4 Biological Resources .....	40
3.4.1 Affected Environment .....	40
3.4.2 Impacts of Alternative 1 .....	43
3.4.3 Impacts of Alternative 2 .....	43
3.4.4 Impacts of Alternative 3 .....	44
3.4.5 Impacts of Alternative 4 (Proposed Action) .....	44

3.4.6	Impacts of Alternative 5 .....	44
3.4.7	Impacts of Alternative 6 .....	45
3.5	Land Use .....	45
3.5.1	Affected Environment.....	45
3.5.2	Impacts of Alternative 1 .....	46
3.5.3	Impacts of Alternative 2 .....	46
3.5.4	Impacts of Alternative 3 .....	46
3.5.5	Impacts of Alternative 4 (Proposed Action) .....	47
3.5.6	Impacts of Alternative 5 .....	47
3.5.7	Impacts of Alternative 6 .....	47
3.6	Cultural Resources .....	48
3.6.1	Affected Environment.....	48
3.6.2	Impacts of Alternative 1 .....	50
3.6.3	Impacts of Alternative 2 .....	50
3.6.4	Impacts of Alternative 3 .....	50
3.6.5	Impacts of Alternative 4 (Proposed Action) .....	51
3.6.6	Impacts of Alternative 5 .....	51
3.6.7	Impacts of Alternative 6 .....	51
3.7	Waste and Hazardous Material Management .....	52
3.7.1	Affected Environment.....	52
3.7.2	Impacts of Alternative 1 .....	52
3.7.3	Impacts of Alternative 2 .....	52
3.7.4	Impacts of Alternative 3 .....	53
3.7.5	Impacts of Alternative 4 (Proposed Action) .....	53
3.7.6	Impacts of Alternative 5 .....	53
3.7.7	Impacts of Alternative 6 .....	53
3.8	Human Health and Safety .....	54
3.8.1	Affected Environment.....	54
3.8.2	Impacts of Alternative 1 .....	55
3.8.3	Impacts of Alternative 2 .....	55
3.8.4	Impacts of Alternative 3 .....	55
3.8.5	Impacts of Alternative 4 (Proposed Action) .....	56
3.8.6	Impacts of Alternative 5 .....	56
3.8.7	Impacts of Alternative 6 .....	56
3.9	Socioeconomics .....	57
3.9.1	Affected Environment.....	57
3.9.2	Impacts of Alternative 1 .....	58
3.9.3	Impacts of Alternative 2 .....	58
3.9.4	Impacts of Alternative 3 .....	58
3.9.5	Impacts of Alternative 4 (Proposed Action) .....	59
3.9.6	Impacts of Alternative 5 .....	59
3.9.7	Impacts of Alternative 6 .....	59
4	Glossary .....	61
5	List of Preparers.....	64
6	References.....	65
	Appendix A.....	69
	Agency Correspondence .....	69
	Appendix B .....	79
	Halfway Ranger Station Historic District.....	79
	Section 106 Resource and Boundary Delineation Report .....	79
	Appendix C .....	81

Halfway Ranger Station Historic District .....	81
National Register of Historic Places Registration Form .....	81
Appendix D .....	119
Summary of Comments on July 2010 Environmental Assessment; .....	119
Appendix E.....	125
Halfway Ranger Station Adaptive Reuse Biological Assessment .....	125
INTRODUCTION.....	6-1
PROPOSED ACTION .....	6-2
Summary of Action.....	6-2
Area of Analysis.....	6-3
APPLICABLE LAWS AND REGULATORY REQUIREMENTS .....	6-4
Endangered Species Act (ESA).....	6-4
Forest Service Manual (FSM).....	6-5
The National Forest Management Act of 1976 .....	6-5
National Environmental Policy Act of 1969 (NEPA) .....	6-5
U.S. Fish and Wildlife Service Effects Definitions.....	6-5
AFFECTED ENVIRONMENT.....	6-6
Species of Concern.....	6-7
Effects Determinations and Background .....	6-8
Gray wolf ( <i>Canis lupus</i> ) .....	6-8
Canada Lynx ( <i>Lynx canadensis</i> ) .....	6-11
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ) .....	6-13
References Cited.....	6-17
7 Appendix F.....	7-1
Draft Decision Notice and Finding of No Significant Impact Halfway Ranger Station Revised Building Disposition Environmental Assessment .....	7-1
Draft .....	7-2
Decision Notice and Finding of No Significant Impact .....	7-2
Halfway Ranger Station Revised Building Disposition Environmental Assessment.....	7-2
U.S. Forest Service, Northern Research Station,.....	7-2
Halfway Ranger Station .....	7-2
Ely, MN.....	7-2
Location .....	7-2
Background .....	7-2
Decision and Reasons for Decision.....	7-3
Resource Protection Measures .....	7-3
Other Alternatives Considered .....	7-4
Public and Agency Involvement and Scoping.....	7-5
Finding of no Significant Impact .....	7-5
Context .....	7-5
Intensity .....	7-6
Conclusion.....	7-7
Findings Required by Other Laws and Regulations.....	7-7
Best Available Science.....	7-8
Pre-Decisional Objection Opportunities .....	7-8
Implementation Date.....	7-9
Contact .....	7-10

### List of Tables

Table 2-1. Comparison of the impacts of the alternatives..... 26  
Table 3-1. Resource assessment impact definitions ..... 31  
Table 1 Forest Types in Jack Pine/Black Spruce Landscape Ecosystem.....6-7  
Table 2 Forest Types in Lowland Conifer Landscape Ecosystem .....6-7  
Table 3 Summary of federally listed species or species proposed for listing .....6-8  
Table 4 Minimum Wolf Population Estimates for Minnesota .....6-10

**List of Figures**

Figure 1.1. Project vicinity map ..... 2  
Figure 1.2 Halfway Ranger Station site map ..... 3  
Figure 2.1. Roof Damage Example ..... 15  
Figure 2.3. Ranger Dwelling/Main Lodge ..... 16  
Figure 2.4. Pump House ..... 16  
Figure 2.5. Oil House ..... 17  
Figure 2.6. Cellar..... 17  
Figure 2.7. Outhouse/Sauna ..... 18  
Figure 2.8. District Office/Wolf Cabin ..... 18  
Figure 2.9. LSFES Dwelling/Bunkhouse ..... 19  
Figure 2.10. Warehouse/Garage ..... 19  
Figure 2.11. Boathouse..... 20  
Figure 2.12. Office ..... 20  
Figure 3.3. South Kawishiwi River (from project site) ..... 38  
Figure 3.4. Ranger Dwelling (top 1934, bottom 2006) ..... 49  
Figure 1 Site Location, Halfway Ranger Station .....6-1  
Figure 2 Kawishiwi Experimental Forest and Halfway Ranger Station Site.....6-4  
Figure 3 Whitenose Syndrome Infested Hibernacula .....6-16

## List of Abbreviations and Acronyms

ACM	Asbestos Containing Material
BA	Biological Assessment
BMP	Best Management Practice
BWCAW	Boundary Waters Canoe Area Wilderness
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
FY	Fiscal Year
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
HRS	Halfway Ranger Station
HRSHD	Halfway Ranger Station Historic District
IWC	International Wolf Center
LSFES	Lake States Forest Experiment Station
MCC	Minnesota Conservation Corps
MDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
NAAQS	National Ambient Air Quality Standards
Northern Bedrock	Northern Bedrock Historic Preservation Conservation Corps
NEPA	National Environmental Policy Act
NFS	National Forest System
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRS	Northern Research Center
OSHA	Occupational Safety and Health Administration
SDS	State Disposal System
SHPO	State Historic Preservation Officer
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey



# 1 Purpose and Need

## 1.1 Introduction

The United States Department of Agriculture (USDA) Forest Service Northern Research Station (NRS) has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and state laws and regulations. This EA analyzes the potential environmental impacts of disposition of its buildings at the Halfway Ranger Station (HRS), located near Ely, Minnesota.

The NRS is seeking to dispose of the HRS buildings in order to obtain relief of their operation and maintenance costs. NRS itself has not had a research interest based out of the HRS for more than 25 years and has no future plans for the buildings. Additionally, the buildings are in poor condition and the NRS has no plans to rehabilitate them, or to continue supporting their high annual maintenance and utility costs.

HRS is located in Township 62 North, Range 11 West, Section 33, 4th P.M., Bogberry Lake, Minnesota 7.5 Minute Quadrangle Map. The site is within the Superior National Forest along the eastern bank of the South Kawishiwi River in Lake County, Minnesota, approximately 12 miles southeast of Ely, Minnesota (see Figure 1-1 and Figure 1-2). HRS is an administrative site on the Kawishiwi Experimental Forest, consisting of eleven buildings and one structure (a poured-concrete cellar). The NRS manages the experimental forest and administrative site (the HRS buildings).

This EA analyzes five alternatives for building disposition and a no action alternative.

## 1.2 Background

The NRS is part of United States Forest Service (USFS) Research and Development Division, which is a division separate from the National Forest System (NFS). The USFS Research and Development Division is responsible for research on the effects of social, biological, and physical processes on forests; this research focuses on four major areas:

- Resource Valuation and Use
- Science, Policy, Planning, Inventory, and Information
- Vegetation Management and Protection
- Wildlife, Fish, Water, and Air

The HRS was originally established in 1910 as the Superior National Forest Halfway Ranger Station. In 1955, management of the administrative site was transferred from the Superior National Forest to USFS Research and Development Division USFS Research and Development Division when the Kawishiwi Experimental Forest was established by written order of the Chief of the Forest Service. Research conducted out of the buildings shifted from a focus on forestry to one on wildlife research in 1968, with research teams from the University of Minnesota and the United States Geological Survey (USGS) using the site. By the 1980s, the USFS Research and Development Division had discontinued all of its research activity at the site, but retained ownership and management of the buildings. The USGS Northern Prairie Wildlife Research Center, which formerly conducted wildlife research based from the buildings, vacated HRS in 2011 due to safety concerns related to the poor condition of the buildings. The site has since been vacant.



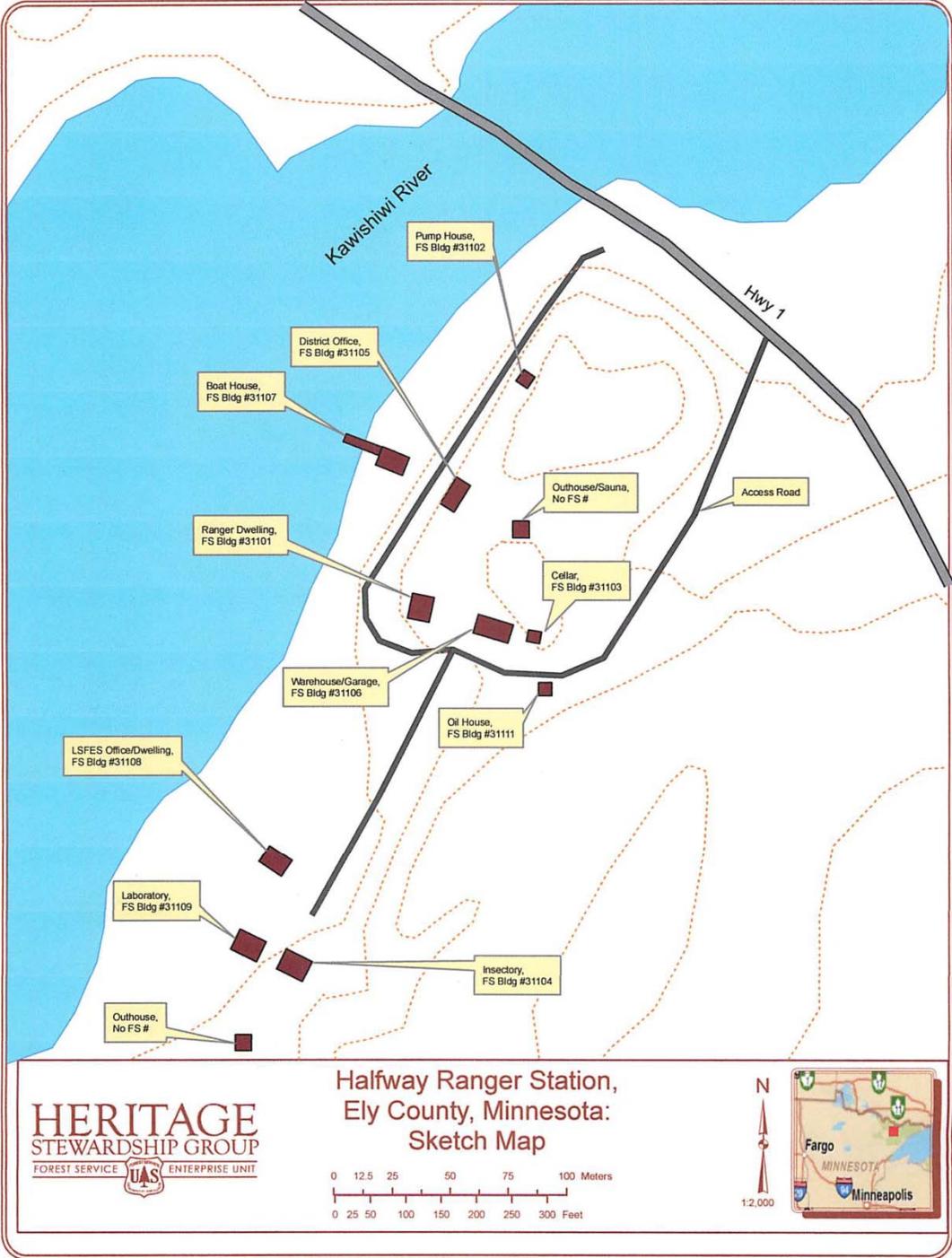


Figure 1.2 Halfway Ranger Station site map

In 2006, the Minnesota State Historic Preservation Officer (SHPO), in response to inquiries from the NRS, determined that the HRS site was eligible for listing on the National Register of Historic Places as a Historic District. At the request of the SHPO, NRS contracted with the Heritage Stewardship Group, an enterprise unit of the Forest Service, for delineation and analysis of the historic district. The resulting report (Appendix B) determined that eight buildings and one structure contribute to the historical significance of the delineated Halfway Ranger Station Historic District (HRSHD) (Ferguson 2009). HRSHD was nominated for listing on the National Register of Historic Places in 2012 (see Appendix C for the nomination) and formally listed on the Register in 2013. The historic importance of HRSHD relates to its association with a Federal agency, the Forest Service, and a Federal program, the Depression Era Civilian Conservation Corps (CCC), as well as the superior construction craftsmanship of buildings on the district and their representation of the nationally significant Rustic or Adirondack architectural styles. Seven of the historic buildings (Ranger Dwelling/Main Lodge, Pump House, Oil House, Outhouse/Sauna, District Office/Wolf Cabin, Warehouse/Garage, and Boathouse) are Rustic/Adirondack Style log cabins built in 1934 and 1935 by the CCC. Additionally, there is a stand-alone underground concrete cellar poured by the CCC at the site, and a balloon-framed residence, built in 1931 with funds from the Hoover Administration's Public Works Administration. The three other buildings onsite include an office and an insectary built in 1957, and an additional outhouse of uncertain age. The 2013 National Register of Historic Places Listing determined that these buildings also contribute to the HRSHD's historic status. Three additional original buildings have at one time been removed or demolished from the site (SNFHRP 2007).

### *1.2.1 Proposed Action*

The NRS is seeking the disposition of its buildings at the HRS, as the NRS has no current or future plans for the buildings and the buildings are excess to NRS needs. Alternative courses of disposition include transfer of both the ownership and the management of the buildings to another entity, transfer of management but retention of ownership of the buildings, relocation of the buildings to a site off of Superior National Forest land and relinquishment of ownership and maintenance, and demolition of the buildings.

### *1.2.2 Purpose and Need for the Action*

The purpose of this initiative is for NRS to identify an acceptable strategy for relief of the HRS buildings' operation and maintenance costs. The HRS buildings are under NRS ownership and management. This action is needed, because the NRS has not used the buildings for over 25 years and has no future plans for the buildings. Due to lack of resources to address the high annual utility and maintenance costs, the buildings are currently deteriorating. The buildings are excess to NRS needs and do not help fulfill the mission of the USFS Research and Development Division, which is to help sustain the natural resources in the Northeast and Midwest through leading-edge science and effective information delivery (NRS 2013).

### *1.2.3 Existing Direction and Decision to be Made*

The action proposed by the NRS to meet its purpose and need is to dispose of the HRS buildings. Given the purpose and need, the deciding official will use the analysis presented in this EA to determine whether any of the alternatives analyzed would meet the agency's purpose and need while not resulting in significant impacts to the human environment. If the deciding official selects an alternative that is likely to result in significant impacts to the environment, a Finding of No Significant Impact (FONSI) is not appropriate. In such cases, the responsible official may

then choose either to proceed with preparation of an Environmental Impact Statement (EIS); propose mitigation measures that will address the significant impacts of the proposed action, in which case a FONSI stipulating the mitigation measures would be prepared; or select to implement an alternative not likely to result in significant impacts to the environment, for which a FONSI can be prepared. If a FONSI has been prepared for the alternative chosen by the deciding official, a decision to proceed with the action will be documented in a decision notice.

## 1.3 Scope of the EA

This USFS EA analyzes the environmental impacts that would result from five action alternatives and the No Action alternative. This EA was prepared in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190), the Council of Environmental Quality (CEQ) Regulations dated November 28, 1978 (40 CFR Parts 1500-1508), the USDA NEPA Policies and Procedures (7 CFR part 1B), and the Forest Service Manual Chapter 1950 and Forest Service Handbook 1909.15.

Key goals of NEPA are to:

1. provide Federal agency officials sufficient analysis and information to make well-informed decisions about agency actions;
2. ensure that Federal agencies consider the range of reasonable alternatives to proposed actions, including taking no action;
3. ensure that Federal agencies consider the impacts of their proposed actions and alternatives upon the human environment; and
4. provide the general public opportunities to scrutinize and comment upon Federal agency analysis of proposed activities.

This EA identifies, describes, and evaluates potential environmental impacts that would result from implementing each of five action alternatives and the no action alternative, taking into consideration possible cumulative impacts from other actions. As appropriate, the affected environment and environmental consequences of the action will be described in both site-specific and regional contexts. In instances where mitigation measures may lessen any potentially adverse impacts, this EA identifies such measures that should be implemented to further minimize environmental impacts.

The following resource areas have been identified for study within this EA: geology and soils, water resources, biological resources (including threatened and endangered species), land use, cultural resources, waste and hazardous materials management, human health and safety, and socioeconomics. Resource areas considered but dismissed from further analysis are discussed below.

### 1.3.1 *Public Involvement*

#### 1.3.1.1 Scoping

To support the preparation of the HRS Building Disposition alternatives development process, NRS solicited input from interested parties and the general public to help identify issues, concerns, and subject matter that should be addressed in the EA. The intent of this process was three-fold:

- Provide interested parties and the general public with information about the HRS buildings and their proposed disposition;
- Provide interested parties and the general public with the opportunity to provide input and voice any relevant issues or concerns regarding various options related to building disposition; and,
- Provide interested parties and the general public with an opportunity to propose alternative courses of action regarding the disposition of the HRS buildings.

As part of the scoping process, the NRS held two public scoping meetings on December 13, 2006. The meetings were held at the Grand Ely Lodge in Ely, Minnesota, at 1:00 to 3:00 p.m. and 6:00 to 8:00 p.m. Both sessions began with a one-hour open house, during which the public was invited to peruse display boards discussing the historical significance and current condition of the buildings, as well as an introduction to the NEPA process. Additionally, attendees were provided with a handout covering many of these same issues. The open house was followed by a presentation including representatives of the USDA-Forest Service (Research & Development: NRS and Heritage Resources Program), the USGS-Northern Prairie Wildlife Research Center, and the Mangi Environmental Group.

Public notices of the scoping process and opportunities to participate were widely distributed prior to the December 13th meetings. Public notices were published in the following local newspapers:

- Duluth News Tribune (published Wednesday, November 29)
- Mesabi Daily News (published Wednesday, November 29)
- Ely Echo (published in the weekly edition beginning November 25)
- Ely Timberjay (published in the weekly edition beginning November 30)

Public notices were also submitted to the following radio stations for broadcast as public service announcements:

- WELY 94.5FM “End of the Road Radio” Ely, Minnesota
- WEVE 97.9FM Eveleth, Minnesota
- WSCN 100.5FM/WSCD 92.9FM “Minnesota Public Radio” Duluth, Minnesota

These press releases invited all interested members of the general public to participate in the December 13th public meetings. Additionally, the NRS mailed 30 letters to Federal and state agencies and 318 letters to private groups and citizens, inviting all recipients to participate in the public meetings. The press release was also posted on the NRS website.

The general public and interested parties were invited to submit comments regarding the possible future directions of the HRS buildings disposition during the scoping period, which ended January 17, 2007. Opportunities for providing comments included:

- Verbally or in writing at the December 13th scoping meetings
- Postal Mail

- Facsimile Transmission
- Electronic Mail
- Phone

In addition to comments from the general public, comments were also received from the USGS, the International Wolf Center (IWC), Vermillion Community College, Superior National Forest, NRS, Ely City Council, Ely Chamber of Commerce, and the Bois Forte Band of Chippewa.

### 1.3.1.2 Response to Environmental Assessment

In July of 2010 NRS released an EA evaluating documentation and demolition the HRS buildings (Alternative 6) as the proposed alternative. NRS provided notice of the availability of the EA and solicited public comment in legal notices published in local newspapers:

- Duluth News Tribune (published Monday, July 12)
- Mesabi Daily News (published Tuesday, July 12)
- Ely Echo (published in the weekly edition beginning July 17)
- Ely Timberjay (published in the weekly edition beginning July 24)

The newspaper notices also invited interested parties to attend public meetings at 1 pm and 6 pm on August 3, 2010, at the Ely Lodge to comment on the EA. NRS also again submitted Public notices to the following radio stations for broadcast as public service announcements:

- WELY 94.5FM “End of the Road Radio” Ely, Minnesota
- WEVE 97.9FM Eveleth, Minnesota
- WSCN 100.5FM/WSCD 92.9FM “Minnesota Public Radio” Duluth, Minnesota

These press releases invited all interested members of the general public to participate in the August 3rd public meetings. Additionally, the NRS mailed letters to 48 Federal, Tribal and state governmental agencies and 150 letters to individuals and private organizations, inviting all recipients to participate in the public meetings. The press release was also posted on the NRS website.

The August public meetings opened with NRS presenting a summary of the EA and Proposed Action, followed by an informal question and answer period. NRS provided attendees with information sheets and comment forms. Attendees were encouraged to submit formal comments in writing, either through use of the comment forms, which could be submitted at the meeting or mailed; by email facsimile, or letter.

In addition to comments from the general public, NRS received EA comments from the USGS, IWC, the Minnesota SHPO, the Northern Lakes Conservation Corps, Vermillion Community College, Superior National Forest, Ely City Council, Ely Chamber of Commerce, and the Bois Forte Band of Chippewa.

## 1.3.2 Comments Summary

### 1.3.2.1 Scoping Comments

NRS received comments from the public and from agencies during scoping that could be categorized into four themes, which NRS then classified as four distinct significant issues. Significant issues are defined as those directly or indirectly caused by implementing the proposed action (a scoping report prepared in 2007 summarized the public comments to the initial public scoping process and available in the project record). Non-significant issues are identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The CEQ NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...." The NRS identified four significant issues during scoping:

#### ***Issue #1: Loss of Laboratory Would Result in Loss of Research Opportunities***

##### **Comments Received Related to Issue #1**

Wolf research has been continuously based out of HRS since 1968. The wolf research based at the laboratory represents one of the longest running continuous wildlife studies in the world, and has been instrumental in developing early radio telemetry techniques for wildlife research. HRS has also been used for research on plant ecology, forest fire histories, recreation, and environmental impacts of mining. Also, several non-wolf wildlife studies including: beaver, loon, black bear, deer, lynx, and moose were conducted from HRS. The Fond du Lac band of Lake Superior Chippewa has also collaborated on research projects conducted at HRS.

Additionally, several local institutions use HRS for learning exercises and hands-on experiences for students of all ages. Vermillion Community College educators Lori Schmidt and Bill Tefft both discussed the value of HRS to their students' educational experiences. Lori Schmidt and Mike Nelson, USGS Northern Prairie Wildlife Research Center and IWC, discussed the partnership that Vermillion Community College has with the wolf research conducted at HRS; Vermillion students are frequently called upon to help collect field data, including such tasks as retrieving carcasses, and measuring and weighing animals.

Walter Medwid, Executive Director of IWC, and Cree Bradley, a member of the IWC Board, discussed the value of the laboratory as a base for their educational programs for youth and adults. The proximity of the laboratory to the city of Ely, where IWC is based, has helped to facilitate this partnership. IWC has also supported the research at the laboratory, as it relates to their educational programs.

There were also queries from members of the public regarding why the NRS no longer needs the buildings for its own purposes and whether or not NRS could use the buildings at some time in the future.

- *"The lab seems like an ideal place to study the effects of global climate change in cold climates due to its proximity to the transition zone of the deciduous forest, coniferous forest, and prairie ecosystems."* (Chuck Wick, a former ranger in the Superior National Forest and former educator at Vermillion Community College)

- There is a concern that the loss of HRS would represent a loss of forest research opportunities in the Superior National Forest.
- There is some question of whether or not the buildings could be maintained by NRS for use other than research, namely an interpretive center.
- There is also a concern that the disposition of the buildings would set a precedent for the disposition of other USFS buildings that are no longer used but located at the Superior National Forest.

### **Response to Issue #1**

Since these comments were received, the USGS has vacated the HRS site due to safety concerns identified during a September 30, 2010 inspection (see Appendix A. for a copy of the letter requesting USGS vacancy of the site). The implications of building disposition on the wildlife research conducted out of the Field Laboratory are discussed in Section 3.4, Biological Resources. As for any potential future use of the buildings by the NRS, the NRS has no plans to use the buildings for future research, and developing and maintaining an interpretive center is not consistent with the mission of NRS or the USFS Research and Development Division; nor does NRS have funding to consider this alternative. The NRS does not believe that this action sets a precedent, as the NRS does not own or maintain any other structures within the Superior National Forest.

### ***Issue #2: Mining Interests May be Hidden Motive***

#### **Comments Received Related to Issue #2**

Some members of the public have expressed concern that the impetus behind the need for disposition of the buildings is related to nearby mining interests. During scoping meetings, a gentleman in the audience reported that when management of the majority of the Kawishiwi Experimental Forest was reverted back to the Superior National Forest, several mining operations began in the region at about the same time.

### **Response to Issue #2**

Mining is taking place in the surrounding area (¼ to ½ mile from the laboratory), but there is no known connection between the building disposition at the laboratory and mining interests. A discussion of mining as it relates to the HRS can be found in Section 3.5, Land Use.

### ***Issue #3: Historical Significance of the Buildings is Important to Community***

#### **Comments Received Related to Issue #3**

During the scoping meetings held for the proposed project, public interest in maintaining the HRS buildings for their historical importance to the area and as a marker of a point in time in the country's history was noted several times. There are many local connections to the buildings in terms of the men who built them and the construction materials.

Specific comments related to the buildings and their historical value included comments on maintenance requirements, bringing the buildings up to date with current building codes in light of their historic significance, what the loss of the location would mean to their historic eligibility

if the buildings were to be relocated, and, if the buildings were to be relocated, whether or not all of the buildings would need to be moved together and reassembled in the current layout.

### **Response to Issue #3**

Maintenance requirements of the historic structures have not yet been determined, and would be finalized only after comprehensive consultation and coordination with the SHPO. The historic value of the buildings is described and analyzed in Section 3.6, Cultural Resources. Additional details pertaining to the relocation of the buildings can be found in Section 2.6, under the description of Alternative 5: Relocation of Buildings.

### ***Issue #4: Current Condition of the Buildings May Pose Safety Risk***

#### **Comments Received Related to Issue #4**

There have been some concerns expressed regarding the current state of disrepair of some of the buildings (not being up to fire protection codes, the presence of asbestos, and the deteriorating structural support of the buildings), and the corresponding potential risks to the safety of building visitors, including the USGS researchers who currently use using the buildings.

### **Response to Issue #4**

In 2011 the site was vacated due concerns for the safety of building occupants. The presence of hazardous or potentially dangerous materials in the buildings at the project site, including asbestos and lead, is discussed in Section 3.7, Waste and Hazardous Materials. The implications of the current state of disrepair of the buildings on human safety are discussed in Section 3.8, Human Health and Safety.

#### **1.3.2.2 Comments on the 2010 EA**

The substantive comments from public and agency review of the 2010 EA, *Northern Research Station, Kawishiwi Field Laboratory Building Disposition* can be grouped into four general topic areas plus several miscellaneous comments. The first three topic areas directly correspond to the first three Issues identified through the scoping process, above. These are: 1) disposition would adversely affect wildlife research headquartered at HRS; 2) disposition of the field lab buildings may be linked to mining proposals in the area; and 3) demolition of relocation of the historic buildings/district would be a significant impact to historic resources. The fourth topic area is a call for development and analysis of additional alternatives with greater likelihood of feasibility (for a complete summary of the comments received and NRS response, see Appendix D).

### ***Issue #1: Disposition would Adversely Affect Wildlife Research Headquartered at HRS:***

#### **Comments Received Related to Issue #1**

Several commenters stated concerns that demolishing the HRS buildings would adversely affect wildlife research that was headquartered at HRS when the 2010 EA was released. Commenters stated that keeping active research at HRS, regardless of the party performing the research is consistent with NRS goal to “*improve the Station’s capacity as a partner in research collaboration and regional partnerships.*” Other commenters expressed concern that loss of wolf research conducted at HRS would violate Endangered Species Act.

### **Response to Issue #1**

In 2011 USGS vacated the HRS site, due to safety concerns related to the condition of the buildings. Rather than discontinuing its wolf and other wildlife research in Northern Minnesota, however, USGS has secured alternative office space at the Superior National Forest's Kawishiwi Ranger Station in Ely, Minnesota, and continues to conduct field studies in wolf ecology and other topics. Loss of the HRS as a headquarters site has caused some inconvenience for USGS staff previously located there, but has not resulted in cessation of the agency's wildlife research in the region.

### ***Issue # 2: Linkage to Mining Proposals***

#### **Comments Received Related to Issue #2:**

Some commenters suggested that preparation of an Environmental Impact Statement is appropriate due to existing proposals to mine a variety of minerals in area. These comments imply an ulterior motive: removing the historic HRS buildings would remove an impediment to approval of mining proposals.

#### **Response to Issue #2**

Mineral exploration is ongoing in the area surrounding the HRS site. Off-site horizontal drilling is being used to explore the mineral deposits beneath the HRS. The mineral estate beneath the HRS is federally owned and not part of a preference right lease. Therefore, any minerals related activities near HRS are subject to the appropriate level of NEPA and stipulations to protect surface resources. There is no known connection between the increased mining interests in the area and the building disposition alternatives.

### ***Issue #3: Demolition of the Historic Buildings/District is a Significant Impact***

#### **Comments Received Related to Issue #3**

Several commenters objected to demolition of the HRS buildings, citing their historic status and importance as cultural resources. Commenters also stated that proceeding with building demolition, the 2010 EA's Proposed Action prior to completion of consultation with the Minnesota State Historic Preservation Officer would violate Section 106 of National Historic Preservation Act, and should trigger analysis at the EIS level.

#### **Response to Issue #3**

Due to the level of concern expressed by public and agency commenters regarding the historic importance of the HRS site, NRS sought a partner for adaptive reuse of the site that would conserve its historic integrity. Alternative 4 of this EA is resultant Proposed Action.

### ***Issue #4 Develop and Analyze feasible Reuse Alternatives***

#### **Comments Received Related to Issue #4**

Some commenters felt that Alternatives 3 (increase maintenance funding for site), 4 (transfer ownership and management of buildings), and 5 (transfer management of buildings) in the 2010 EA were not designed to be viable alternatives. Others suggested identifying additional partners or funding sources for rehabilitation of the HRS buildings.

#### **Response to Issue #4**

Alternative 4, as presented in this EA, is NRS' response to this issue.

### 1.3.3 Resource Topics Dismissed from Further Analysis

#### *Wild and Scenic Rivers*

The National Wild and Scenic Rivers Act is administered by four Federal agencies; the Bureau of Land Management, the National Park Service, the U.S. Fish and Wildlife Service, and the U.S. Forest Service. The Act protects selected rivers, and their immediate environments, which possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values. In the State of Minnesota, there is only one National Wild and Scenic River, the St. Croix River.

The St. Croix River is a 164-mile-long tributary of the Mississippi River. The river originates approximately 20 miles south of Lake Superior in Wisconsin, and the lower 125 miles of the river form the state line between Minnesota and Wisconsin. The St. Croix River and its watershed will not be affected by the proposed project in any way. Therefore, this topic is dismissed from further analysis.

#### *Air Quality*

The Clean Air Act of 1977 is the primary regulatory authority used by the Minnesota Pollution Control Agency (MPCA) to protect the state's air quality. In addition to the Clean Air Act, state law grants broad authority to the agency to protect Minnesota's air. Under the requirements of the Clean Air Act, the U.S. Environmental Protection Agency (USEPA) regulates seven air pollutants, known as criteria pollutants. The seven criteria pollutants are carbon monoxide (CO); lead; sulfur dioxide (SO<sub>2</sub>), nitrogen oxide (NO); ozone (O<sub>3</sub>); particulate matter with diameters of 10 micrometers or less (PM<sub>10</sub>); and particulate matter with diameters of 2.5 micrometers or less (PM<sub>2.5</sub>). Additional hazardous air pollutants and other toxics, including mercury, are regulated under the Clean Air Act Amendments of 1990.

For each criteria pollutant, the maximum concentration above which adverse effects on human health may occur is called a National Ambient Air Quality Standard (NAAQS). Attainment means that the levels of criteria pollutants in a particular area are less than the NAAQS. Non-attainment means that the levels of criteria pollutants in the air are at or above the NAAQS in an area. All of Minnesota is currently in attainment for all seven criteria pollutants, and a 2013 monitoring study undertaken in Ely confirmed that Ely has lower levels of criteria pollutants than the statewide averages (MPCA 2014).

None of the alternatives under consideration for HRS building disposition involve a stationary source of air emissions. However, two of the alternatives under consideration for building disposition (relocation and demolition) would require the use of heavy equipment, such as graders, bulldozers, backhoes, dump trucks, cranes and other diesel- and gasoline-fueled equipment, which would intermittently emit non-stationary source quantities of five criteria air pollutants: CO, NO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, in addition to Volatile Organic Compounds. The emission rates of the equipment used on site are considered to be *de minimis* (of minimal importance) rates and would not impact regional air quality.

In addition to tailpipe emissions from heavy equipment, the temporary disturbance of the ground surface during excavation and grading activities could potentially generate fugitive dust. Fugitive dust can affect public health, especially if laden with hazardous materials. The type and severity of the effects depend in large part on the size and nature of the dust particles as well as the length of exposure. The types of effects that can occur include inhalation of fine particles that can

accumulate in the respiratory system causing various respiratory problems including persistent coughs, wheezing, eye irritations, and physical discomfort. Construction personnel would be expected to implement reasonable measures, such as applying water to exposed surfaces or stockpiles of dirt, when windy and/or dry conditions promote problematic fugitive dust emissions. Adhering to reasonable measures would minimize any fugitive dust emissions. Use of mitigation measures would further reduce the possibility of adverse impacts from fugitive dust emissions. Overall, impacts from fugitive dust emissions would be negligible. Because impacts to air quality from the proposed action would not have a measurable impact on air quality, this topic is dismissed from further analysis.

### ***Traffic***

Minnesota Highway 1 provides direct vehicle access to the HRS site, via a short unpaved road which forms a loop off of Highway 1. At 346 miles in length, Highway 1 is the longest state route in Minnesota and often accommodates slow-moving equipment transports and log transportation trucks. Additionally, the site can be accessed from the west via boat on the South Kawishiwi River. Though Alternative 5, Relocation of the Buildings, would temporarily involve the use of large, slow-moving vehicles, none of the project alternatives would create more than a temporary increase in traffic on Highway 1, which would be considered negligible relative to background use of the highway. Therefore, this impact topic is dismissed from further analysis.

### ***Noise***

Noise is generally defined as unwanted sound. Noise can influence humans or wildlife by interfering with normal activities or diminishing the quality of the environment. Noise levels heard by humans are dependent on several variables, including distance, ground cover, and objects or barriers between the source and the receiver, as well as atmospheric conditions. Certain land uses, facilities, and the people associated with these noise levels are more sensitive to a given level of noise than other uses. Such “sensitive receptors” include schools, churches, hospitals, retirement homes, campgrounds, wilderness areas, hiking trails, and some species of threatened or endangered wildlife. The closest sensitive receptor to the project site is the Boundary Waters Canoe Area Wilderness (BWCW), located approximately 4 miles northeast of the site.

Current uses of the HRS site do not generally create noises audible offsite or noises that are disruptive to wildlife or humans. The nuisance factor of noise associated with either disassembling and relocating the buildings or demolition activities should be minimized by limiting such activities to daylight hours and by using properly maintained and muffled equipment. Hearing protection equipment would be required for sound levels that exceed Federal workplace standards. Provided the preceding steps are taken, no impacts from noise are anticipated from the proposed project, and this topic is therefore dismissed from further analysis.

### ***Environmental Justice***

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, requires all Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. There are no residential areas in the immediate vicinity of the HRS, and the proposed project would not result in any measurable level of change to the socioeconomic environment of the area. HRS is located within Lake County, and the nearest municipality is Ely, Minnesota. Both Lake County and Ely have

very low minority populations (less than 3 percent and 4 percent, respectively) (USCB 2014a, USCB 2014b). No minority or low-income populations are anticipated to be adversely impacted by the proposed project. Therefore, this topic is dismissed from further analysis.

## 2 Proposed Action and Alternative Actions

### 2.1 Introduction

This section discusses several possible alternative courses of action the NRS could take to meet the purpose and need discussed in the previous section. The alternative of taking no building disposition action and no action to protect the buildings, the No Action alternative (Alternative 1), is discussed but does not meet the project's purpose and need. Alternative 2 involves increasing maintenance so that the buildings can be rehabilitated and properly maintained. Four of the five action alternatives (alternatives 3 through 6) are forms of disposition of the HRS buildings from NRS' management or from both NRS' management and ownership.

For the purpose of the impacts analysis of alternatives 3 through 6, many possible scenarios of potential future management, ownership, and reuse of the buildings are considered under the description of the alternatives in this section. These scenarios are based on the best available information at this time of what actions could occur under the respective alternatives. These scenarios describing potential future use and reuse of the site provide a basis for a full impacts analysis of the respective alternatives, but the scenarios are in no way binding or limiting. The analysis of alternatives 3 through 6 is, where possible, based on the maximum predictable impacts which could arise from each of the alternatives.

NRS is considering a wide range of alternatives regarding the future of the buildings; however, none of the alternatives will affect the land underlying the buildings. The USDA Forest Service will retain administration of the land regardless of the alternative.

### 2.2 Alternative 1: No Action Alternative

Under the No Action alternative, no disposition of the HRS buildings would occur. NRS would retain ownership and management responsibility for the buildings. NRS has no plans to use the buildings in the future and does not plan on rehabilitating any of the buildings. The buildings would continue to deteriorate without needed rehabilitation and maintenance funding and effort. The current condition of most of the buildings is fair to poor, due to several decades of neglect. Ongoing problems include rotting wood (see Figure 2.1), extensive powder post beetle infestation resulting in loss of density in the wood, substandard plumbing, inadequate heating infrastructure, and rodent and bat infestations. The issues of rotting wood and loss of density of the wood, in particular, can be expected to worsen as time continues. These issues make the buildings increasingly unsound and unsafe, and decrease the possibility of successful rehabilitation of the buildings, as the funding and effort required to restore the buildings increases each year.

Photos of the HRS building follow. Refer to figure 1.2 for the site layout and building locations.



**Figure 2.1. Roof Damage Example**



**Figure 2.2. Ranger Dwelling/Main Lodge**

- Built in 1934 by the CCC
- Craftsman Style
- Similar to Dwellings at Tofte and Isabella
- The interior is largely unchanged over time unlike at the Ranger Dwellings at Tofte and Isabella; therefore it retains more historical significance
- Full basement

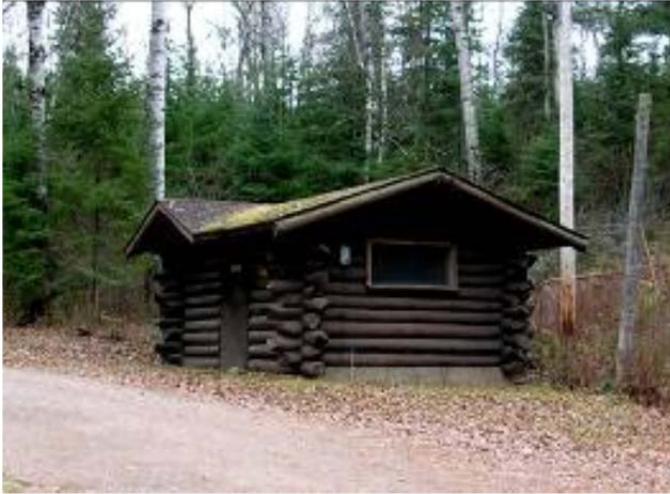
**Current Conditions:** Fair; routine maintenance largely ignored, but no major repairs are needed. Problems with bats and bat guano are ongoing.



**Figure 2.3. Pump House**

- Built in 1935 by the CCC
- The foundation was reconstructed in 1964 using a concrete slab in place of the previous foundation of unknown material
- The original door has been replaced
- An exhaust stack comes through the roof

**Current Conditions:** Generally good; powder post beetle infestation prevalent and could compromise the building if untreated.



**Figure 2.4. Oil House**

- Built in 1935 by the CCC
- There is a cross-gable roof over the front door, covered with asphalt shingles
- The foundation is a poured concrete slab

**Current Conditions:** Poor; largely as a result of insect infestations.



**Figure 2.5. Cellar**

- Built in the early 1930s by the CCC
- Constructed into hillside and consists of concrete walls and an earthen floor
- Originally used for storing food during construction and later used for storing trees and other forestry supplies
- Has an above ground ventilation and refrigeration system, which appears to be electric, although it is not clear if it is functional

**Current Conditions:** Generally good.



**Figure 2.6. Outhouse/Sauna**

- Built in 1935 by the CCC
- Originally used as an outhouse; later converted to a sauna. This involved removal of the bench and installation of a woodstove.

