

**POINTS AND PITS:  
ARCHAEOLOGICAL INVESTIGATIONS IN  
MINNESOTA'S REGION 9, THE LAKE SUPERIOR SHORE,  
CARLTON, COOK, LAKE, AND ST. LOUIS COUNTIES,  
MINNESOTA**

**Final Report Prepared by:**

**Susan C. Mulholland (Principal Investigator),  
Stephen L. Mulholland (co-Principal Investigator),  
Jennifer R. Hamilton,  
and  
Stacey Stark**

**Duluth Archaeology Center  
5910 Fremont Street, Suite 1, Duluth, MN 55807**

**This project was funded by the Minnesota Arts and Cultural Heritage Fund as part of the  
Statewide Survey of Historical and Archaeological Sites.**

**August 2011**

**Duluth Archaeology Center Report No. 11-22**

## **ABSTRACT**

A contract was awarded by the Oversight Board and the Minnesota Historical Society to the Duluth Archaeology Center, L.L.C. to conduct archaeological investigations in Minnesota's Region 9, the Lake Superior Shore. The project was funded by the Minnesota Arts and Cultural Heritage Fund as part of the Statewide Survey of Historical and Archaeological Sites; funds came from the Legacy Amendment, approved by Minnesota voters in 2009. The project was designed to add to our knowledge of Region 9, which was poorly known as a result of relatively few previously recorded prehistoric archaeological sites (a total of 34). The project start date was in late September 2010 and, as a result of the state funding cycle, was to be completed by the end of June 2011.

Four objectives were stated for the project to be conducted in three tasks. A summary of what is currently known about the prehistoric occupation of the region was the first task. Both literature and collections review were specifically included as sources. Updating the State Archaeologist site files for known sites and locating new sites was the second task, including both checking on sites reported by private collectors and new survey. The fourth objective was to develop a narrative predictive model of prehistoric site location for agency managers; the reporting task also included a technical report of all activities and a short overview of Region 9 prehistory for the general public. Unfortunately, the project schedule (a direct result of the funding cycle driving deadlines) made the strict following of this order impossible. The short time before the fall 2010 field season focused more on preparation for the field than the archival research.

The field survey for new sites, most of which had to be conducted in fall 2010 before the ground froze, focused on a GIS compilation of several environmental factors previously thought to be important predictors of prehistoric site locations: distance to water (50 and 100 m) and slope (5%, 7%, 10%). Where possible, information on shoreline features from glacial lakes was also incorporated. Factors of access and land ownership (public lands preferable) were also compiled. Specific locations were then selected by the field archaeologist, drawing on decades of experience. Survey followed standard procedures, mainly shovel testing but pedestrian walkover where possible. Only four new archaeological sites were located, all in Jay Cooke State Park and all initially found by surface finds in Park trails. Most of the areas selected for survey (County and City lands in St. Louis County, Split Rock Lighthouse State Park in Lake County, Judge Magney State Park in Cook County) were either negative or untestable.

Concurrently with preparation for new survey, informant reports of new sites were recorded and, where possible, field verified in fall 2010. The response from members of the local archaeological society was overwhelming; over three dozen leads were given, about half for prehistoric sites and half for historic sites that might have prehistoric components. Additional site leads were supplied from members of the general public who heard of the project from media releases or by word of mouth. Although some site leads were either natural items or outside the Region 9 boundary, several prehistoric sites were recorded from this source.

After the weather made additional field work impossible (occurring in mid-November 2010), archival review was the main focus of the investigation. Site leads had already been received and initial review of historical society collections in the four counties started in the fall. More focused review of these data, as well as review of known site information, was conducted in winter 2010. In addition, recording of previously unknown sites on state site forms was started.

In spring 2011, the ground remained frozen through mid-May; however, some additional field work was conducted. Survey at locations in Tettegouche State Park in Lake County focused on areas suggested by MnDNR archaeologists; two new sites were recorded in this survey. Some site

leads were field verified and additional site updates were also conducted during this time. Survey totaled approximately 144 acres over the two seasons; 6 new prehistoric sites were recorded from the survey and 20 confirmed sites from informants (with an additional 13 leads). The data from both sources suggest that sites in Region 9 do tend to correlate to water, both past and present; however, specific numerical values for environmental variables are not as productive as viewing topography in the field. Areas of low slope are also high potential but not all flat area near water have site materials. Areas of low to no potential would include areas of steep slope (but not all area greater than 10% slope), water saturation (both permanent and seasonal), and/or areas at far distances from water (although quantitative measures are not firm).

This technical report documents the activities conducted for the investigation and provides a summary of prehistoric archaeological sites known in Region 9. Some sites near the region boundary are included, as are some Contact and post-Contact sites documented during the project. Much more research needs to be conducted to understand the pre-Contact occupation of the region, as well as develop a better predictive model of site location.