**Current Conditions:** Ongoing insect infestations have caused severe deterioration. It is not useable.



**Figure 2.7. District Office/Wolf Cabin**

- Built in 1935 by the CCC
- Wood burning stove historically present
- Currently no usable indoor plumbing or heat

**Current Conditions:** Many areas of disrepair: plumbing is in poor condition and not up to code, concrete at the front entry needs replacement, and there is an active powder post beetle infestation.



**Figure 2.8. LSFES Dwelling/Bunkhouse**

- Built in 1931
- Balloon-Frame Structure
- Oldest remaining administrative building in the Superior National Forest
- Funding for construction provided by Hoover administration's Public Works Program
- First admin building in the forest with a bathroom

**Current Conditions:** Good. Original siding and trimwork are intact, but need some attention.



**Figure 2.9. Warehouse/Garage**

- Built in 1934 by the CCC
- Foundation comprised of cement masonry units with a poured-concrete slab
- Original doors have been replaced
- Roof trusses are adjustable to allow for tightening of the turnbuckles as the structure settles
  - This prevents the walls from bowing outward as the structure settles
  - Settling is a universal issue in log structures

**Current Conditions:** Generally fair; a powder post beetle infestation is ongoing; and some wood is rotting.



**Figure 2.10. Boathouse**

- Built in 1935 by the CCC
- The structure is one story high and a dock is present
- It features a four-panel sliding front door
- The dock was replaced in 1979, nothing is known of the previous dock

**Current Conditions:** Fair; experiencing a powder post beetle infestation.



**Figure 2.11. Office**

**Buildings constructed in 1957, and not built by the CCC:**

**Office**

- Used as office workspace
- Generally well maintained, no major issues

**Insectary**

- Total disrepair; not used

**Southern Outhouse**

- Total disrepair; not used
- Construction date not known

## 2.3 Alternative 2: Increase of Maintenance Funds

Alternative 2 consists of increasing the maintenance funds for the HRS buildings, so that the buildings can be adequately rehabilitated and maintained. Increased funding for the buildings would have to be drawn from NRS' overall budget. At a higher level, NRS is one of five research stations of the USFS Research and Development Division; in addition to the research stations, the Division includes the Forest Products Laboratory and the International Institute of Tropical Forestry located in Puerto Rico. The Fiscal Year (FY) 2013 budget for the entire USFS Research and Development Division was \$280 million. Of this amount, \$57 million was allocated to the NRS (USFS 2014).

The NRS maintains 377 employees, 25 field locations, 24 experimental forests, 14 research work units, and forest inventory and monitoring for 24 states (NRS 2013). The NRS does not currently and will not in the future have funding specifically allocated for the maintenance of buildings which are excess to its needs. Increased maintenance funds for the HRS would have to come from the funding currently allocated to one of the five research areas which the NRS pursues:

- Forest Disturbance Processes
- Urban Natural Resources Stewardship
- Sustaining Forests
- Providing Clean Air and Water
- Natural Resources Inventory, Monitoring, and Assessment (NRS 2013)

Redirecting funding from research efforts to building maintenance would conflict with the mission of the NRS.

## 2.4 Alternative 3: Transfer of Ownership and Management

Alternative 3 would involve the transfer of both the ownership and management of the HRS buildings to another agency or entity. As previously stated NRS has no need for the laboratory buildings and has not had any active research projects in the facility since the 1980s. The USGS and other research institutions have been using the facilities since that time.

Transferring ownership of the buildings would require identifying an agency or entity willing to take responsibility for ownership and all management requirements of the buildings. This entity would acquire title to the buildings, but not the underlying land, which would remain experimental forest under the jurisdiction of the NRS. NRS has no plans to dissolve the experimental forest. Dissolution of the experimental forest would cause the land to revert back to national forest land. The Superior National Forest has already indicated that they will not sell the land. Specific maintenance requirements would be coordinated with the SHPO and recorded as part of the deed, as the buildings would have to be maintained as historic structures. The simplest path for transfer of ownership and management would be transfer to the Superior National Forest. Property records would simply be changed to reflect the transfer. The next simplest vehicle would be transfer to another federal entity. Transferring ownership outside of federal status would require a legal instrument (like a special-use permit) to authorize the change. Any instrument used to transfer the ownership and management would be authorized by the NRS, in consultation with the Superior National Forest.

Provided a Special Use Permit can be issued for the buildings, several entities and interested parties have expressed interest in acquiring ownership and maintenance responsibilities for the buildings. The Minnesota Conservation Corps (MCC), a direct descendent of the CCC, has

expressed great interest in preserving the buildings and partnering with Federal, state, and local land-managements agencies, and with nonprofits, to offer programs and opportunities at the site related to their mission of providing hands-on environmental stewardship and service-learning opportunities to youth and young adults while accomplishing priority cost-effective conservation, natural resource management projects and emergency response work (Hagberg 2007).

Suggestions for potential reuse of the site by other entities have included conversion of the site to a designated recreation site or resort, privatization of the site to homesteads, and funding assistance to keep the research focus of the site active from entities such as the IWC and the local Ely community and government.

The Superior National Forest does not want to assume ownership or management responsibility of the buildings. In the past 10 years, Superior National Forest sold its property at the Isabella Ranger Station Historic District. The sale of the buildings at the Isabella Ranger Station Historic District is part of a nationwide trend in which national forests are disposing of little-used or abandoned properties to reduce the nationwide backlog of unfunded facility repairs and maintenance, estimated to be \$160 million at the end of 2013 (USFS 2014).

## 2.5 Alternative 4: Transfer of Site Management (Proposed Action)

Alternative 4 would involve NRS executing a renewable, five-year, participating agreement with Northern Bedrock Historic Preservation Corps (Northern Bedrock), a private nongovernmental organization (ngo), for management, rehabilitation and use of site and structures. NRS would retain ownership of the buildings under this alternative. This would only partially support the purpose of the proposed project, which is for NRS to permanently dispose of the buildings.

Under this alternative, Northern Bedrock would use the HRS site and structures to train young adults in rehabilitation and maintenance of historic structures through their existing manpower, job training, and development programs. NRS would receive care and maintenance of the site and facilities. NRS would receive this cooperative manpower at no cost. Initially, Northern Bedrock staff and trainees would camp at the HRS site. As buildings are rehabilitated, Northern Bedrock would use them as bunkhouse space, a kitchen and dining hall. In the first years of their participating agreement, Northern Bedrock would likely station 5 to 15 employees on the site; at full implementation the site would host up to 30 employees in the winter and 50 during the summer. Additional information about Northern Bedrock's proposal is available in Northern Bedrock's Feasibility Study for HRS (available on Northern Bedrock's webpage at <http://www.northernbedrockconservationcorps.org/2014/12/re-use-plan-halfway-ranger-station/>). All work done at the site would be conducted in consultation with the SHPO and in accordance with all Forest Service policies and requirements.

## 2.6 Alternative 5: Relocation of Buildings

Alternative 5 would involve the partial dismantling and subsequent relocation of the HRS buildings from the site. The buildings that are removable would be relocated to a yet to be determined location offsite, off of Superior National Forest land. This location would be owned by an entity willing and able to assume the relocation costs and willing and able to take responsibility for the future maintenance of the buildings as historical structures. This would likely require a significant initial investment, which has been projected to range from \$200,000 to over \$1 million. Annual long-term maintenance costs are not currently available. Federal tax

credits may be available to help assist the entity assuming ownership, if the buildings are reassembled and maintained in accordance to stipulations pertaining to their historic significance.

Buildings that may be able to be moved from the site include the Ranger Dwelling/Main Lodge, Pump House, Oil House, Outhouse/Sauna, District Office/Wolf Cabin, Warehouse/Garage, Boathouse, Lake States Forest Experiment Station (LSFES) Dwelling/Bunkhouse, and the Office. Some or all of these buildings would be relocated under this alternative.

Due to its structure (poured concrete located within the hillside); the cellar would not be moveable. Additionally, the condition of the insectary and second outhouse prohibit their relocation. These three structures would require a combination of demolition and abandonment in place.

Before moving, the original setting and context of the site would be documented. Consultation and coordination with the SHPO would determine additional requirements. Removal of the buildings would undermine any historical significance of the HRSHD. The buildings would, however, retain characteristics that contribute to their historical significance, such as craftsmanship and architectural styles. Keeping the buildings together and within the Ely region would help to mitigate some, but not all, of the impact to historical value.

Due to the landscape and road conditions at the project site, it is considered likely that the buildings which are removable would be at least partially disassembled prior to moving. Disassembling the buildings would be a laborious process. Each wooden log, its position and adjoining logs would be marked properly before dismantling so that the pieces would fit back together when reassembled. If rotten and unusable logs are found they would be measured and replacement logs would be crafted in the exact likeness of the original logs. Contractors experienced in moving historic buildings would work on the disassembly, relocation, and reassembly of the structures. This would require the use of heavy machinery, trucks, and trailers. Activities related to demolition of the structures left onsite (at a minimum, the cellar, insectary, and second outhouse), would require the use of dump trucks, cranes, excavators and other heavy equipment.

## 2.7 Alternative 6: Demolition of Buildings

Alternative 6 would consist of demolishing the HRS buildings on site. NRS would retain administration of the Kawishiwi Experimental Forest land, and would have sole discretion and decision-making authority regarding future land reuses. It is anticipated that following building demolition, the land would be at a minimum regraded and reseeded with native plants.

Prior to any demolition activities, all site details and historically significant structures would be photographed and documented to meet Library of Congress standards for the Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and Historic American Landscapes Survey (HALS).

Demolition of the laboratory buildings would require the use of heavy equipment, such as elevated work platforms, dump trucks, cranes, excavators, graders, bulldozers and other diesel- and gasoline-fueled equipment. It would take several weeks or months to prepare the buildings for demolition. All items of value, such as historic objects and copper wiring, would be stripped from the buildings. Other materials removed prior to demolition would include all glass and other materials which can scatter or form projectiles during demolition. Additionally, any and all

materials containing dangerous or hazardous materials such as asbestos or lead would be properly abated and disposed of prior to demolition, in accordance to Federal and state regulations.

## 2.8 Mitigation Measures

All future actions proposed as part of this project should employ the following mitigation measures to ensure that environmental impacts from maintenance, demolition, or structure relocation activities are minimized to the greatest extent possible. Adherence to the following mitigation measures, in conjunction with adherence to all applicable and appropriate local, state, and Federal regulations and permits, should ensure that the environmental impacts resulting from building disposition at the HRS are minimized to the greatest extent possible.

### ***Soil***

- Incorporate and maintain best management practices (BMP) into any repair, disassembly, or demolition activities that disturb the soil surface or vegetation; BMPs typically consist of various erosion and sediment control measures such as silt fences, straw bales, and other temporary measures to be placed in low lying areas and along portions of the site perimeter to control erosion and trap transported sediments on site during activities which could cause soil to be exposed and displaced. These temporary erosion prevention measures should be maintained in place until new site vegetation is firmly established and soil has stabilized. Erosion and sediment control measures should be inspected on a regular schedule, as well as after any storm.
- Store and maintain all fuels in a designated equipment staging area to reduce the potential for soil contamination. Designate a person(s) as being responsible for equipment fueling who closely monitors the fueling operation, and have an emergency spill kit containing absorption pads, absorbent material, a shovel or rake, and other cleanup items, readily available on site in the event of an accidental spill.
- Stabilize and revegetate all disturbed areas with native plant vegetation following commencement of project implementation activities. Proper seed selection will result in native plants with deep root systems, which will stabilize soils, foster greater infiltration, and reduce runoff from the site.

### ***Water Resources***

- Place BMPs along portions of the site perimeter to control erosion during all soil exposing and demolition activities. Under all circumstances, sediment runoff from the site should be captured and prevented from entering the Kawishiwi River.
- If a National Pollution Discharge Elimination System/State Disposal System (NPDES/SDS) permit is not required for the site due to the footprint of the proposed disturbance, ensure that BMPs related to storm water runoff components are in place and working correctly. This should control movement of loose sediment, fuels, oils, and other potential contaminants throughout project implementation processes.

### ***Cultural Resources***

- To minimize the adverse impacts of transferring significant cultural resources out of Federal control, relocating cultural resources, or demolishing cultural resources, the NRS will coordinate with the SHPO and address all of SHPO's recommendations to the extent possible in order to mitigate impacts to the site. As stated under alternative 6, in the case

of demolition of buildings, NRS would document all site historic resources to the HABS/HAER/HALS standard. The NRS will also notify the Advisory Council on Historic Preservation of its actions, so it has the opportunity to participate in the project mitigations and advise the NRS of additional recommended courses of action to ensure that impacts to cultural resources are minimized as much as possible.

***Air Quality***

- Implement reasonable measures, such as applying water to exposed surfaces or stockpiles of dirt, when windy and/or dry conditions promote problematic fugitive dust emissions. Adhering to these BMPs would minimize any fugitive dust emissions.

***Waste Management***

- Recycle and/or reuse as many materials as possible during all building upgrade or demolition activities to minimize the amount of waste generated by the project.

## 2.9 Comparison of Alternatives

This section presents a summary table (table 2-1) of the impacts of the alternatives. The impacts are based on the effect the respective alternatives presented in this chapter would have on the affected environment discussed in Chapter 3. The full analysis of the alternatives is also included in Chapter 3. While it is not known exactly what potential future uses and reuses of the buildings and HRS site may occur under each alternative, the impacts are the maximum predictable impacts from the most likely scenario of the alternative. The scenarios upon which the impacts analysis is based are in no way binding or limiting to the future actions of NRS.

**Table 2-1. Comparison of the impacts of the alternatives**

<i>Topic or Resource Area</i>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Increase Funds</b>	<b>Alternative 3 Transfer Ownership &amp; Maintenance</b>	<b>Alternative 4 Transfer Management</b>	<b>Alternative 5 Relocation</b>	<b>Alternative 6 Demolition</b>
<i>Purpose and Need for Project</i>	Does not meet purpose and need	Does not meet purpose and need	Fully meets purpose and need	Partially meets purpose and need	Fully meets purpose and need	Fully meets purpose and need
<i>Geology and Soils</i>	No Impact	No Impact	Short-term, negligible impacts from potential site upgrades	Negligible impacts	Localized, short-term, adverse minor impacts from soil disturbing activities	Localized, short-term, adverse minor impacts from soil disturbing activities
<i>Water Resources</i>	Short-term, adverse minor impacts to Kaw. River possible from fragmenting of dilapidated buildings	No Impact	Negligible impacts	Negligible impacts	Temporary, adverse minor impacts from work on Boathouse/dock	Temporary, adverse minor impacts from work on Boathouse/dock
<i>Biological Resources</i>	Negligible, direct impacts	Direct, long-term, minor impacts to wildlife from maintenance	Short-term, localized, negligible to moderate impacts from reuse	Short-term, localized, negligible to minor impacts from increased maintenance.	Long-term, beneficial impacts from revegetation/reclamation of the area.	Long-term, beneficial impacts from revegetation/reclamation of the area
<i>Land Use</i>	Negligible impacts	Negligible impacts	Beneficial, localized, and minor impacts	Beneficial, localized, and minor impacts	Temporary, localized adverse impacts; long-term impacts unknown	Temporary, localized adverse impacts; long-term impacts unknown

<i>Topic or Resource Area</i>	<b>Alternative 1 No Action</b>	<b>Alternative 2 Increase Funds</b>	<b>Alternative 3 Transfer Ownership &amp; Maintenance</b>	<b>Alternative 4 Transfer Management</b>	<b>Alternative 5 Relocation</b>	<b>Alternative 6 Demolition</b>
<b><i>Cultural Resources</i></b>	Long-term, adverse, potentially significant impacts due to loss by neglect	Long-term, major beneficial impacts	Adverse impacts which can be at least partially mitigated	Long-term, beneficial impacts; any adverse impacts can be mitigated	Long-term, adverse impacts which can be somewhat mitigated; impacts still major	Long-term, adverse, impacts, mitigated by HABS/HAER/HALS documentation
<b><i>Waste and Hazmat Mgmt.</i></b>	No impact	Temporary, minor adverse impacts	Temporary, minor adverse impacts	Temporary, minor adverse impacts	Short-term, minor adverse impacts	Short-term, minor adverse impacts
<b><i>Human Health and Safety</i></b>	Long-term, adverse, localized, and major impacts to visitors	Long-term, beneficial, localized, and moderate impacts to building occupants and visitors	Long-term, beneficial, localized, and minor to major impacts to future building occupants and visitors	Long-term, beneficial, localized, and minor to major impacts to future building occupants and visitors	Temporary, minor, adverse, and localized impacts from site activities; long-term, beneficial impacts	Temporary, minor, adverse, and localized impacts from site activities; long-term, beneficial impacts
<b><i>Socioeconomics</i></b>	Negligible short-term impacts; adverse, minor, long-term impacts	Negligible onsite impacts; unknown NRS impacts	Negligible impacts	Negligible impacts	Negligible onsite impacts; unknown impacts at transferred location	Negligible impacts

## 2.10 Cumulative Impacts

CEQ regulations (40 CFR 1508.7) require an analysis of the cumulative impacts resulting from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes these other actions. Cumulative impacts can result from individually minor, but collectively significant, actions. This cumulative impacts section of the EA addresses the cumulative effects arising from considering the Proposed Action in combination with other ongoing actions at, or in the vicinity of, the HRS.

The Superior National Forest maintains and implements projects on a continuous basis; these projects are generally consistent with forest wide goals as expressed in the Forest Plan. Key goals cited in the Forest Plan include promoting ecosystem health and conservation; protecting, and where appropriate, restoring soil, air and water resources; and, providing for sustained forest product uses in an environmentally acceptable manner (USFS 2004b). The following are some examples of routine Superior National Forest activities that have occurred in the past and will occur in the future: timber harvest, wildlife habitat improvement projects, prescribed burn projects, watershed improvement or restoration projects, and trail or road construction (USFS 2004b). It is not anticipated that any of the building disposition project alternatives would contribute cumulative impacts to routine Superior National Forest activities.

There has been a renewed interest in mining in the Kawishiwi area for copper, nickel, silver, platinum and palladium. There are several mining claims within the vicinity of the HRS. Some individuals have expressed concern that relocation or demolition of the buildings would free up the land underlying the HRS to mining interests. Mineral exploration is ongoing in the area surrounding the HRS site. Off-site horizontal drilling is being used to explore the mineral deposits beneath the HRS. The mineral estate beneath the HRS is federally owned and not part of a preference right lease. Therefore, any minerals related activities near HRS are subject to the appropriate level of NEPA and stipulations to protect surface resources. There is no known connection between the increased mining interests in the area and the building disposition alternatives. Further, mining is not considered a potential future use of the site. It is therefore not considered likely that this project would contribute cumulatively to mining impacts in the area.

Similarly, timber harvesting at the Superior National Forest has increased in recent past. Under the previous Forest Plan, the average rate of logging was 75 million board feet per year. According to the USFS Final EIS, the new Forest Plan allows for 1.02 billion board feet within a 950,000-acre area, to be harvested over the next 10 years. This constitutes a harvest increase of over 25 million board feet per year. Two major areas proposed for harvesting in the Kawishiwi Ranger District include the Big Grass Timber Sale and the Tomahawk Timber Sale; both of these sites have caused area controversy. However, because the proposed project alternatives would not facilitate timber harvest or provide valuable timber, this project is not considered to contribute cumulative impacts to overall timber harvesting at Superior National Forest.

The National Forest System has management responsibility for approximately 193 million acres of public land containing an estimated two million cultural resource sites; while the USFS has identified nearly 325,000 cultural resource sites within the System, the agency “lacks the statutory guidance and funding to adequately care for these known sites and to identify and evaluate the remaining 80 percent of USFS lands that have not been surveyed for cultural resources” (NTFHP 2008). Heritage Programs, programs designed to maintain and support cultural resources in national forests, account for approximately 0.4 percent of the total USFS appropriated budget of \$4.4 billion (FY 2008). In addition to insufficient funding, other threats

facing cultural resources include vandalism, fire, theft, damage caused by some types of recreation, oil and gas extraction, mining, and timber harvesting (NTFHP 2008). The proposed project alternatives that would result in adverse impacts to the cultural resources on site (the No Action alternative, relocation of the buildings, and especially, demolition of the buildings) would contribute incrementally adverse impacts to the National Forest Service-wide issues of inadequate preservation of cultural resources.

## 2.11 Alternatives Considered but Dismissed

CEQ regulations for implementing NEPA require that Federal agencies explore and objectively evaluate all reasonable alternatives to a proposed action, and briefly discuss the rationale for eliminating any alternatives that are not considered in detail. Because all alternatives to the proposed action, disposition of the NRS buildings at the HRS, are considered in detail within this EA, no alternatives have been rejected at this time. Transfer of ownership of the Superior National Forest land underlying the buildings, from which the Kawishiwi Experimental Forest was established, is not within the jurisdiction or authority of the NRS, and is therefore not included within the scope of alternatives considered by the NRS.

## 3 Affected Environment and Environmental Consequences

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above.

### 3.1 Introduction and Methodology

NEPA requires consideration of context, intensity, and duration of impacts, direct or indirect impacts, cumulative impacts, and measures to mitigate for impacts. Overall, the NRS based the following impact analyses and conclusions on the review of existing literature, information provided by experts within the geographic area, and with other agencies, professional judgments, and USFS staff insights.

Potential impacts are described in terms of type (beneficial or adverse), context, duration, and intensity. The following general definitions were used to evaluate the context, intensity, duration, and cumulative nature of impacts associated with project alternatives. The specific criteria used to rate the intensity and duration of potential impacts for each resource topic are presented within each resource area impact analysis in this chapter.

#### ***Intensity of Impact***

Impact intensity is the degree to which a resource would be beneficially or adversely affected by an action. Impact intensities are quantified as negligible, minor, moderate, or major.

#### ***Context of Impact***

Context is the setting within which an impact is analyzed, such as local, regional (forest wide), or resource-wide. Localized impacts are those that affect the resource area only on the project site or its immediate surroundings, and would not extend into the region.

#### ***Duration of Impact***

The duration of impact is analyzed independently for each resource because impact duration is dependent on the resource being analyzed. Depending on the resource, impacts may last as long as construction takes place, or a single year or growing season, or longer. For purposes of analysis, impact duration is measured in temporary, short-term, and long-term intervals.

#### ***Direct versus Indirect Impacts***

Direct effects are impacts caused by the alternative(s) at the same time and in the same location as the action. Indirect effects are impacts caused by the alternative(s) that occur later in time or farther in distance than the action, but are still reasonably foreseeable.

**Table 3-1. Resource assessment impact definitions**

<b>Impact Level</b>	<b>Negligible</b>	<b>Minor</b>	<b>Moderate</b>	<b>Major</b>
<b>Intensity</b>	Little or no impact to the resource would occur. Any change that might occur may be perceptible but difficult to measure.	Change in a resource would occur, but no substantial resource impact would result. The change in the resource would be perceptible, but would not alter the condition of the resource.	Noticeable change in a resource would occur and this change would alter the condition or appearance of the resource, but the integrity of the resource would remain.	Substantial impact or change in a resource area would occur, which is easily defined and highly noticeable, and that measurably alters the condition or appearance of the resource.
<b>Context</b>	Very small area – limited to immediate site of effect. Would not affect entire sites	Localized – Impact would occur only at the project site or its immediate surroundings, and would not extend into the region.	Regional – Impact would affect the resource on a regional level, extending well beyond the immediate project site.	Resource wide – Impact would affect the resource at an ecosystem, physiographic area, or other large-scale connected system scale.
<b>Duration</b>	Transient – effect would dissipate immediately upon cessation of the action.	Temporary – Impact would occur only during the project implementation actions. Afterwards, the resource conditions would return to pre-action levels.	Short-term – Impact would extend beyond the time of project implementation actions, but would not last more than two years.	Long-term – Impact would likely last more than two years and may continue beyond the lifetime of the project implementation.

## 3.2 Geology and Soils

### 3.2.1 Affected Environment

The bedrock underlying the Superior National Forest was deposited during the Early, Middle, and Late Precambrian ages (approximately 4,500 to 542 million years ago). Bedrock within the vicinity of the project site belongs to the Duluth Complex, which consists of predominantly igneous rocks such as gabbro, troctolitic anorthosites, and mafic and felsic intrusive rocks. The mineral composition of the bedrock is rich with iron oxide minerals (USGS 2000). Early Precambrian rocks have been a valuable source of iron ore and have yielded small quantities of gold. The present day Mesabi Range has been producing high-quality iron ore from Middle Precambrian sedimentary rocks for over 100 years. The most important mineral deposits of the Late Precambrian age are the copper-nickel deposits that occur along the base (northwest margin) of the Duluth complex (USFS 2004a). Iron ore was discovered in Minnesota when miners were searching for gold deposits. Iron was originally mined from three deposits: the Vermilion Range,

the Cuyuna Range, and the Mesabi Range; parts of the Vermilion and Mesabi Ranges are found within the boundaries of Superior National Forest.

One of the main iron ore mines in the Vermilion Range is located near Ely. The Chandler Mine was the first in the Ely area to begin shipping ore; it began sending cargo in August of 1888. Because ore was discovered near the surface, an open pit operation was incorporated. As the ore body dipped deeper, mines had to be operated by shafts. Eventually, due to the high cost of mining ore underground, the last of the operating mines in the Ely area and the Vermilion Range was closed in 1967 (ARDC 2002).

The project site is located in an area whose geography was heavily influenced by the most recent glaciation; moraines, outwash plains, kettle lakes, eskers, and drumlins all resulted from the deposition of sediment and ice by glaciers as they retreated from this area approximately 15,000 years ago (USFS 2004a).

Portions of the project area are covered with unsorted glacial till deposits, which resulted in the formation of ground moraines and drumlins. Other formations include those formed as a result of water deposition such as outwash plains and eskers. These tend to be more stratified and occur less frequently throughout the project area. The formation of this topography resulted in the accumulation of organic debris and the creation of wet lowlands, lakes, and peat deposits (USFS 2004a). The general trend of area topographic features is northeast – southwest, reflecting both the bedrock structures and the general direction of glacial retreat (USGS 2000).

As illustrated in figure 3-1, all of the soils surrounding the HRS are of the Mesaba-Barto Series. These gravelly, sandy loam soils are typically moderately deep, well-drained soils that form in loamy till found over the igneous bedrock that was deposited during the Precambrian. The retreat of the glaciers left poorly sorted glacial till covering the area, which became the source for these soils. The composition of the till included gravel, clay, cobbles, pebbles, and sand. Many portions of this soil series have a peat layer at the surface; beneath that, depth to bedrock ranges from 1.6 to 3.3 ft. Both the Mesaba and Barto soils are well-drained with medium to rapid surface runoff (NRCS 2007).

### *3.2.2 Impacts of Alternative 1*

Under the No Action alternative, no demolition, construction, or site upgrade activities would occur that would impact geologic resources or soils. Thus, no impacts to geologic resources or soils would be expected to occur from this alternative.

### *3.2.3 Impacts of Alternative 2*

Alternative 2 would involve the increase of maintenance funds to the HRS. However, no impacts to geologic resources or soils would be expected to occur under this alternative either, as rehabilitating the structures and increasing their maintenance would not involve any earth-moving activities.

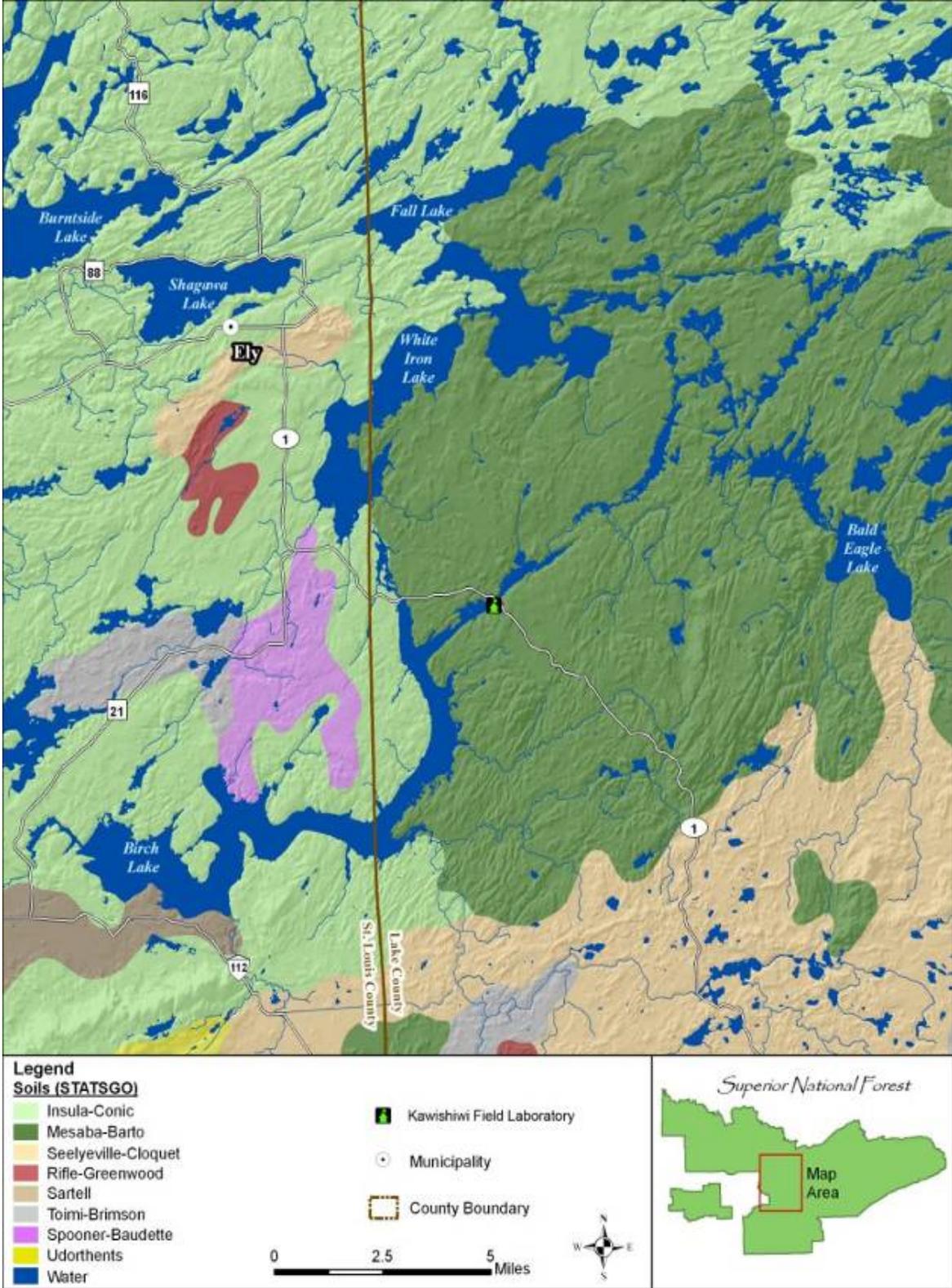


Figure 3.1. Soil map of project area

### ***3.2.4 Impacts of Alternative 3***

Alternative 3, the transfer of both ownership and management of the HRS buildings, would potentially involve a limited amount of ground disturbance if the buildings are upgraded to accommodate new reuses. However, no reuses of the buildings under this alternative would involve subsurface drilling or exploration of geologic resources. The land underlying the site does not have potential for geologic instability or subsidence. Geological resources are not expected to be impacted under this alternative.

A limited amount of soil disturbance can be expected to occur during the upgrade of site buildings. A minimal amount of additional storm water runoff can be expected to result from these activities.

The Minnesota Pollution Control Agency (MPCA) is responsible for administering the state's storm water management program. The MPCA program is unique in that it incorporates the requirements of both the Federal National Pollution Discharge Elimination System (NPDES) permits and the Minnesota State Disposal System (SDS) permit into a single permit referred to as NPDES/SDS permit. This permit must be obtained if the footprint of disturbance is greater than one acre. The footprint of disturbance anticipated under this alternative would be much smaller than one acre, and the site would therefore be exempt from obtaining the permit. However, all site runoff should be managed according to BMPs specified under the 2005 Minnesota Stormwater Manual Standard. Construction BMPs, such as installing perimeter silt fences, spreading straw and mulch to protect exposed ground, covering stockpiles of earth or soils, and so forth, will help minimize any runoff, erosion and impacts to on-site and off-site soils during construction activities. Overall impacts to soils from this alternative are considered to be short-term and negligible.

### ***3.2.5 Impacts of Alternative 4 (Proposed Action)***

Under alternative 4, management of the HRS buildings would be transferred to Northern Bedrock. The NRS would retain ownership of the buildings and administration of the land. Impacts under this alternative would be similar to those discussed under alternative 3, as Northern Bedrock would maintain and rehabilitate the buildings. No impacts are anticipated to geologic resources, and only short-term negligible impacts during building rehabilitation are anticipated from increased runoff from disturbed soils.

### ***3.2.6 Impacts of Alternative 5***

Alternative 5 would involve the disassembly and relocation of all or some of the buildings on site. Those buildings not able to be relocated would likely be demolished, or in the case of the cellar, abandoned in place.

The disassembly, relocation, and reassembly of the structures would require the use of heavy machinery, trucks, and trailers. Activities related to demolition of the structures left onsite (at a minimum, the cellar, insectary, and second outhouse), would require the use of dump trucks, cranes, excavators and other heavy equipment. As with almost any construction project involving the use of heavy equipment, there would be some risk of an accidental fuel or chemical spill, and the potential contamination of soils. Fuel products (petroleum, oils, lubricant) would be needed to operate and fuel the equipment. To reduce the potential for soil contamination, fuels would be stored and maintained in a designated equipment staging area. A person(s) designated as being responsible for equipment fueling would closely monitor the fueling operation, and an emergency spill kit containing absorption pads, absorbent material, a shovel or rake, and other cleanup items,

would readily be available on site in the event of an accidental spill. Following these precautions, the potential for an accidental chemical or fuel spill occurring and resulting in adverse impacts on soils would be negligible.

Soil disturbance is defined as anything that causes the impairment of physical, chemical and biological properties and processes, such as erosion, compaction, displacement, rutting, burning, loss of organic matter, and mass movement of soil (USDA 2005). Construction equipment also has the potential to compact soil, reducing the porosity and conductivity of the soil. Such compaction would be likely to slightly increase the amount of surface runoff in the immediate area. Soil stabilization would be required to prevent sediment runoff impacts to water sources, possibly degrading water quality.

The NPDES under the Clean Water Act prohibits the discharge of any pollutant, including sediments, to waters of the United States. Because the total, combined footprint of disturbance of this alternative would likely be greater than one acre, an NPDES/SDS permit would need to be obtained from the MPCA in order to regulate discharge of storm water runoff from the site during relocation activities. Typically, sediment erosion rates from construction sites are 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. The main requirements of the NPDES/SDS permit are a \$400 application fee and development of a site specific Storm Water Pollution Prevention Plan (SWPPP). SWPPPs contain measures to reduce soil erosion and prevent pollution from petroleum, oil, and lubricants and other chemicals or hazardous/toxic materials at construction sites. Specifically, SWPPP plans assess the characteristics of the site such as nearby surface waters, topography, and storm water runoff patterns; identify potential sources of pollutants such as sediment from disturbed areas, and stored wastes or fuels; and identify BMPs which would be used to minimize or eliminate the potential for these pollutants to reach surface waters through storm water runoff. Standard construction BMPs, such as installing perimeter silt fences, spreading straw and mulch to protect exposed ground, covering stockpiles of earth or soils, and so forth, would minimize runoff, erosion and impacts to on-site and off-site soils during all building removal and demolition activities.

As described in section 3.2.1, soils within the proposed project site are generally well drained and have rapid surface runoff. However, it is also likely that a large area of these soils have been previously disturbed by site activities. The majority of soil compaction occurs upon initial development and traversal by heavy machinery. Because of this, it is very likely that all of the portions of the proposed project site that hold buildings have experienced some degree of soil compaction. It can also be expected that additional impacts will occur during the building relocation process. Earth-moving activities, compaction, erosion, and loss of vegetative cover, can all impact soil quantity and quality. Overall impacts to soils at the proposed project site from building relocation and demolition under alternative 5 are expected to be adverse, localized (limited to where project activities will be occurring), short-term, and minor.

Once building relocation activities are complete, the HRS site would be re-contoured and re-vegetated. These activities would limit loose soils, encourage nutrient growth and assist biological productivity of area soils. It is not known what future land reuses the Superior National Forest would propose at the site. It is likely, however, that the site would be managed as part of the forest ecosystem in a manner that minimizes any future impacts to soils.

### *3.2.7 Impacts of Alternative 6*

Alternative 6 would consist of the demolition of all of the buildings on site. The cellar would be abandoned in place. The NRS would retain administration of the land, and would have sole discretion and decision-making authority regarding future land reuses. It is anticipated that following building demolition, the land would be, at a minimum, regraded and reseeded with native plant vegetation.

Demolition of the laboratory buildings would require the use of heavy equipment, such as elevated work platforms, dump trucks, cranes, excavators, graders, bulldozers and other diesel- and gasoline-fueled equipment. It would take several weeks or months to prepare the buildings for demolition. Impacts to soils from this alternative would be very similar to those described under alternative 5. Fuel products brought onsite would be stored and handled in the same manner. Because the total, combined footprint of disturbance of this alternative would likely be greater than one acre, an NPDES/SDS permit would also need to be obtained from the MPCA to regulate discharge of storm water runoff from the site during demolition activities. The SWPPP and BMPs developed for the site would be adhered to in order to minimize soil impacts.

Overall impacts to geology and soils at the proposed project site from building demolition under alternative 6 are expected to be adverse, localized (limited to where project activities will be occurring), short-term, and minor.

Once building demolition activities were complete, the HRS site would be re-contoured and re-vegetated. The land will remain an experimental forest.

## **3.3 Water Resources**

### *3.3.1 Affected Environment*

The HRS buildings are located on the southeastern bank of the South Kawishiwi River, less than 2 miles from where the river empties into Birch Lake. This region of Minnesota is well known for numerous lakes, rivers, wetlands, and generally wet, marshy topography. Predominant surface water bodies in the area include White Iron Lake to the northwest of the project site, and Birch Lake which is immediately south of the project site (Figure 3.2). Although portions of Lake County are located within the Minnesota Coastal Zone, the project area is not and does not impact the state's Coastal Zone Management Area, which protects Lake Superior.

The main channel of the Kawishiwi River is perennial, with seasonal discharge that ranges from 19 cubic feet per second under ice cover to 220 cubic feet per second during spring melt (USGS 2000). For context, this is approximately one tenth of the average low flow of the Mississippi as measured at Anoka, Minnesota. The Kawishiwi River Basin drains parts of Lake and Cook Counties in Minnesota, and is partially located within the boundaries of the BWCAW, which is part of the National Wilderness Preservation System and is administered by the Superior National Forest (USGS 2000). The BWCAW boundary is located approximately 4 miles north of the HRS.

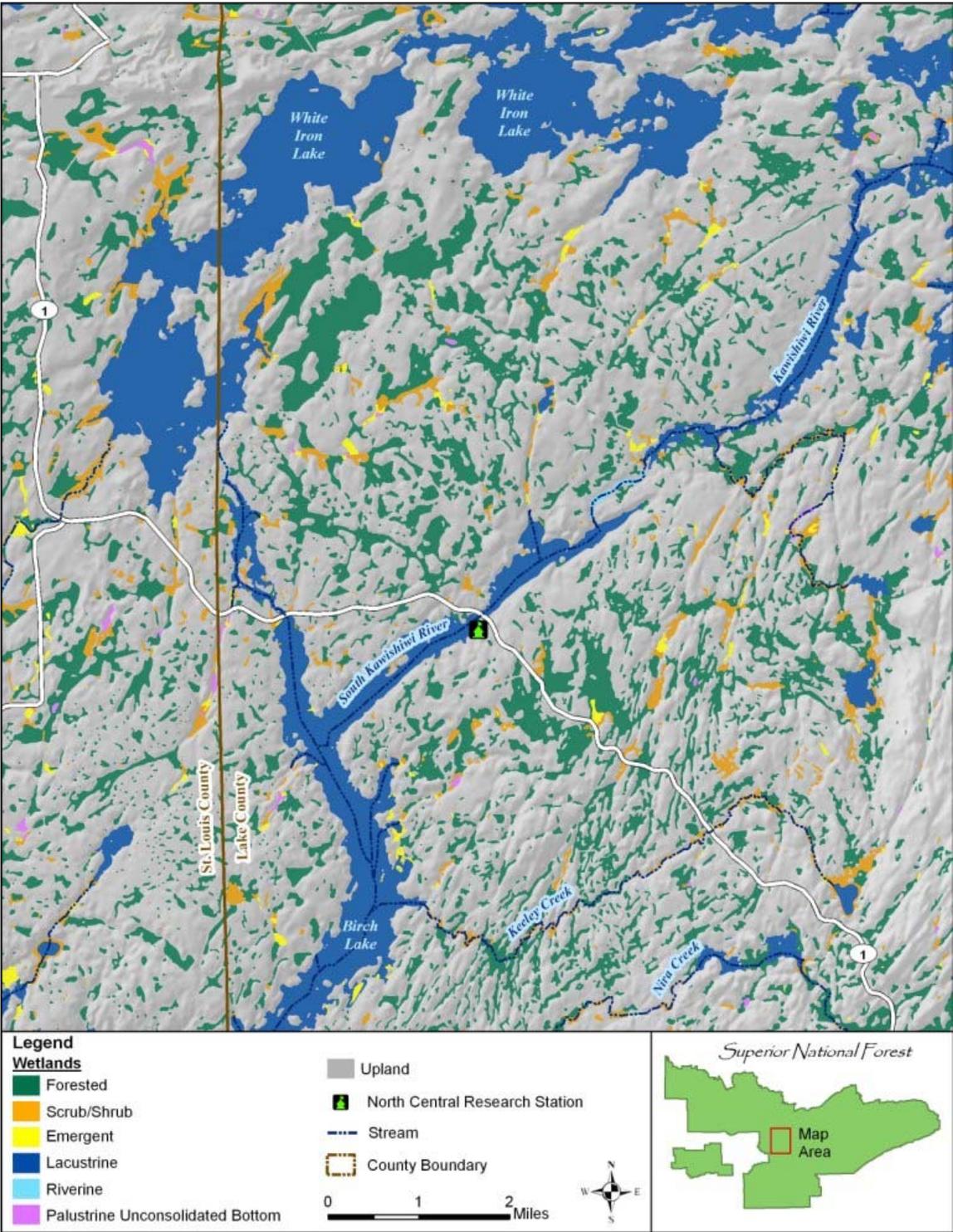
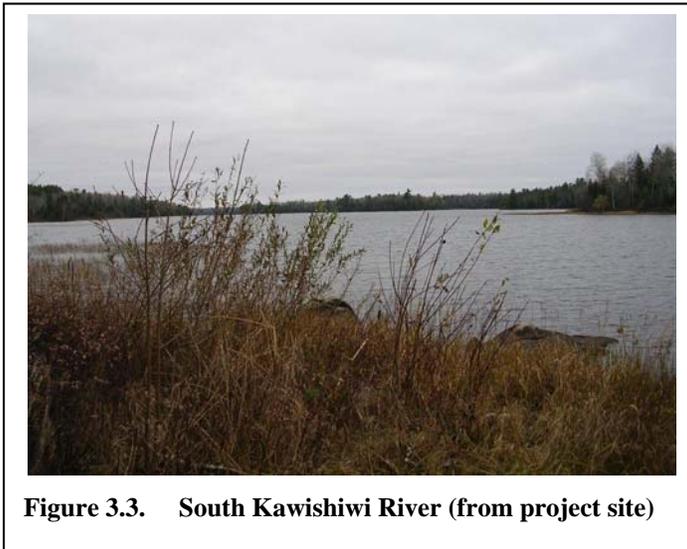


Figure 3.2. Aquatic features of project area

Water quality data for the Kawishiwi River near Ely were recorded from 1963 to 1995; a variety of sampling techniques were used and some were later determined to be flawed, leaving a more limited, but accurate, data set. This data set indicates that the river water is moderately acidic with a strong presence of ammonium, hydrogen, calcium, sulfate, and nitrate ions. The presence of the strongly acidic (sulfate and nitrate) anions is indicative of this location being influenced by anthropogenic emissions of sulfur and nitrogen compounds, which cause acid rain (USGS 2000).

Section 303 of the Clean Water Act (CWA) established Total Maximum Daily Load (TMDL) as a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards for its designated use. These water quality standards and designated uses are interpreted from the CWA and enforced by each state. When a state deems a water body impaired, it is placed on the 303(d) List of Impaired Waters. It would remain on this list until TMDL water quality standards are met. The reach of the Kawishiwi River near the project site is not included on the 303(d) List. However, portions of the Kawishiwi River within 2 miles of the project site, including both Birch Lake and White Iron Lake, are listed on the 303(d) List of Impaired Waters by the USEPA for elevated levels of mercury; these portions of the river have been listed as impaired since 2002. The EPA lists mercury in fish tissue as the reason for impairment, but the source of the mercury is unknown (USEPA 2008).

In addition to the 303(d) impaired water designation, the goals of the CWA are also assessed through Section 305(b) of the act which designates whether or not a water body is supporting of recreational uses. The portion of the South Kawishiwi River directly adjacent to the proposed project site (Figure 3.3) is designated as fully supporting aquatic recreation. This, in combination with the fact that the portion of the South Kawishiwi River directly adjacent to the proposed project site is not currently listed on the 303(d) list, indicates that overall water quality is good (USEPA 2004, MPCA 2008).



**Figure 3.3. South Kawishiwi River (from project site)**

There are no wetlands on the project site. Wetlands within the vicinity of the project site include forested wetlands within one-half mile of the site, both to the southeast and across the South Kawishiwi River, northwest of the site. Forested wetlands are also referred to as wooded swamps. Scrub/shrub wetlands are located within one half-mile both east and north of the project site. These wetlands are characterized by woody vegetation less than 20 feet tall; they often represent a successional stage in transition to a forested wetland. See section 3.4.1 for a description of area vegetation. The swamps found near the project area are characteristic of the generally wet environment, dominated by rivers, lakes, and wetlands that is found in this Boundary Waters Region. No floodplain data are currently available for Lake County.

### ***3.3.2 Impacts of Alternative 1***

If the No Action alternative were to be implemented, current site uses would continue and no activities related to the rehabilitation, maintenance, relocation, or demolition of the site buildings would occur. The buildings would continue to deteriorate. The Boathouse and its associated dock could experience structural failure and splinter off into the South Kawishiwi River. This would result in short-term, adverse, minor impacts to the waterway. No additional impacts to groundwater or wetlands and floodplains would be expected from implementation of this alternative.

### ***3.3.3 Impacts of Alternative 2***

Under alternative 2, maintenance funds would increase for the HRS buildings. The increase in maintenance funds would go toward rehabilitating the buildings and increasing their maintenance. The risk posed by the Boathouse and its dock deteriorating into the South Kawishiwi River would be substantially reduced under this alternative. No impacts to water resources would be anticipated to occur as a result of this alternative.

### ***3.3.4 Impacts of Alternative 3***

Alternative 3 would result in transfer of both ownership and management of the HRS. A limited amount of ground disturbance could occur from project activities if the buildings are upgraded to accommodate new reuses. Site upgrades or new structures would be reviewed and approved by NRS, in consultation with the Superior National Forest. However, upgrades and new structures would be restricted to a minimal amount. As a result, impacts to water resources from this alternative are anticipated to be negligible.

### ***3.3.5 Impacts of Alternative 4 (Proposed Action)***

Under alternative 4, management of the HRS buildings would be transferred to Northern Bedrock. The NRS would retain ownership of the buildings. Impacts under this alternative would be similar to those discussed under alternative 3. Negligible impacts to water resources are anticipated as a result of this alternative.

### ***3.3.6 Impacts of Alternative 5***

Alternative 5 would consist of the relocation of all or some of the buildings on site. Those buildings not able to be relocated would likely be demolished or abandoned in place. Impacts associated with the building disassembly and relocation activities could affect water resources by storm water runoff from the site coming into contact with exposed soils and carrying sediment and contamination loads into surface water during times of heavy rain, and by contamination from relocation activities infiltrating area soils and percolating down into the groundwater. As discussed under the geology and soils section, a NPDES/SDS permit would need to be obtained from the MPCA in order to regulate discharge of storm water runoff from the site during relocation activities. The incorporation of the BMPs and mitigation measures specified in the SWPPP into the design phase of the project would reduce any potential impacts to water quality in the area to a negligible level.

Due to the distance of the nearest wetlands to project activities, no wetlands would be impacted by relocating the structures. Although there are no floodplain data available for Lake County, no impacts to the floodplain would be anticipated to occur from the project activities. Additionally, no impacts to Minnesota's Coastal Zone are anticipated to occur, as the project site is located far from the Coastal Zone boundary. Due to the distance of the project area from the Coastal Zone, a

Federal consistency determination, as per the requirements of the Coastal Zone Management Act, would not be required.

Under this alternative the Boathouse and its dock, which extend into the South Kawishiwi River, would either be disassembled and relocated or disassembled and demolished. Depending on the specific relocation plan, a Section 404 of the CWA permit application could be required to be submitted to the St. Paul District of the U.S. Army Corps of Engineers, which regulates discharge of dredged or fill material into the navigable waters. Additionally, as the Kawishiwi River at the project site is a navigable waterway, a Section 10 permit of the Rivers and Harbors Appropriation Act of 1899, would be required. These permits and their stipulations would ensure that any impacts resulting from relocation or demolition activities of the Boathouse and dock would be mitigated. No additional permits from the Minnesota Department of Natural Resources (MDNR) would be anticipated to be required.

Overall impacts to water quality and water resources from potential building relocation and demolition activities from alternative 5 would be adverse, temporary, and minor.

### *3.3.7 Impacts of Alternative 6*

Alternative 6 would consist of the demolition of all of the buildings on site. The cellar would be abandoned in place. It is anticipated that following building demolition, the land would at a minimum be regraded and reseeded with native plant vegetation. NRS would retain administration of the land.

The impacts to water resources from demolition of the laboratory buildings would be very similar to the impacts discussed under alternative 5. Overall impacts to water resources at the proposed project site from building demolition would be expected to be adverse, minor, temporary, and localized, limited to where project activities will be occurring.

## 3.4 Biological Resources

### *3.4.1 Affected Environment*

The project site is located within a southern boreal forest ecosystem. Dominant upland tree species include jack pine, quaking aspen, birch, northern red oak, black spruce, and fir. Understory vegetation is typically juneberry, beaked hazelnut, mountain maple, willow, and American green alder. Lowland and marsh vegetation includes black spruce, northern white cedar, tamarack, and speckled alder. Both red and white pines were once extensive in this region but are now located in isolated, scattered stands due to the effects of logging and fire (USGS, 2000).

Wildlife found within the vicinity of the project site is typical of that found along the border of boreal forest ecosystems. Black bears, Canada lynx, gray wolves, white-tailed deer, moose, beavers, raccoons, chipmunks, squirrels, other rodents, and bats are dominant mammal species. Common bird species include jays, starlings, red-winged blackbirds, grackles, pileated and red-headed woodpeckers, and waterfowl such as Canada geese, mallards, wood ducks, heron, and loons. Birds of prey include bald eagles, red-tailed hawks, ospreys, and great horned and snowy owls (Runesson 2007).

### ***Threatened and Endangered Species***

In March 1967, the gray wolf (*Canis lupus*) was listed by the U.S. Fish and Wildlife Service (USFWS) as threatened within the State of Minnesota on the Federal Endangered Species List. The gray wolf (also referred to as the timber wolf) is native to northern Minnesota and the surrounding region. The gray wolf was delisted and its status changed to recovered on March 12, 2007, in the Western Great Lakes region, which includes all of Minnesota (USFWS, 2008), however it was relisted as threatened in Minnesota in a Federal Court settlement on September 16, 2009 (USFWS 2009). The species was delisted due to recovery in 2012, was monitored by the USFWS as a recently delisted species, in compliance with section 4(g) of the Endangered Species Act. The 2012 delisting was overturned by a Federal District Court on December 19, 2014 (USFWS 2014).

The gray wolf is widespread throughout northern Minnesota. It is an opportunistic predator and is mostly limited by availability of its primary prey species, white-tailed deer and moose. Aggressive past trapping, hunting, and poisoning campaigns had reduced the U.S. wolf population to near extinction during the middle of the 20th century.

Canada lynx (*Lynx canadensis*), listed as threatened in 2000, is known to occur on the Superior National Forest (USFS 2004a). The distribution of the Canada lynx closely follows the distribution of its main food, the snowshoe hare, which inhabits boreal forests. Thus, lynx formerly lived in most forested areas of north-central and northeastern North America, and extended south along the Rocky Mountains to central Colorado. Human actions, mainly over-trapping, have reduced lynx populations throughout much of the species' former range.

The northern long-eared bat (*Myotis septentrionalis*) is proposed for federal listing as Endangered throughout its range (Federal Register 2015). Listing is anticipated on April 2, 2015. The primary threat leading to the decline of this species, as well as other bat species that use caves as winter hibernacula, is white nose syndrome (WNS). Named for a white fungus that appears on the noses of infected bats, WNS has spread rapidly since its first identification in bats in New York State in 2006. A 2009 study found population declines of 75 percent over a two year period where WNS was present (Blehert et al. 2009).

As of spring 2014, no infestations of WNS had been verified in Minnesota, but two caves used as bat hibernacula in the state are suspected of harboring WNS. The syndrome has been documented as spreading rapidly, likely on clothing equipment of visitors to infected caves. Suitable forest habitat for northern long-eared bats occurs in the project area, and the bats likely occur as well. During a summer 2013 misting netting survey of the HRS site, no northern long-eared bats were captured in nets placed three locations on the site (Timothy Catton, personal communication, March 5, 2015).

In 1978, the bald eagle (*Haliaeetus leucocephalus*) was listed under the Endangered Species Act as threatened in Minnesota, Michigan, Oregon, Wisconsin, and Washington, and endangered in the remainder of the conterminous United States (USFS 2004a). Although the species was officially removed from the Federal list of endangered and threatened species in 2007, it continues to be protected under the Migratory Treaty Act and the Bald and Golden Eagle Protection Act.

Regional Forester Sensitive Species on the Superior National Forest include 29 animals and 49 plants (USFS 2004, USFS 2008b). Regional Forester Sensitive Species are those species of

highest viability concern on a national forest. It is possible that some of these species occur at or near the HRS complex.

On February 20, 2015, the NRS sent the USFWS a Biological Assessment (BA) and request for informal consultation, per Section 7 of the Endangered Species Act. The BA (Appendix E) provides additional information regarding federally listed threatened or endangered species that might occur in the project area, any designated critical habitats that may be present for these species, and the potential effects of project activities upon such species and habitats. The BA determined that the HRS adaptive reuse project may affect, but is unlikely to adversely affect gray wolf, Canada lynx, and northern long-eared bats, and is not likely to adversely affect the designated critical habitat for gray wolf and Canada lynx. On March 20, 2015, the Twin Cities Ecological Office of the USFWS concurred with this assessment (see Appendix A).

### **Wildlife Research**

Wildlife research, and in particular research on gray wolves, occurred at HRS between 1968 and 2011, when the USGS Northern Prairie Wildlife Research Center vacated the site due to the poor repair of buildings and potentially unsafe conditions. The USGS relocated the Northern Prairie Wildlife Research Center, Minnesota field office, to the Superior National Forest's Kawishiwi Ranger Station in Ely. The wolf research that was based out of HRS is one of longest running continuous wildlife studies in the world. The research has been spearheaded by Dr. L. David Mech (originally under the purview of the USFWS and now under the USGS), and is rivaled in length only by another of Dr. Mech's wolf research initiatives in Isle Royale, Michigan. The predecessor of the NRS, the North Central Forest Experiment Station, originally conducted its own research out of the laboratory in concert with other agencies, including the USFWS and University of Minnesota.

Research at the site focused on the gray wolf and on the wolf's main prey, the white-tailed deer (*Odocoileus virginianus*). Incidental research on the American marten (*Martes Americana*) and the Canada lynx was also conducted. Over the past 40 years, University of Minnesota research conducted in the Superior National Forest on moose (*Alces alces*), white-tailed deer, black bear (*Ursus americanus*), raven (*Corvus coyax*) and loon (*Gavia immer*) had been headquartered out of HRS, with several graduate students receiving master's and doctoral degrees based on this research. Additional research collaborators who have conducted field research at the laboratory include Vermillion Community College (Ely, Minnesota), Macalester College (St. Paul, Minnesota), MDNR, IWC, USDA Wildlife Services, and the Superior National Forest. Field research based out of the HRS had contributed to hundreds of published scientific articles, books, and monographs (Mech 2007).

The research based out of the HRS was instrumental in developing early radio telemetry techniques for wildlife research. Radio telemetry continues to be a valuable contribution of the laboratory to regional and global wildlife conservation; scientists and wildlife managers from around the country and the world have been coming to the laboratory over the years to learn radio telemetry techniques.

Several attributes made the HRS an ideal location as a staging area for research: (1) extensive accommodations in the form of sleeping, eating, and office facilities, storage areas, garage, and shop; (2) proximity to the central Superior National Forest and the BWCAW; (3) proximity to the community of Ely, (4) proximity to airport and seaplane bases, and (5) its status as the only suitable field research headquarters in Minnesota north of Duluth, east of Grand Rapids, and west of Grand Marais (Mech 2007).

The USGS and the IWC have attributed the ongoing recovery of the gray wolf population, and the subsequent return of the wolves to Yellowstone National Park, to the research based at the laboratory. In addition, a separate wolf delisting proposal is proceeding in the West, and a controversial wolf reintroduction is underway in the Southwest. Information and trained personnel resulting from the wolf studies conducted out of HRS are considered valuable to the Federal wolf programs currently being proposed or underway. The research center's new location in Ely is somewhat less convenient to many of the field study sites, but provides advantages including modern facilities and proximity to Forest Service staff offices (pers. comm. with Shannon Barber-Meyer, USGS, October 2014).

### 3.4.2 Impacts of Alternative 1

As there would be no new actions under alternative 1, there would be no new impacts on biological resources. Disposition of the HRS buildings would not occur. It is likely that the current level of outdoor maintenance, for example, mowing the lawn around structures, would continue along with existing impacts on surrounding vegetation, such as trampling due to foot traffic. Animals inhabiting buildings, such as bats, rodents, and powder post beetles would continue to remain mostly undisturbed. Otherwise, wildlife would not be affected beyond current disturbance from human presence, and there would be no new effects on wildlife habitat.

There would be negligible direct impacts to biological resources as a result of alternative 1.

### 3.4.3 Impacts of Alternative 2

Increased maintenance funds to upgrade building facilities in alternative 2 would primarily focus on the structures themselves, but it is likely that there would also be increased maintenance of the grounds surrounding the buildings. It is possible that vegetation would be trimmed or removed to prevent encroachment on structures, and lawns would continue to be mowed. Repeated disturbance of vegetation (i.e., due to vehicle passes or foot traffic) during maintenance would cause damage to plants; however, the areas surrounding the buildings are considered disturbed, and any additional impacts would be minimal.

Maintenance that would occur inside the buildings would impact only animals that inhabit the structures. It is likely that actions would take place to exclude bats and rodents and eliminate powder post beetles. Due to the potential to trap northern long-eared bats, proposed for endangered species status, any bat exclusion would occur between the end of August and the beginning of April, when bats are not present at the site. Bat exclusion from site buildings would displace little brown bats (*Myotis lucifugus*) that use some site buildings for as summer maternity roosts, and may displace some northern long-eared bats, although mist netting on the site did not detect any northern long-eared bats. The importance of such displacement is mitigated by placement of bat boxes on the site in the spring of 2013 as alternative bat roosts, and plentiful suitable habitat in the project vicinity. Maintenance that would occur on the outside of the buildings may disturb or displace wildlife in the vicinity due to noise associated with work taking place and increased presence of humans and vehicles during renovation or other activities. However, maintenance activities would be temporary, albeit on a recurring basis over the long term. Wildlife habitat would not likely be altered or disturbed.

There would be long-term, minor, localized, adverse impacts to biological resources as a result of alternative 2 due to increased maintenance of buildings and grounds.

### ***3.4.4 Impacts of Alternative 3***

Impacts to biological resources from the transfer of ownership and management of the laboratory complex in alternative 3 are difficult to assess, as it is unknown who would purchase the property, what use they would make of it, or at what level they would maintain it. If the facility would be used in a manner similar to past uses, and upgrades or renovations are made, then impacts may be similar to those described for alternative 2. If substantial renovations are made, then the impacts would also be similar to alternative 2, or greater as described in alternative 4. If the function of the facility would change, then impacts on wildlife and vegetation would differ, depending on type and extent of use.

Impacts on biological resources as a result of alternative 3 could range from negligible to moderate, and would likely be long-term, localized and adverse, depending on types and levels of use with transfer of ownership and management.

### ***3.4.5 Impacts of Alternative 4 (Proposed Action)***

Under alternative 4, maintenance and rehabilitation of the HRS buildings would be assumed by Northern Bedrock. Site activity levels and human occupation would increase from current levels, thus impacts would be similar to those described in alternative 2. Work on the inside of the buildings would still have similar impacts on biological resources as alternative 2; however, work and activity outside of the buildings would be more extensive, with longer periods of noise, human presence, and more vehicles or power tools. A recreation area would be established north of the LSFES Office/Dwelling by clearing brush. This would be consistent with recent long-term maintenance of the area as mowed building grounds. The vault or pit toilets proposed would be located adjacent existing buildings in currently disturbed sites. Such activity would disturb or displace wildlife in the vicinity for longer periods of time. Wildlife would likely be displaced from the immediate vicinity of the HRS buildings and grounds, other than species adapted to live in close association with humans, such as raccoon, and numerous small songbirds.

Overall, there would be short-term, localized, negligible to minor, adverse impacts to biological resources as a result of the alternative 4 due to increased maintenance and possible substantial renovation of buildings and grounds. Residential use of the site and buildings would result in long-term, localized, negligible to minor, adverse impacts to biological resources. The importance of these impacts would be mitigated by the abundance of similar habitats in the vicinity of HRS.

### ***3.4.6 Impacts of Alternative 5***

Relocation of the laboratory buildings under alternative 5 would entail the use of heavy machinery, trucks, and trailers to haul the buildings away. Dismantling and relocating the buildings would necessitate removal of plants surrounding the buildings, primarily lawn grasses but also trees or shrubs that occur very close to the structures. Repeated disturbance of vegetation from vehicle passes during this process in areas where plants are not cleared would cause damage to plants and destruction of the vegetation mat. However, the majority of disturbance would occur in previously disturbed areas, thus adverse vegetation impacts would be minimized. Upon removal of buildings, all disturbed areas would be reseeded or revegetated and erosion control BMPs would be maintained until the vegetation is fully reestablished.

The activity and noise generated during dismantling and relocating the buildings would cause temporary displacement and disturbance of resident wildlife for the duration of the project. Species are expected to return to the area after relocation is completed. The disturbed nature of the area surrounding the buildings does not currently provide quality wildlife habitat; however,

relocation activities may disturb or destroy any habitat that is being used. Furthermore, areas surrounding the project site could provide appropriate habitat for any habitat that is temporarily lost. Revegetation or natural reclamation of the laboratory complex upon removal of the structures would be beneficial as it would provide new wildlife habitat. Initial site clearing would occur between the end of August and the beginning of April to avoid taking of birds nesting on site vegetation and mortality to bats or birds roosting or nesting in the site buildings. Animals that live year-round in the site's structures, such as rodents, would be displaced or killed.

There would be temporary, localized, adverse impacts to biological resources as a result of alternative 5, due to habitat disturbance during the location activities, and beneficial long-term impacts due to revegetation or reclamation of the area.

### *3.4.7 Impacts of Alternative 6*

Demolition of the laboratory buildings on-site would have effects similar to those described in alternative 5, with adverse effects from demolition activities and beneficial effects from possible revegetation or natural reclamation of the site. Additionally, there would be impacts on vegetation and wildlife from fugitive dust generated by demolition of buildings. Dust could cover, choke out, or kill surrounding vegetation. It could also have detrimental health effects on resident wildlife. However, fugitive dust would only be generated temporarily during demolition, and it is likely that animals would flee the area while there is increased human activity and noise and possibly avoid the majority of the dust.

There would be temporary, localized, negligible to minor, adverse impacts to biological resources as a result of alternative 6 due to disturbance and destruction during structure demolition, and long-term, beneficial impacts due to revegetation or reclamation of the area

## 3.5 Land Use

### *3.5.1 Affected Environment*

HRS is located in Lake County, approximately twelve miles southeast of Ely, on the eastern bank of the South Kawishiwi River. The buildings are located on Superior National Forest land. The Superior National Forest manages approximately two-thirds of the 3.9 million acres within its boundaries. Thus, forested land comprises most of this area. Wetlands, lakes, and rivers also are present. Roads, utility corridors, residences, resorts, and pastures account for one percent of land uses in the Superior National Forest area (USFS 2004a).

The Superior National Forest owns 58 percent of land in Lake County. Other Lake County ownership is private (16 percent), county (14 percent), and state (12 percent). Thirty-seven percent of the Federal land at the Superior National Forest is classified as wilderness (USFS 2004a). Recreation and natural resource extraction are major activities in the forest. In the southwestern part of Superior National Forest, iron mining is major employer. Timber is the lead industry in the southeastern part of the Superior National Forest. The lead industry in the northern and eastern parts of Superior National Forest is recreation. Recreational opportunities include water recreation, sightseeing, and wildlife viewing. Hiking, hunting, fishing, biking, and nature studying are other activities enjoyed at Superior National Forest (USFS 2004a). In 2000, Superior National Forest received 4 million visits (USFS 2004b). The BWCAW (part of the Superior National Forest) is approximately one million acres in extent, and hosts almost 300,000 visits annually (USFS 2004a). The BWCAW is 4 miles to the north of the field laboratory.

NRS owns and manages the buildings. Between 1968 and 2011 HRS has been used for research by various groups. NRS discontinued conducting research out of the field laboratory in the 1980s. Currently the HRS buildings are vacant

### *3.5.2 Impacts of Alternative 1*

Under the No Action alternative, the field laboratory buildings would continue to deteriorate from lack of maintenance and rehabilitation. This would represent no change from the current use and maintenance schedule. Alternative 1 would have negligible impacts on land use in both the short and long term.

### *3.5.3 Impacts of Alternative 2*

The increase of maintenance funds under alternative 2 would result in the rehabilitation and maintenance of the buildings. This would represent an improvement in the quality of the HRS buildings. Under this alternative, the buildings would become suitable for use by a tenant, which would be selected by NRS. The reallocation of funds from other NRS program(s) and site(s) in order to increase the funds available to the HRS buildings could lead to a change in land use at that (those) location(s). Until the determination of how the funds would be reallocated, the impacts to the site(s) and program(s) receiving reduced funds are unknown. The impacts to land use at HRS under alternative 2 are expected to be minor for both the short and long term, but cannot be accurately predicted without knowledge of potential site tenants.

### *3.5.4 Impacts of Alternative 3*

The transfer of ownership and management of the buildings, alternative 3, would represent a change in land use. The magnitude of this change would depend on the entity that assumes the ownership and management of the building, and its plans for their use. The use of the field laboratory by the MCC for hands-on environmental stewardship, service-learning opportunities to youth and young adults, cost-effective conservation, natural resource management projects, and emergency response work would be compatible with the surrounding land uses as it is similar to past uses of the project area and compatible with the Forest Service direction.

Converting the field laboratory buildings to a rustic eco-resort where the cabins could be rented, or made into private homesteads, would represent a change in land use from past research, but would still be compatible with the land uses in the vicinity of the area, which includes both homesteads and recreational activities. Since the experimental forest will remain, access to and use of the buildings by a new owner will require a legal instrument (special-use permit, or other agreement) to authorize the use. This would enable NRS to ensure that the uses of the buildings would be compatible with research activities and the surrounding land uses of the forest. Regardless of who obtains ownership and maintenance of the buildings, many different types of landowners exist in the project area (state, Federal, and private); thus, the transfer of ownership and maintenance of the buildings away from a Federal agency would not represent an incompatible change in ownership with the area surrounding the field laboratory. Any reuse plans for the HRS buildings would require approval by the NRS. If any NRS approved site upgrades were to occur in the future, the Lake County Planning and Zoning Office, located in Two Harbors, Minnesota, would be contacted regarding the requirements relating to building setbacks, removal, construction, etc. The overall temporary and long-term impacts to land use from implementing this alternative are beneficial, localized, and minor.

### *3.5.5 Impacts of Alternative 4 (Proposed Action)*

Transferring management of the buildings to Northern Bedrock for their rehabilitation and maintenance would result in a change in land use. The new use would as a training and operations site for a historic preservation corps would be consistent the buildings' original construction by the Depression Era CCC. The impacts of alternative 4 would be very similar to those of alternative 3, described above. Therefore, the temporary and long-term impacts to land use from implementing this alternative would be beneficial, localized, and minor.

### *3.5.6 Impacts of Alternative 5*

Relocation of the buildings would represent a change in land use where the field laboratory is currently located. The relocated buildings could also represent a change in land use at their new location. The type of land use impacts, and the resultant natural resource impacts, would depend on the current land use of the final destination of the buildings, which is unknown at this time.

Once the buildings are removed, the land would be reintegrated into the research use of the experimental forest and the surrounding Superior National Forest management plan.

There has been a renewed interest in mining in the Kawishiwi area for gold, copper, nickel, silver, platinum, and palladium. Several mining claims lie within the vicinity ( $\frac{1}{2}$  to  $\frac{1}{4}$  mile) of the field laboratory. Three relatively large mines (North Met, Birch Lake, and Mesaba) either just opened or are currently proposed to open in the project vicinity. The mines are situated near the town of Babbitt, along a northeast-to-southwest running line from Birch Lake, a widening of the South Kawishiwi River, to the north, and the town of Hoyt Lakes to the south. There has been some concern that relocation of the buildings would free up the land underlying the HRS to mining interests. Under this alternative, the future reuse of the land is the discretion of the Superior National Forest, with appropriate public input. There is no known connection between mining interests and the project site.

Impacts from the change in land use where the field laboratory buildings are currently located are likely to be minimal relative to the over two million acres of land the Superior National Forest manages. Temporary impacts to land use from implementing this alternative would be adverse, minor, and localized. Long-term impacts are not known, as the Superior National Forest has not indicated what the future land use may be.

### *3.5.7 Impacts of Alternative 6*

Demolition of the buildings would represent a change in land use, as the site would become vacant. The uses of land currently occupied by the f HRS buildings would be at the discretion of the Superior National Forest and NRS, with appropriate public input. Future use of the HRS site would be expected to be compatible with the current land uses surrounding the project area, and could be anything from timber harvesting to recreation based on current Superior National Forest activities. There is no known connection between mining interests and the project site, so mining does not appear to be a likely future use of the site at this time.

Overall impacts from this alternative would be the same as described under alternative 5; temporary impacts to land use from implementing this alternative would be adverse, minor, and localized. The long-term impacts are not known, as the Superior National Forest has not indicated what the future land use may be.

## 3.6 Cultural Resources

### 3.6.1 *Affected Environment*

The Kawishiwi River area was inhabited by the Sioux and then the Chippewa Indians, and later, by the French Canadian voyageurs, or canoeists employed by fur companies. By the time the first of the fur traders entered the region (during the 18th century), the Chippewa Indians had moved into the region from the east, moving the Sioux Indians farther west to the Plains. The tribal reservation nearest the project area is the Bois Forte Indian Reservation, formed for the Bois Forte Band of Chippewa, which is located more than 60 miles to the west.

Cultural and historic resources are protected by a variety of laws and regulations, including the National Historic Preservation Act, as amended, and the Archaeological Resources Protection Act. Section 106 of the National Historic Preservation Act and implementing regulations (36 CFR 800) outline the procedures to be followed in the documentation, evaluation, and mitigation of impacts on cultural resources. The Section 106 process applies to any Federal undertaking that has the potential to affect cultural resources.

The Minnesota Historical Society is the state agency charged with safeguarding Minnesota's historic buildings and sites. Minnesota's State Historical Preservation Officer (SHPO) administers over 7,000 historic properties included on the National Register of Historic Places, with 95 of these located within Lake County. The historical properties in Lake County are primarily located at the Gooseberry Falls State Park (which has 31 contributing historical log and stone buildings/structures built by CCC workers, featuring designs executed by Italian stonemasons in locally quarried granite); at Tettegouche Camp Historic District (which has 11 contributing historic rustic-style log and half-log buildings remaining from a private sport and recreation club established circa 1910 by group of Duluth businessmen); and, at the Isabella Ranger Station (which has 13 contributing historic rustic-style log residences and outbuildings built in 1934–35 by CCC workers for the USFS) (MHS 2008).

The CCC, created in 1933 by Franklin Roosevelt to help reduce unemployment during the Great Depression, was very active in Minnesota. The CCC hired men ages 18–25 and provided training and employment opportunities. CCC enrollees at the Superior National Forest were involved with reforestation; fighting fires; reversing soil erosion; and construction of fire towers, recreational buildings, administrative centers, and ranger dwellings. Included in these construction projects were the log buildings constructed at Tofte Ranger Station, Isabella Ranger Station, Halfway Ranger Station, and the South Kawishiwi River Community Building. It is thought that some or all of CCC companies 701, 704, 711, 1720, 1721, and 3703 may have participated in constructing the original buildings at the Halfway Ranger Station, which is now the HRS (SNFHRP 2007).

The CCC constructed seven log buildings and one poured-concrete cellar at the HRS. Locally experienced men, local craftsmen hired by the CCC to provide expertise in various building trades, guided the CCC enrollees in constructing these structures. Emil Neimi, Ed Salo, and Urho Charles Salimen were locally experienced men thought to be hired to work on the project site structures. They directed the project and were responsible for fitting the logs. All of the materials for the log buildings were from the local area; the logs (from both softwood pines and hardwood quaking aspen) were harvested from within the Superior National Forest, and the granite for the fireplaces and chimneys was quarried just outside of Ely, in a now defunct quarry.

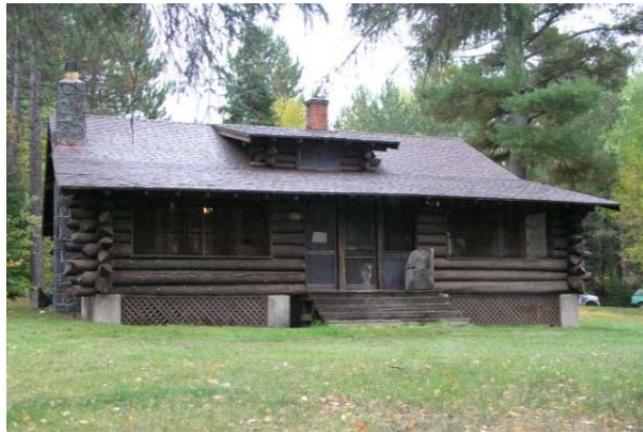
The HRS log buildings were constructed of horizontally laid wood logs. The logs were left round and unhewn, except for the groove incised on the bottom of each log to fit over the log below. As

a result, no chinking mortar was required between logs. Only oakum caulking was used between the logs to produce a weather-tight joint. The logs are saddle-notched at the corners and extend beyond the wall planes, terminating in chiseled points. All windows are sliding sash and the doors were constructed from wood boards. All of the woodwork was stained a reddish-brown color (SNFHRP 2007).

The HRS log buildings are an example of Rustic/Adirondack Style architecture; buildings which blend in with the natural environment. The seven Rustic/Adirondack Style log cabins onsite were built by the CCC in 1934 and 1935. Each of these log structures (Ranger Dwelling/Main Lodge, Pump House, Oil House, Outhouse/Sauna, District Office/Wolf Cabin, Warehouse/Garage, and Boathouse) is considered to contribute to the historic fabric of the HRSHD (Ferguson 2009).

For the most part, no major renovations have been made to the log buildings (see Figure 3.4). Of particular note, the former Ranger's Dwelling (now referred to as the Ranger Dwelling/Main Lodge) is identical to the Rangers' Dwellings at the Tofte and Isabella Ranger Stations. In contrast to the Rangers' Dwellings at the Tofte and Isabella Ranger Stations, however, the Ranger Dwelling/Main Lodge on the project site has many original intact interior fixtures and finishes, including the original bead board ceilings, original light fixtures, and original plumbing fixtures (SNFHRP 2007).

In addition to the seven log buildings on site, there is a stand-alone underground concrete cellar poured by the CCC at the site, and a balloon-framed residence. The concrete cellar was constructed around 1934, and may have been used for food or seedling storage. The balloon-framed residence, referred to as the LSFES Dwelling/Bunkhouse, was built in 1931 with funds from Herbert Hoover's Public Works Administration. The balloon-framed structure is the oldest remaining administrative building in the Superior National Forest, and the first to have an indoor bathroom. The bathroom reportedly attracted a lot of attention from the surrounding community, as Ely gets quite cold during the winter and it was a novelty to not have to go to the outhouse. Another important feature is the building style which was typical of the era in which it was built; it was an early light-framed structure.



**Figure 3.4. Ranger Dwelling (top 1934, bottom 2006)**

Staff of the Superior National Forest's Heritage Resources Program has completed an evaluation of each of the nine original buildings on site and considers the buildings eligible for inclusion on

the National Register of Historic Places under criteria A and C. Criterion A states that a property must be associated with a historic event at a local, state, or national level. Criterion C states that a property must be an example of an architectural style, period, method of construction, or the work of a known master craft-person or designer. Specifically, Superior National Forest staff believes that the site meets criterion A at the national level, because it is associated with two historically significant initiatives of the Federal Government: 1) Management of public lands, and 2) New Deal Era programs. The staff also believes that the site meets criterion C because seven of its buildings are intact examples of the Rustic/Adirondack design used by government land management agencies for constructing their administrative buildings during the first half of the 20th century (SNFHRP 2007). In response to public concerns about demolition of the HRS buildings, the HRS site was formally nominated to the National Register of Historic Places in 2012. The site was formally listed in 2013, and the listing included all existing buildings on the HRS site as contributing to the historic nature of the HRS Historic District.

As per National Historic Preservation Act requirements, consultation with the Minnesota SHPO has been initiated. This formal consultation process, called the Section 106 Review process, takes its name from Section 106 of the National Historic Preservation Act of 1966, which set up a review process through the states to assure state-level review of Federal projects that may adversely impact historic properties. Minnesota's SHPO has responded to consultation letters, and has indicated that the HRS site meets the criteria of the National Register of Historic Places as a historic district. The SHPO requested a delineation of the boundaries of the historic district. This delineation was completed in 2009.

### ***3.6.2 Impacts of Alternative 1***

Under alternative 1, the No Action alternative, the buildings at the HRS would likely continue to deteriorate in condition without adequate restoration or maintenance funds, as discussed under section 2.2. The long-term effects of this deterioration would be structural failure and eventual degradation and loss beyond repair of the buildings.

The site buildings that contribute to the site's designation as a National Historic District are unique in several ways. Although similar log buildings can be found at the Tofte and Isabella Ranger Stations, the former Ranger's Dwelling at Kawishiwi has many original intact interior fixtures and finishes, as previously noted. Additionally, the LSFES Dwelling/Bunkhouse building is unique to the Kawishiwi site, and is believed to be the oldest remaining administrative building on the Superior National Forest (Ferguson 2009). The loss of this historic district through neglect would constitute a long-term, adverse, potentially significant impact on cultural resources.

### ***3.6.3 Impacts of Alternative 2***

Under alternative 2, maintenance funds of the HRS buildings would be increased in order to adequately rehabilitate and maintain the buildings. This would result in a marked long-term, major beneficial impact to the historic properties located on site. As the site is now listed on the National Register of Historic Places, maintenance specific to the historic requirements of the site would be agreed upon with the SHPO.

### ***3.6.4 Impacts of Alternative 3***

Under alternative 3, transfer of ownership and management of the HRS buildings, the NRS would be transferring historic properties listed on the National Register of Historic Places out of NRS and possibly out of Federal control. This transfer of control in and of itself may constitute an adverse effect on cultural and historic resources of significance, as per 36 CFR Part 800.5.

However, with proper coordination with SHPO, these impacts could be partially mitigated and the resultant adverse impacts would be less than significant.

Any deed agreement between NRS and the entity willing and able to assume ownership and management of the buildings would include stipulations regarding the maintenance and preservation of the buildings as historic structures and maintenance of the site as a historic district. Coordination involving SHPO would form the backbone of developing these stipulations.

The NRS would notify the Advisory Council on Historic Preservation of its actions, so it has an opportunity to participate in developing maintenance and preservation stipulations and advise the NRS of additional recommended courses of action to ensure that impacts to cultural resources are mitigated to the extent possible.

### ***3.6.5 Impacts of Alternative 4 (Proposed Action)***

Alternative 4 would transfer of rehabilitation, maintenance, and use of the HRS buildings to Northern Bedrock. The participating agreement between NRS and Northern Bedrock would include stipulations regarding the maintenance and preservation of the buildings as historic structures and maintenance of the site as a historic district. Coordination involving SHPO would form the backbone of developing these stipulations.

SHPO has previously indicated its support for an alternative similar to this (see Appendix A). Impacts of this alternative to cultural resources would be long-term and beneficial, although the participating agreement between NRS and Northern Bedrock would be subject to five-year terms.

### ***3.6.6 Impacts of Alternative 5***

Under alternative 5, some or all of the buildings that are able to be disassembled and moved would be relocated. Before disassembly, the original setting and context of the site would be documented. Consultation and coordination with the SHPO would determine additional requirements. In terms of historical significance, the fact that the buildings were built on the site is important, as well as how the buildings relate to the use of the site. Relocation of the buildings would irreversibly damage their historical significance. However, the location of the buildings is not the only criterion that was used to establish their historical significance; moving the buildings offsite would not detract from the historical significance of the craftsmanship of the individual buildings, although it would still be recognized as a loss by the historical preservation community. Keeping the buildings together and within the Ely region would help to mitigate some, but not all of the historical losses. Overall impacts to cultural resources from the relocation of the HRS structures would be long-term, adverse, and major.

Disassembly of the buildings under alternative 5 would require excavation to remove the building foundations and basements. Should any item of potential archaeological significance be discovered during these ground-disturbing activities, the SHPO would be notified immediately. If any historically or culturally significant materials or artifacts were unearthed, activities would halt immediately and not resume until consultation with the SHPO was complete, in accordance with 36 CFR 800.13.

### ***3.6.7 Impacts of Alternative 6***

Alternative 6 would involve the demolition or abandonment in place of all of the buildings at the HRS. Prior to any demolition activities, all site details and historically significant structures

would be extensively documented in accordance with Library of Congress HABS/HAER/HALS standards.

The permanent loss of the structures at the laboratory cannot be fully mitigated. Their demolition would represent a long-term, adverse impact on cultural resources. The significance of this impact, however, would be mitigated by extensive documentation of the site's buildings and landscape.

## 3.7 Waste and Hazardous Material Management

### 3.7.1 *Affected Environment*

The buildings at the HRS utilize septic fields for wastewater treatment. Municipal solid waste and any hazardous waste that is generated at the site is collected and disposed of in accordance with regulations promulgated by the MPCA.

Chemicals used in the routine research activities at the laboratory likely include fixatives and preservatives, solvents, lubricants, fuels, cleaners, and degreasers. Although the buildings are now vacant, some residues of these chemicals likely remain in the buildings. Additionally, some of the site buildings likely have construction materials, particularly insulation, which contain asbestos containing material (ACM) and lead. The attic of the Ranger Dwelling/Main Lodge also suffers from a bat infestation. Bat guano is a biohazardous material, and is particularly dangerous when it becomes dried and airborne (Dunn 1997).

The Lake County Solid Waste Department is responsible for all solid waste activities within Lake County, and owns and operates a demolition landfill near the Castle Danger area in Silver Creek Township. This landfill is an unlined landfill, and there is a specific list of materials accepted at the facility, including a very restricted list of industrial waste and asbestos (as well as ACM). Lake County also owns and operates a full service recycling facility located within the City of Two Harbors on Recycle Center Drive, in addition to providing a program for disposing of hazardous waste.

The Superior National Forest is responsible for management of wastes on its lands. The forest has a "Green Team," which is a group of employees who work to promote sustainability in the forest, while reducing waste and increasing recycling opportunities.

### 3.7.2 *Impacts of Alternative 1*

Under the No Action alternative, waste generation, collection, and disposal would continue according to current practices. No increase in waste generated at the site is predicted, and hazardous materials present at the site would remain at the site. There would be no impact to either waste management or hazardous materials management from this alternative.

### 3.7.3 *Impacts of Alternative 2*

Alternative 2, the increase of building maintenance funds, would not cause any change in the amount of municipal solid waste generated at HRS, or the manner in which the waste is collected. However, the increased building funds would be used to ensure that the bat and rodent infestation in the Ranger Dwelling/Main Lodge is eradicated and that the bat guano in the dwelling is abated according to state and Federal regulations. In addition, any lead, or friable or exposed ACM, would be abated from the site. Although these actions would result in an increase in items to be

disposed of in the area's landfill and hazardous waste facility, this would only constitute a temporary, minor, adverse impact to localized waste management.

### ***3.7.4 Impacts of Alternative 3***

Alternative 3 would involve the transfer of both ownership and management of the HRS buildings to another entity. It is likely that the new entity assuming responsibility for the buildings would eradicate the bat and rodent infestation in the Ranger Dwelling/Main Lodge and abate the bat guano in the dwelling, according to state and Federal regulations. In addition, the entity may choose to abate any lead, or friable or exposed ACM, from the site. As under alternative 2, these actions would result in an increase in items to be disposed of in the area's landfill and hazardous waste facility. However, this increase is only anticipated to constitute a temporary, minor, adverse impact to localized waste management.

### ***3.7.5 Impacts of Alternative 4 (Proposed Action)***

Under alternative 4, Northern Bedrock would assume responsibility for maintenance and rehabilitation of the HRS buildings. Northern Bedrock's Feasibility Study for HRS states that Northern Bedrock would eradicate the bat and rodent infestation in the Ranger Dwelling/Main Lodge and abate the bat guano in the dwelling, according to state and Federal regulations. In addition, Northern Bedrock would abate any lead, or friable or exposed ACM, from the site. As under alternatives 2 and 3, these actions would result in an increase in items to be disposed of in the area's landfill and hazardous waste facility. However, this increase is only anticipated to constitute a temporary, localized, minor, adverse impact to waste management.

### ***3.7.6 Impacts of Alternative 5***

Relocation of the field laboratory buildings under alternative 5 would include disassembly of the structures to be relocated, and demolition or abandonment in place of the remaining structures. Prior to disassembly or demolition of all buildings at the field laboratory, a survey would be conducted by the NRS and the entity assuming ownership of the buildings. Each building would be characterized with respect to the presence, location, and condition of all asbestos materials, ACM, lead materials, and any and all hazardous and biohazardous materials. These materials would all be abated and disposed of in accordance with all local, state, and Federal regulations and law, prior to the commencement of relocation or demolition activities.

If rotten and unusable logs are found during disassembly of the structures to be relocated, these logs would be disposed of for recycling, in addition to any and all materials not desired by the entity assuming ownership of the buildings at their new location. Any demolition activities would also generate considerable amounts of demolition debris.

Recycling and/or reuse of all discarded materials would be encouraged whenever possible. Any non-hazardous construction debris or other solid waste that cannot be reused or recycled is anticipated to be disposed of by a contractor at the Lake County landfill. Provided all personnel follow applicable guidelines, impacts from the management of waste and hazardous materials would be short-term, adverse, and minor.

### ***3.7.7 Impacts of Alternative 6***

Demolition of all site structures under alternative 6 would generate a considerable amount of demolition debris. As under alternative 5, NRS would conduct a survey prior to demolition of the buildings at the field laboratory. Each building would be characterized with respect to the

presence, location, and condition of all asbestos materials, ACM, lead materials, and any and all hazardous and biohazardous materials. These materials would all be abated and disposed of in accordance with all local, state, and Federal regulations and law, prior to the commencement of demolition activities.

Demolition is anticipated to be carried out in a step-by-step fashion, so that all materials can be separated and classified according to their reuse, recycling, or waste disposal potential and categorization. Recycling and/or reuse of all discarded materials would be encouraged whenever possible. Any non-hazardous construction debris or other solid waste that cannot be reused or recycled is anticipated to be disposed of by a contractor at the Lake County landfill. Overall impacts from the management of waste and hazardous materials would be short-term, adverse, and minor.

## 3.8 Human Health and Safety

### 3.8.1 Affected Environment

The primary human health and safety concern at HRS, exposure of long-term researchers to the current building conditions, was largely mitigated in 2011 when USGS researchers vacated the site. Current health and safety concerns at the site are limited primarily to possible injury to trespassers drawn to the vacant buildings as an attractive nuisance. Structural conditions of the existing buildings were rated from good to poor in a building survey conducted over 15 years ago (Dunn 1997), and some of the buildings have insect, bat, and rat infestations. Additionally, the buildings are not up to current fire protection codes and some of the buildings likely have construction materials, particularly insulation, which contain ACM.

During the building survey, the Ranger Dwelling/Main Lodge was listed in generally fair structural condition (Dunn 1997). Many components of the structure are worn and require repair, however none of these components is considered likely to lead to structural failure in the near future. Bat infestation has occurred in the attic of the building, and as a result poses a great risk to the health of inhabitants. Bat guano is a biohazardous material, and is particularly dangerous when it becomes dried and airborne. Bat-cave disease is a possibility if the infestation is not addressed in a timely and effective manner, which would include removing the bats, disposing of contaminated building materials, and sealing potential points of entry (Dunn 1997). In addition to bats, the building has a history of rat infestation.

The District Office/Wolf Cabin was listed in fair structural condition. However, there is no usable indoor plumbing or heat. In addition to an active powder post beetle infestation, a number of structural repairs are needed, including new roof shingles, plumbing repairs, and a new front entry porch (Dunn 1997). Powder post beetles are dry-wood-eating insects. Damage is caused by the beetles tunneling in the wood. Professional extermination of the beetles and their larvae is recommended (Dunn 1997).

The LSFES Dwelling/Bunkhouse was listed in good structural condition during the building survey, and had not been impacted by a powder post beetle infestation. The Pump House was also considered to be in generally good structural condition. However, the structure suffers from a powder post beetle infestation.

The Warehouse/Garage was listed to be in generally fair to good structural condition. The building suffers from an active powder post beetle infestation, and the front side logs need to be replaced (Dunn 1997).

The Cellar appeared to be in good structural condition. During the building survey, a great deal of interior condensation was observed on the walls.

The Outhouse was listed as badly deteriorated, and repairs would include either partial or complete restoration of the structure. Building surveys showed signs of advanced insect infestation.

The Oil House was listed in poor structural condition. The building has suffered extensive insect infestation, and large piles of frass, or insect fecal pellets, were observed on the inside of the structure during the building survey. Additionally, the roof shingles and flashing need to be replaced (Dunn 1997).

The Boathouse was listed in fair structural condition. The building suffers from an active powder post beetle infestation.

The three buildings at HRS were not considered historically significant at the time of the 1997 survey: the office, insectary, and second outhouse. These structures were not part of the building survey conducted at that time. The office appears to be in good overall condition. The insectary and second outhouse are both in very poor condition and are structurally unsound

### ***3.8.2 Impacts of Alternative 1***

Under alternative 1 the HRS building would continue to be vacant. The buildings would continue to deteriorate without adequate rehabilitation and maintenance funds. Any and all structurally unsound buildings pose a substantial safety risk to any trespassers or other occupants.

In addition to structural integrity and fire risk issues, occupants of the Ranger Dwelling/Main Lodge could potentially be exposed to asbestos, ACM, lead, bat guano, and rodents. It is probable that some or all of these materials are present in other site buildings as well, although possibly not to the extent found at the Ranger Dwelling/Main Lodge.

The overall human health and safety impacts arising from the No Action alternative to building occupants of HRS would be long-term, adverse, localized, and minor. Impacts are minor because the buildings are vacant and only rarely occupied by staff conducting inspections or trespassers.

### ***3.8.3 Impacts of Alternative 2***

Under alternative 2, increased maintenance funds for the rehabilitation and needed maintenance of the field laboratory buildings would address many of the issues of concern to human health and safety: the structural integrity of the buildings, fire risk issues, and the presence of asbestos, ACM, lead, bat guano, and rodents. Although all of these issues would not be able to be addressed immediately or completely, it is anticipated that impacts to the human health and safety of building occupants and visitors would be long-term, beneficial, localized, and minor.

### ***3.8.4 Impacts of Alternative 3***

Alternative 3, the transfer of both ownership and management of the HRS buildings to another entity, is likely to result in impacts similar to those discussed under alternative 2. It is likely that the new entity assuming responsibility for the buildings would choose to install fire warning systems and protection measures in the buildings, eradicate the bat and rodent infestation in the Ranger Dwelling/Main Lodge and abate the bat guano in the dwelling, and abate any lead or friable or exposed ACM from the site. Human health and safety impacts from this alternative on

future building occupants would be long-term, beneficial, localized, and minor to major, depending on the extent of building upgrades.

### ***3.8.5 Impacts of Alternative 4 (Proposed Action)***

Under alternative 4, Northern Bedrock would assume maintenance and rehabilitation responsibility for the buildings. Northern Bedrock's Operating Plan for Adaptive Reuse of the HRS states that Northern Bedrock would install fire warning systems and protection measures in the buildings, eradicate the bat and rodent infestation in the Ranger Dwelling/Main Lodge and abate the bat guano in the dwelling, and abate any lead or friable or exposed ACM from the site. Human health and safety impacts from this alternative on future building occupants would be long-term, beneficial, localized, and minor to major, depending on the extent of building upgrades.

### ***3.8.6 Impacts of Alternative 5***

Relocation of the field laboratory buildings under alternative 5 would include disassembly of the structures to be relocated, and demolition or abandonment in place of the remaining structures. Prior to disassembly or demolition of all buildings at the field laboratory, a survey would be conducted by the NRS and the entity assuming ownership of the buildings. Each building would be characterized with respect to the presence, location, and condition of all asbestos materials, ACM, lead materials, and any and all hazardous and biohazardous materials. All these materials would be abated and disposed of in accordance with all local, state, and Federal regulations and law, prior to the commencement of relocation or demolition activities. If rotten and unusable logs are found during disassembly of the structures to be relocated, these logs would be replaced with new, structurally sound logs.

The worker safety program requirements applicable at the project site during project relocation and demolition activities would include the "construction" and "general industry" standards of the Federal Occupational Safety and Health Administration (OSHA) 29 CFR 1910 and 1926. These standards include hazardous materials management and handling, walking-working surfaces, operation of power equipment, adequate ventilation, noise exposure controls, fire protection, and electrical equipment safeguards. Because of the level and duration of project activities, the impacts to human health of both site workers and the public can be expected to be temporary, minor, adverse, and localized. Following applicable mitigation measures and BMPs will reduce the adverse impacts to human health even further. The long-term impacts of alternative 5 on human health and safety following completion of site activities would be beneficial and moderate.

### ***3.8.7 Impacts of Alternative 6***

The demolition of all field laboratory buildings under alternative 6 would have similar impacts to human health and safety as discussed under alternative 5. Prior to demolition of all buildings at the field laboratory, NRS would conduct a survey to characterize each building with respect to the presence, location, and condition of all asbestos materials, ACM, lead materials, and any and all hazardous and biohazardous materials. These materials would be abated and disposed of in accordance with all local, state, and Federal regulations and law, prior to the commencement of demolition activities.

The worker safety program requirements applicable at the project site during project demolition activities would include OSHA's "construction" and "general industry" standards. Because of the level and duration of project activities, impacts to human health of both site workers and the public can be expected to be temporary, minor, adverse, and localized. Following the mitigation

measures and BMPs will reduce the adverse impacts to human health even further. The long-term impacts of alternative 6 on human health and safety following completion of site activities would be beneficial and moderate.

## 3.9 Socioeconomics

### 3.9.1 Affected Environment

The HRS is located in Lake County, completely within the boundaries of the Superior National Forest. The city of Ely, Minnesota, is the closest municipality to the field laboratory. The area is located in the Vermillion Iron Range, which was historically home to several iron ore mines. Today, Ely and its immediate environs are better known as the gateway to the BWCAW and home to the IWC, and rely heavily on income related to recreation and tourism.

The 2013 population estimate for Lake County, Minnesota, was 10,777, which is a 0.82 percent decrease from the 2010 levels (USCB 2014a). Ely, which is located in adjacent St. Louis County, had an estimated population of 3,455 in 2013, which is a 0.14 percent decrease from the 2010 population (USCB 2014b). The percent of residents below poverty was 13.1 in Lake County in the period 2008 through 2012 (USCB 2014a).

In 2013, Lake County had 7,754 housing units, and the median value of owner-occupied housing units was \$147,100 (USCB 2014a). For the period of 2008 through 2012, approximately 81 percent of the housing units in Lake County were owner-occupied (USCB 2014a). For the period of 2009 through 2013, Ely, Minnesota, had 2,008 housing units with 80.4 percent being occupied, and the median value of owner-occupied units was \$90,400 (USCB 2014a).

For Lake County in the period 2008 through 2012, the top three occupation categories were management, professional, and related (25.6 percent); service (25.0 percent); and, sales and office (20.0 percent). The top three industry categories which provided employment were educational, health, and social assistance (26.7 percent); arts, entertainment, recreation, accommodation, and food services (15.3 percent); and agriculture, forestry, fishing and hunting, and mining (8.3 percent). The total labor force was 5,547 for the period (USCB 2014c).

For the city of Ely in 2013, the top three occupation categories were management, professional, and related (28.7 percent); service (27.1 percent); and sales and office (24.4 percent). Farming, fishing, and forestry occupations comprised 0.4 percent, and construction, extraction, and maintenance occupations comprised 13.9 percent. The top three industry categories which provided employment were and arts, entertainment, recreation, accommodation, and food services (22.1 percent), educational, health, and social service (18.9 percent); and retail (13.5 percent). The total labor force was 1,618 (USCB 2014a).

In 2013, Lake County's total personal income was \$ 483,591,000 (BEA 2014). For the period of 2008 through 2012, median household income was \$47,210 for Lake County and \$40,560 for Ely; per capita money income was \$27,670 for Lake County and \$23,611 for Ely; and the unemployment rate was 6.7 for Lake County.

The Superior National Forest received 4 million visits in 2001. Forest visitors spend approximately \$1,400 per person on all outdoor recreation activities (equipment, recreation trips, memberships, and licenses). Approximately \$115.00 per person of this expenditure occurs within a 50-mile radius of the recreation site. In 2002, the cumulative economic impact from the Superior National Forest was \$561,000,000 and 24,720 jobs (USFS 2004a).

The threshold level of significance for socioeconomic resources is the potential of the project to result in a substantial population or employment increase or decrease in the region of influence.

### ***3.9.2 Impacts of Alternative 1***

Under the No Action alternative, alternative 1, the buildings would continue to deteriorate from lack of maintenance and rehabilitation. As the buildings are currently vacant, there would be no change in economic activity on the site. There would thus be no economic impact of implementing this alternative.

### ***3.9.3 Impacts of Alternative 2***

Increasing the maintenance funds, alternative 2, could potentially represent an increase in jobs in the area for rehabilitating and maintaining the field laboratory. The length of time required to rehabilitate the buildings would depend on the number of people employed. However, the need for maintenance would require jobs regularly for a longer period of time than the rehabilitation. At a maximum, it is estimated that approximately 15 people would be required for the rehabilitating the field laboratory buildings. This represents less than one percent of the Ely labor force. Between one and five people would be required for the continued maintenance, representing an even smaller potential socioeconomic benefit to the region.

Given the amount of unoccupied housing and unemployment, the maximum estimates of 15 people for rehabilitation and up to 5 for maintenance would likely be accommodated by the existing community labor pool and housing stocks or would represent only a minimal increase in population for the temporary employment. This would be expected to be only a minimal impact to housing and expenditures. Any increase in employment and population from these jobs created would be minimal compared to existing Lake County population and employment.

Increases in funding to rehabilitate and maintain the field laboratory would come from a finite NRS budget. Other NRS site(s) or program(s) would thus be likely to see reductions in jobs and funding. The impacts of this reallocation of funding would depend on change in funding at the sites and programs receiving less funding, which is currently unknown. If the reallocation were done in a manner which minimized impacts to the other NRS sites and programs, these impacts would be partially mitigated.

The expenditures from alternative 2 in the region would be small compared to Lake County's more than \$480 million total personal income. Thus, implementation of alternative 2 would not likely cause any indirect jobs to be created. Therefore, the known economic impacts from alternative 2 to the field laboratory area would be negligible.

### ***3.9.4 Impacts of Alternative 3***

The impacts of alternative 3 (Transfer of Ownership and Management) on socioeconomics would depend on the final use of the buildings. Restoring and maintaining the buildings would have the same impacts as alternative 2. There could possibly be additional jobs created for operating the buildings, such as a site manager, if the buildings are converted into an eco-resort. Similar to alternative 2, these jobs would mostly likely be a minimal component of the larger Ely and Lake County area economy.

Since no new buildings would be permitted at the site, regardless of the potential reuses of the project area, the possibilities for increased population and employment related to reuses of the buildings are limited. The visitation and expenditures from using the HRS buildings as a resort

could be an increase from the current expenditures in recreation and lodging. However, due to the restriction from constructing additional buildings, any increase in revenue (which could translate in new population and jobs) would be small compared to the cumulative economic impact of \$561,000,000 and 24,720 jobs from Superior National Forest as well as the Lake County's total personal income of greater than \$480 million. Similarly, since no new buildings would be allowed for the privatization of the site to homesteads, any increase in taxes or money from transferring the field laboratory to houses would be minimal compared to the economic impact of Superior National Forest and the project area. Therefore, the impacts of alternative 3 to socioeconomics would likely be negligible.

### ***3.9.5 Impacts of Alternative 4 (Proposed Action)***

Under the proposed action, Northern Bedrock would rehabilitate and maintain the buildings at HRS as part of a youth job training program. Estimates of job creation from Northern Bedrock's proposed program range from 5 to 15 in the initial year up to 30 to 40 once the program is established. Even the largest estimate of increases in local employment represents approximately 3 percent of total Ely employment, and numbers would dip each year during the winter. The potential economic impacts would be minor, localized and beneficial.

### ***3.9.6 Impacts of Alternative 5***

Under alternative 5, the time required to disassemble, relocate, and reassemble the buildings would depend on the number of workers. It is not likely to require more than 30 people at any given time, or approximately 1.7 percent of the Ely workforce, which would be minimal impact to population. Because the jobs would be temporary, the impact to unemployment from these jobs would not be expected to be substantial, even if all of the jobs utilized local people. The economic impacts of this alternative would depend on the final location of the buildings and their use at the new location, which is currently unknown.

The initial investment needed to relocate and rehabilitate the buildings has been quoted to be \$200,000 to over \$1 million. Not all of this is likely to be spent in the project area. Even if it were, the \$1 million would represent approximately 0.3 percent of the total personal income of Lake County. This would not likely contribute to the creation of many new jobs, especially as the activity would be temporary.

Once the buildings have been moved, the uses of the land currently occupied by the field laboratory would depend on NRS and the Superior National Forest. It could be used for anything from timber harvesting to recreation, based on current Forest activities. The economic impacts from the additional land are minimal compared to the over two million acres of Superior National Forest and the cumulative economic impact of \$561,000,000 and 24,720 jobs from the Forest (see Section 3.5). Therefore, the impacts to socioeconomics from this alternative are expected to be negligible. However, the true scale of the impacts would be based on the final location and reuse of the buildings.

### ***3.9.7 Impacts of Alternative 6***

Demolition of the buildings would represent a loss of possible income and jobs from the rehabilitation, recreation, and maintenance opportunities which are a part of the other alternatives under consideration. The time to remove the buildings would depend on the number of workers. It is not likely to require more than 30 people at any given time at the site, which would be minimal impact to population. Because the jobs would be temporary, the impact to unemployment from these jobs would not be expected to be substantial.

Once the buildings have been demolished, the uses of the land currently occupied by the field laboratory buildings would depend on the Superior National Forest. Impacts would be similar as those described under alternative 5, above. Overall, the socioeconomic impacts from the employment of demolition crews would be beneficial, but negligible in the regional context.

## 4 Glossary

**APE (Area of Potential Effects):** The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking.

**Archaeological resource:** Any material remains or physical evidence of past human life or activities, which are of archaeological interest, including the record of the effects of human activities on the environment. An archaeological resource is capable of revealing scientific or humanistic information through archaeological research.

**Attainment area:** A zone within which the level of a pollutant is considered to meet United States National Ambient Air Quality Standards.

**Best management practice (BMP):** A practice or combination of practices chosen as the most effective, economical, and practical means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with State and local water quality goals. Selection of appropriate BMPs depends largely upon the conditions of the site, such as land use, topography, slope, water table elevation, and geology.

**Cultural resource:** An aspect of a cultural system that is valued by or significantly representative of a culture, or that contains significant information about a culture. A cultural resource may be a tangible entity or a cultural practice. Tangible cultural resources are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places.

**Cumulative impacts:** Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (Federal or non-Federal) or person undertakes such other actions; effects resulting from individually minor, but collectively significant, actions taking place over a period of time.

**Diversity:** The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

**EA (Environmental Assessment):** A concise public document, prepared in compliance with the National Environmental Policy Act, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an environmental impact statement or finding of no significant impact (40 CFR 1508.9).

**EIS (Environmental Impact Statement):** A detailed written statement required by Section 102(2) (C) of the National Environmental Policy Act, analyzing the environmental impacts of a Proposed Action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and ir retrievable commitment of resources (40 CFR 1508.11).

**Endangered Species:** A species that is threatened with extinction throughout all or a significant portion of its range.

**FONSI (Finding of No Significant Impact):** A document prepared in compliance with the National Environmental Policy Act, supported by an environmental assessment, that briefly presents why a Federal action will have no significant effect on the human environment and for which an environmental impact statement, therefore, will not be prepared (40 CFR 1508.13).

**Floodplain:** The lowland that borders a stream or river and is found outside of the floodway. It is usually dry, but subject to flooding.

**Historic District:** A geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history (NPS 1998).

**Historic Property:** A district, site, structure, or landscape significant in American history, architecture, engineering, archaeology, or culture; an umbrella term for all entries in the National Register of Historic Places (NPS 1998).

**Historic Site:** The site of a significant event, prehistoric or historic occupation or activity, or structure or landscape whether extant or vanished, where the site itself possesses historical, cultural, or archaeological value apart from the value of any existing structure or landscape (NPS, 1998).

**Historic Structure:** A constructed work, usually immovable by nature or design, consciously created to serve some human activity that is significant in American history, architecture, engineering, or culture (NPS 1998).

**Invasive Species:** An alien (nonnative to the ecosystem) species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

**Mitigation:** A method or action to reduce or eliminate adverse program impacts.

**NEPA (National Environmental Policy Act of 1969):** Requires all Federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Establishes requirement for EAs and EISs. Federal agencies must integrate NEPA with other planning requirements, and prepare appropriate NEPA documents to facilitate better environmental decision making (40 CFR 1500).

**Non-attainment Area:** An area that has been designated by the U.S. Environmental Protection Agency and the appropriate state air quality agency as exceeding one or more National Ambient Air Quality Standards.

**Perennial Stream:** A stream that flows throughout the year.

**Runoff:** Non-infiltrating water entering a stream or other conveyance channel shortly after a rainfall.

**Sediment:** Any finely divided organic and/or mineral matter derived from rocks or biological sources that has been transported and deposited by water or air.

**Sedimentation:** The process of depositing sediment from suspension in water.

**Silt:** Unconsolidated mineral sediment of finer grain size than sand. Due to fine grain, easily suspended in stagnant water or carried by moving water, and often accumulates on the bottom of rivers.

**Silt Fence:** A temporary barrier, consisting of a filter fabric stretched between supporting posts with the bottom entrenched in the soil, used to trap sediment being borne by runoff. Typically used as a BMP during ground disturbing activities to avoid displacement of sediments off of the disturbed site.

**Soil erosion:** The removal and loss of soil by the action of water, ice, gravity, or wind.

**Soil permeability:** The quality that enables the soil to transmit water or air.

**State Historic Preservation Officer (SHPO):** The official within each state, authorized by the state at the request of the Secretary of the Interior, to act as a liaison for purposes of implementing the National Historic Preservation Act.

**Structure (in terms of cultural resources):** A constructed work, usually immovable by nature or design, consciously created to serve some human activity (e.g., buildings, monuments, dams, roads, railroad tracks, canals, millraces, bridges, tunnels, locomotives, forts and associated earthworks, Indian mounds, ruins, fences, and outdoor sculpture). In the National Register program, “structure” is limited to functional constructions other than buildings (NPS 1998).

**Threatened Species:** A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**Wetlands:** Areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil, including swamps, marshes, bogs, and other similar areas.

## 5 List of Preparers

This EA was initially prepared in 2008 by:

Mangi Environmental Group  
 7915 Jones Branch Drive, Suite 2300  
 McLean, VA 22102  
 703-760-4801

The following Mangi Environmental Group personnel were principal contributors to this EA:

<b><u>Name and Document Contribution</u></b>	<b><u>Associated Professional Expertise</u></b>
<b>Phil Sczerzenie, Ph.D., Wildlife Biology</b> Project Management	30 years' experience: project-level, landscape-level, and programmatic EISs; human health and ecological risk assessments; watershed assessments, statistical analyses
<b>Anna Lundin, MS Environmental Engineering</b> Soils, Water, Waste, Human Health, Cultural Resources	10 years' experience: watershed analyses, Phase I/II environmental site assessments, Environmental Baseline Surveys, EAs/EISs
<b>Meghan Morse, B.A., Environmental Studies</b> Land Use, Socioeconomics	2 years' experience: analysis of public comments; public outreach; resource sections of CCPs, EISs, and EAs
<b>Mark Blevins, MS Geography</b> Mapping, GIS-based data & analysis	5 years' experience: GIS specialist: ArcGIS 8.3 – 9.1, ArcVIEW 3.2, GPS: Trimble GeoExplorer, Garmin GPS III – V Plus, Pathfinder Office software
<b>Jim Mangi, Ph.D., Ecology</b> Project Oversight	30 years' experience: recognized as a NEPA expert; has assisted the U.S. Army and five other Federal and state agencies in developing their NEPA regulations and guidance

The 2010 and 2015 updates and revisions to this EA were completed by the Forest Service Enterprise Technical Services Team, Principal NEPA Planner John R. Slown.

## 6 References

- (ARDC 2002). Arrowhead Regional Development Commission. Superior National Forest, Forest-Wide Roads Analysis. June 2002. Accessed June 2008 at:  
[http://www.fs.fed.us/r9/forests/superior/projects/roads\\_analysis/cover\\_page.pdf](http://www.fs.fed.us/r9/forests/superior/projects/roads_analysis/cover_page.pdf)
- Blehert, D. S., A. C. Hicks, M. Behr, C. U. Meteyer, B. M. Berlowski-Zierl, E. L. Buckles, J. T. H. Coleman, S. R. Darling, A. Gargas, R. Niver, J. C. Okoniewski, R. J. Rudd, and W. B. Stone. 2009. Bat white nose syndrome: an emerging fungal pathogen?. *Science*, January 9, 2009, vol. 323, no. 5911: p. 227.
- (BEA 2014). Bureau of Economic Analysis 2014. BEARFACTS Regional Data. Accessed January 2015 at:  
<http://bea.gov/itable/itable.cfm?ReqID=70&step=1#reqid=70&step=30&isuri=1&7022=20&7023=7&7024=non-industry&7033=-1&7025=4&7026=27075&7027=2013&7001=720&7028=1&7031=27000&7040=-1&7083=levels&7029=20&7090=70>.
- (Dunn 1997). Dunn, Edith A. An Evaluation of Selected Log Structures at Superior National Forest; North Central Research Station. December 1997. Prepared for USDA Forest Service, Superior National Forest. Purchase Order: 43-63A9-73143.
- (Ferguson 2009). Ferguson, John. 2009. Halfway Ranger Station Historic District, Section 106 Resource and Boundary Delineation Report. Heritage Services Group, USDA Forest Service.
- (Hagberg 2007). Hagberg, Rolf. Special Projects Coordinator, Minnesota Conservation Corps. Letter to Rick Sindt, NRS Environmental Engineer, December 14, 2007.
- (MHS 2008). Minnesota Historical Society. 2008. Minnesota's National Register Properties; Lake County. Accessed June 2008 at: <http://nrhp.mnhs.org/NRSearch.cfm>
- (MPCA 2014). Minnesota Pollution Control Agency. Ely Air Monitoring Study. Accessed January 2015 at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=15857>
- (MPCA 2008). Minnesota Pollution Control Agency. 305b Assessments of Lake Conditions in Minnesota's Major River Basins. May 2008. Accessed at:  
<http://proteus.pca.state.mn.us/water/basins/305blake.html>
- (NRCS 2007). Natural Resources Conservation Service. 2007. Official Soil Series Description: Mesaba-Barto Series. Accessed June 2008 at:  
<http://www2.ftw.nrcs.usda.gov/osd/dat/M/MESABA.html>
- (NRS 2013). Northern Research Station. 2013. Research Highlights. Accessed December 2014 at:  
<http://www.fs.fed.us/nrs/highlights/>
- (NPS 1998). National Park Service. NPS DO#28: Cultural Resource Management Guideline. Effective Date: June 11, 1998. Accessed June 2008 at:  
[http://www.nps.gov/history/history/online\\_books/nps28/28contents.html](http://www.nps.gov/history/history/online_books/nps28/28contents.html)

- (NTFHP 2008). National Trust for Historic Preservation. The National Forest System: Cultural Resources at Risk: An Assessment and Needs Analysis. May, 2008. Accessed at: <http://www.preservationnation.org/issues/public-lands/additional-resources/NTHP-Forest-Service-Report-2008-web.pdf>
- (OSHA No date). Occupational Safety & Health Administration – U.S. Department of Labor. No date provided. Occupational Noise Exposure: 29 CFR 1910.95. Accessed June 2008 at: [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_id=9735&p\\_table=STAN DARDS](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9735&p_table=STAN DARDS)
- (Runesson 2007). Runesson, Ulf T. World's Boreal Forests: Animal and Plant Species. September 20, 2007. Faculty of Forestry and the Forest Environment, Lakehead University. Accessed June 2008 at: [http://www.borealforest.org/world/world\\_species.htm](http://www.borealforest.org/world/world_species.htm).
- (SNFHRP 2007). Superior National Forest Heritage Resources Program. 2007. National Register of Historic Places Registration Form (NPS Form 10-900); Halfway Ranger Station. Bill Clayton, Archaeologist.
- (USCB 2014a). U.S. Census Bureau. 2014. State & County QuickFacts: Lake County, Minnesota. Accessed August 2014 at: <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>
- (USCB 2014b). U.S. Census Bureau. 2013. American Factfinder: Ely City, Minnesota. Accessed September 2014 at: [http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml).
- (USCB 2014c) U. S. Census Bureau. 2014. 2008-2012 American Community Survey ; DP03. Accessed September 2014, at: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>
- (USDA 2005). United States Department of Agriculture: Soil Resource Management. 2005. National Program 202: Soil Resource Management Assessment Team Meeting. USDA-ARS. Accessed 2008 at: <http://ars.usda.gov/sp2UserFiles/Program/202/202Assessment2004/202AssessmentReportFinal.pdf>.
- (USEPA 2008). U.S. Environmental Protection Agency. 2008. TMDLs; Listed Water Information. South Kawishiwi River to Farm Lake. Accessed: June 2008 at [http://iaspub.epa.gov/tmdl\\_waters10/enviro.control?p\\_list\\_id=MN09030001-512&p\\_cycle=2006](http://iaspub.epa.gov/tmdl_waters10/enviro.control?p_list_id=MN09030001-512&p_cycle=2006)
- (USEPA 2004). U.S. Environmental Protection Agency. 2004. South Kawishiwi River. 205(b) Lists/Assessment Unit Information Year 2004. Accessed June 2008 at: [http://oaspub.epa.gov/tmdl/enviro\\_V4.wcontrol?p\\_id305b=MN09030001-536](http://oaspub.epa.gov/tmdl/enviro_V4.wcontrol?p_id305b=MN09030001-536)
- (USFS 2014) United States Department of Agriculture, Forest Service. 2014. Fiscal Year 2015 Budget Justification. March 2014. Accessed December 29, 2014 at: <http://www.fs.fed.us/aboutus/budget/2015/FS15-FS-Budget-Justification.pdf>.
- (USFS 2008a). U.S. Department of Agriculture, Forest Service. Fact Sheet; Trappers Landing – Lot 5. Superior National Forest, Tofte Ranger District, Isabella, Minnesota. April 23,

2008. Accessed June 2008 at:  
[http://www.fs.fed.us/r9/forests/superior/FACTSHEETISABELLA\\_002.htm](http://www.fs.fed.us/r9/forests/superior/FACTSHEETISABELLA_002.htm)
- (USFS 2008b). U.S. Department of Agriculture, Forest Service. 2008. Region 9 Threatened, Endangered and Sensitive Species Lists. Accessed July 2008 at:  
[http://www.fs.fed.us/r9/wildlife/tes/tes\\_lists.htm](http://www.fs.fed.us/r9/wildlife/tes/tes_lists.htm)
- (USFS 2004a). U.S. Department of Agriculture, Forest Service. Final Environmental Impact Statement for Forest Plan Revision on Chippewa and Superior National Forests. July, 2004. Accessed June 2008 at:  
[http://www.fs.fed.us/r9/forests/superior/projects/forest\\_plan/2004Plan/feis/Final\\_EIS/Final\\_EIS\\_Contents\\_Abstract\\_Preface.pdf](http://www.fs.fed.us/r9/forests/superior/projects/forest_plan/2004Plan/feis/Final_EIS/Final_EIS_Contents_Abstract_Preface.pdf).
- (USFS 2004b). U.S. Department of Agriculture, Forest Service. Land and Resource Plan; Superior National Forest. July, 2004. Accessed June 2008 at:  
[http://www.fs.fed.us/r9/forests/superior/projects/forest\\_plan/2004Plan/snf/index.shtml](http://www.fs.fed.us/r9/forests/superior/projects/forest_plan/2004Plan/snf/index.shtml)
- (USFWS 2014). U.S. Fish and Wildlife Service; Gray wolves in the western great lakes states. 2014. September 2014 first post-delisting monitoring report. Accessed December 2014 at:  
<http://www.fws.gov/midwest/wolf/>
- (USFWS 2009). U.S. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Reinstatement of Protections for the Gray Wolf in the Western Great Lakes in Compliance With Settlement Agreement and Court Order. Federal Register, v74,178: 47483-47488.
- (USGS 2006). United States Geological Survey. Classification of Wetlands and Deepwater Habitats of the United States; Scrub-Shrub Wetland. August 3, 2006. Accessed June 2008 at: <http://www.npwrc.usgs.gov/resource/wetlands/classwet/scrbshrb.htm>
- (USGS 2000). United States Geological Survey. Kawishiwi River near Ely, Minnesota (Station 05124480). July 17, 2000. Hydrologic Benchmark Network (HBN) USGS Circular 1173-B. Accessed June 2008 at: <http://pubs.usgs.gov/circ/circ1173/circ1173b/chapter07.htm>



---

## **Appendix A**

### Agency Correspondence



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Twin Cities Field Office  
4101 American Blvd E.  
Bloomington, Minnesota 55425-1665

March 20, 2015

Mr. Richard Sindt, P.E.  
USDA Forest Service  
Northern Research Station  
1992 Folwell Avenue  
St. Paul, Minnesota 55127

RE: FWS No. 03E19000-2015-I-0071  
Consultation for Gray wolf, Canada lynx, and Northern long-eared bat

Dear Mr. Sindt:

The U.S. Fish and Wildlife Service (Service) received a Biological Assessment (BA) and letter dated February 20, 2015, and received February 24, for the proposed Halfway Ranger Station Adaptive Reuse Project. Mr. John Slown, of Enterprise Technical Services and on behalf of the USDA Forest Service Research and Development Division, Northern Research Station, requested consultation on the “may affect, not likely to adversely affect” determination for Gray wolf (*Canis lupus*), Canada lynx (*Lynx canadensis*), and Northern long-eared bat (*Myotis septentrionalis*), and “no adverse modification” for designated Gray wolf and Canada lynx critical habitats, in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). We have reviewed the BA and concur with the effects determinations for the reasons described below.

The Halfway Ranger Station (HRS) is administered by the USDA Forest Service Research and Development Division and is located within the Superior National Forest, on the 116-acre Kawishiwi Experimental Forest, in Township 62 North, Range 11 West, Section 33, Lake County, Minnesota. Specifically, the site is on the east bank of the South Kawishiwi River and south side of Highway 1, approximately 12 miles southeast of Ely.

The Northern Research Station proposes to enter into a participating agreement with the Northern Bedrock Historic Preservation Corps to rehabilitate and maintain 11 historic HRS buildings and one other structure, in exchange for use of the HRS site as a training facility, staff bunkhouse, and headquarters for its related skills teaching program.

The rehabilitation would occur in three phases.

1. Building stabilization, removal of hazards, approximately one acre of brush clearing for a recreation site, and installation of pit or vault toilets; 5 to 15 people would reside on the HRS site in a primitive camping setting approximately 150 to 200 yards southwest of the HRS buildings.
2. Building rehabilitation with additional camping facilities to accommodate up to approximately 30 people.
3. Final build-out, with conversions of on-site buildings for living and office use by up to 50 staff and students during the summer and 30 people during the winter. Northern Bedrock would continue to use primitive camping structures (three yurts) for seasonal staff camping.

The HRS site has had a long history of uses through 2011, and proposed activities would be similar to those past uses.

Gray wolf and designated critical habitat: Wolves occur throughout the Superior National Forest (Forest) and the BA indicated that one wolf pack has denned within five miles of the HRS site, they've been documented near the HRS site, and likely use the site transiently. The project area is located within wolf Critical Habitat Zone 1 where densities of high standard roads are to be maintained below one mile per square mile (per the wolf recovery plan, U.S. Fish and Wildlife Service 1992). Currently, the level of high standard roads in the area surrounding HRS is below this threshold and use of adjacent Highway 1 is not expected to increase due to this project.

The proposed project would increase the level of year-round human use and occupation at the site relative to the last few years when it was closed. However, the site has already experienced a long history of human use year-round. Wolves can be tolerant of human activities, including near den sites, and habituate to human-related disturbances. While some minor changes in behavior to a few individual wolves may result from the proposed activities, the activities should not measurably decrease the viability of any wolf pack and no other direct or indirect effects to wolves are anticipated. The proposed one acre of brush clearing will occur in a previously open area adjacent to the buildings and there will be no increase in road density or road use; therefore, activities will not adversely modify designated critical habitat for wolves.

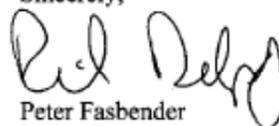
Canada lynx and designated critical habitat: The Forest is occupied by lynx and the BA indicated that several records have documented lynx within one mile of the HRS, though none were within the site. As discussed in the wolf section above, the proposed action would result in increased human use and activity at the site, which has a long history of human use. Traffic volumes on Highway 1 are not expected to increase due to project implementation and no clearing of boreal forest will occur. Lynx are a highly mobile species and the project's potential direct and indirect effects to lynx should be minimal. The project activities are on an existing administrative site, and such sites were excluded from lynx critical habitat. Therefore, rehabilitation activities will not adversely modify designated critical habitat for Canada lynx.

Northern long-eared bat: Northern long-eared bat habitat is abundant and well-distributed throughout the Forest and they could occur on the site. However, the BA indicated that no

Northern long-eared bats have been caught during mist-netting attempts on-site, and there are no records of them using the site. The potential to adversely affect Northern long-eared bats by exclusion from the buildings due to proposed activities will be mitigated by scheduling rehabilitation work to occur between the end of August and beginning of April, when Northern long-eared bats are unlikely to be at the site (fall migration and hibernation periods). No trees will be cleared, and should any present northern long-eared bats be displaced from the buildings, there is an abundance of suitable forested habitat for roosting in the immediate project vicinity. In addition, two bat boxes have been constructed on the site as alternative day or maternity roosts. The activities proposed for the HRS site are similar to those that have occurred for many years and they would occur during daylight hours, when bats are inactive. Therefore, the proposed building rehabilitation and other associated activities at HRS should not directly affect any Northern long-eared bats.

This concludes consultation under Section 7 of the ESA. Please contact the Service if the project changes or new information reveals effects of the proposed action to proposed or listed species or critical habitat to an extent not covered in your BA. If you have questions, please contact Ms. Tamara Smith, Fish and Wildlife Biologist, at 612-725-3548 (extension 2219) or via email at [tamara\\_smith@fws.gov](mailto:tamara_smith@fws.gov).

Sincerely,



For Peter Fasbender  
Field Supervisor

cc: Tim Catton, Kawishiwi Ranger District Biological Science Technician  
John Slown, Enterprise Program – Enterprise Technical Services

#### **Literature Cited**

U.S. Fish and Wildlife Service. 1992. Recovery Plan for the Eastern Timber Wolf. Twin Cities, Minnesota. 73 pp.



**Forest  
Service**

**Superior  
National  
Forest**

**8901 Grand Avenue Place  
Duluth, Minnesota 55808-1122  
(218) 626-4300  
Fax: (218) 626-4398**

7300/6440

**Date:** May 6, 2009

**File Code:**  
**Route To:**

**Subject:** Disposition of the Kawishiwi Field Laboratory

**To:** Thomas L. Schmidt, Assistant Director, Northern Research Station

Thank you for the opportunity to review the Draft Environmental Assessment (EA) for the Kawishiwi Field Laboratory Building Disposition, which was dated October 2008, and included with your memo of February 10, 2009.

As you know the Superior National Forest (SNF) has been and continues to be supportive of the research activities provided through this facility. However, the SNF faces challenges, including declining budgets, which are similar to those presented by the Northern Research Station (NRS) as justification for disposing of the buildings. Because of these challenges, the SNF has consistently stated, throughout the NRS evaluation process, that it will not accept responsibility for maintenance or management of the buildings. As noted on page 1-2 of the EA, lack of care over the years has led to building deterioration.

Nonetheless, your memo indicates NRS's preferences are alternative three "Transfer of Ownership and Management" and alternative four "Transfer Management." As stated on pages 2-9 and 2-10 of the EA, the SNF has no interest in assuming ownership or management responsibility of the buildings or issuing a Special Use Permit for third party use. Alternatives three and four are not acceptable to the SNF and I recommend they be dismissed from further consideration.

I agree with the building-related health and safety concerns disclosed in the EA and also recognize the impacts to cultural resources related to all proposed alternatives. I urge NRS to begin consultation with the State Historic Preservation Office to identify specific mitigation requirements.

If you have any questions, please contact Elizabeth Roat at (218) 626-4373.

/s/ Mary L. Shedd (for)

**JAMES W. SANDERS**  
Forest Supervisor

cc: Mark VanEvery  
Roseann M Hess  
Elizabeth Roat



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

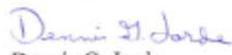
Northern Prairie Wildlife Research Center  
8711 37<sup>th</sup> St. SE  
Jamestown, ND 58401  
April 20, 2007

Michael T. Rains  
Station Director  
USDA – Northern Research Station  
11 Campus Boulevard  
Suite 200  
Newton Square, PA 19073

Dear Mr. Rains:

Thank you for your letter (File Code 6400) of April 9, 2007 and your offer to DOI-USGS to take permanent ownership and managements of the buildings and site of the Kawishiwi Field Laboratory near Ely, MN. Although this site continues to be the headquarters and duty station of the long-term scientific field study of Gray Wolves, the USGS Northern Prairie Wildlife Research Center does not have the funding available to address the major maintenance and management issues of these facilities beyond the routine incidental expenses to house a field crew at the site. Therefore, we must decline your offer to transfer ownership and management to the USGS.

Sincerely,

  
Dennis G. Jorde  
Acting Center Director  
701-253-5514



## United States Department of the Interior

U.S. GEOLOGICAL SURVEY

Northern Prairie Wildlife Research Center  
8711 37th Street SE  
Jamestown, North Dakota 58401-7317

July 3, 2008

Richard D. Sindt  
USFS Northern Research Station  
1992 Folwell Ave  
St. Paul, MN 55108

Dear Mr. Sindt:

I am replying to your May 6, 2008 request for comments regarding USGS use of Kawishiwi Field Laboratory in Ely, Minnesota.

You are correct in that USGS does not intend to use the facility long enough to assume its ownership and management. However, use of the facility is critical to our wolf research program, and we very much appreciate your continued cooperation and willingness in letting us use it. While it is true that our research in this area is beginning to wind down, we cannot determine at this time just when it will conclude. Thus, we do anticipate needing use of the facility for at least five more years. Of course, we will try to adapt to whatever alternative your process leads to.

Thank you again for the use of the facility and for this opportunity to comment.

Sincerely,

Janine E. Powell  
Director

Cc: Terry Williams



MINNESOTA HISTORICAL SOCIETY  
State Historic Preservation Office

December 20, 2006

Mr. Richard Sindt  
Station Engineer  
Northern Research Station  
1992 Folwell Avenue  
St. Paul, MN 55108

Re: Possible disposition of the buildings at the Kawishiwi Field Laboratory  
Fall Lake Twp., Lake County  
SHPO Number: 2007-0668

Dear Mr. Sindt:

Thank you for the opportunity to review and comment on the above project. It has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the Advisory Council on Historic Preservation (36CFR800).

As your notice indicates, the Halfway District Office complex meets the criteria of the National Register of Historic Places. Your transmittal indicates that the specific future alternatives for conveyance of this property area are not developed at this point. It also indicates that the land will remain in the ownership of the Forest Service.

It is important that alternatives that preserve the historical integrity of the property are developed and investigated. Moving the buildings to new locations would likely result in the loss of eligibility of the complex. It is not clear if the Forest Service intends to consider an alternative that would include retention of Forest Service ownership of the land, with potential long-term lease(s) of the buildings. Such an alternative, with appropriate planning, could retain the historical integrity of the complex. There may be other alternatives as well.

We note that our previous correspondence with the Forest Service (17 April 2001) indicated the need for clarification of the appropriate boundaries for the National Register determination. We would recommend that this issue be addressed at the earliest stage of the planning process for this proposal.

We look forward to working with you as this proposal proceeds. Contact me at 651-259-3456 with any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dennis' followed by a stylized flourish.

Dennis A. Gimmestad  
Government Programs & Compliance Officer

cc: Walt Okstad, USDA-FS

345 Kellogg Boulevard West/Saint Paul, Minnesota 55102-1906/Telephone 651-296-6126



MINNESOTA HISTORICAL SOCIETY

State Historic Preservation Office

June 3, 2008

Mr. Richard Sindt  
Environmental Engineer  
Northern Research Station  
1992 Folwell Avenue  
St. Paul, MN 55108

Re: USDA Forest Service Northern Research Station to dispose of its buildings at the  
Kawishiwi Field Laboratory, Superior National Forest  
Fall Lake Twp., Lake County  
SHPO Number: 2007-0668

Dear Mr. Sindt:

Thank you for your recent letter regarding the above referenced proposed undertaking.

We previously commented on this proposal in a letter of 20 December 2006 to your office. The concerns we expressed in that letter still apply, and a copy of that letter is attached.

One of the issues we raised in that letter (also expressed in an earlier letter of 17 April 2001) focused on the need for clarification of appropriate boundaries for the National Register determination. We recommended that this issue be addressed at the earliest stage of the planning process. The site map included with your recent letter illustrates buildings that are "under consideration for historical significance" and buildings that are "not historically significant". This categorization does not adequately address our expressed concerns or the requirements of the Section 106 review. Previous studies of this area have resulted in a determination that the area meets National Register criteria as a historic district. The boundaries of this district need to be delineated, taking into account not only the individual buildings, but also other topographic and landscape features that define the historic property. Then, the elements within this district need to be classified as "contributing" or "non-contributing". It is important that individual buildings considered to be "not historically significant" be categorized as "non-contributing" elements within the historic district. Appropriate treatment of these building within a historic district may need to be addressed as part of any treatment strategies.

Certain alternatives may need to incorporate measures to address archaeological concerns, even though the land will remain under FS ownership.

Please consider the other issues we raised in our 20 December 2006 letter as well.

Contact us at 651-259-3456 with questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dennis A. Gimmestad'.

Dennis A. Gimmestad  
Government Programs & Compliance Officer

cc: Wait Okstad, USDA-FS

enclosure: 20December 2006 letter



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
77 West Jackson Boulevard  
Chicago, IL 60604

Mr. Richard D. Sindt  
USDA Forest Service  
Northern Research Station  
1992 Folwell Ave  
St. Paul, MN 55108

Date: June 21, 2007

**Document: Scoping Report for the Environmental Assessment of the Kawishiwi Field Laboratory Building Disposition, federal agency: USDA/USFS letter dated April 3, 2007**

Dear Mr. Sindt:

The NEPA Implementation Section has received the document listed above. Under the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations, and Section 309 of the Clean Air Act, U.S. EPA reviews and comments on major federal actions. Typically, these reviews focus on Environmental Impact Statements, but we also have the discretion to review and comment on other environmental documents prepared under NEPA if interest and resources permit.

We did not undertake a detailed review of the document you sent to this office, and will not be generating comments because of the reason selected below.

- The document was not prepared under NEPA.
- The document was given a cursory review, but other workload priorities precluded us from detailed review and comment.
- The document was given a cursory review, and we determined that there were no significant concerns meriting comment.
- We opted to wait for the next level of documentation on this project before deciding whether or not to comment.

We reserve the right to reconsider undertaking a review at future planning stages, or if significant new data on the project is made available by the sponsoring agency or other interested parties. If you have any questions, please call Julie Guenther, of my staff, at 312-886-3172 or e-mail her at [guenther.julia@epa.gov](mailto:guenther.julia@epa.gov). Thank you for providing information on the project.

Sincerely,

Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Enforcement & Compliance Assurance

## **Appendix B**

Halfway Ranger Station Historic District

Section 106 Resource and Boundary Delineation Report

**Due to the size of the Section 106 Resource and Boundary Delineation report, it is attached to this document as a stand-alone document.**

---

## **Appendix C**

Halfway Ranger Station Historic District

National Register of Historic Places Registration Form

NPS Form 10-900

OMB No. 1024-0018

(Expires 5/31/2012)

United States Department of the Interior  
National Park Service

## National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).

### 1. Name of Property

historic name Halfway Ranger Station

other names/site number Halfway Administrative Site; Kawishiwi Field Laboratory

### 2. Location

street & number Off Minnesota Highway 1

N/A
X

 not for publication

city or town Fall Lake Township, Superior National Forest, Ely vicinity

state Minnesota code MN county Lake code 075 zip code 55604

### 3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,  
I hereby certify that this X nomination     request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets     does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national     statewide     local

Signature of certifying official/Title \_\_\_\_\_ Date \_\_\_\_\_

State or Federal agency/bureau or Tribal Government \_\_\_\_\_

In my opinion, the property X meets     does not meet the National Register criteria.

*Britta L. Bloomberg* 8/9/11  
Signature of commenting official Britta L. Bloomberg Date

Deputy SHPO Minnesota Historical Society  
Title State or Federal agency/bureau or Tribal Government

### 4. National Park Service Certification

I hereby certify that this property is:

    entered in the National Register     determined eligible for the National Register

    determined not eligible for the National Register     removed from the National Register

    other (explain): \_\_\_\_\_

Signature of the Keeper \_\_\_\_\_ Date of Action \_\_\_\_\_

United States Department of the Interior  
 National Park Service / National Register of Historic Places Registration Form  
 NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
 Name of Property

Lake, MN  
 County and State

**5. Classification**

**Ownership of Property**  
 (Check as many boxes as apply.)

**Category of Property**  
 (Check only one box.)

**Number of Resources within Property**  
 (Do not include previously listed resources in the count.)

- private
- public - Local
- public - State
- public - Federal

- building(s)
- district
- site
- structure
- object

Contributing	Noncontributing	
11	0	buildings
		sites
1		structures
		objects
12	0	<b>Total</b>

**Name of related multiple property listing**  
 (Enter "N/A" if property is not part of a multiple property listing)

**Number of contributing resources previously listed in the National Register**

N/A

0

**6. Function or Use**

**Historic Functions**  
 (Enter categories from instructions.)

**Current Functions**  
 (Enter categories from instructions.)

GOVERNMENT/research facility

GOVERNMENT/research facility

**7. Description**

**Architectural Classification**  
 (Enter categories from instructions.)

**Materials**  
 (Enter categories from instructions.)

Early 20<sup>th</sup> Century American Movements

foundation: Concrete

Other: Rustic Architecture

walls: WOOD/Log

Other: Adirondack Architecture

WOOD/Lap Siding

roof: ASPHALT

other: \_\_\_\_\_

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

**Narrative Description**

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

**Summary Paragraph**

The Halfway Ranger Station (HRS) is located in Township 62 North, Range 11 West, Section 33, 4<sup>th</sup> P.M. <sup>Bogtany Lake</sup> Babbitt, Minnesota 7.5" USGS Quadrangle Map. The site is situated adjacent to the South Kawishiwi River, approximately 12 miles south of Ely, Minnesota in Lake County. USDA Forest Service Northern Research Station (NRS), headquartered in Newtown Square, PA, is responsible for the management of the HRS. The HRS includes seven buildings and one structure from the Halfway Ranger Station built during the Depression, an additional four buildings that are historically part of the Lakes States Forest Experimental Station (LSFES), and an assortment of historic landscape features. The site also includes several ruins (concrete foundations) of no longer extant buildings. Collectively, these resources are known as the HRS, which is how the district will be referred to throughout the document.

**HRS Contributing Resources**

The purpose of this section is to discuss resources of the HRS that are contributing to the National Register. What follows is a series of brief descriptions of the form, structure, and character-defining features of each resource as well as an evaluation of each resource's status within the district. Each brief narrative will describe the qualities and conditions of the buildings, and structure in order to illustrate the architectural uniqueness, significance, and the overall integrity of the district.

The HRS features twelve standing buildings and structures. These consist of one pre Depression-era building (the LSFES Dwelling and Office), seven Depression-era buildings (Ranger Dwelling, Pump House, Oil House, Outhouse/Sauna, District Office, Warehouse/Garage, and Boat House), one Depression-era structure (a CCC-built Cellar), two post-WWII buildings (Laboratory and Insectary), and one outhouse of unknown vintage. The CCC-built resources were constructed in 1934 or 1935, the LSFES combination dwelling office was built in 1931, and the two post-WWII buildings were constructed in 1957.

Within each of the following subsections are discussions of associated resources determined to be contributing elements of the historic district. Overall, the HRS features ten (11) contributing buildings and one (1) contributing structure (a cellar).

**Buildings and Structures**

**Contributing Buildings**

**Ranger Dwelling (FS Bldg. #31101)**

Physical Description

Located near the center of the compound, the Ranger Dwelling is a single-story log building with a medium pitched side-gabled roof and wide, exposed eave-overhangs. The building measures approximately 38' x 38'. Historically it served as living quarters for the district ranger and family members. The building also possesses a finished attic. Built with notable deviations from Region 9 building Plan #48 for Ranger Dwellings, the building was designed with a square massed floor plan, which included a full-length porch extending approximately 7-8 feet from the front entrance façade-wall. A low-angle shed roof extends outward from the main roof's eave-line to form a continuous or "extended" porch cover (see photo 2 of 18). The floor plan is oriented on the landscape so that the front entrance façade-wall faces to the west. The center axis of the building is roughly perpendicular to the east shoreline of the South Kawishiwi River.

The Ranger Dwelling rests on a full-sized, poured concrete basement with at least a six foot wall depth below grade. The outer wall of the porch rests on three large poured concrete footings that are approximately 3' x 3' square. The walls are constructed with peeled round logs prepared from locally available pine and aspen logs that were laid with alternating butt and tip ends and connected by means of a standard saddle-notch. In keeping with the rustic style, log ends were intentionally cut to run proud of the wall intersection and finished by shaping the ends to chisel-edge point (see photo 2 of

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

18). In order to facilitate a tight, weatherproof fit, the underside of each log was prepared by shaping a groove or flute along its entire length. The roof of the Ranger Dwelling was constructed with purlins made of small diameter logs and covered with twelve inch wide dimensional lumber. The original roof covering was likely cedar shake.

The building possesses many character defining features including a large shed dormer, a fireplace chimney, and a smaller, furnace chimney. The centrally positioned dormer is covered by a low-angled shed roof, which is tied into the ridgeline of the principal roof. The dormer roof extends from the roof peak and terminates at the primary roof eave line. The fireplace gable wall chimney is situated on the west half of the north elevation and is constructed of locally cut stone quarried from a nearby source of gabbro (see photo 2 of 18). The chimney is towered. A smaller brick chimney that serves as an exhaust outlet for the furnace protrudes just below the ridgeline on the main roof's western slope. A secondary entrance offers direct access to the basement stairs and the kitchen. This entrance is located in the center south gable wall, and is accessible from the yard by an elevated stoop covered with a small shed roof. The stoop is supported by thin log columns set atop a low, log wall.

In order to facilitate description of the interior layout, the massed floor plan of the Ranger Dwelling is arbitrarily divided into two approximate halves: east and west. The west side of the first story includes a combined kitchen and eating space, in addition to a living room with a stone fireplace flanked by two casement windows on the north wall. Views of the porch and surrounding yard are accessible through two sets of tall casement windows set into the west façade wall. One set is centered on the kitchen wall and one is on the right half of the living room wall. From the porch, the front entrance to the building is located in the center of the west façade wall and is situated on the inside near the southwest corner of the living room wall. The east half of the building contains a full bath, linen closet and two bedrooms. A narrow hallway joins the bath and bedrooms, as well as the attic staircase. The attic consists of two main rooms on the west side that are joined by a full-length hallway. The east side of the attic is reserved for a continuous storage space that is partitioned off from the hallway by a short knee wall.

The building also possesses unique finishing elements. The ceiling framing is finished with 1 to 1 ½ inch wainscoting, which is covered with at least one coat of high-gloss varnish. In the particular case of the living room ceiling, the wainscoting was installed in between exposed log beams, which are set perpendicular to the west façade wall and spaced approximately two feet on center across the length of the room. The dwelling features at least three different types of doors that vary according to construction method. These include the front entrance door, located in the approximate center of the west façade wall, which consists of vertically oriented dimensional planks strengthened with hand-forged iron tie bands that are finished with a hand-hammered dimpling texture. Other door types in the Ranger Dwelling include storage space doors in the attic, which are finished on the hallway side with the same wainscoting used to construct the ceilings and the interior rooms, and side entrance doors, which were constructed in the typical rail-and-stile fashion. Also notable is the screen door, which was constructed in typical rail-and-stile fashion with two rails located on either side of the vertical midpoint uniquely connected with a row of turned dowels. This unique screen door type originally hung on many of the buildings within the district, and also appeared on the Kawishiwi Pavilion located directly north of the district, across Highway 1 on the north side of the South Kawishiwi Campground. With the exception of the dormer, all the windows in the building appear to be of original construction consisting of multiple glass panes encased in a joined frame tied together with a squared latticework of rabbeted muntins. The windows in the Ranger Dwelling were constructed according to two common patterns: casement and double hung. The casement windows were installed primarily in the kitchen and the living room and the double-hung types were installed primarily in the bedrooms and attic rooms. All windows retain their original hardware.

#### Alterations

Overall, with the exception of the exterior finish and some minor detailing, the Ranger Dwelling has changed little from its original form, shape, and layout. Furthermore, it has retained most of its significant architectural and stylistic elements. Alterations since construction are minor and consist of several episodes of exterior repainting, replacement of window screening, replacement of front and side entrance stoops, and several episodes of roof re-shingling—including the most recent one witnessed by the heritage resources staff during a photographic survey trip in the fall of 2006. The most significant change was the removal of the log railing on the front entrance stoop, which can be seen in a 1934 photograph of the front elevation. The date of this alteration is unknown but was probably completed when the present version of the front stoop was constructed.

#### Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture with distinctive Craftsman architectural elements. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

**District Office Building (FS Bldg. #31105)**

Physical Description

The District Office Building, which is situated to the northeast of the Ranger Dwelling, is a single-story, side gabled, log dwelling with a low pitched roof and wide, unenclosed eave-overhangs. It once served as the administrative office for the Halfway Ranger District but is now vacant. The building was constructed with a linear, double-room, rectangular floor plan and a newer bathroom addition connected to the south corner. The building's long axis is oriented in a northwest-southeast direction resulting in a northwest facing entrance, and northeast-southeast facing gable walls. According to the original floor plan, the two rooms consisted of a kitchen/living area on the building's northeast side and a bedroom on the southeast side that opens on the east wall to the newer bathroom addition. The interior rooms are divided by a log wall and are accessible by a slightly offset doorway. The main entrance door is located roughly in the center of the northwest elevation and allows direct access to the right side of the kitchen/living space. A small, cross-gable porch cover intersects the main roof at midpoint between the peak and the eave line (see photo 3 of 18). The entrance porch cover is supported by two log columns that rest directly on a rough-cut stone platform that serves as a stoop. The building is accessible via a rough stone sidewalk and stone stairs (see photo 4 of 18).

The Office Building is situated on a poured concrete foundation, approximately twelve inches in height. The exterior walls are constructed of round logs and are fitted in the same manner as the Ranger Dwelling. The roof is constructed with one-inch dimensional lumber sheathing laid perpendicular to four log purlins tied into the top of the gable walls and supported by a central partition wall.

Other architectural details include several paired sets of double-hung windows and three doors. Two sets of windows flank the front door, one set is centered at each gable wall and one is centered on the rear (east) elevation. All doors are constructed in typical rail and-stile fashion. The front entrance door features a single course of three elongated rectangular lights. A secondary screen door is also hung on the front entrance and is similar in construction and design to the one hanging on the front entrance of the Ranger Dwelling porch.

Alterations

Based on survey and photographic evidence the District Office Building has undergone more significant alterations than any of the contributing buildings within the historic district. The most striking of these changes are the bedroom and bathroom additions. The building was originally constructed with a one-room floor plan. Some time before 1947, a smaller room, (the present bedroom), was attached to the southwestern wall and made accessible by cutting in, and installing, the present doorway. The original window for this wall has been filled in but is still discernible. Photographic evidence shows that construction of the bedroom addition must have occurred within a 14-year period after the building's initial construction. However, the bathroom addition's construction date remains unknown.

Another significant alteration was the complete replacement of the original support posts for the porch cover. Originally, the posts consisted of two bent logs that flanked the front entrance door. Each log was connected to the wall in an unknown fashion and angled upward roughly from the door's midpoint to meet with a central support log. The date of this alteration is unknown but it took place sometime after 1947.

Determination

This building is significant under National register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Warehouse/Garage (FS Bldg. #31106)**

Physical Description

The Warehouse Building is a single story, cross-gabled, log building with a low pitched roof and wide, overhanging eaves with exposed rafter ends and sits directly east of the Ranger Dwelling (see photo 9 of 18). Originally, it served as a storage warehouse, garage, and workshop for the Halfway Ranger Station. It was constructed with a rectangular, linear floor plan that encompasses four separate units consisting of a large work space/garage room on the northwest side, a narrow garage space in the center, and a shop-storage room combination contained in the southeast end of the building. A stud wall separates the shop and storage area. The large cross-gable features three garage doors and the two small gabled porch covers are located over two smaller pedestrian doors supported by small diameter log struts (see photo 9 of 18). Like the Ranger Dwelling and the District Office Building, the Warehouse Building is not oriented toward a cardinal

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

direction. Its long axis runs roughly northwest to southeast with the front entrance wall facing roughly to the southwest. All windows are horizontal sliding sash with two sashes per window and four lights each in a 2-over-2 configuration. As for doors, there are three modern, sectional garage doors and two modern rail-and-stile doors that are now used in the front façade-wall entryways.

The structural system for the Warehouse Building is similar in design, materials, and construction to the Ranger Dwelling with the exception of the floor construction. The foundation consists of a short wall made from poured concrete that runs underneath each wall. This foundation wall, which encompasses the entire building plan, surrounds a poured concrete slab that serves as the building's floor. The walls are built with the same log construction method utilized on the other buildings in the district and the roof is designed and constructed in a similar manner.

Alterations

Alterations to the original construction of the Warehouse Building include the replacement of all the exterior doors and the addition of supporting brackets to both the small porch covers. The original door construction consists of board-and-batten covered on the exterior with wainscoting set in a diamond pattern. Remaining examples of this door type hang on the front entrance of the Oil House, the front entrance of the Sauna/Outhouse, and a variation on the front entrance of the Boat House. The date of these alterations is unknown. The Warehouse has experienced some structural degradation from powder post beetle infestation.

Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Boat House (FS Bldg. #31107)**

Physical Description

The Boat House, which is located to the west of the District Office building on the South Kawishiwi River, is still used to store watercraft. A small front-gabled log building, the boathouse has a low pitched roof and wide, unboxed overhanging eaves (see photo 7 of 18). The building is situated on the west shoreline of the South Kawishiwi River (see photo 8 of 18). Built to a simple single-room rectangular floor plan, the Boat House is accessible through a large sliding door on the right side of the front gable wall and a standard single-leaf door on the rear wall. There is a single vertical sliding-sash window centered on each of the side elevation walls. Each sash consists of six lights in a 2-over-3 configuration. Aside from its log construction, the most notable detail of the Boat House is the unusual design of the sliding door (see photo 7 of 18). The interior side consists of vertical battens. The exterior side is partitioned into four quadrants and edged with four-inch wide trim-boards. Each quadrant is filled in with wainscoting arranged in a diamond shape. For details on the structural system of the Boat House, please refer to the structural description section for the Warehouse/Garage Building.

Alterations

The Boat house has received very few alterations except the removal of the original boat ramp which consisted of iron rails and a dock. There has been some structural degradation from powder post beetle infestation.

Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Oil House (FS Bldg. #31111)**

Physical Description

The Oil House, which is located across the access road and to the southeast of the Warehouse building, is a 12' x 14' single-room, side-gabled, log building with a low pitched gable roof and wide, exposed eave-overhangs (see photo 11 of 18). Presently used to store firewood, the front entrance is centered on the north elevation wall with single windows centered on each gable end. The entrance features a small gabled porch cover which intersects the main gable roof at midpoint between the ridge and the eave line. A single-leaf door provides access to the building. It is finished on the exterior-side with wainscoting set in a diamond-shaped pattern (see photo 11 of 18). The inside consists of vertical

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

planking. The original windows are gone. Screen material now covers the window openings (see photo 12 of 18). For details on the structural system of the Oil House, please refer to the structural description section for the Warehouse/Garage Building.

Alterations

The Oil House has experienced very few alterations except the removal of the original windows and some structural degradation from powder post beetle infestation.

Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Pump House (FS Bldg. #31102)**

Physical Description

The northeastern-most building at the compound, the Pump House is a single-room (10' x 10') front-gabled log building with a medium pitched roof and wide, exposed, overhanging eaves (see photo 13 of 18). The building still houses pumping equipment. The single front entrance is located on the left side of the front gable wall and consists of a single leaf door. There are no windows. For details on the structural system of the Pump House, please refer to the structural description section for the Warehouse/Garage Building.

Alterations

The Pump House has experienced very few alterations, with the exception of slight structural degradation from powder post beetle infestation.

Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**LSFES Office and Dwelling (FS Bldg. #31108)**

Physical Description

Situated in the southern portion of the compound, the LSFES Office and Dwelling is a front-gabled, one-and-a-half-story, wood framed building with a medium pitched gable roof. It also features wide, exposed eave-overhangs. The building's foundation consists of poured concrete. The walls and both gabled roofs are balloon framed. This building served multiple purposes for the LSFES as an office, laboratory and bachelor's quarters. It was built in 1931 and is the oldest extant administrative building on the Superior National Forest. The building is oriented so that its front gable entrance-wall faces roughly toward the northwest and the west shore of the South Kawishiwi River.

The building's front entrance is accessible through an offset, enclosed porch, capped by a medium pitched front gable roof. This feature is supported on each corner by a small, square column. There are three double-hung windows on the southwest façade wall, three on the northeast façade wall, three on the front gable, and two on the rear. The upper level features two such windows each centered at the top of the gable-ends.

The exterior walls are covered with standard lap siding with a four inch reveal. The lapboards tie in at each corner to corner boards made from one-inch dimensional lumber. Roofing consists of at least one layer of standard three-tab shingles. A red brick chimney exists on the roof's southwest slope near the peak.

Alterations

Based on limited information, the LSFES Dwelling appears to have been relatively unaltered since its construction. The few notable alterations, based on photographic evidence, include the addition of aluminum inserts on all the windows and the replacement of the original doors.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

Determination

This building is significant under National Register criteria A and C for its association with Early Forest Service administration of the Superior National Forest—and subsequent forest research—and as a good example of National Folk architecture. The building remains one of the few remnants of pre-CCC architecture left in the Superior National Forest. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Outhouse/Sauna (No FS Number)**

Physical Description

The Outhouse is a square, front-gabled, log building with a low pitched roof and wide, exposed located on the west elevation wall. The door consists of a single leaf type finished on the exterior side with a diamond-shaped geometric pattern outlined in wainscoting. The gable eaves are trimmed with a simple fascia board and there is a vent stack positioned on the ridgeline of the roof. The foundation of the Outhouse most likely consists of a set of sill logs positioned directly on the ground. The walls and roof are composed of logs installed in the same manner as the rest of the buildings within the district (see photo 14 of 18).

Alterations

The only alteration made to the Outhouse is its conversion into a sauna. In order to do this, the bench was removed to make room for a wood sauna stove. An access opening for the stove was cut into the bottom portion of the east façade wall.

Determination

This building is significant under National Register criteria A & C for its association with the Depression-era CCC and as a representation of Forest Service rustic/Adirondack log architecture. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Cellar (FS Bldg. #31103)**

Physical Description

The Cellar is a 12' x 12' subsurface enclosure located to the east of the Outhouse/Sauna and constructed of poured cement with a dirt floor. Although its original purpose is unknown, it may have been used to store seedlings. The structure possesses a single entrance located on the west side. The interior of the structure is accessible through a single leaf door constructed planks of dimensional lumber. There is a vent stack positioned on the roof of the structure. The walls and roof are constructed of poured concrete (see photo 6 of 18).

Alterations

Any alterations made to the structure are unknown.

Determination

This building is significant under National Register criteria A for its association with the Depression-era CCC. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**LSFES Laboratory Building (FS Building #31109)**

Physical Description

The LSFES Laboratory Building is a single-story, wood framed, multi-room dwelling built according to a massed, rectangular floor plan capped with a low-pitched hip roof featuring wide, unboxed eave-overhangs (see photo 17 of 18). Situated near the southern portion of the compound, the building was built as a laboratory space in 1957 and now serves as an office space. The walls of the building are sided with short-reveal lap siding that is tied into corner boards and the narrow window casings. The building features multiple double-hung and casement windows as well as a wooden interior and metal exterior door set. The front elevation also features a course of three large picture windows. The building is oriented on the landscape with its long axis laid out in a general east west direction. The front elevation faces roughly to the north (see photo 17 of 18). There is a red brick chimney extending above the roof ridge on the right side of the roof's northeast slope. The building rests on concrete cinder block foundation.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

Alterations

The LSFES Laboratory appears to have been relatively unaltered since its construction.

Determination

This building is significant under National Register criterion A for its association with the forest research program. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**LSFES Insectary/Garage (FS Building # 31104)**

Physical Description

The Insectary/Garage is a single-story, wood framed, two-unit building covered by a low pitched hip roof and located immediately to the east of the LSFES Laboratory (see photo 15 of 18). Built in 1957, the same year as the Laboratory Building, the Insectary was initially utilized as a space to raise various species of insects for forestry-related research. It now serves as a storage space. Like the Laboratory Building, the long axis of the Insectary is laid out in an east-west direction. The building possesses a garage space on the eastern end and an open space, presumably for raising insects, on the west end that is enclosed with floor-to-ceiling screening (see photo 16 of 18). The single-leaf, main entrance door to the building is located in the center of the front wall. The building rests on concrete footings for the screened area and a concrete foundation for the garage area (see photo 16 of 18). The screened area is supported by a wooden joist system constructed with dimensional lumber. The garage portion of the building has a concrete slab for a floor.

Alterations

The LSFES Insectary appears to have been relatively unaltered since its construction.

Determination

This building is significant under National Register criterion A for its association with the forest research program. The resource has also retained a preponderance of integrity and is therefore considered a contributing feature of the HRS.

**Outhouse (No FS Number)**

Physical Description

The southern-most building at the compound, this small, wood framed outhouse is front-gabled with a low pitched roof that is covered with cedar shakes (now mostly deteriorated and covered with moss). The walls are clad with board and batten siding and it rests on a concrete foundation (see photo 18 of 18). The building's construction date is unknown.

Alterations

The outhouse appears to have been relatively unaltered.

Determination

While little is known about the building, as there is no mention of it in Forest records, it appears the same vintage as most of the buildings at the compound. As the outhouse features in-kind materials and has retained original integrity, it is considered a contributing feature of the HRS.

United States Department of the Interior  
 National Park Service / National Register of Historic Places Registration Form  
 NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
 Name of Property

Lake, MN  
 County and State

**8. Statement of Significance**

**Applicable National Register Criteria**

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

**Criteria Considerations**

(Mark "x" in all the boxes that apply.)

Property is:

- A Owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years old or achieving significance within the past 50 years.

**Areas of Significance**

(Enter categories from instructions.)

Architecture

Conservation

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Period of Significance**

1931-1961

\_\_\_\_\_

**Significant Dates**

N/A

\_\_\_\_\_

\_\_\_\_\_

**Significant Person**

(Complete only if Criterion B is marked above.)

N/A

**Cultural Affiliation**

N/A

\_\_\_\_\_

\_\_\_\_\_

**Architect/Builder**

US Forest Service (Architect)

Civilian Conservation Corps (Builder)

\_\_\_\_\_

United States Department of the Interior  
 National Park Service / National Register of Historic Places Registration Form  
 NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
 Name of Property

Lake, MN  
 County and State

**Period of Significance (justification)**

The period of significance begins with the construction of the LSFES combination dwelling office in 1931, encompasses the extensive CCC-era building period at the site, and ends in 1961 following the construction of the LSFES Insectary/Garage and LSFES Laboratory Building.

**Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance and applicable criteria.)**

With its association to the Civilian Conservation Corps work relief efforts during the Great Depression, its use as both a US Forest Service logistical center and as a federal research center, in addition to the nationally significant Rustic or Adirondack style buildings that comprise it, the Halfway Ranger Station is significant at the national level, the Halfway Ranger Station is eligible for listing in the National Register of Historic Places under Criterion A. Furthermore, as the building compound contains good examples of Rustic or Adirondack style architecture, it is eligible for listing under Criterion C.

**Narrative Statement of Significance (Provide at least one paragraph for each area of significance.)**

The Halfway Ranger Station (HRS) is eligible for listing in the National Register of Historic Places (NRHP) as a historic district. The HRS was originally developed as a US Forest Service (USFS) administrative and logistical center, and later, as a forest research station where federal land management activities and forest science was conducted. It is nationally significant under Criterion A for its association with historic trends in the increased development of professionally standardized USFS architecture during the Depression era. The HRS is also eligible under Criterion A for its historic association with forest research as administered by Lake States Forest Experimental Station (LSFES). Furthermore, the HRS is eligible under Criterion A for its historic association with the Civilian Conservation Corps (CCC) federal work relief program, as the CCC constructed most of the site's buildings, structures, and landscape. The HRS's period of significance is 1931-1961.

The HRS is also eligible for listing in the NRHP under Criterion C because seven of its buildings and one structure are good examples of the Rustic, or Adirondack, architecture. Rustic designs were used in numerous private and government administrative buildings in the first half of the 20th Century, and principally during the Depression Era. These buildings were constructed by the CCC according to guidelines established by the renowned Forest Service architect W. Ellis Groben in his design book *Acceptable Plans, Forest Service Administrative Buildings* (1938). Also, a single pre-CCC building located at this site exhibits distinctive Craftsman and National Folk stylistic elements, thus making it eligible under Criterion C.

**Developmental history/additional historic context information (if appropriate)**

**The Halfway Ranger Station: Historic and Architectural Context**

**Overview**

The HRS's dynamic history has witnessed almost 100 years of regional development in Northeastern Minnesota. The name Halfway dates to the turn of the century when the St. Croix Logging Company, operating out of Winton, Minnesota, conducted logging activities in the area. From at least 1910 until 1950, when the Superior National Forest moved Halfway Ranger District employees to offices in Ely, Minnesota, the site was the location of the Halfway Ranger Station of the Superior National Forest. The southern portion of the site has been a base for forest research since at least 1931, and possibly as early as 1924, when the LSFES started operating in the area. The site received considerable upgrades (buildings and other infrastructure) during President Franklin Delano Roosevelt's New Deal, when seven of the extant buildings and one structure were constructed by local CCC companies. The "documents" portion of this nomination contains site plans showing the chronological development of the HRS. Since 1968, the HRS has been utilized by federal biologists conducting long-term, large mammal research, including a wolf study currently conducted by USGS biologists.<sup>1</sup>

<sup>1</sup> William Clayton, Lee Johnson, Erin Potter, Walt Okstad, *Halfway Ranger Station Historic District Historic Structure Report* (Duluth: Heritage Resources Program, Superior National Forest, 2006), 1.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

The design and construction of USFS administrative buildings is often a product of agency funding, policy and initiatives and is therefore a historic indicator of agency evolution. The architectural nature of the buildings at the HRS reflects USFS design and building construction practices during the 1930s. Seven of the buildings within the HRS are good examples of the nationally recognized architectural design type known as the Rustic or Adirondack style. The origins of Rustic architecture can be found in the promotion and utilization of the design in the construction of early 20th century administrative buildings of the National Park Service (NPS) and many state agencies. Rustic design was often used in the 1930s for the construction of CCC-built Forest Service buildings.<sup>2</sup>

The following narrative divides the history of the site into three distinct, yet overlapping, historic context statements. The first addresses the development and significance of the site as it relates to a wider Forest Service administrative context. The second explores the significance of the HRS's relation to forest research. The third discusses the site's association with the nationally significant CCC and the fourth explores the site's architectural context.

**Federal Public Lands Management: Superior National Forest**

Federal management of Minnesota's pinelands was initiated on June 2, 1902 with the establishment of a 225,000 acre forest reserve near the headwaters of the Mississippi. Instrumental in the creation of this forest reserve (later consolidated into the Chippewa National Forest) was the successful lobbying of Christopher C. Andrews, Minnesota's first forest commissioner. C.C. Andrews observed scientifically managed forests during his appointment as Minister to Sweden and Norway (1869-77). Upon his return from Sweden, Andrews vigorously organized, lobbied, and lectured on the benefits of scientific forestry and land conservation. After the successful establishment of Minnesota's first forest reserve in 1902, Andrews turned his attention to the pinelands of Cook, St. Louis, and Lake County, which would later become the 2.3 million acre Superior National Forest. Andrews' aspirations regarding scientific management of Minnesota's Arrowhead region are highlighted in a 1902 letter to the General Land Office Commissioner Binger Herman, in which he stated, "I have the honor to recommend that the following townships, all public land situated in Cook and Lake Counties, an area in round numbers of 500,000 acres, be set apart by the president as a forest reserve."<sup>3</sup>

On February 1, 1905, the United States Department of Agriculture (USDA) became the primary manager of some 63 million acres of public forest lands.<sup>4</sup> These initial landholdings were consolidated from Department of Interior Forest Reserves, which were established in 1891 to protect timber and hydrological resources. In 1907, the Department of Agriculture officially changed the name of the Forest Reserves to National Forests. The development of the National Forest system and the adoption and application of managerial directives concerned with the long-term production of sustainable forest products was fostered through the efforts of conservationists Theodore Roosevelt (1858-1919) and Gifford Pinchot (1865-1946). The early 20th century conservation movement was largely a response to the "cut and run" policies of early mining, railroad, and timber companies. The efforts of the nation's most well known conservationist (Roosevelt) and its first scientific forester (Pinchot) were successful, despite significant congressional and private opposition. By 1907, the federal government had consolidated some 150 million acres of forested lands.<sup>5</sup>

The efforts of Minnesota's early conservation movement came to fruition on February 13, 1909, when President Theodore Roosevelt, in Proclamation #848, set aside 1,018,638 acres as the Superior National Forest. Since that time, the total acreage directly administered by the Superior National Forest has increased to 2,174,000 acres as of 2006.<sup>6</sup>

On May 1, 1909, Scott Leavitt arrived in Ely, Minnesota and assumed the duties of Acting Forest Supervisor<sup>7</sup> (White 1974c). Mr. Leavitt gave ranger examinations to seven individuals, some of whom would later become the Superior National Forest's first forest rangers. The initial duties of the incipient forest crews included clearing portage trails,

<sup>2</sup> Clayton, 2

<sup>3</sup> Wesley J. White *Historical Sketches of the Quetico-Superior*, Vol. III (Superior National Forest: U.S. Department of Agriculture, 1967); Clayton et al., 3.

<sup>4</sup> W. W. Bergoffen, *100 Years of Federal Forestry* (Washington D.C.: U.S. Government Printing Office, 1976) Harold K. Steen, *The U.S. Forest Service: A History* (Seattle: University of Washington Press, 1991) Gerald W. Williams, *The USDA Forest Service – The First Century* (Washington D.C.: The USDA Forest Service, 2000).

<sup>5</sup> Clayton et al., 3.

<sup>6</sup> Ibid.

<sup>7</sup> Wesley J. White, *Historical Sketches of the Quetico-Superior*, Vol. XVI (Superior National Forest: U.S. Department of Agriculture, 1974).

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

constructing fire towers and guard stations, installing telephone lines, suppressing wildfires, cruising and scaling timber harvested from forest lands, and verifying timber, stone, and homestead claims.<sup>8</sup>

Before the Depression-era building boom, which resulted in the widespread development of forest administrative building complexes, Superior National Forest lands were managed by remote guard stations and a few centrally located ranger stations. Guard stations (built from 1909-1924) were typically composed of local materials and were often located in roadless portions of the forest. Guard stations served as satellites of the ranger stations and, prior to 1930, were based in Ely, Minnesota and near the Temperance River on the North Shore of Lake Superior, respectively. Historically, and still today, ranger stations were located in or near population centers or on roadways accessing portions of their respective ranger districts.<sup>9</sup>

In 1930, the Superior National Forest was comprised of six ranger districts including, LaCroix, Mesaba, Halfway, Kawishiwi, Temperance, and Grand Marais. Currently the Superior National Forest has five ranger districts. They include (from west to east) LaCroix, Kawishiwi, Laurentian, Tofte, and Gunflint. The location of districts and the size of their respective lands has continuously changed and fluctuated throughout the 85 year history of the Superior National Forest. For example, Halfway Ranger Station was within the Stony Ranger District in the 1920's, the Halfway Ranger District through the 1970's, and the Kawishiwi Ranger District following 1974. The dynamic history of the Superior National Forest's administrative facilities should be viewed within a larger, national context, which recognizes changes in policy, directives, mission, and funding over time.<sup>10</sup>

Early guard stations were typically one-room buildings approximately 12' x 14' in size and often associated with fire lookouts. In contrast, ranger stations were often larger and featured multiple rooms for office space. On average they were about 18' x 38' in size. In addition, ranger stations often included boathouses, wells, root cellars, barns, and outhouses. Locations for these administrative facilities were selected based on agency resource objectives such as proximity to active timber sales, proximity to major water routes accessing roadless areas, and proximity to tote roads and/or spur lines constructed by logging companies.<sup>11</sup> USDA Historian, Gerald Williams explains the dynamic history of administrative sites on newly acquired Forest lands:

When the FS took over management of the forest reserves in 1905, the new agency built more of these cabins, especially on NFS lands near potential water power sites. Sometimes these early ranger stations were abandoned homestead cabins. They were termed ranger stations but within a few years they were mostly renamed as guard stations. They were set inside the NF boundary or right on the edge, as well as scattered throughout the forest, often a one day horse ride away from each other where a ranger and his horse could overnight. When roads replaced trails, there was little need for many ranger and guard stations. Later, one central ranger station covered the management of the district that was often 100,000 acres or larger.<sup>12</sup>

Generally, it appears that guard stations were evenly dispersed across the Superior National Forest by either a single-day paddle or hike (approximately 12-20 miles). The available data indicates that approximately 26 guard stations and five ranger stations were constructed on the Superior National Forest between 1909-1927. Work orders from 1924 indicate that the Halfway Ranger Station was in-use prior to 1921 on the eastern shore of the Kawishiwi River, approximately 12 miles south of Ely, Minnesota. At that time, Halfway was one of two ranger stations situated in the now consolidated Stony Ranger District (the other being Baird Ranger Station). It is possible that the original Halfway Ranger Station utilized buildings that had previously been built by the St. Croix Lumber Company. In an interview with Superior National Forest Information Specialist Ray Naddy, dated July 27, 1970, the third Supervisor of the Superior National Forest, Joe Fitzwater, mentions that the "halfway house" was utilized by Forest Service employees during the summer of 1910.<sup>13</sup> Work records indicate that the original Halfway Ranger Station included a 24' x 38' 1 1/2 story house, an 18' x 38' four room combination building, a cesspool, a toilet, and a 12' x 24' x 7' boathouse.<sup>14</sup> All of the buildings at the original Halfway Ranger Station

<sup>8</sup> Clayton et al., 4.

<sup>9</sup> Ibid, 4.

<sup>10</sup> Ibid, 5.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid, 6.

<sup>13</sup> Wesley J. White, *Historical Sketches of the Quetico-Superior*, Vol. XVII (Superior National Forest: U.S. Department of Agriculture, 1974), 3.

<sup>14</sup> Superior National Forest, Improvement Project Records, on file at the Iron Range Research Center, Chisholm, Minnesota, 1927.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

were constructed of upright logs with rubberized roofs.<sup>15</sup> Helen D. Barnes, daughter of Halfway Ranger Tom A. Denley (1917-1927; 1930-1943), recalls life in the original Halfway Ranger Station:

At the Halfway Ranger Station, he made it a point to get up and prepare breakfast for the several guards that worked for him during the summer months.....And somehow it seemed just right in that little old dark kitchen with walls of upright logs chinked with plaster, the wash basin in a corner by a bucket of water; worn oil cloth on the table, and the kerosene lamp chimney smoked and cracked, and the grey enameled dishes ready on the shelf of the warming shelves of the stove for the food he was preparing... Food for the working young men who waited outside to be called in to eat.<sup>16</sup>

Guards working out of the Halfway Ranger Station were probably responsible for telephone line and trails maintenance, as well as fire patrol and suppression between Halfway and Clearwater Guard Station, situated in a roadless area approximately 10 miles to the northeast. Furthermore, forest guards operating out of the Halfway Ranger Station were likely involved in the administration and scaling of the Forest's first timber sale—the "Birch Lake Sale." The sale was awarded to St. Croix logging company on February 15, 1910 and included approximately 735 acres of pine, spruce, and tamarack, much of which was partially damaged by fire in 1908 and 1909.<sup>17</sup>

The area surrounding Halfway Ranger Station, like most of Northeastern Minnesota at the time, was rugged with few roads. The Halfway Ranger Station was unique in that it offered early forest rangers two transportation options: The Kawishwi River provided water access to the interior reaches of the forest to the north, while the Stony Tote road linked the ranger station with Ely and the Stony River drainage to the east.<sup>18</sup>

The Stony Tote road was constructed under contract for the St. Croix Lumber Company ca. 1900-1901. Bedrock outcrops, lakes, and swamps forced the road builders along a circuitous route at a total cost of \$6,000 per mile.<sup>19</sup> Winding south of Ely, across the Stony and Kawishwi Rivers, the Stony Tote road connected a series of St. Croix lumber camps before ending approximately 26 miles south of Ely at Source Lake. In the winters of 1901-1914, both draft horses and wood fed steam haulers plied the road with supplies for the winter camps.<sup>20</sup> In a letter to historian J.W. White, dated April 9, 1971, retired Superior National Forest Ranger M.J. Valentine (1918-1953) describes how the Halfway claimed its name:

Mike Kelly drove the four horse tote team that hauled the supplies and equipment to various St. Croix lumber camps scattered throughout that area. In those days it was practically a full day's trip from Ely to the Halfway camp located along the tote road on the opposite side of the river. The following day he would travel on to camp 27 near the Stony River and approximately 27 miles from Ely.<sup>21</sup>

Until the 1920's, the Stony Tote road was one of the only operable roads in the Ely area. Improvement and paving of newly renamed Highway 1 was completed by St. Louis County in 1921, and the road was extended to Two Harbors the following year. The evolution of the Stony Tote road from a primitive log-hauling road to an all weather highway facilitated growth in local tourism and improved access to national forest lands for resource management and fire suppression. And as road networks expanded and fire detection techniques improved, guard stations were replaced by centralized ranger stations responsible for the management of blocks of forest lands in excess of 100,000 or more acres. During the 1930s, Halfway Ranger Station, like many similar Forest Service facilities throughout the U.S., was significantly altered following the implementation of major public works programs like the CCC.<sup>22</sup>

#### Forest Research: Lake States Experimental Station

From its inception, the Forest Service was committed to research and development in its effort to adhere to the conservation ethic. As Chief of the newly founded agency, Gifford Pinchot sought to institutionalize a research branch

<sup>15</sup> Clayton et al., 6.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid, 7.

<sup>18</sup> Ibid.

<sup>19</sup> Jeff Forester, *The Forest For The Trees: How Humans Shaped the North Woods* (St. Paul: Minnesota Historical Society Press, 2004), 50.

<sup>20</sup> Clayton et al., 7.

<sup>21</sup> Ibid.

<sup>22</sup> Ibid, 7-8.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

aimed at addressing research questions related to scientific forestry. Pinchot, like many of his contemporaries in the early Forest Service administration, applied long utilized European forestry techniques, like sustained yield, toward the management of national forest lands. The sustained yield method applied a holistic approach to forestry and sought to counter previous wasteful practices. It utilized scientific data to ensure a continuous supply of wood products while simultaneously conserving soil and water resources.<sup>23</sup>

Before 1915, forest research was primarily conducted at the district level, with researchers subordinate to local administrators. This arrangement generated tension between administrators and researchers, and was considered by many to be "stifling" because it lacked the independent oversight necessary to conduct objective field studies. Earle Clapp, a forester who became the chief of Forest Service research in 1915, stated that "direct district participation had stifled research, for it was impossible to develop real research if the investigator had to cater to local whims." In June 1915, chief of the USDA Forest Service, Henry S. Graves (1910-1920), established the Branch of Research as an independent entity within the newly founded administration. Forest researchers were then able to carry out their unique mission and investigate fundamental questions completely "independent from the daily pressures of administering the national forests."<sup>24</sup>

By the mid-1920's, the Forest Service Branch of Research had established twelve regional centers, numerous experimental forests, the Forest Products Laboratory in Madison, Wisconsin, and a network of experimental stations/laboratories on National Forest lands throughout the U.S. Raphael Zon, a European immigrant and Cornell graduate who had worked with Pinchot at the Bureau of American Forestry in 1901, was appointed as director of the Lake States Forest Experimental Station (LSFES) in St. Paul, Minnesota in 1923. The LSFES, renamed North Central Research Station in 1965 and later renamed the Northern Research Station, continues to be responsible for research and interagency cooperation regarding forest research in Minnesota, Wisconsin, and Michigan.<sup>25</sup>

One of the LSFES's first tasks was to provide baseline data regarding the age, types, and structure of forests stands on the National Forests in the Upper Midwest and to develop research questions specific to the region. Research questions were tiered to diverse forest types, which covered the region, but included forest regeneration, nursery studies, fire research, drought resistance, insect damage, forest inventory, forest economics, and wildlife studies. Portions of the region were divided into work centers or branches, such as the Superior Branch (Halfway Ranger District near Ely, MN.), the Chippewa Branch (Cass Lake, MN.), and the Upper Peninsula Branch (Dukes, MI.). These regional branches, or work centers, were often located on existing Forest Service administrative sites.<sup>26</sup>

The headquarters for the Superior Branch of the LSFES was established on the Halfway Ranger District administrative site in 1931 by F.H. "Windy" Eyre. In addition to persuading the Superior National Forest to allocate a portion of the Halfway Ranger District to LSFES, Eyre established the 2,635 acre Kawishiwi Experimental Forest. A combination dwelling-office structure was constructed at the LSFES portion of the Halfway administrative facility in 1931 for a total cost of \$2,626. This combination office dwelling included a bathroom which was, at that time, the only bathroom available on any of the existing Ranger Stations on the Superior National Forest. In 1942, Eyre sponsored the designation of the 640-acre Keeley Creek Scientific and Natural Area (later termed Research and Natural Area or RNA) near the Halfway administrative site. The Keeley Creek RNA, the second oldest in the North Central Region, continues to protect a unique jackpine, black spruce and sedge meadow ecosystem while also providing scientists with a baseline or reference area by which to monitor long-term ecosystem change.<sup>27</sup>

The LSFES received a considerable boost in manpower between the years of 1933-1941, when CCC camps were established in the area. The additional labor intensified pre-existing LSFES experimental projects which included forest survey, timber stand improvement, and replanting. Between 1931 and 1937, CCC labor and Works Progress Administration funds were used to complete the first large-scale forest inventory of the Lake States region. The LSFES, Superior National Forest, and local CCC companies were successful in pooling resources, technical expertise, and the experimental data necessary to establish thousands of acres of pine plantation near the Halfway Ranger Station (Clayton

<sup>23</sup> Ibid, 8-9.

<sup>24</sup> Steen, 138; Clayton et al, 10.

<sup>25</sup> Steen, 141; Clayton et al., 11.

<sup>26</sup> Clayton et al., 11.

<sup>27</sup> Paul O. Rudolf, *History of the Lake States Forest Experiment Station* (Washington D.C.: Government Printing Office, 1985), 19; Clayton et al., 11-12.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

et al 2006). A newsletter from CCC Company 704 (Halfway Camp), describes both the working relationship between the LSFES and CCC Company 704, as well as the relationship of LSFES to the Superior National Forest:

The Lake States Forest Experimental Station, situated near the Halfway Ranger Station, is the other department with which we are concerned. The relation existing between this division and the Halfway camp are as follows: Fifty men from [the] camp are turned over to the LSFES each day, under the direction of R.K. Lebaron, assisted by foreman Kruse and Isaacson. The work is mainly the furthering of experimental projects relating to forestry. The LSFES, while being classed as in the Forest Service, differs from it in that their work is concerned with the experimental phases of Forestry rather than the management of extensive stands of timber. In other words the results of their experiments are often used profitably by the Forest Supervisor in planning future work.<sup>28</sup>

The Superior National Forest appears to have moved Halfway Ranger District employees to the Kawishiwi Ranger Station in the early 1950s, thus making the LSFES the site's sole occupant. The Superior National Forest continued to assign personnel and District Rangers to the Halfway Ranger District until 1974, although these personnel were based out of the Kawishiwi Ranger Station office in Ely, MN.<sup>29</sup>

On July 1, 1974, the Superior National Forest officially consolidated the Halfway Ranger District with the Kawishiwi Ranger District. Although the Superior National Forest retained control of the land, responsibility for management of all the buildings at the Halfway Administrative Site was assumed by North Central Research Station (formerly the LSFES and the North Central Forest Experiment Station and now the NRS).<sup>30</sup>

#### **Depression-era Relief: The CCC on the Halfway Ranger District**

Despite the nation-wide economic depression, the 1930s ushered in a period of increased activity on the Superior National Forest. This growth, typified by large-scale conservation projects and the construction of new administrative facilities, was largely the result of the successful implementation of Franklin Delano Roosevelt's Emergency Conservation Work program, otherwise known as the CCC. On March 31st, 1933, congress signed a bill giving President Roosevelt authority to begin federal programs for relief of unemployment. At the time the bill was signed, Minnesota had a 29% unemployment rate with that figure reaching nearly 70% on the Iron Range. Seven buildings and one structure at the Halfway Ranger District originated during this prodigious period of conservation-orientated development.<sup>31</sup>

CCC operations and activities were coordinated through the combined efforts of the War Department, which was responsible for "physical conditioning, transportation, camp construction and administration, and supplies," the Department of Agriculture and the Department of the Interior, which were "responsible for planning and conducting work projects on national forests" as well as on other public lands, and the Department of Labor, which selected the workers. Men from local communities, known as Local Experienced Men, or LEMs, were hired to direct building projects and to provide on-the-job training to enrollees. Generally, a CCC camp housed about 200 enrollees, up to 25 army personnel, around 30 staff from the Forest Service, and 10-20 LEMs.<sup>32</sup>

Eligibility for the CCC required citizenship and sound physical fitness; and membership was only granted to unemployed and unmarried men, 18 to 25 years of age, without criminal records. Enrollees enlisted for one six month term. However, with satisfactory work performance these terms could be extended for a total of two years. Each worker was provided food, clothing, shelter, and a wage of \$30 per month, \$25 of which the enrollee was required to send home to a dependent.<sup>33</sup>

<sup>28</sup> Unknown Author, "Who Do You Work For?" *Birch Lake Newsletter*, Vol. 2, May 20, (1936), 12.

<sup>29</sup> Marilyn Solberg Russell, *Recollections of Personalities and Events in the Early History in "Development of the South Kawishiwi Summer Homesite Area,"* on file at the Iron Range Research Center, Chisholm, Minnesota, ca. 1980s; Clayton et al, 12.

<sup>30</sup> Clayton et al., 1.

<sup>31</sup> Robert S. Drake, "The Civilian Conservation Corps – A Brief History," in *It Was a Good Deal: The Civilian Conservation Corps in Northeastern Minnesota*, ed. Edward P. Nelson and Barbara Sommer (Duluth: St. Louis County Historical Society, 1987), 9; Clayton et al., 12; Alison T. Otis, with William D. Honey, Thomas C. Hogg, and Kimberly K. Lakin, *The Forest Service and The Civilian Conservation Corps: 1933-42* (Washington D.C.: USDA Forest Service, 1986), 6.

<sup>32</sup> Drake, 12; Otis et al.; Clayton et al., 8.

<sup>33</sup> James F. Kieley, *CCC*, (U.S. Department of the Interior: National Park Service, 1938), 8; Otis et al., 7; Alfred Emile Corneise, *The CCC Chronicles: Camp Newspapers of the Civilian Conservation Corps, 1933-1942*, (Jefferson, NC: McFarland & CO, 2004), 11; Neil M. Maher, *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement*

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

By July 1933, enrollment had reached over 300,000, and more than 1,500 camps had been established across the country. This was the "largest peacetime mobilization...the United States had ever seen." The CCC was divided across the country into nine distinct units known as Corps Areas. The Corps Areas were then broken down into smaller districts, sub-districts and, finally, companies, each of which was housed at individual camps. However, CCC camps, with few exceptions, were not stable fixtures in any locale. The Corps was funded by Congress in six month increments known as Enrollment Periods, therefore, "the number of CCC camps and conservation projects fluctuated biannually." While, new camps were constantly being constructed, others were often abandoned or relocated, and there was never a fixed amount of camps. Each camp was delineated by a letter indicating the manager of the land on which it operated (all camps on national forest land were designated with the letter "F") and a number (for example, the camp that likely constructed Halfway Ranger Station was known as F-1). The various individual companies located at these camps were also given numbers (for example, F-1 housed Company 704).<sup>34</sup>

In northern Minnesota, CCC development projects (conducted between 1933 and 1942) included soil conservation, riparian rehabilitation, fish stocking, fire suppression, tree replanting, road improvement, and the construction of recreation and administrative facilities. From 1933 to 1942, a total of 28 CCC camps were established on the Superior National Forest.<sup>35</sup> Associated with these permanent camps were numerous spike camps, which were used for the duration of individual conservation projects and subsequently abandoned. The Superior National Forest Heritage Resource Office has identified nearly 130 CCC sites within the Superior National Forest.<sup>36</sup>

Historical documentation suggests that CCC Company 704 (based at Halfway Camp, 10 miles south of Ely, Minnesota) was involved in the construction of the Halfway Ranger Station, the South Kawishiwi River Campground, and the Kawishiwi Pavilion. Halfway Camp F-1 was established on May 18, 1933 approximately 3 miles west of the Halfway Ranger District. An excerpt from CCC Company 704's "Birch Lake Newsletter" states that "During the past year this camp completed the following...2 office buildings at Ranger Stations...and 4,337 Mandays maintenance at the Halfway Ranger Station and Lake States Experimental Station" (Birch Lake Newsletter 1935: 6). In addition to Company 704, there were a number of other CCC companies based in the area which could have contributed to the construction of the Halfway Ranger Station. These companies may have included Company 1720 (Dunnigan Camp), 701 (Gegoka Camp), (F54) Baptism Camp and 1721 (Isabella Camp).<sup>37</sup>

The available literature does not list the actual construction dates for the log buildings at the Halfway Ranger Station. However, congressional support (in the form of budgeted dollars) peaked between 1934 and 1936, and subsequently decreased in 1937.<sup>38</sup> An article from the Ely Miner (1934) indicates that money for ranger station construction was being allocated by the spring of 1934:

Forest fire protection and administrative improvements estimated to cost about \$220,000 are being approved for the National Forests of Illinois, Michigan, Minnesota, and Wisconsin and will be constructed by emergency conservation workers from the CCC and NIRA camps during the coming year, according to Regional Forester E.W. Tinker. The improvements include fire lookout towers, various buildings such as ranger stations; warehouses for tools, machinery and other equipment; lookout cabins; garages; wells, and telephone lines. The buildings are plain, neat and simply constructed. They are generally located in isolated parts of the forests and can be built by the CCC boys, but local skilled labor is employed, when the job requires it.

Photographic evidence also supports a ca. summer 1934 construction date for at least some of the log buildings at Halfway Ranger Station. A photograph of the Halfway warehouse (ranger dwelling in the background) is stamped with a date of September 9, 1934. It is likely that the pump house, office building, boathouse, oil house, and outhouse, all of which are similar in design, workmanship, and materials, were constructed shortly thereafter.<sup>39</sup>

(Oxford: Oxford University Press, 2008), 19; Soil Conservation Service and the U.S. Forest Service, *The CCC at Work: A Story of 2,500,000 Young Men*, (Washington, D.C.: U.S. Government Printing Office, 1941), 16.

<sup>34</sup> Otis et al.; Clayton et al.

<sup>35</sup> Drake, 17.

<sup>36</sup> Cultural Resource Inventory forms on file at the Superior National Forest Supervisor's Office, Duluth, MN; Clayton et al., 8-9.

<sup>37</sup> Clayton et al., 8-12.

<sup>38</sup> Drake, 13.

<sup>39</sup> *Ibid.*, 9.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

### Architectural Context

This section consists of an overview of the architectural significance embodied in the buildings within the HRS. It explores the history of USFS administrative building design which had considerable influence on the design of the buildings at the HRS. The section also addresses the development and significance of rustic or Adirondack architecture.

The evolution of the USFS as a federal land management agency is reflected in the increasing complexity of form, shape, and design embodied in its administrative buildings. Yet, this complexity cannot be divorced from other contributing factors such as the evolution of building design, material technologies, and raw material availability.<sup>40</sup>

During the early years of the USFS (1909-1920s), employees constructed buildings that exhibited minimalism and simplicity in design, materials, and construction methods. This was a period in Forest Service history characterized by limited funding for field operations. Prior to the construction of "simple" buildings, employees had to, "carry out their duties in rented rooms in towns, in abandoned homesteads, and in tents in the field."<sup>41</sup> And while the Forest Service eventually constructed administrative buildings (guard stations and ranger stations), constraints in funding and support, and a lack of professional design standards led to many "small, poorly designed...and inadequate [buildings] for conducting day-to-day business."<sup>42</sup> Early Forest Service administrative buildings were also, "largely reflective of the ranger's personal preferences, as well as the materials, tools, and time available to them."<sup>43</sup>

Significant changes in USFS land management goals during the 1920s and 1930s, led to increased support for reliable infrastructure (access roads, buildings, and structures) throughout the forests. During this period, the LSFES Dwelling was constructed. Supported with funds provided by the Hoover administration's Public Works Program, the LSFES Office/Dwelling was built in 1931 as a combination office/laboratory/living quarters. It was probably built to a standardized plan. This balloon or platform-framed building is an example of a vernacular type known as the National Style. The single-story layout of the building, as well as the front entrance porch and finished attic space, is indicative of the "gablefront" subgroup or family of the ubiquitous National Folk Style. Later versions of gable-front buildings of the National design were built with Craftsman detailing and spatial massing. The Craftsman Style was one of the leading residential design modes from the 1900s to the 1920s. The dwelling features some Craftsman elements, including a low-pitched gable roof and wide, unenclosed eave-overhangs<sup>44</sup>

Forest Service architecture continued to evolve through various initiatives following the Hoover Administration. New Deal directives, largely made in response to the economic depression, created positions for professional architects within the agency and organized a large labor force (CCC) with the capacity to undertake large construction projects. Both of these directives played an active role in the design and construction of the rustic buildings at the HRS. When considering Forest Service administrative buildings of the era, it is important to understand that their design was part of an agency-wide plan to standardize the architecture of administrative buildings, yet, allow for a certain amount of regional flexibility in their final construction.<sup>45</sup>

The most prominent individual associated with administrative building development during the era was Forest Service architect W. Ellis Groben. Hired specifically to help the Forest Service craft its own unique style of architecture, Groben developed a set of standard plans for the design and construction of administrative buildings. In the early 1930s, T.W. Norcross, Chief Engineer of the Forest Service, hired Groben as consulting landscape architect for the Washington DC headquarters. Groben argued that earlier forest facilities exhibited deficiencies, stating that Forest Service design did not "possess Forest Service identity or adequately express its purposes." His theories concerning architectural designs and form for administrative sites were published in technical information and design guidelines to assist regional architects and New Deal construction workers. Even though he developed general guidelines for designers, Groben also encouraged the different regions to develop building plans that reflected their separate identities. These guidelines were supplemented in 1936 and in 1937 when the Forest Service published the *Improvement Handbook* that specified building construction techniques and appropriate materials. Groben's guidelines articulated that buildings in a group should be of similar

<sup>40</sup> Clayton, 16.

<sup>41</sup> John R. Grosvenor, *A History of the Architecture of the USDA Forest Service* (Pacific Southwest Region USDA Forest Service, 1999), 3.

<sup>42</sup> Grosvenor, 3.

<sup>43</sup> Grosvenor, 3; Clayton et al., 16.

<sup>44</sup> Rudolph, 19; Grosvenor, 13-17; Clayton et al., 16-17; Virginia McAlester and Lee McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, Inc., 2003), 90, 453-454.

<sup>45</sup> Clayton et al., 16.

United States Department of the Interior  
 National Park Service / National Register of Historic Places Registration Form  
 NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
 Name of Property

Lake, MN  
 County and State

character and appearance, that local materials should be used whenever possible, and every effort should be taken to avoid combinations of materials (e.g. a stone building with brick and wood porch posts).<sup>46</sup>

Groben's guidelines were further refined and published in a book entitled *Acceptable Plans, Forest Service Administrative Buildings*. This book addressed how to effectively plan and design "acceptable" administrative complexes from site selection to color choices and individual building designs. "Architectural and landscape designs were integral parts of planning for optimum serviceability and utility, as was provisions for logical future expansion." Administrative, service, and residential buildings or building groups were organized separately to achieve maximum efficiency of operation and minimum interruption of activity. While the function of each respective building was clearly articulated, a uniformity of style was achieved through similarity of character and appearance (exhibited at HRS). "Continuity of forms and materials produced a textural harmony which contributed to the overall ensemble character of the site." Groben's site planning philosophy was supplemented by the work of A.D. Taylor. A prominent landscape architect, Taylor was hired by the Forest Service and authored the 1936 publication *Problem of Landscape Architecture in the National Forests*. Taylor furthered the discussion of how to locate buildings within a complex, and landscape effectively.<sup>47</sup>

One of Groben's stylistic recommendations for the Eastern Region of the USFS was the use of log construction. The architectural details of Groben's log designs are quite similar to the rustic or Adirondack style, previously developed and extensively utilized by the National Park Service during the early 20th Century. One prominent example of this style is the Park Service's Old Faithful Inn, built in 1912 at Yellowstone National Park. In fact, prior to the construction of log administrative buildings on the Superior National Forest, the state of Minnesota had already fashioned their administrative buildings according to tenets of Rustic design. One example of this is the famous Douglas Lodge built in Itasca State Park in 1905. Notable elements of the rustic style include the use of round, saddle-notched logs accentuated with chisel-shaped log-ends that often ran "proud" of wall planes at corner-junctions.<sup>48</sup>

At the HRS, the Ranger Dwelling, although featuring unique architectural deviations (the addition of a full-length porch instead of a stepped-in, partial-length porch), was constructed from Groben's Plan #48 for Ranger Dwellings. Its elevations, shape, details (exposed rafter tails, low profile shed roof dormer, interior finishes, and interior massing of room units) suggest a direct influence from the Craftsman school. However, the overall composition of the walls and corner details are clearly reflective of the rustic style and the rustic philosophy. The other six log buildings at the HRS are more purely rustic and largely devoid of Craftsman influence.<sup>49</sup>

The construction of rustic buildings on a nation-wide scale reflected changes in Forest Service administration strategies and priorities. However, these new administrative goals could not have been met without a ready supply of CCC labor. Without the CCC, the Superior National Forest would not have had the resources to construct the Halfway administrative facility. In addition, the CCC gave the Forest Service the opportunity to employ large crews composed of both trainees (CCC enrollees) and professional craftspeople (LEM). As a result, facilities at administrative sites like the HRS were built with a high level of workmanship.<sup>50</sup>

The HRS features representations of three distinct yet interconnected styles of architecture that predominated throughout the Forest Service during the first half of the Twentieth Century. The LSFES Dwelling/Office and the log buildings of the Halfway Ranger Station are manifestations of policies implemented during two Presidential administrations: Hoover and Roosevelt. In addition, the HRS buildings are good examples of three significant design styles: National Folk, Rustic or Adirondack, and Craftsman.

<sup>46</sup> Kay Atwood, with Sally Donovan, Dennis Gray and Ward Tonsfeldt, *Utility and Service Combined with Beauty: A Contextual and Architectural History of USDA Forest Service Region 6 (1905-1960)* (Pacific Northwest Region: USDA Forest Service, 2004), 50-51.

<sup>47</sup> Ibid, 53.

<sup>48</sup> Grosvenor, 32; Bruce D. Bomberger, *The Preservation and Repair of Historic Log Buildings* in Preservation Briefs 26 (Washington, D.C.: National Park Service, 1991); Edith A. Dunn, *An Evaluation of Selected Log Structures at Superior National Forest: Isabella Ranger Station, Tofte Ranger Station, North Central Research Station, South Kawishiwi River Community Building*. Submitted to USDA Forest Service, Purchase Order: 43-63A9-7-3143; National Park Service, *National Register NRHP Multiple Property Documentation Form: Minnesota State Park CCC/WPA/Rustic Style Historic Resources* (St. Paul: Minnesota Historical Society, 1989); National Park Service, *Federal Relief Construction in Minnesota, 1933-1941* (St. Paul: Minnesota Historical Society, 1989).

<sup>49</sup> Dunn; Clayton et al., 20-23.

<sup>50</sup> Clayton et al.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

### 9. Major Bibliographical References

**Bibliography** (Cite the books, articles, and other sources used in preparing this form.)

- Atwood, Kay with Sally Donovan, Dennis Gray and Ward Tonsfeldt. *Utility and Service Combined with Beauty: A Contextual and Architectural History of USDA Forest Service Region 6 (1905-1960)*. Pacific Northwest Region: USDA Forest Service, 2004.
- Barnes, Helen D. Early Canoes by Old Paddlers. *The Superior Paddle*. 27 November 1970.
- Bomberger, Bruce D. *The Preservation and Repair of Historic Log Buildings*. Preservation Briefs 26. Washington, D.C.: National Park Service, 1991.
- Bergoffen, W. W. *100 Years of Federal Forestry*. Washington, D.C.: U.S. Government Printing Office, 1976.
- Unknown Author. "Spirit of 704 Forestry News." *Birch Lake Newsletter* (1935).
- Unknown author. Who Do You Work For? *Birch Lake Newsletter* Vol. 3 No. 2 (1936).
- Clayton, William, Lee Johnson, Erin Potter, Walt Okstad. *Halfway Ranger Station Historic District Historic Structure Report*. Duluth: Heritage Resources Program, Superior National Forest, 2006.
- Conrad, David E. *The Land We Cared For...A History of the Forest Service's Eastern Region*. Milwaukee: USDA Forest Service, 1997.
- Cornelise, Alfred Emile. *The CCC Chronicles: Camp Newspapers of the Civilian Conservation Corps, 1933-1924*. Jefferson, NC: McFarland, 2004.
- Drake, Robert S. "The Civilian Conservation Corps – A Brief History." In *It Was a Good Deal: The Civilian Conservation Corps in Northeastern Minnesota*, edited by Edward P. Nelson and Barbara Sommer, pp. 9-15. Duluth: St. Louis County Historical Society, 1987.
- Dunn, Edith A. *An Evaluation of Selected Log Structures at Superior National Forest: Isabella Ranger Station, Tofte Ranger Station, North Central Research Station, South Kawishiwi River Community Building*. Submitted to USDA Forest Service, Purchase Order: 43-63A9-7-3143, 1997.
- Miner, Ely. "Four States to Receive Forest Improvement, April 20." Ely, Minnesota, 1934.
- Facilities Records for the Kawishiwi Field Laboratory. On file with Engineering & Facility Services, US Forest Service Northern Research Station, St. Paul, MN 55108.
- Frome, Michael. *Whose Woods These Are: The Story of the National Forests*. Garden City, NY: Doubleday & Company, Inc., 1962.
- Forester, Jeff. *The Forest For The Trees: How Humans Shaped the North Woods*. St. Paul: Minnesota Historical Society Press, 2004.
- Goodall, Harrison and Renee Fiedman. *Log Structures: Preservation and Problem-Solving*. Nashville: The American Association for State and Local History, 1980.
- Groben, W. Ellis. *Acceptable Plans, Forest Service Administrative Buildings*. Washington, D.C.: USDA Forest Service, 1938.
- Grosvenor, John R. *A History of the Architecture of the USDA Forest Service*. Pacific Southwest Region: USDA Forest Service, 1999.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station

Lake, MN

Name of Property

County and State

- Heinselman, Miron. *The Boundary Waters Wilderness Ecosystem*. Minneapolis: The University of Minnesota Press, 1996.
- Kylie, H.R., G.H. Hieronymus, and A.G. Hall. *CCC Forestry*. Washington, DC: US Government Printing Office, 1937.
- McAlester, Virginia and Lee McAlester. *A Field Guide to American Houses*. New York: Alfred A. Knopf, Inc., 2003.
- Merrill, Perry H. *Roosevelt's Forest Army: A History of the Civilian Conservation Corps*. Montpelier: Perry H. Merrill, 1981.
- National Park Service. Register NRHP Multiple Property Documentation Form: Minnesota State Park CCC/WPA/Rustic Style Historic Resources. St. Paul: National Minnesota Historical Society, 1989.
- National Park Service. Federal Relief Construction in Minnesota, 1933-1941. St. Paul: National Minnesota Historical Society, 1989.
- National Center for Cultural Resources (NCCR). *Federal Historic Preservation Laws*. Washington, D.C.: National Park Service, U.S. Department of the Interior, 2002.
- Northern Research Station (NRS). Unpublished Deferred Maintenance Report on the Kawishiwi Field Laboratory. Spreadsheet on file, Northern Research Station, St. Paul, Minnesota, 1999.
- Otis, Alison T., William D. Honey, Thomas C. Hogg, and Kimberly K. Lakin. *The Forest Service and the Civilian Conservation Corps: 1933-1942*. Washington, DC: USDA Forest Service, 1986.
- Rudolf, Paul O. *History of the Lake States Forest Experiment Station*. Washington, D.C.: Government Printing Office, 1985.
- Russell, Marilyn Solberg. "Recollections of Personalities and Events in the Early History." In *Development of the South Kawishiwi Summer Homesite Area*, ca. 1980s.
- Searle, R. Newell. *Saving Quetico-Superior: A Land Set Apart*. Duluth: Minnesota Historical Society Press, 1977.
- Soil Conservation Service and the U.S. Forest Service. *The CCC at Work: A Story of 2,500,000 Young Men*. Washington D.C.: U.S. Government Printing Office, 1941.
- Steen, Harold K. *Origins of the National Forests*. Durham: The Forest History Society, 1992.
- Steen, Harold K. *The U.S. Forest Service: A History*. Seattle: University of Washington Press. Originally published 1976, Reprinted 1991.
- Superior National Forest. 1927 Improvement Project Records. On file at the Iron Range Research Center, Chisholm, Minnesota.
- Weeks, Kay D. and Anne E. Grimmer. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. Washington, D.C.: National Park Service, 1995.
- White, J. Wesley. *Historical Sketches of the Quetico-Superior, Vol. III*. Superior National Forest: U.S. Department of Agriculture, 1967.
- Historical Sketches of the Quetico-Superior, Vols. I-XVI*. Superior National Forest: U.S. Department of Agriculture: 1967-1974.
- Historical Sketches of the Quetico-Superior, Vol. VII*. Superior National Forest: U.S. Department of Agriculture: 1974.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

*Historical Sketches of the Quetico-Superior*, Vol. XII. Superior National Forest: U.S. Department of Agriculture: 1974.

*Historical Sketches of the Quetico-Superior*, Vol. XVI. Superior National Forest: U.S. Department of Agriculture: 1974.

Williams, Gerald W. *The USDA Forest Service – The First Century*. Washington, D.C.: USDA Forest Service, 2000.

United States Department of the Interior  
 National Park Service / National Register of Historic Places Registration Form  
 NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
 Name of Property

Lake, MN  
 County and State

**Previous documentation on file (NPS):**  
 preliminary determination of individual listing (36 CFR 67 has been requested)  
 previously listed in the National Register  
 previously determined eligible by the National Register  
 designated a National Historic Landmark  
 recorded by Historic American Buildings Survey # \_\_\_\_\_  
 recorded by Historic American Engineering Record # \_\_\_\_\_  
 recorded by Historic American Landscape Survey # \_\_\_\_\_

**Primary location of additional data:**  
 State Historic Preservation Office  
 Other State agency  
 Federal agency  
 Local government  
 University  
 Other  
 Name of repository: \_\_\_\_\_

Historic Resources Survey Number (if assigned): \_\_\_\_\_

**10. Geographical Data**

**Acreage of Property** 12  
 (Do not include previously listed resource acreage.)

**UTM References**  
 (Place additional UTM references on a continuation sheet.)

1	<u>15</u>	<u>594446</u>	<u>5296290</u>	3	_____	_____	_____
	Zone	Easting	Northing		Zone	Easting	Northing
2	_____	_____	_____	4	_____	_____	_____
	Zone	Easting	Northing		Zone	Easting	Northing

**Verbal Boundary Description** (Describe the boundaries of the property.)

The HRS is located in Township 62 North, Range 11 West, Section 33, 4<sup>th</sup> P.M. Babbitt, Minnesota 7.5" USGS Quadrangle Map. As shown in the attached District Boundary Map, the site is situated adjacent to the South Kawishiwi River, approximately twelve miles southeast of Ely, Minnesota in Lake County. The facility occupies a twelve acre parcel of land and features distinct geographic boundaries on all sides. Generally oriented obliquely toward the northeast, the Property's northeastern boundary is Highway 1, at which the HRS can be accessed at two points, its entire southeastern boundary is marked by a prominent rock outcropping, its southwest boundary is marked by a small creek (name unknown) which drains into the South Kawishiwi River and a geographic depression, and its northwestern boundary is the South Kawishiwi River.

**Boundary Justification** (Explain why the boundaries were selected.)

Boundaries were selected based on the property owned by the USFS for use by the HRS during its period of significance. Additionally, the boundaries are aligned with distinct landscape elements, which include roads, waterways, and earthen features.

**11. Form Prepared By**

name/title John Ferguson/ Architectural Historian and Josh Weinberg/ Architectural Historian  
 organization USDA Forest Service/Heritage Stewardship Group date June 1, 2011  
 street & number 1001 SW Emkay Dr. telephone 970-290-2104  
 city or town Bend state OR zip code 97702  
 e-mail jferguson@fs.fed.us

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

**Additional Documentation**

Submit the following items with the completed form:

- **Maps:** A USGS map (7.5 or 15 minute series) indicating the property's location.  
  
A Sketch map for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items.)

**Photographs:**

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

**Name of Property:** Halfway Ranger Station      **City or Vicinity:** Ely

**County:** Lake      **State:** Minnesota

**Photographer:** John Ferguson

**Date Photographed:** June 5, 2009

**Description of Photograph(s) and number:**

- 1 of 18. Ranger Dwelling (FS Bldg. #31101); Contributing. Northern elevation.
- 2 of 18. Ranger Dwelling (FS Bldg. #31101); Contributing. Southern elevation.
- 3 of 18. LSFES Office (FS Bldg. #31108); Contributing. Western elevation.
- 4 of 18. LSFES Office (FS Bldg. #31108); Contributing. Eastern elevation.
- 5 of 18. District Office (FS Bldg. #31105); Contributing. Western elevation.
- 6 of 18. Cellar (FS Bldg. #31103); Contributing. Western elevation.
- 7 of 18. Boat House (FS Bldg. #31107); Contributing. Western elevation.
- 8 of 18. Boat House (FS Bldg. #31107); Contributing. Eastern elevation.
- 9 of 18. Warehouse (FS Bldg. #31106); Contributing. Southeast elevation.
- 10 of 18. Warehouse (FS Bldg. #31106); Contributing. Eastern elevation.
- 11 of 18. Oil House (FS Bldg. #31111); Contributing. Northern elevation.
- 12 of 18. Oil House (FS Bldg. #31111); Contributing. Western elevation.
- 13 of 18. Pumphouse (FS Bldg. #31102); Contributing. Southwestern elevation.
- 14 of 18. Outhouse/Sauna (No FS number); Contributing. Southern elevation.

United States Department of the Interior  
National Park Service / National Register of Historic Places Registration Form  
NPS Form 10-900 OMB No. 1024-0018

(Expires 5/31/2012)

Halfway Ranger Station  
Name of Property

Lake, MN  
County and State

**15 of 18.** Insectary and Laboratory (FS Bldgs. #31104 and #31109); Contributing. Northeast elevations.

**16 of 18.** Insectary (FS Bldg. #31104); Contributing. Southeast elevation.

**17 of 18.** Laboratory (FS Bldg. #31109); Contributing. Eastern elevation.

**18 of 18.** Outhouse (No FS number); Contributing. Northern elevation.

**Property Owner:**

(Complete this item at the request of the SHPO or FPO.)

name USDA Forest Service Northern Research Station  
street & number 11 Campus Blvd., Suite 200 telephone 610-557-4017  
city or town Newtown Square state Pennsylvania  
zip code 19073

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).  
**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

PHOTOGRAPHS



1 of 18. Ranger Dwelling (FS Bldg. #31101); Contributing. Northern elevation. Lake County, MN.



2 of 18. Ranger Dwelling (FS Bldg. #31101); Contributing. Southern elevation. Lake County, MN.



3 of 18. LSFES Office (FS Bldg. #31108); Contributing. Western elevation. Lake County, MN.



4 of 18. LSFES Office (FS Bldg. #31108); Contributing. Eastern elevation. Lake County, MN.



5 of 18. District Office (FS Bldg. #31105); Contributing. Western elevation. Lake County, MN.



6 of 18. Cellar (FS Bldg. #31103); Contributing. Western elevation. Lake County, MN.



7 of 18. Boat House (FS Bldg. #31107); Contributing. Western elevation. Lake County, MN.



8 of 18. Boat House (FS Bldg. #31107); Contributing. Eastern elevation. Lake County, MN.



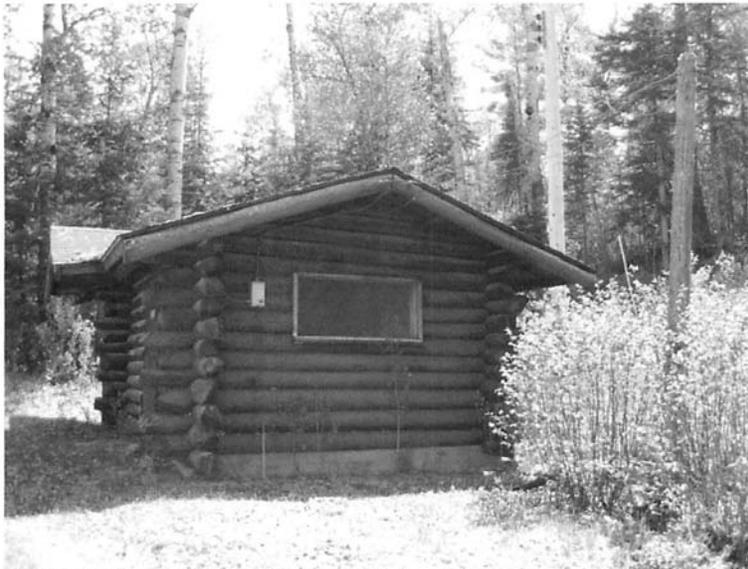
9 of 18. Warehouse (FS Bldg. #31106); Contributing. Southeast elevation. Lake County, MN.



10 of 18. Warehouse (FS Bldg. #31107); Contributing. Eastern elevation. Lake County, MN.



11 of 18. Oil House (FS Bldg. #31111); Contributing. Northern elevation. Lake County, MN.



12 of 18. Oil House (FS Bldg. #31111); Contributing. Western elevation. Lake County, MN.



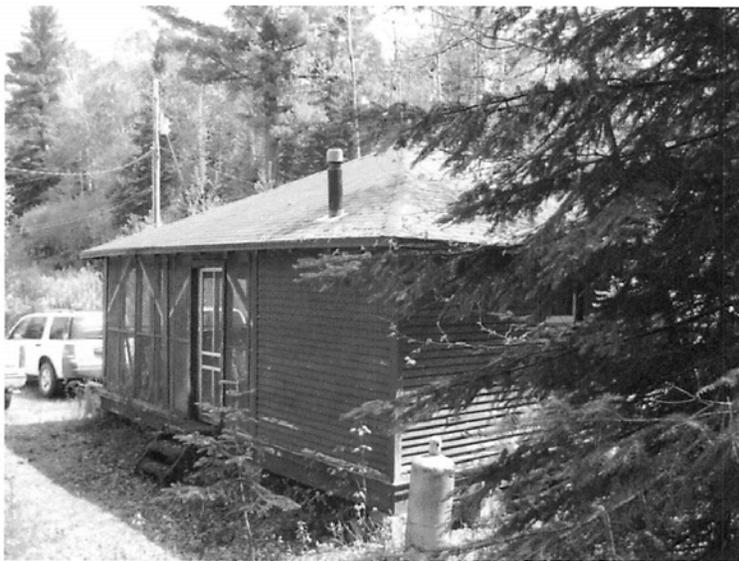
13 of 18. Pumphouse (FS Bldg. #31102); Contributing. Southwestern elevation. Lake County, MN.



14 of 18. Outhouse/Sauna (No FS number); Contributing. Southern elevation. Lake County, MN.



15 of 18. Insectary and Laboratory (FS Bldgs. #31104 and #31109); Contributing. Northeast elevations. Lake County, MN.



16 of 18. Insectary (FS Bldg. #31109); Contributing. Southeast elevation. Lake County, MN.



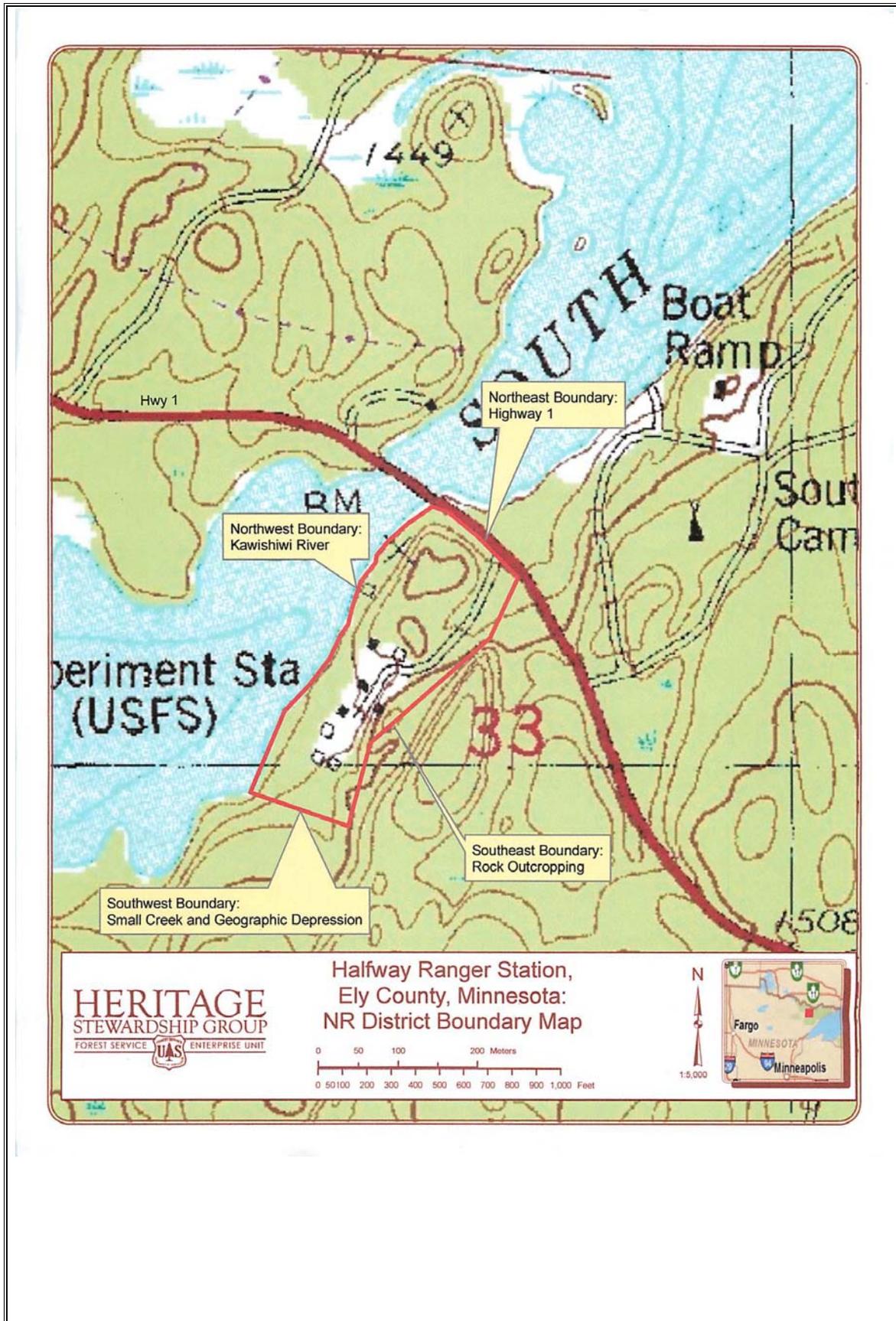
17 of 18. Laboratory (FS Bldg. #31104), Contributing. Eastern elevation. Lake County, MN.



18 of 18. Outhouse (No FS number), Contributing. Northern elevation. Lake County, MN.







## **Appendix D**

Summary of Comments on July 2010 Environmental Assessment; Northern Research Station Kawishiwi Field Laboratory Building Disposition

## **Substantive Public and Agency Comments on Environmental Assessment; Northern Research Station Kawishiwi Field Laboratory Building Disposition, July 2010**

The substantive comments from public and agency review of the *Environmental Assessment, Northern Research Station, Kawishiwi Field Laboratory Building Disposition* (EA) can be grouped into five general topic areas: 1) impacts to ongoing research currently headquartered at the field lab; 2) linkage between disposition of the field lab buildings and mining proposals in the area; 3) significance of the historic buildings/district; 4) examine additional alternatives or modify existing alternatives to enhance their viability; and 5) miscellaneous.

### **Ongoing research at the field lab:**

*Comment:* Research is ongoing at lab, just not done by the Northern Research Station (NRS). Thus keeping the lab is consistent with NRS goal to “*improve the Station’s capacity as a partner in research collaboration and regional partnerships*”

*Response:* The United States Geological Survey (USGS) Northern Prairie Wildlife Research Center, which had been the sole tenant of Kawishiwi Field Lab (hereafter referred to as Halfway Ranger Station, or HRS), vacated the Station in 2011 due to unsafe building conditions. While the USGS wildlife research formerly based at HRS has produced valuable information, the NRS had no role in this research other than serving in a land lord capacity as owners of the buildings used. The research formerly based at HRS did not improve NRS’s capacity as a partner in research, because NRS did not actively participate in the research.

*Comment:* Loss of wildlife research conducted at HRS would violate Endangered Species Act.

*Response:* This comment was based on two faulty assumptions: first, the assumption that research formerly headquartered at HRS would cease if the buildings were closed; second, that discontinuing research on a listed species violates the endangered species act. Regarding the first assumption, when USGS vacated the HRS, the research was simply moved to another Forest Service building in Ely, Minnesota. While the new location is less conveniently located to host field research on gray wolves, lynx, and a variety of other boreal forest wildlife, than is HRS, the new location has other advantages. These include proximity to the International Wolf Center, ready access to field offices of the Superior National Forest, and safe modern facilities. Loss of the HRS buildings as a USGS research headquarters thus did not result in the cessation of research previously headquartered there.

On the second assumption, the comment misconstrues the scope of Federal Endangered Species Act, which encourages research on listed species but enforces prohibitions against actions that directly harm such species or their designated critical habitat. Closing a research venue is not a violation of the Endangered Species Act. NRS received a memo (see Appendix A of this EA) from the U.S. Fish and Wildlife Service, which administers the Endangered Species Act, stating that no federally listed or proposed threatened or endangered species or designated or proposed critical habitat occur within the action area of the EA.

*Comments:* Loss of research conducted at site is a significant impact to several wildlife species. Loss of wildlife research significant to Chippewa Tribe, as some species studied are Tribally Significant

*Response:* As stated above, research formerly headquartered at HRS is now hosted at an alternate site in Ely, Minnesota. This relocation ultimately benefitted research by removing current unsafe conditions to which the researchers were exposed at the HRS site.]

### **Linkage to Mining Proposals**

*Comment:* An Environmental Impact Statement is appropriate due to existing proposals to mine a variety of minerals in area. Removing the historic buildings at the HRS site would remove an impediment to approval of mining proposals.

*Response:* As stated in this EA (Section 3.5), none of the existing mining proposals target the HRS site. Superior National Forest review and approval of requests for mining permits is a separate process from the disposition of buildings at this site.

### **Significance of the Historic Building/District**

*Comment:* Buildings at the HRS site have great importance due their association with the Depression era Civilian Conservation Corps (CCC).

*Response:* The NRS recognizes the historical significance of the HRS, as evidenced by its having contracted the *Halfway Ranger Station Historic District §106 Resource and Boundary Delineation Report* and proposed action of partnering with Northern Bedrock for the buildings' rehabilitation, maintenance, and adaptive reuse.

*Comment:* Documentation of the site and buildings to the standards of the Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and Historic American Landscapes Survey (HALS) is insufficient mitigation for demolition of an historic site.

*Response:* NRS recognizes that the loss of the historic buildings and landscapes of HRS cannot be fully mitigated. For this reason NRS now proposes entering a participating agreement with a partner for rehabilitation, maintenance, and adaptive reuse of the buildings.

*Comment:* Consultation under Section 106 of National Historic Preservation Act (NHPA) is not complete, thus any NEPA decision would be premature. Section 110 of the NHPA requires agencies give special consideration to preserving nationally significant properties. HRS is such a property.

*Response:* NRS is consulting with the Minnesota SHPO as required by Section 106; no final decision will be issued prior to completion of this process. The new Proposed Action of entering a participating agreement with Northern Bedrock for rehabilitation, maintenance, and adaptive reuse of the HRS buildings reflects NRS's recognition of this property as a nationally important historic property.

*Comment:* NRS needs to consider the archaeological significance of site, not just the historic structures.

*Response:* The *Halfway Ranger Station Historic District §106 Resource and Boundary Delineation Report* addresses the historic and cultural significance of the entire site, as well of this structures on the site. While the prehistoric use of the area by Sioux and Chippewa Tribes is noted in the EA (Section 3.6), no prehistoric artifacts or sites have been located on the HRS site.

*Comment:* All buildings on site contribute to historic significance of site.

*Response:* When NRS prepared the 2010 EA, it concurred with the conclusion of the *Halfway Ranger Station Historic District §106 Resource and Boundary Delineation Report* that three buildings; the Insectary, the Laboratory, and a nearby outhouse; did not contribute to the historical significance of the site. These three buildings were, however, included as contributing elements in the 2012 nomination of the site for listing on the National Register of Historic Places. NRS thus recognizes their historic importance in the analysis presented in the current EA.

*Comment:* The EA should address importance of the ranger station in overall regional historical context.

*Response:* Both the EA and the *Halfway Ranger Station Historic District §106 Resource and Boundary Delineation Report*, which is incorporated into the EA by reference, provide historic background on the site, during its use as a National Forest ranger station, as a field lab of the NRS, and as the base lab of field wildlife research conducted by USGS in recent years.

### **Alternative Uses or Reuses**

*Comment:* Alternatives 3 (increase maintenance funding for site), 4 (transfer ownership and management of buildings), and 5 (transfer management of buildings) in the EA are “straw men.” Alternative 3 will not be implemented because NRS has no intention of increasing maintenance funding. Alternatives 4 and 5 will not be implemented because a special use permit (SUP) from Superior National Forest would be required for third party use of the site, and the National Forest has indicated that no SUP would be approved.

*Response:* It is common in NEPA analyses to evaluate actions that have a low likelihood implementation, but are reasonable alternatives to the proposed action. Such alternatives can provide valuable insight into the full range of impacts which would occur from various possible scenarios, and their public disclosure may create momentum for initially marginal alternatives. A more fully developed of Alternative 4 is now the proposed alternative.

*Comment:* NRS should explore the possibility of obtaining preservation funds from the Minnesota Heritage Fund as “Alternative 7” in the EA.

*Response:* NRS is in the process of executing a participating agreement with Northern Bedrock, a non-governmental organization that has requested funding from the Minnesota Heritage Fund.

*Comment:* Superior National Forest should consider issuing an SUP or disclose reasons for not issuing one.

*Response:* A SUP is not required for reuse of the site by a third-party user operating under a participating agreement with NRS.

### **Miscellaneous**

*Comment:* What is the status of Experimental Forest? Are HRS buildings on Experimental Forest lands?

*Response:* The 2,635-acre Kawishiwi Experimental Forest was established in 1931 to research silvics and silviculture of jack pine, the spruces and balsam fir. By the mid-1950s the timber types and condition classes of the Experimental Forest were no longer considered suitable for research needs and the Lakes States Forest Experimental Station (precursor to NRS) recommended that the Kawishiwi Experimental Forest be “turned back to the Superior National Forest for management”

other than 116 acres comprising the HRS and adjacent lands. This was formally implemented by the Chief of the Forest Service on June 20, 1967. Since that time, the Kawishiwi Experimental Forest has essentially been limited to the grounds of HRS.

*Comment:* Sale of Isabella Ranger Station is a precedent for the sale of Forest Service historic buildings to private parties with conditions on the sale that the buildings be maintained in their historic condition.

*Response:* Alternative 3 in the EA, Transfer of Ownership and Management, is similar to the sale of historic properties at Isabella, except that the Superior National Forest would retain ownership of the underlying land.

*Comment:* EA does not disclose economic effects of closing HRS.

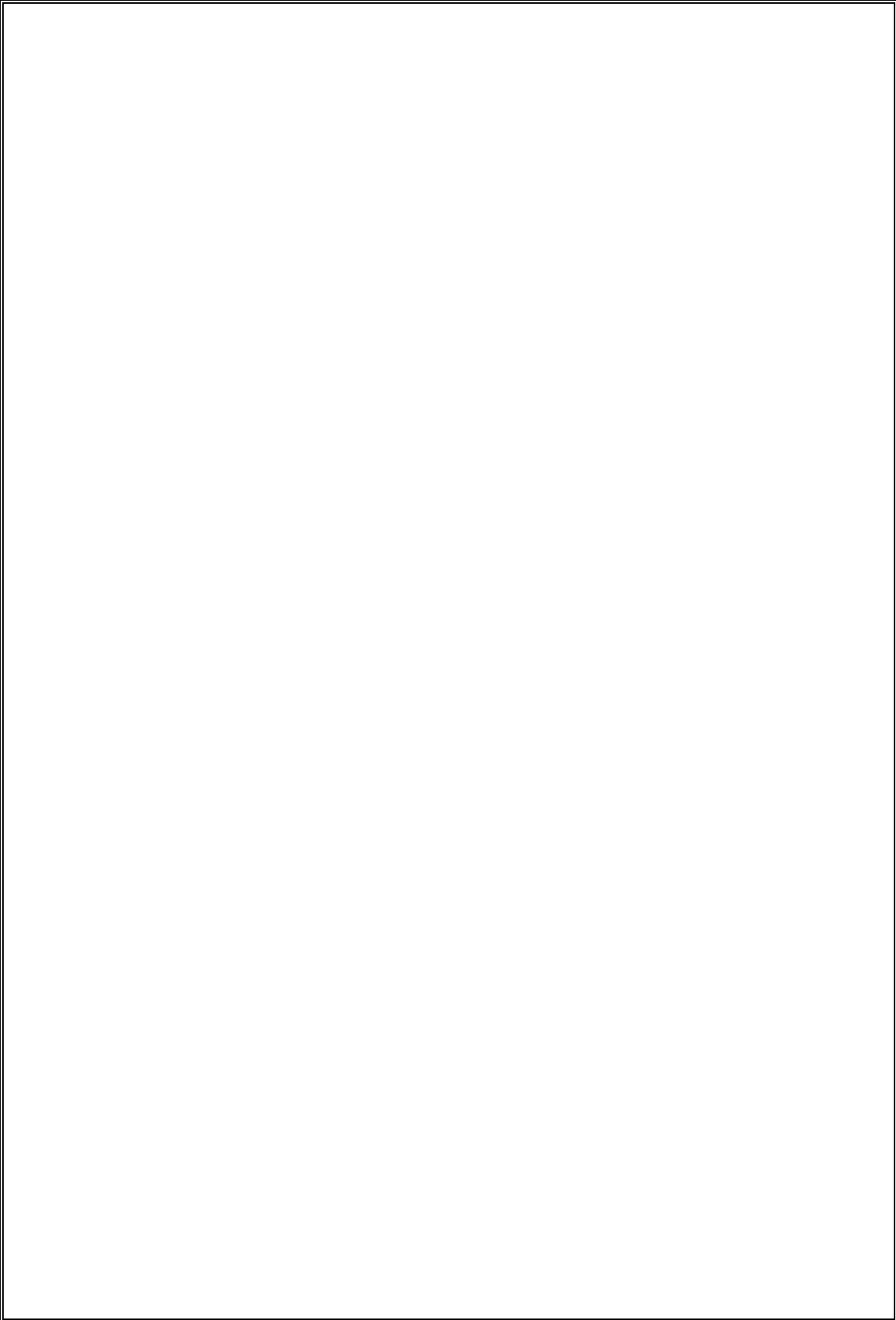
*Response:* Chapter 3.9, Socioeconomics, analyzes the effects of the various alternatives on the local economy to the level of detail appropriate in an environmental assessment.

*Comment:* Controversy surrounding demolition triggers significance under NEPA, thus a full environmental impact statement should be prepared.

*Response:* The language in the National Environmental Policy Act regulations that defines significance, and thus determines when an environmental impact statement is required, states that the following should be considered in evaluating the intensity of an action: “the degree to which the effects on the quality of the human environment are likely to be highly controversial” (40 CFR§1508.27 (b)(4)). In interpreting this language, the courts have stated that virtually all federal actions are likely to engender some opposition, and are thus controversial. In the context of determining significance under NEPA, “controversy” should be used to describe situations where considerable disagreement exists regarding the size, nature, or effect of the federal action, rather than the mere existence of opposition to an action, the effect of which is not in dispute. The effect of the proposed federal action, demolition of historic buildings at HRS, is not generally in dispute, thus the existence of opposition to the action does not constitute “controversy” as applied to NEPA.

*Comment:* Preserving HRS is consistent with *Superior National Forest Plan*.

*Response:* Heritage Resource Standard 2 of the *Superior National Forest Plan* states, in part: “National Register eligible properties receive full consideration under the National Historic Preservation Act.” The consultation that NRS is conducting with the MN SHPO reflects full consideration of the site’s National Register status.



## **Appendix E**

### Halfway Ranger Station Adaptive Reuse Biological Assessment

# Halfway Ranger Station Adaptive Reuse

## Biological Assessment

Prepared by:

John R. Slown  
Biologist/Planner

Enterprise Technical Services Enterprise Unit

for:

Northern Research Station

February 2015





The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDAs TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202)720-6382 (TDD). USDA is an equal opportunity provider and employer.

## Table of Contents

INTRODUCTION.....	6-1
PROPOSED ACTION .....	6-2
Summary of Action.....	6-2
Area of Analysis.....	6-3
APPLICABLE LAWS AND REGULATORY REQUIREMENTS .....	6-4
Endangered Species Act (ESA).....	6-4
Forest Service Manual (FSM).....	6-5
The National Forest Management Act of 1976 .....	6-5
National Environmental Policy Act of 1969 (NEPA) .....	6-5
U.S. Fish and Wildlife Service Effects Definitions.....	6-5
AFFECTED ENVIRONMENT.....	6-6
Species of Concern.....	6-7
Effects Determinations and Background .....	6-8
Gray wolf ( <i>Canis lupus</i> ) .....	6-8
Canada Lynx ( <i>Lynx canadensis</i> ) .....	6-11
Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ) .....	6-13
References Cited.....	6-17

### List of Tables

Table 1 Forest Types in Jack Pine/Black Spruce Landscape Ecosystem .....	6-7
Table 2 Forest Types in Lowland Conifer Landscape Ecosystem .....	6-7
Table 3 Summary of federally listed species or species proposed for listing.....	6-8
Table 4 Minimum Wolf Population Estimates for Minnesota .....	6-10

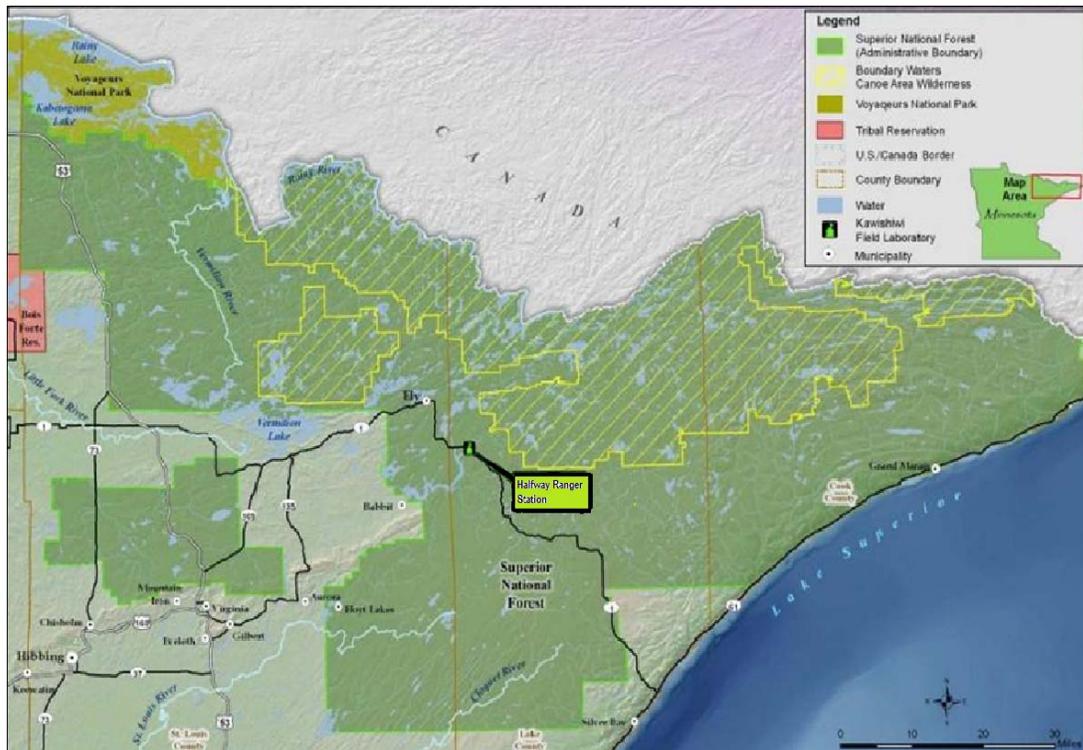
### List of Figures

Figure 1 Site Location, Halfway Ranger Station.....	6-1
Figure 2 Kawishiwi Experimental Forest and Halfway Ranger Station Site .....	6-4
Figure 3 Whitenose Syndrome Infested Hibernacula.....	6-16



## INTRODUCTION

The Halfway Ranger Station (HRS), also known as the Kawishiwi Field Laboratory or K-lab, is administered by the Northern Research Station, a unit of the USDA Forest Service Research and Development Branch. HRS is located on the Kawishiwi Experimental Forest, which was established in 1931 from lands previously administered by the Superior National Forest. HRS is located in Township 62 North, Range 11 West, Section 33, 4th P.M., Bogberry Lake, Minnesota 7.5 Minute Quadrangle Map. The site is within the Superior National Forest along the eastern bank of the South Kawishiwi River in Lake County, Minnesota, approximately 12 miles southeast of Ely, Minnesota, on the west side of Minnesota Route 1 and the east bank of the South Kawishiwi River (see Figure 1).



**Figure 18 Site Location, Halfway Ranger Station**

The HRS was originally established in 1910 as the Superior National Forest Halfway Ranger Station. In 1931 the Kawishiwi Experimental Forest was established on land including the HRS administrative site, and administration was transferred from the Superior National Forest to USFS Research and Development Division. HRS then became an office and lab complex for research conducted on the Kawishiwi Experimental Forest. After the Kawishiwi Forest was considerably reduced in size in 1967, research conducted out of the buildings shifted from a focus on forestry to one on wildlife research. Research teams from the University of Minnesota and the United States Geological Survey (USGS) as well as Forest Service personnel used the HRS facilities. By the 1980s, the USFS Research and Development Division had discontinued all of its research activity at the site, but retained administration of the experimental forest and ownership and management of the HRS buildings. The USGS Northern Prairie Wildlife Research Center, which formerly conducted wildlife research based from the buildings, vacated HRS in 2011 due to safety concerns related to the poor condition of the buildings. The site has since been vacant.

The Northern Research Station currently seeks to enter into a participating agreement with the Northern Bedrock Historic Preservation Corps (Northern Bedrock), a non-governmental organization. Northern Bedrock would provide rehabilitation and maintenance of the HRS buildings, in exchange for use of the HRS site as a training facility, staff bunkhouse, and headquarters for its program of teaching historic building rehabilitation and maintenance skills.

The purpose of this site specific Biological Assessment (BA) is to identify and evaluate the effects of proposed Forest Service actions on species listed or proposed for listing as threatened or endangered pursuant to the Endangered Species Act of 1973 and on their designated Critical Habitat. This BA will provide biological information to ensure the USDA Forest Service, Northern Research Station's compliance with the National Forest Management Act (NFMA), National Environmental Policy Act (NEPA), Forest Service Manual 2670, Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1536 [c] et seq. 50CFR 402), and follows the standards established in the Forest Service Manual direction (FSM 2672.42; USDA Forest Service 1991). This document complies with the requirements of the Endangered Species Act to disclose effects on listed species and their habitats. Additionally, this document provides a standard process to provide full consideration of federally listed species and their habitats in the decision-making process.

Section 7 of the Endangered Species Act directs federal agencies to ensure that actions they authorize, fund, or implement are not likely to jeopardize the continued existence of any species listed or proposed for listing as threatened or endangered, or result in destruction or adverse modification of the critical habitats of such species (16 U.S.C. 1536 et seq.). Federal Agencies must consult with the appropriate Secretary whenever an action is likely to affect a species listed as threatened or endangered, or to affect its critical habitat. The ESA mandates conference with the appropriate Secretary whenever an action is likely to jeopardize the continued existence of any species proposed for listing as threatened or endangered, or whenever an action might result in destruction or adverse modification of critical habitat proposed for listing (16 U.S.C. 1536 (a) 4).

## **PROPOSED ACTION**

### **Summary of Action**

The proposed action would allow the Northern Research Station to execute a participating agreement with Northern Bedrock to secure rehabilitation and maintenance of eleven buildings and one structure at HRS, all of which are listed on the National Register of Historic Places. The purpose of the action is for the Northern Research Station to identify an acceptable strategy for relief of the HRS buildings' operation and maintenance costs. The HRS buildings are under Northern Research Station ownership and management. This action is needed, because the Northern Research Station has not used the buildings for over 25 years and has no future plans for the buildings. Due to lack of resources to address the high annual utility and maintenance costs, the buildings are currently deteriorating. The buildings are excess to Northern Research Station needs and do not help fulfill the mission of the USFS Research and Development Division. An earlier Northern Research Station plan to raze the buildings and restore the site to forest condition was abandoned due to concern about the loss of historic resources.

Northern Bedrock has proposed to rehabilitate the HRS buildings in three phases. The first phase focuses on stabilization of the buildings and removal of hazards. During this phase 5 to 15 people would reside on the HRS site, in a primitive camping setting. Northern Bedrock would clear existing brush to create a recreation area of about an acre in a level area along the central access

road, install pit or vault toilets for use until HRS septic systems are upgraded, and park a kitchen trailer on the site for meal preparation. The first phase of use would also include setting up a single yurt approximately 150 to 200 yards southwest of the HRS site for staff housing. The second phase would focus on rehabilitation of the buildings on the site. Northern Bedrock would set up two additional yurts for this phase. The yurts would be sited on high ground in an existing clearing; no trees would be removed for the yurt sites. During phase 2 Northern Bedrock would increase its on-site work force to approximately 30 people. As buildings are rehabilitated staff would begin to use them for bunkhouse space. The third phase is final build out; Northern Bedrock envisions developing a kitchen and dining hall within site buildings and housing staff of up to 50 persons during the summer and 30 persons during the winter. Northern Bedrock would continue to use the three yurts for seasonal camping by staff.

Construction and rehabilitation activities would incorporate best management practices to limit erosion and sedimentation in nearby waters. Site vegetation clearing would be limited to minimum necessary and scheduled to avoid disturbance of migratory birds during the breeding and rearing season.

## Area of Analysis

The area analyzed for effects to species listed or proposed for listing as federally endangered or threatened is the land within 116 acre Kawishiwi Experimental Forest (see Figure 2). This area of analysis extends beyond the HRS site. The area of analysis would include all proposed actions, including the staff camping area to the south of the HRS site. It borders a reach of the South Kawishiwi River, lands of Superior National Forest, Minnesota State Forest Lands, and scattered private lands. The site elevation is approximately 1,450 feet above sea level.

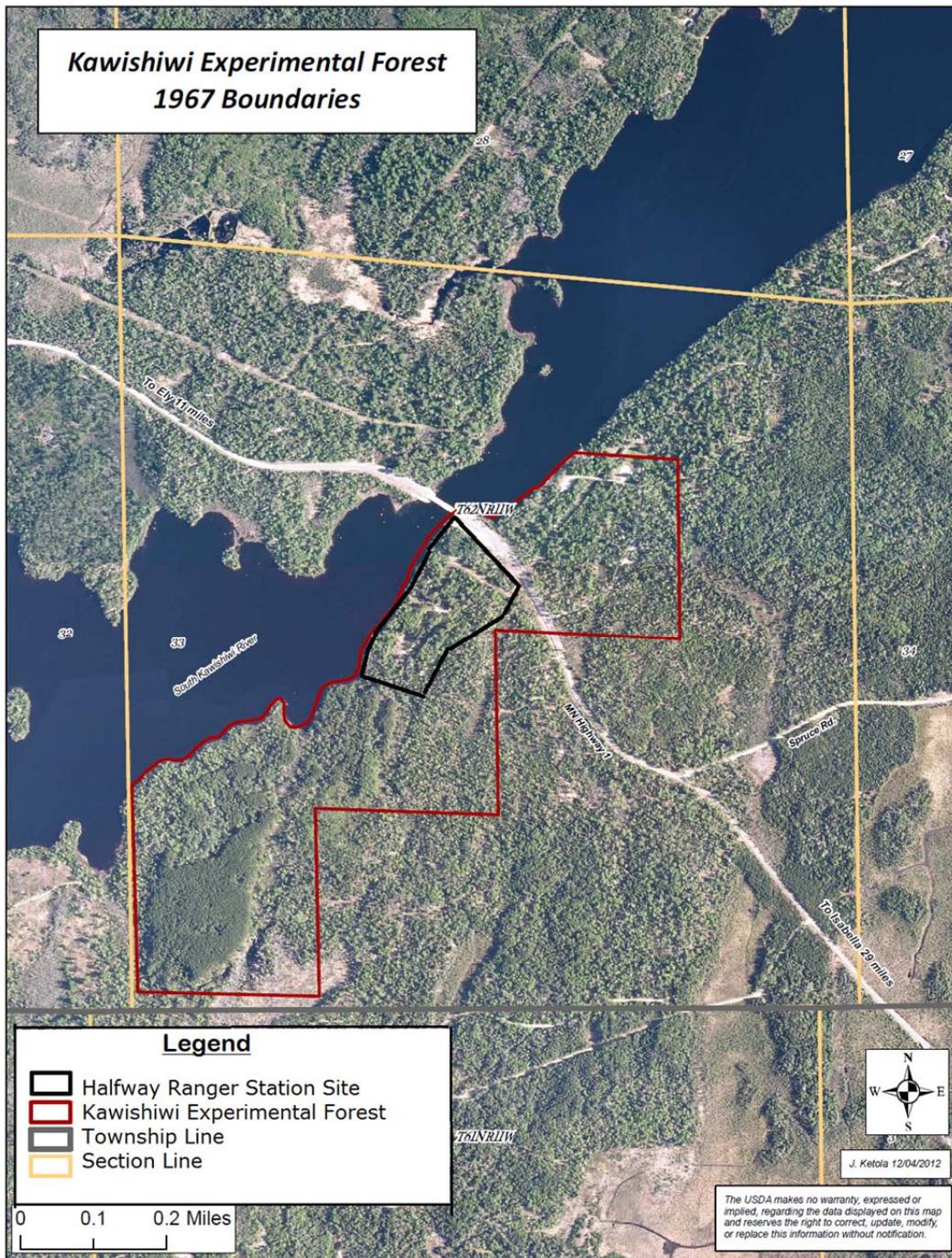


Figure 19 Kawishiwi Experimental Forest and Halfway Ranger Station Site

## APPLICABLE LAWS AND REGULATORY REQUIREMENTS

### Endangered Species Act (ESA)

The Endangered Species Act (ESA, PL 93-205), Forest Service Manuals (FSM) 2670.11, 2670.21, and 2670.31, and Forest Plan standards and guidelines all require that National Forest

land be managed for both conservation and recovery of endangered, threatened, and proposed (TEP) species. Section 7(a) (2) of the ESA requires that the agency actions are not likely to jeopardize the continued existence of federally listed species. FSM 2670 directs Forests to manage habitats, to assist in the recovery of TEP species, and to avoid actions “which may cause a species to become threatened or endangered.”

## Forest Service Manual (FSM)

The Biological Assessment (BA) for species potentially affected by this project was prepared in accordance with FSM direction 2672.42 and meets legal requirements set forth under Section 7 of the Endangered Species Act of 1973, as amended, and implementing regulations [19 U.S.C. 1536 (c), 50 CFR 402.12 (f) and 402.14 (c)].

- To ensure that Forest Service actions do not contribute to loss of viability of any native or desired non-native plant or animal species, or contribute to trends toward Federal listing of any species.
- To provide a process and standard by which to ensure that threatened, endangered, or proposed receive full consideration in the decision making process.

## The National Forest Management Act of 1976

The National Forest Management Act of 1976 required the Secretary of Agriculture to develop guidelines for land management planning with the individual forest being the planning unit or area. The Act states that “Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area” (36 C.F.R. § 219.19). A viable population is defined as “[a population] which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area” (§ 219.19). Therefore, management of viable populations is intended to be accomplished at the individual National Forest level (planning area).

## National Environmental Policy Act of 1969 (NEPA)

This act established procedures for decision making, disclosure of effects, and public involvement on all major federal actions. Forest Service Manual 1950.2 requires a consideration of the impacts of Forest Service proposed actions on the physical, biological, social, and economic aspects of the human environment (40 CFR § 1508.14).

## U.S. Fish and Wildlife Service Effects Definitions

The FWS published the Endangered Species Act Consultation Handbook – Procedures for Conducting §7 Consultation and Conferences (USFWS 1998a). This handbook contains definitions for making determinations of “no effect”, “is not likely to adversely affect”, “is likely to adversely affect”, and “is likely to jeopardize proposed species/adversely modify proposed critical habitat”. The definitions, as listed below, were used to arrive at final determination of effects in this document.

**No Effect** is, “the appropriate conclusion when the action agency determines its proposed action will not affect listed species or critical habitat.”

**Not Likely to Adversely Affect** is, “the appropriate conclusion when effects on listed species are expected to be discountable, or insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species. Insignificant effects

relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not: 1) be able to meaningfully measure, detect, or evaluate insignificant effects; or 2) expect discountable effects to occur.”

**Likely to Adversely Affect** is, “the appropriate conclusion if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not: discountable, insignificant, or beneficial (see definition of “is not likely to adversely affect”). In the event the overall effect of the proposed action is beneficial to the listed species, but also is likely to cause some adverse effects, then the proposed action “is likely to adversely affect” the listed species.”

**Likely to Jeopardize Proposed Species/Adversely Modify Proposed Critical Habitat** applies to a species or critical habitat while it is proposed for addition to the Federal endangered species list, but before a final rule is published making the designation official. A conference with FWS is required, “when the action agency or the Services [FWS or NMFS] identify situations in which the proposed action is likely to jeopardize the continued Existence of the proposed species or adversely modify the proposed critical habitat.”

**Destruction or Adverse Modification of Critical Habitat** is direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.

**Is Not Likely to Jeopardize Non-essential Experimental Population** for the purposes of §7 of the ESA, experimental populations that are determined to be nonessential to the continued existence of the species are treated as species proposed for listing on NFS lands. By definition, a nonessential experimental population is not essential to the continued existence of the species. Therefore no proposed action impacting a population so designated could lead to a jeopardy determination for the entire species. Therefore, a “not likely to jeopardize” determination is appropriate for activities occurring on NFS lands.

## AFFECTED ENVIRONMENT

The Area of Analysis occurs in the Minnesota Department of Natural Resources’ (MNDNR) Border Lakes Subsection, which includes the Boundary Waters Canoe Area Wilderness. MNDNR describes the Border Lakes Subsection as containing the largest blocks of fragmented forests remaining in the state (MNDNR 2006). The Superior National Forest completed an analysis of forest conditions in the area surrounding the Kawishiwi Experimental Forest in 2009 in preparation for the Glacier Project. The following description of the ecosystems in the project area is summarized from that analysis (USDA Forest Service 2009).

The forest that exists today in Northeastern Minnesota evolved as a result of both natural and human processes. The pioneer logging that occurred during the late 19<sup>th</sup> century, followed by widespread slash-fueled wildfires, altered the composition and structure of the original forests. Recent timber management and fire suppression activities have contributed to current forest conditions. Natural disturbances and forest succession have also taken place to varying degrees on managed and unmanaged lands within the area. The resulting forest is different from the forest that would have evolved under purely natural processes.

Historically, large areas of spruce and balsam fir forest conditions did not typically occur since stand replacement fires occurred every fifty to three hundred years (dependent on forest type).

Today, wildfires within the Superior National Forest are mainly suppressed outside the wilderness areas. The exclusion of fire can cause the loss of a distinct ecosystem as surely as if the forest were clear cut and not regenerated to the existing forest type of the parent stand.

The dominant landscape ecosystem (LE) in a large region surrounding the Area of Analysis for this project is the Jack Pine/Black Spruce LE. The dominant forest types of this LE are displayed in table 1.

**Table 2 Forest Types in Jack Pine/Black Spruce Landscape Ecosystem**

Upland Forest Type	Acreage	Percentage
Jack Pine	3,076	12.8
Red Pine	1,672	7.0
White Pine	330	1.4
Spruce-fir	4,682	19.6
Aspen	13,492	56.4
Paper Birch	665	2.8
<b>Total</b>	<b>23,917</b>	<b>100</b>

The red pine acres are mostly a result of conversion through planting from past harvests of jack pine, spruce and aspen. Aspen occupies the most acreage due to past practices of harvesting other forest types and allowing aspen to occupy them naturally. Consequently this type occupies much more of the area than occurred naturally in the past. Understory vegetation is typically juneberry, beaked hazel, mountain maple, willows, and American green alder.

The Lowland Conifer LE is interspersed throughout the upland LEs as is typical throughout Northern Minnesota. Table 2 displays the dominant forest types in this LE.

**Table 3 Forest Types in Lowland Conifer Landscape Ecosystem**

Lowland Forest Type	Acreage	Percentage
Black Spruce and lowland conifers	4,682	79.4
Tamarack	336	5.7
Northern White Cedar	249	4.2
Lowland Hardwoods	630	10.7
<b>Total</b>	<b>5,897</b>	<b>100</b>

The HRS site has a long history of use as a National Forest Ranger Station, the headquarters site for an experimental forest, and a wildlife research site. Between 1910 and 2011 researchers and others have resided and been employed on the site. The areas surrounding the buildings were maintained as grounds during most of that period, with mowed grassy areas and scattered trees. In recent years, as maintenance has been reduced, shrubby species have begun to colonize the site.

## Species of Concern

The species of concern appearing in Table 3, below, were listed as potentially occurring in the Kawishiwi Ranger District of the Superior National Forest (Timothy Catton, Biological Technician, personal communication February 5, 2015). This list fulfills the requirements to provide a current species list pursuant to Section 7 (c) ESA, as amended.

**Table 4 Summary of federally listed species or species proposed for listing**

Species	Listing Status	Present in the Project Area (Records or Habitat)	Effects Determination	Reason or Mitigation for No Effects Determination
<b>Mammals</b>				
Gray wolf ( <i>Canis lupus</i> )	Threatened	Yes	May Affect NLAA*	Localized activity similar to past uses at HRS should not measurable affect this wide-ranging, mobile species.
Gray wolf Critical Habitat		Yes	No adverse modification	No change of Critical Habitat Primary Constituent Elements
Canada lynx ( <i>Lynx canadensis</i> )	Threatened	Yes	May Affect NLAA	Localized activity similar to past uses at HRS should not measurable affect this, mobile species.
Canada lynx Critical Habitat		No	No adverse modification	Critical habitat does not include manmade structures and the land on which they are located existing within the legal boundaries on October 14, 2014 (Federal Register 2014)
Northern long-eared bat ( <i>Myotis septentrionalis</i> )	Proposed Endangered	Potential habitat, no records	May Affect NLAA	No records of bat at site, effect mitigation measures implemented

\*May affect/NLAA (not likely to adversely affect) – see Effects Definitions, above

Definitions of Species Status:

Endangered: Listed in the Federal Register as being in danger of extinction.

Threatened: Listed as likely to become endangered within the foreseeable future.

## Effects Determinations and Background

### *Gray wolf (Canis lupus)*

#### Natural History

The following description and natural history is summarized from the U.S. Fish and Wildlife Service’s Ecological Conservation Online System (USFWS 2015a), unless otherwise cited.

### *Description*

Adult gray wolves generally weigh between 70 and 110 pounds. They tend to be black, white, or gray in coloration, with broad, blocky faces and muzzles and short rounded ears. Wolves are up to 2 ½ feet tall at the shoulders and 6 feet in length. Adult tracks are generally 5 inches long and 4 ½ inches wide (USFWS undated).

### *Habitat Requirements*

Wolves are habitat generalists, and can thrive anywhere there is suitable prey and levels of human caused mortality are not excessive. Wolves were historically widespread throughout the Northern Hemisphere.

### *Food Habits*

Wolves' primary prey is large ungulates, mostly moose (*Alces alces*) and white-tailed deer (*Odocoileus virginianus*) in Minnesota. They will also readily scavenge. Secondary prey includes medium sized mammals such as Beaver (*Castor Canadensis*). Wolves can also utilize smaller mammals, birds, and fish.

### *Movement / Home Range*

Wolves are social animals that live in groups, called packs, which typically include a breeding pair (the alpha pair), their offspring, and other non-breeding adults. Wolf packs live within territories, which they defend from other wolves. Their territories range in size from 50 square miles to more than 1,000 square miles, depending on the available prey and their seasonal movements. Wolves travel over large areas to hunt, as far as 30 miles in a day. Although they usually trot along at about 5 miles per hour, wolves can run as fast as 40 miles per hour for short distances.

### *Reproductive Strategy*

Wolves are capable of mating by age two or three and sometimes form a lifelong bond. They can live 13 years and breed past 10 years of age. On the average, five pups are born in early spring and are cared for by the entire pack. For the first six weeks, pups are reared in dens. Dens are often used year after year, but wolves may also dig new ones or use some other type of shelter, such as a cave.

Pups depend on their mother's milk for the first month, then are gradually weaned and fed regurgitated meat brought by pack members. By the time pups are seven to eight months old they are almost fully grown and begin traveling with the adults. After a year or two, young wolves may leave to try to find a mate and form a pack. Lone, dispersing wolves have traveled as far as 600 miles in search of a mate or territory.

### *Distribution*

Gray wolves once ranged from coast to coast and from Alaska to Mexico in North America. They were absent from the Southeast, which was occupied by red wolves (*Canis rufus*), and from the large deserts of the Southwest. By the early 20th century, government-sponsored predator control programs and declines in prey brought gray wolves to near extinction in the lower 48 States. At that time small populations remained on Isle Royale in Lake Superior and in extreme Northeastern Minnesota. Populations in Western Canada and Alaska have remained relatively robust. Currently gray wolves occur in three population groups within the contiguous United States: the Western Great Lakes Population occurs in Minnesota, Wisconsin, and Michigan's Upper Peninsula; the Northern Rockies Population occurs in Idaho, Montana, and Wyoming; and an experimental, non-essential population of the subspecies Mexican gray wolf (*C. l. baileyi*)

occurs in Arizona and New Mexico. Wolves from the Western Great Lakes and Northern Rockies Populations have dispersed into surrounding states.

**Status of the Species (Range-wide and within the Area of Analysis)**

The gray wolf was first listed as endangered throughout the contiguous United States in 1967 by a precursor to the 1973 Federal Endangered Species Act. In 1978 the Minnesota population of gray wolf was reclassified to Threatened and Critical Habitat for the, the gray wolf was designated in Minnesota (Federal Register 1978). The gray wolf was delisted and its status changed to recovered on March 12, 2007, in the Western Great Lakes region, which includes all of Minnesota (Federal Register 2007), however it was relisted as threatened in Minnesota in a Federal Court settlement on September 16, 2009 (Federal Register 2009). The species was delisted due to recovery in 2011 (Federal Register 2011), and was monitored by the USFWS as a recently delisted species, in compliance with section 4(g) of the Endangered Species Act. The 2011 delisting was overturned by a Federal District Court on December 19, 2014 (USFWS 2014). The gray wolf is currently listed as Threatened in Minnesota, Recovered in Montana and Idaho, and Experimental, Non-essential in Wyoming.

Within the state of Minnesota, wolves are most numerous in the extreme northeastern portion where HRS is located. Minimum population estimates for Gray wolf in Minnesota, as provided by the US Fish and Wildlife Service, are presented in Table 4 (USFWS 2013)

**Table 5 Minimum Wolf Population Estimates for Minnesota**

<b>Year of Survey</b>	<b>Population Estimate</b>
1976	1,000 – 1,200
1978 – 1979	1,235
1988 – 1989	1,500 – 1,750
1997 – 1998	2,445
2003 – 2004	3,020
2007 – 2008	2,921
2012 – 2013	2,211

Wolves have been documented near the HRS and likely use the site transiently.

This project area is located within wolf Critical Habitat Zone 1. The 1992 wolf recovery plan states that within this zone, densities of high standard roads are to be maintained below 1 mile per square mile. Currently the level of high standard roads in the area surrounding the HRS site is below this threshold.

**Threats**

Historic threats include poisoning and deliberate persecution due to depredation on livestock. Since about 1970, legal protection, land-use changes, and rural human population shifts to cities have arrested wolf population declines and fostered natural recolonization in parts of the United States, including considerable population increases in Northeastern Minnesota. Continued threats include exaggerated concern by the public concerning the threat and danger of wolves, and

fragmentation of habitat, with resulting areas becoming too small for populations with long-term viability (Mech and Boitani 2010).

### Direct and Indirect Effects Analysis

While one pack of wolves has its den within five miles of the HRS site, there are no records of wolf sightings or sign on the site proper. The proposed project would increase the level of human use and occupation of site with a long history of human use. While some minor changes in behavior to a few individual wolves may result from the proposed activities, no other direct or indirect effects to wolves are anticipated. The proposed activities should not measurably decrease any wolf pack's viability (L. David Mech, personal communication, February 17, 2015).

### Determination

I have determined that the proposed action may affect the behavior of individual gray wolves, but its effects would be insignificant. I have determined that the proposed activity would not adversely modify gray wolf designated critical habitat.

### Rationale

Wolves are highly mobile animals and the proposed activity would only affect a small geographic location within their range and would differ only marginally from long established activities in the area, no direct or indirect effects beyond minor, behavioral changes among individual wolves should result. No adverse modification of gray wolf designated critical habitat would occur, as the proposed activity would occur entirely on or adjacent to existing areas of disturbance and no increase in road density would result.

## *Canada Lynx (Lynx canadensis)*

### Natural History

#### *Description*

The following description and natural history information for the Canada lynx is summarized from the US Fish and Wildlife Service Environmental Conservation Online System (USFWS 2015b). The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The lynx's winter coat is dense and has a grizzled appearance of grayish-brown mixed with buff or pale brown fur on the back, and grayish-white or buff-white fur on the belly, legs and feet. The summer coat is more reddish to gray-brown. Adult males average 22 pounds in weight and 34 inches in length (head to tail), and females average 19 pounds and 32 inches. The lynx's long legs and large feet make it highly adapted for hunting in deep snow. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest.

#### *Habitat Requirements*

Lynx habitat can generally be described as moist boreal forests that have cold, snowy winters and a high-density snowshoe hare (*Lepus americanus*) prey base. The predominant vegetation of boreal forest is conifer trees, primarily species of spruce (*Picea* spp.) and fir (*Abies* spp.). In the contiguous United States, the boreal forest type transitions to deciduous temperate forest in the Northeast and Great Lakes, and to subalpine forest in the west.

### *Food Habits*

Snowshoe hares are the primary prey of lynx, comprising the bulk of the lynx diet throughout its range. Without high densities of snowshoe hares, lynx are unable to sustain populations despite utilizing a multitude of other prey when snowshoe hare numbers are low. Other prey species include red squirrel (*Tamiasciurus hudsonicus*), grouse (*Bonasa umbellus*, *Dendragapus* spp., *Lagopus* spp.), flying squirrel (*Glaucomys sabrinus*), ground squirrel (*Spermophilus parryii*, *S. Richardsonii*), porcupine (*Erethizon dorsatum*), beaver, mice (*Peromyscus* spp.), voles (*Microtus* spp.), shrews (*Sorex* spp.), and fish. Ungulate carrion may also be consumed.

### *Movement / Home Range*

Individual lynx maintain large home ranges generally between 12 to 83 square miles. The size of lynx home ranges varies depending on abundance of prey, the animal's gender and age, season, and the density of lynx populations. When densities of snowshoe hares decline, for example, lynx enlarge their home ranges to obtain sufficient amounts of food to survive and reproduce. Lynx also make long distance exploratory movements outside their home ranges. Preliminary research supports the hypothesis that lynx home ranges at the southern extent of the species' range are generally large compared to those in the core of the range in Canada, indicating a relative reduction of food resources in these areas.

### *Reproductive Strategy*

Lynx breed in late winter to early spring. Gestation lasts 62-74 days. Litter size averages three or four. Adult females produce one litter every one to two years. In years of low or average snowshoe hare numbers, few or no kittens survive, but when hares are abundant, kitten survival is very high. Kittens stay with their mother for one year before dispersing. The male does not assist with rearing the young.

### **Distribution**

Lynx are widespread throughout much of Canada and Alaska. Within the contiguous United States lynx are limited to boreal forests. Such Forests extend south into the contiguous United States along the North Cascade and Rocky Mountain Ranges in the west, the western Great Lakes Region, and northern Maine. Lynx occur in the States of California Colorado, Idaho, Montana, New Mexico, Oregon, Utah, Washington, and Wyoming in the U.S. West; Michigan, Minnesota, and Wisconsin in the Western Great Lakes; and Maine in the Northeast. In Minnesota lynx range is primarily the northeastern corner of the state, but individuals occasionally range into the forests of north-central Minnesota (MNDNR 2015).

### **Status of the Species (Range-wide and within the Area of Analysis)**

The Contiguous United States distinct population segment of Canada lynx was listed as threatened on March 24, 2000 (Federal Register 2000). Critical Habitat for the Canada Lynx was designated in 2014 (Federal Register 2014). Populations in Canada and Alaska are considered stable. Although census data are not available for Minnesota, DNA sampling in recent years suggests that fewer than 100 individual lynx occur in the state (MNDNR 2015). There are no records of Canada lynx on the HRS site, but the Superior National Forest has one record of a lynx within one-half mile of the site and two records of lynx within one mile of the site (Timothy Catton, personal communication, February 4, 2015).

## Threats

In all regions within the range of the lynx in the contiguous United States, timber harvest, recreation, and their related activities are the predominant land uses affecting lynx habitat. The primary factor that caused the lynx to be listed was the lack of guidance for the conservation of lynx and snowshoe hare habitat in plans for federally managed lands. Landscape connectivity between lynx populations and habitats in Canada and the contiguous United States must be maintained. Lynx movements may be negatively affected by high traffic volume on roads that bisect suitable lynx habitat in some areas, mortalities due to road kill are high (USFWS 2015b). Habitat fragmentation due to conversion of forests is a current threat to Canada lynx, while global climate change is a long term potential threat (MNDNR 2015).

## Direct and Indirect Effects Analysis

While there are two records of Canada lynx within one mile of the HRS site, no individuals have been reported on the site. The proposed action would result in increased human use and activity of a site with a long history of human use. Traffic volumes on Minnesota Highway 1 would not increase beyond the range of normal variation with implementation of the proposed action. No clearing of boreal forest would result. For these reasons, direct and indirect effects of the proposed action for Canada lynx should be minimal and discountable.

## Determination

I have determined that the proposed action may affect the behavior individual Canada lynx, but its effects would be insignificant. I have determined that the proposed activity would not adversely affect Canada lynx designated Critical Habitat.

## Rationale

Canada lynx are mobile animals. The proposed activity would only affect a small geographic location within their range and would differ only marginally from long established activities in the area; no direct or indirect effects beyond minor, behavioral changes among individual lynx should result. No adverse modification of Canada lynx designated critical habitat would occur, as the proposed activity would occur entirely on or adjacent to buildings and grounds. Such areas were specifically excluded from Lynx Critical Habitat (Federal Register 2014).

## *Northern Long-eared Bat (Myotis septentrionalis)*

### Natural History

#### *Description*

The following description and natural history information for the northern long-eared bat is summarized from the US Fish and Wildlife Service Environmental Conservation Online System (USFWS 2015c). The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, *Myotis*, which are actually bats noted for their small ears (*Myotis* means mouse-eared).

#### *Habitat Requirements*

During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, such as caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been

found, rarely, roosting in structures such as barns and sheds. Foster and Kurta, in a study of radio tracked female bats in Michigan, concluded that the species rarely uses structures for roosts, showing a strong preference for trees (1999). Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible.

### *Food Habits*

Northern long-eared bats emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation. The northern long-eared bat's foraging along wooded hillsides and ridgelines, rather than above valley-bottom streams and along the edges of riparian forests is an unusual trait among small, insectivorous North American bats (Center for Biological Diversity 2015). This bat also feeds by gleaning motionless insects from vegetation and water surfaces. In summer, an activity peak generally occurs 1-2 hours after sunset, with a secondary peak 7-8 hours after sunset. Nocturnal insects often exhibit a strong flight period beginning before sunset, peaking near midnight, and waning throughout the early morning hours, and a second but less intense flight period may occur before sunrise (NatureServe 2014).

### *Movement / Home Range*

Definitive information about the home range and migration of this bat is not available. In West Virginia, foraging home ranges of seven females averaged 160.6 acres (Owen et al. 2003). A study of radio-tagged bats in Michigan during spring and summer showed individuals changing roosts every 2 days. The distance between roosts ranged from 20 feet to 1.24 miles (Foster and Kurta 1999).

### *Reproductive Strategy*

Breeding begins in late summer or early fall when males begin swarming near hibernacula. After copulation, females store sperm during hibernation until spring, when they emerge from their hibernacula, ovulate, and the stored sperm fertilizes an egg. This strategy is called delayed fertilization. After fertilization, pregnant females migrate to summer areas where they roost in small colonies and give birth to a single pup. Maternity colonies, with young, generally have 30 to 60 bats, although larger maternity colonies have been observed. Most females within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located within the species' range. Young bats start flying by 18 to 21 days after birth. Adult northern long-eared bats can live up to 19 years.

### *Distribution*

The northern long-eared bat is widely but patchily distributed in the eastern and northcentral United States and adjacent southern Canada, from Newfoundland and eastern Quebec south through New England and the mountains of Virginia, North Carolina, South Carolina, and Georgia to the northcentral panhandle of Florida (formerly) and northwestward through Alabama, northern Arkansas, the eastern Great Plains, and the western Canadian provinces, to northeastern British Columbia and southern Northwest Territories (NatureServe 2014).

---

## Status of the Species (Range-wide and within the Area of Analysis)

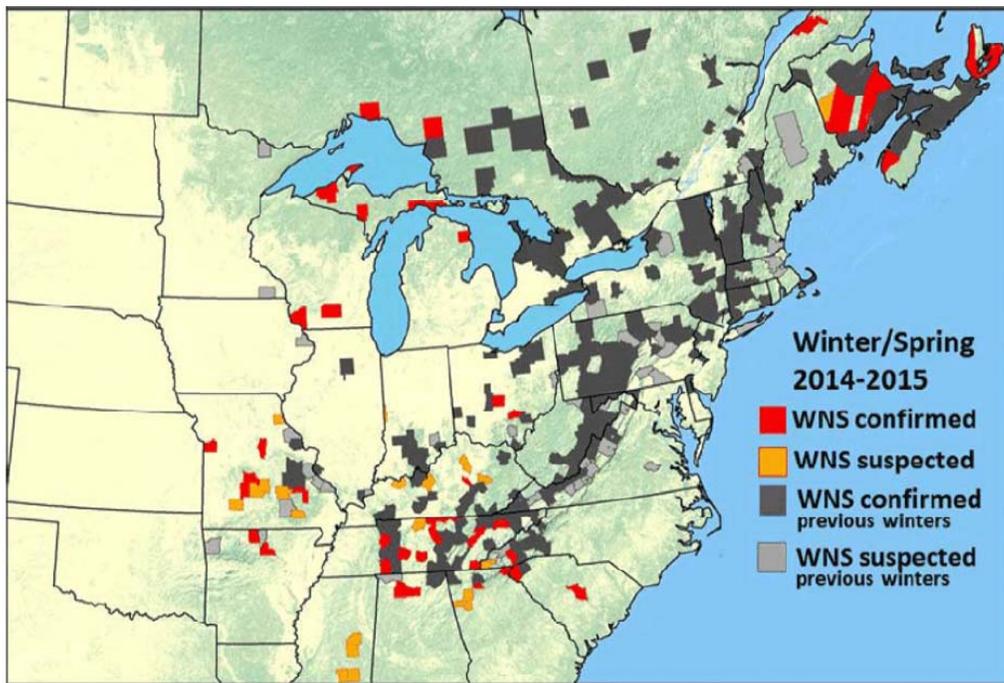
The northern long-eared bat is proposed for federal listing as Endangered throughout its range (Federal Register 2015). Listing is anticipated on April 2, 2015. The HRS site occurs within the range of this species and suitable habitat exists, but the species has not been documented on the site. The Superior National Forest conducted mist netting for bats at three locations on the HRS during the summer of 2013, due to concerns about maternity roosts inside of the Ranger Cabin. Although several hundred little brown bats (*Myotis lucifugus*) were captured and released, no northern long-eared bats were detected (Timothy Catton, personal communication, March 5, 2015).

## Threats

Lack of knowledge regarding bat species' overall ecology has been called one of the greatest threats to bat conservation (WNDR 2013). One major threat and several lesser threats to northern long-eared bat can be identified.

White nose syndrome (WNS) is a relatively new, major threat to northern long-eared bats, as well as other bats that use caves or mines as hibernacula. This fungal disease that infects bats in their winter hibernacula was first identified in New York State in 2006. It since has appeared in several Eastern and Midwestern states. A 2009 study found population declines of 75 percent over a two year period where WNS was present (Blehert et al. 2009). WNS, named for a visible white fungus that appears on the faces and wings of infected bats, causes high levels of death during and shortly after hibernation, apparently from depletion of body fat. Infected bats that survive hibernation may sustain wing damage that results in high rates of death after emergence (Reichard and Kuntz 2009). Although not verified at any sites in Minnesota by the fall of 2014 (see Figure 3), WNS has spread rapidly, and two sites within the state are suspected of harboring WNS. The disease can be spread from bat to bat, but new infestations many miles remote from existing infestations suggest human transmission by movement of contaminated clothing or equipment between sites.

Other threats to the northern long-eared bat include disturbance by cavers during hibernation that wakes the bats from torpor. Bats in torpor reduce their metabolism to low levels to conserve energy. A single waking can exhaust fat stores equivalent to more than 60 days of hibernation. Disturbance can thus result in starvation (WDNR 2013). Improperly sited wind energy facilities can also result in mortality to bats, primarily during migration, through direct collision with the rotating turbine blades or through a pressure differential experienced by bat flying near the blades (Baerwald et al 2008). Increased agricultural, industrial, and household pesticide use also degrades northern long-eared bat habitat. While many species are adversely affected by pesticides, bats may be more vulnerable than other small mammals due to their longevity and high trophic level. These traits make bats more likely to concentrate pesticide residues in their body fat (O'Shay et al 2001)



**Figure 20 Whitenose Syndrome Infested Hibernacula**

### Direct and Indirect Effects Analysis

The proposed action at HRS should not directly affect any northern long-eared bats. No clearing of the bat's forested habitat is proposed, and there are no records of northern long-eared bats using the site. The potential to adversely affect bats during bat exclusion from site buildings will be mitigated by scheduling the work to occur between the end of August and the beginning of April, when bats are not present on the site. Two bat boxes have been constructed on the site as alternative day or maternity roosts for bats currently using the Ranger Cabin as a roost. It is also unlikely that any northern long-eared bats are using the structure as roost, based both on the species' strong preference for using trees, and the lack of northern long-eared bat captures during mist netting adjacent to the building. The activities proposed for the HRS site are similar to those that have occurred on site for many years, and activity would occur during daylight hours, when bats are inactive.

Indirect effects to northern long-eared bats could occur if other bats (primarily little brown bats) displaced from past maternity roost sites in the Ranger Cabin complete for roost sites with northern long-eared bats. This effect should be minor, given the abundance of suitable forested habitat for roosting in the project vicinity.

### Determination

I have determined that the proposed action may affect individual northern long-eared bats but its effects would be insignificant.

### Rationale

The proposed action will not remove any habitat of northern long-eared bat or adversely affect any known roosts used by the species. Suitable habitat for northern long-eared bat is abundant in the project area.

## References Cited

- Baerwald, E. F., G. H. D'Amours, B.J. Klug and R. M. R. Barclay. 2008. Barotrauma is a significant cause of bat fatalities at wind turbines. *Current Biology*, Vol. 18, Is.16, 26 August 2008, pp R695–R696
- Blehert, D. S., A. C. Hicks, M. Behr, C. U. Meteyer, B. M. Berlowski-Zierl, E. L. Buckles, J. T. H. Coleman, S. R. Darling, A. Gargas, R. Niver, J. C. Okoniewski, R. J. Rudd, and W. B. Stone. 2009. Bat white nose syndrome: an emerging fungal pathogen?. *Science*, January 9, 2009, vol. 323, no. 5911: p. 227.
- Center for Biological Diversity. 2015. Mammals; northern long-eared bat. Accessed on February 18, 2015 at: [http://www.biologicaldiversity.org/species/mammals/northern\\_long-eared\\_bat/index.html](http://www.biologicaldiversity.org/species/mammals/northern_long-eared_bat/index.html) .
- Federal Register. 2015. Endangered and Threatened Wildlife and Plants; Listing the Northern Long-Eared Bat With a Rule Under Section 4(d) of the Act: Agency: Fish and Wildlife Service, Interior. Vol. 80, No. 11 / Friday, January 16, 2015: pp 2,371-2,378.
- Federal Register. 2014. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary. Agency: Fish and Wildlife Service, Interior. Vol. 79, No. 177 / Friday, September 12, 2014: pp 54,782-54,846.
- Federal Register. 2011. Endangered and Threatened Wildlife and Plants; Revising the Listing of the Gray Wolf (*Canis lupus*) in the Western Great Lakes: Agency: Fish and Wildlife Service, Interior. Vol. 76, No. 249 / Wednesday, December 28, 2011: pp 81,666-81,726.
- Federal Register. 2009. Endangered and Threatened Wildlife and Plants; Reinstatement of Protections for the Gray Wolf in the Western Great Lakes in Compliance With Settlement Agreement and Court Order: Agency: Fish and Wildlife Service, Interior. Vol. 74, No. 178 / Wednesday, September 16, 2009: pp 47,483-47,488.
- Federal Register. 2007. Endangered and Threatened Wildlife and Plants; Final Rule Designating the Western Great Lakes Populations of Gray Wolves as a Distinct Population Segment; Removing the Western Great Lakes Distinct Population Segment of the Gray Wolf From the List of Endangered and Threatened Wildlife: Agency: Fish and Wildlife Service, Interior. Vol. 72, No. 26 / Thursday, February 8, 2007: pp 6,052-6,103.
- Federal Register. 2000. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Contiguous U.S. Distinct Population Segment of the Canada Lynx and Related Rule; Final Rule: Agency: Fish and Wildlife Service, Interior. Vol. 65, No. 58 / Friday, March 24, 2000: pp 16,052-16,086.
- Federal Register. 1978. Reclassification of the Gray Wolf in the United States and Mexico, with Designated Critical Habitat in Michigan and Minnesota. Agency: Fish and Wildlife Service, Interior. Vol. 43, No 47 / Thursday, March 9, 1978: pp 9,607-9,615.
- Foster, R. W., and A. Kurta. 1999. Roosting ecology of the northern bat (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). *Journal of Mammalogy* 80:659-672.

- Mech, L.D. 2007. History of the use of Kawishiwi Field Station as headquarters for research. Letter date January 17, 2007.
- Mech, L.D. & Boitani, L. (IUCN SSC Wolf Specialist Group) 2010. *Canis lupus*. The IUCN Red List of Threatened Species. Version 2014.3. Accessed on February 13, 2015 at: [www.iucnredlist.org](http://www.iucnredlist.org).
- MNDNR (Minnesota Department of Natural Resources), 2015. Canada lynx; *Lynx Canadensis*. Accessed February 17, 2015 at [http://www.dnr.state.mn.us/forestlegacy/koochiching\\_washington/canadalynx.html](http://www.dnr.state.mn.us/forestlegacy/koochiching_washington/canadalynx.html).
- MNDNR (Minnesota Department of Natural Resources), 2006. Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife, Comprehensive Wildlife Conservation Strategy. Division of Ecological Services, Minnesota Department of Natural Resources.
- NatureServe. 2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Accessed: February 17, 2015 at: <http://explorer.natureserve.org> .
- O'Shea, T. J., A. L. Everette, and L. E. Ellison. 2001. Cyclodiene Insecticide, DDE, DDT, Arsenic, and Mercury Contamination of Big Brown Bats (*Eptesicus fuscus*) Foraging at a Colorado Superfund Site. Arch. Environ. Contam. Toxicol. 40, pp 112–120.
- Owen, S. F., M. A. Menzel, W. M. Ford, B. R. Chapman, K. V. Miller, J.W. Edwards, and P.B. Wood. 2003. Home-range size and habitat used by the northern myotis (*Myotis septentrionalis*). The American Midland Naturalist, 150(2): 352-359.
- Reichard, J.D. and T.H. Kuntz. 2009. White-nose syndrome inflicts lasting injuries to the wings of little brown myotis (*Myotis lucifugus*). Acta Chiropterologica, 11(2): 457–464.
- USDA Forest Service. 2009. Glacier Project Environmental Impact Statement. Superior National Forest, Duluth, MN.
- USFWS (U.S. Fish and Wildlife Service). 2015a. Environmental conservation on-line system; gray wolf (*Canis lupus*). Accessed on February 17, 2015 at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile?sPCODE=A00D>
- USFWS (U.S. Fish and Wildlife Service). 2015b. Environmental conservation on-line system; Canada lynx (*Lynx canadensis*). Accessed on February 17, 2015 at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile?sPCODE=A073>
- USFWS (U.S. Fish and Wildlife Service). 2015c. Environmental conservation on-line system; Lesser long-eared bat *Myotis septentrionalis*. Accessed on February 17, 2015 at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?sPCODE=A0JE>
- USFWS (U.S. Fish and Wildlife Service). 2014. Environmental conservation on-line system; gray wolf (*Canis lupus*). Accessed on December 19, 2014 at: <http://ecos.fws.gov/speciesProfile/profile/speciesProfile?sPCODE=A00D>
- USFWS (U.S. Fish and Wildlife Service). 2013. Wolf Western Great Lakes; gray wolf (*Canis lupus*) wolf number in Minnesota, Wisconsin, and Michigan (excluding Isle Royale) 1973-2013. Accessed on February 17, 2015 at: [http://www.fws.gov/midwest/wolf/aboutwolves/mi\\_wi\\_nos.htm](http://www.fws.gov/midwest/wolf/aboutwolves/mi_wi_nos.htm)

USFWS (U.S. Fish and Wildlife Service). Undated. Gray wolf fact sheet. Accessed on February 17, 2015 at:

<http://www.fws.gov/wafwo/species/Fact%20sheets/Gray%20wolf%20final.pdf>

WDNR (Wisconsin Department of Natural Resources). 2013. Wisconsin northern long-eared bat species guidance. Bureau of natural Heritage Conservation, Wisconsin Department of Natural Resources, Madison, WI. PUB-ER-700.



## **7 Appendix F**

### **Draft Decision Notice and Finding of No Significant Impact Halfway Ranger Station Revised Building Disposition Environmental Assessment**

# **Draft**

## **Decision Notice and Finding of No Significant Impact**

### **Halfway Ranger Station Revised Building Disposition Environmental Assessment**

**U.S. Forest Service, Northern Research Station,**

**Halfway Ranger Station**

**Ely, MN**

#### **Location**

The Halfway Ranger Station (also known as Kawishiwi Field Laboratory or “the K-Lab”) is located in Township 62 North, Range 11 West, Section 33, 4th P.M., Bogberry Lake, Minnesota 7.5 Minute Quadrangle Map. The site is within the Kawishiwi Experimental Forest on the Superior National Forest along the eastern bank of the South Kawishiwi River in Lake County, Minnesota, approximately 12 miles southeast of Ely, Minnesota. Halfway Ranger Station is the administrative site for the Kawishiwi Experimental Forest and consists of eleven buildings and one structure (a poured-concrete cellar). The Northern Research Station, a unit of the USFS Research and Development Mission Area, manages the experimental forest and its administrative site (the structures and surroundings).

#### **Background**

The Halfway Ranger Station was originally established in 1910 as the Superior National Forest Halfway Ranger Station. In 1955, management of the administrative site was transferred from the Superior National Forest to USFS Research and Development Division when the Kawishiwi Experimental Forest was established by written order of the Chief of the Forest Service. Research conducted out of the buildings shifted from a focus on forestry to one on wildlife research in 1968, with research teams from the University of Minnesota and the United States Geological Survey (USGS) using the site. By the 1980s, the USFS Research and Development Division had discontinued all of its research activity at the administrative site, but retained responsibility for management of the buildings. The USGS Northern Prairie Wildlife Research Center, which formerly conducted wildlife research based from the buildings, vacated Halfway Ranger Station

in 2011 due to safety concerns related to the poor condition of the buildings. The site has since been vacant.

In 2010 the Northern Research Station prepared an environmental assessment of disposition of the Halfway Ranger Station buildings, also referred to as the Kawishiwi Field Laboratory. The proposed action at that time was historic and architectural documentation of the buildings, followed by their demolition. During agency and public comments on the 2010 draft environmental assessment, it became clear that the Minnesota Historic Preservation Officer and the public opposed this decision. In response to this situation, the Northern Research Station sought a partner that could provide the necessary building rehabilitation and maintenance in exchange for use of the site. The 2015 environmental assessment analyzes entering into a participating agreement with such an organization as the proposed alternative.

## Decision and Reasons for Decision

Based on the analysis in the Halfway Ranger Station Revised Building Disposition Environmental Assessment (EA) and the associated planning record, I have decided to implement alternative 4 as fully described in the EA (EA, page 22). This alternative will result in the Northern Research Station entering into a participating agreement with Northern Bedrock Historic Preservation Corps, a private non-profit. The Northern Research Station would receive care and maintenance of the site and facilities at no cost. Northern Bedrock would receive use of the administrative site and its buildings as a headquarters and work site for its program of training young adults in techniques of historic building rehabilitation and maintenance.

Alternative 4 best addresses the Minnesota State Historic Preservation Officer's concerns regarding preservation of Halfway Ranger Station's historic value while meeting the Northern Research Station's need for relief of the high costs of maintaining historic buildings no longer used for research. In reaching this decision, I considered the mitigation measures proposed in the EA for protection of sensitive resources and comments received throughout the project planning process.

### *Resource Protection Measures*

#### **Cultural and Historic Resources**

All work plans will be reviewed by the Minnesota State Historic Preservation Officer prior to initiation and will proceed in compliance with a programmatic agreement between the Northern Research Station and the State Historic Preservation Officer (see also EA pp. 48-52).

#### **Sensitive Wildlife**

Project impacts to wildlife and habitats will be minimized primarily through limiting the vegetation clearing and other site disturbance to the area occupied by the historic Halfway Ranger Station. Project activities are consistent with long-term use of the site as office and living space.

Possible effects to sensitive bat species potentially using site buildings as day or maternity roosts will be avoided through scheduling bat-proofing activities during the fall and winter months when bats are not present on the site (see also EA pp. 40-45).

### **Water Resources**

The South Kawishiwi River, which borders the project site to the southwest, will be protected through the use of construction best management practices to avoid transport of eroded sediments off of the site. The project will comply with all water pollution control regulations (see also EA pp. 36-40).

### ***Other Alternatives Considered***

In addition to the selected alternative, I considered five other alternatives. A brief description of the other alternatives is provided here; a detailed comparison of these alternatives can be found in the EA on pages 15-23.

### **No Action**

Under the No Action alternative (Alternative 1), no active rehabilitation of the buildings would occur. Their condition would continue to deteriorate. This alternative would not meet the project purpose and need, as there would be no disposition of the buildings

### **Increase of Maintenance Funds**

This alternative (Alternative 2) considers increased Northern Research Station management investment in the Halfway Ranger Station buildings. While this alternative would address protection of historic resources, it does not meet the project purpose and need, and would use funds needed for ongoing research consistent with the Northern Research Station's mission.

### **Transfer of Ownership and Maintenance of the Buildings**

Under this scenario (Alternative 3) a fee interest in the buildings would be acquired by an outside party. The sale would include stipulations requiring the rehabilitation and maintenance of the buildings consistent preservation of their historic value. This alternative would be consistent within the project purpose and need.

### **Sale and Relocation of the Buildings**

Relocation of the Halfway Ranger Station buildings (Alternative 5) would meet the project purpose and need, but would have adverse effects to the site's historic integrity, as well as that of the buildings.

### **Demolition of the Buildings**

This was the action proposed in the 2010 EA. Although it is consistent with the project purpose and need, it would result in adverse effects to the site's historic integrity that was determined unacceptable.

### *Public and Agency Involvement and Scoping*

As is described in the Background Section of the EA, the Northern Research Station initiated the current efforts to dispose of the Halfway Ranger Station buildings in 2006. At that time the Northern Research Station contacted the Minnesota Historic Preservation Officer to determine whether the site was eligible for listing on the National Register of Historic Places as a Historic District. The Northern Research Station then started a public and agency scoping process to identify issues related to their disposition of the site. As part of this scoping process, the Northern Research Station held public open houses in 2006 and 2010 to solicit public comment. The 2010 open house provided the public an opportunity to comment on the initial 2010 EA. The Station also solicited public comments through direct mail and media announcements, and consulted with Federal, State and Local agencies having jurisdiction.

This scoping effort and review of the 2010 EA ultimately identified four issues of key interest to affected parties:

1. Closing Halfway Ranger Station could result in loss of research opportunities;
2. Demolition of historic buildings at Halfway Ranger Station could facilitate approval of mineral development proposals in the area;
3. Preservation of historic buildings at Halfway Ranger Station would be opposed by some local interests and the State of Minnesota Historic Preservation Officer; and
4. The condition of the buildings at Halfway Ranger Station could pose a safety hazard to building occupants and visitors.

The 2015 revision to the EA responds to these issues (See also EA, pp 5-8).

## **Finding of no Significant Impact**

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

### *Context*

The appropriate context in which to consider the significance of impacts varies with the resource being considered. For effects to soils and geology, biological resources, water quality, human safety, land use, and socioeconomics, effects of actions on site have little impact beyond the local area, generally within 15 miles of the site. Effects to cultural resources are important in a larger context, due to the association of the site's buildings with a historically significant national

program, the Depression Era Civilian Conservation Corps (see EA, Section 3 and 4, pages 30 through 60).

### *Intensity*

The following factors were considered to evaluate intensity.

**1) Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on the balance the effects will be beneficial.**

Based on the predicted impacts of the alternatives discussed in the EA (Section 3), neither the beneficial nor adverse impacts of the action will be significant. As discussed earlier in this Decision Notice, four issues were identified as being important to this decision. The scope and magnitude of effects associated with these issues were limited and acceptable.

**2) The degree to which the proposed action affects public health or safety.**

As is discussed in Section 3.8 of the EA (pp. 54-56), the proposed rehabilitation and maintenance of buildings on the Halfway Ranger Station site should ameliorate potential long-term health and safety hazards. Short-term human safety effects will be mitigated through use of protective equipment during project work.

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

See discussion under Number 8, below, for historic or cultural resources. Project activities will not adversely affect any prime farmlands, wild and scenic rivers, or ecologically critical areas, as none occur proximate to site. The Boundary Waters Canoe Area Wilderness is within four miles of the site, but site activities will not measurably affect visitor experience in the Wilderness.

**4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

There is little controversy related to the effects of historic building restoration.

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

The effects on the quality of the human environment are not likely to be highly uncertain or involve unknown risks. The proposed rehabilitation and maintenance of historic buildings will use standard construction techniques. Similar projects have been undertaken to restore other historic buildings, both within Minnesota and nationally. Their effects are well understood

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

This project does not set a precedent for other projects. In the future, the USDA Forest Service must carefully evaluate each potential facility development or rehabilitation proposal or other action on its own merits. Any future action must be evaluated through the National Environmental Policy Act process. Any future action must stand on its own regarding a public interest determination, feasibility, and environmental effects.

**7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

The cumulative effects of past, present, and reasonably foreseeable future actions were considered for each of the major issues. Based on these discussions, there will be no significant cumulative impacts (See also EA, p.28).

**8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant cultural or historical resources.**

We developed the proposed action specifically to avoid adverse effects to the Halfway Ranger Station National Historic District. The Northern Research Station and our partners will continue to consult with the Minnesota State Historic Preservation Officer to ensure the Historic District is not degraded (See also EA, Section 3.6, pp. 48-51).

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

The action will not adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. The Biological Assessment for the project did not identify any such adverse effects (See also EA, Section 3.4, pp. 40-45, and Appendix E). In a letter dated March 20, 2015, the US Fish and Wildlife Service concurred with the determination of the Project Biological Assessment.

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

This action does not threaten a violation of federal, state or local law or requirements imposed for protection of the environment. Applicable laws and regulations were considered in the EA.

### *Conclusion*

After considering the environmental effects described in the EA and specialist reports, I have determined that implementing Alternative 4 will not have significant effects on the quality of the human environment, considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared, and I will issue a finding of no significant impact in association with the final EA.

## **Findings Required by Other Laws and Regulations**

In addition to the Finding of No Significant Impact, I find that this project is consistent with the standards and guidelines for land management activities described in the 2004 Superior National Forest Land and Resource Plan. Therefore, this project is consistent with the requirements of the National Forest Management Act of 1976. In addition, the Halfway Ranger Station Revised Building Disposition complies with the Endangered Species Act (EA, Appendix E), and other federal, state, and local laws or requirements imposed for the protection of the environment

## Best Available Science

I am confident that the analysis of this project was conducted using the best available science. My conclusion is based on a review of the record that shows my staff conducted a thorough review of relevant scientific information, considered responsible opposing views, and acknowledged incomplete or unavailable information, scientific uncertainty, and risk. Please refer to the specialist reports in the project file for specific discussions of the science and methods used for analysis and for literature reviewed and referenced.

## Pre-Decisional Objection Opportunities

This decision is subject to the objection process pursuant to 36 CFR 218, subparts A and B.

Objections may be:

- 1) Mailed to: Michael T. Rains, Director, Northern Research Station and Forest Products Laboratory, USDA Forest Service, 11 Campus Blvd., Suite 200 Newtown Square, PA 19073;
- 2) E-mailed electronically in a common digital format to [mrains@fs.fed.us](mailto:mrains@fs.fed.us). Please put OBJECTION and “Halfway Ranger Station Revised Building Disposition Environmental Assessment” in the subject line;
- 3) Delivered during business hours (M-F 8:00am to 5:00pm) to: USDA Forest Service, Northern Research Station and Forest Products Laboratory, Attn: Michael T. Rains, Director, 11 Campus Blvd., Suite 200 Newtown Square, PA 19073 (Note: If a phone number is needed for carrier delivery, use 610-557-4017) between the hours of 8 am and 4 pm, M-F; or
- 4) Faxed to: 610-557-4095, ATTN: OBJECTION: Halfway Ranger Station Revised Building Disposition Environmental Assessment.

Objections must include (36 CFR 218.8(d)): 1) name, address and telephone number; 2) signature or other verification of authorship; 3) identification of a single lead objector when applicable; 4) project name, Responsible Official name and title, and name of affected Forest Service Administrative Unit; 5) reasons for, and suggested remedies to resolve, your objections; and, 6) description of the connection between your objections and your prior comments. Incorporate documents by reference only as provided for at 36 CFR §218.8(b).

Objections, including attachments, must be filed within 45 days from the publication date of the legal notice of this decision in the *Mesabi Daily News*, the newspaper of record. Attachments received after the 45-day period will not be considered. The publication date in the *Mesabi Daily News* is the exclusive means for calculating the time to file an objection. Those wishing to object to this decision should not rely upon dates or timeframe information provided by any other source.

The objection must contain the minimum content requirements specified in §218.8(d) and incorporation of documents by reference is permitted only as provided in §218.8(b). It is the objector's responsibility to ensure timely filing of a written objection with the reviewing officer pursuant to §218.9. All objections are available for public inspection during and after the objection process.

At a minimum an objection must include the following (36 CFR 218.8(d)): 1) The objector's name and address, with a telephone number, if available; 2) a signature or other verification of authorship upon request (a scanned signature for Email may be filed with the objection); 3) when multiple names are listed on an objection, identification of the lead objector (verification of the identity of the lead objector shall be provided upon request); 4) the name of the proposed project, the name and title of the Responsible Official, and the name of the Research Station that will implement the project; and 5) a description of those aspects of the proposed project addressed by the objection, including specific issues related to the proposed project if applicable, how the objector believes the environmental analysis or draft decision specifically violates law, regulation, or policy; suggested remedies that would resolve the objection; supporting reasons for the reviewing officer to consider; and 6) a statement that demonstrates connection between prior specific written comments on the particular proposed project or activity and the content of the objection.

## Implementation Date

Publication of the legal notice of this decision is followed by a 45-day Objection Filing Period. If no objections are received during the period, implementation of the decision may begin 5 business days after the close of the Objection Filing Period. If objections are filed, the Objection Filing Period is followed by a 45-day Objection Resolution Period. The decision may be implemented after the end of this period.

## Contact

The Halfway Ranger Station Revised Building Disposal Environmental Assessment and supporting documents are available for public review at the Northern Research Station, 651-649-5120, and online at: <http://www.nrs.fs.fed.us/projects/kawishiwi/>. It is also possible to navigate to the project website via the Northern Research Station webpage (<http://www.nrs.fs.fed.us/>). Scroll down to the bottom right hand corner of the page to a link titled: “Updates on Halfway Ranger Station Historic District.” For further information about the Halfway Ranger Station Revised Building Disposal project contact John Slown at 406-329-3749; email [jslown@fs.fed.us](mailto:jslown@fs.fed.us).

Approved by:

/s/ John C. Brissette

8 April 2015

---

John C. Brissette, PhD  
Acting Assistant Director  
Northern Research Station  
USDA Forest Service