### **KEY PERSONNEL**

Susan C. Mulholland – Principal Investigator, Duluth Archaeology Center  
Stephen L. Mulholland – Principal Investigator, Duluth Archaeology Center  
Jennifer R. Hamilton – field supervisor, Duluth Archaeology Center  
Stacey Stark - GIS Principal Investigator, University of Minnesota Duluth  
Steven Graham - GIS co-principal investigator, University of Minnesota Duluth

### **ACKNOWLEDGMENTS**

Dave Radford (MnDNR archaeologist) provided information, maps, and reports regarding the State Parks previous archaeological investigations. Scott Anfinson (State Archaeologist) provided the Minnesota archaeology licenses. Ed Quinn (MnDNR) provided the research permits for work in State Parks; Park Managers Phil Leversedge, Tom Ludwig, and Eunice Ludetke assisted with the work in Tettegouche, Judge Magney, and Jay Cooke respectively. County personnel provided GIS information on land ownership and permissions. Bruce Koenen (OSA) and Tom Cinadr (SHPO) provided lists of sites in the counties and access to unpublished reports. Crew members Kevin Schneider, Alex Warden, and Brett Ewald assisted with field work; Kevin Schneider and Lyndi Wallen assisted with state site forms and other paperwork. Major thanks go to the members of NLAS and the public who shared information on the artifacts they collected or observed.

### **COPIES SENT TO:**

Scott Anfinson, State Archaeologist, Fort Snelling History Center, St. Paul MN 55111  
Patricia Emerson, Minnesota Historical Society, Fort Snelling History Center, St. Paul MN 55111  
Jim Jones, Minnesota Indian Affairs Council, 3801 Bemidji Avenue North, Suite #5, Bemidji MN 56601

Table of Contents

BACKGROUND INFORMATION..... 1  
 INTRODUCTION..... 1  
 LOCATION AND SETTING..... 2  
 ARCHAEOLOGICAL BACKGROUND..... 5  
     Region 9 Historic Contexts..... 5  
     Previously Recorded Pre-Contact Archaeology..... 6  
 PROJECT METHODOLOGY..... 13  
     BACKGROUND..... 13  
     OBJECTIVES..... 15  
     RESEARCH METHODS..... 16  
     Archival Literature Research..... 16  
     Collections Research..... 16  
     Field Investigations..... 17  
         Previously Recorded Site Locations..... 17  
         Survey for New Sites..... 17  
         Field Methods..... 19  
         Laboratory Methods..... 19  
 RESULTS OF INVESTIGATIONS..... 21  
     ARCHIVAL LITERATURE RESEARCH..... 21  
     Previously Recorded Sites..... 21  
     Superior National Forest Records..... 21  
     Literature Review..... 22  
     COLLECTIONS RESEARCH..... 22  
     Institutions..... 22  
     Private Individuals..... 23  
         Public Information Releases..... 23  
         Northern Lakes Archaeological Society..... 26  
     FIELD SURVEY..... 28  
     Survey for Reported Sites..... 28  
         New Reported Sites..... 28  
         2009 UMD Field School Investigations..... 29  
         Updates of Previously Recorded Sites..... 29  
     Survey for New Sites..... 30  
         Cook County..... 30  
             Judge C.R. Magney State Park..... 30  
             Arrowhead Trail..... 35  
         Lake County..... 36  
             Split Rock Lighthouse State Park..... 36  
             Lake County Road 6..... 41  
             Tettegouche State Park..... 41  
         St. Louis County..... 42  
             Lester Park..... 53  
             Big Sucker Creek..... 54

Hegberg Road. . . . .	55
Lakewood Township. . . . .	55
Beyer Road. . . . .	55
Enger Park. . . . .	55
Carlton County. . . . .	55
North of St. Louis River. . . . .	56
South of the St. Louis River. . . . .	62
SITES IN REGION 9. . . . .	65
DOCUMENTED ARCHAEOLOGICAL SITES. . . . .	65
Carlton County. . . . .	65
Ziebarth Site 21CL0004. . . . .	66
Silver Creek Overlook 21CL0007. . . . .	66
Fond du Lac 2, 21CL0009. . . . .	66
Fond du Lac 3, 21CL0010. . . . .	67
Fond du Lac 4, 21CL0011. . . . .	67
Brooks-Scanlon Boarding House, 21CL0016. . . . .	67
IMAC 392-2, 21CL0023. . . . .	67
Knife Island 1, 21CL0028. . . . .	67
Harlis 1, 21CL0032. . . . .	68
Brett's Quartz, 21CL0033. . . . .	68
Trail Rest Stop, 21CL0034. . . . .	68
Rapids Overlook, 21CL0035. . . . .	68
High Landing, 21CL0036. . . . .	68
Phillip Johnson, 21CL0037. . . . .	69
Alpha Sites. . . . .	69
Other Site Leads. . . . .	69
St. Louis County. . . . .	69
Minnesota Point, 21SL0151. . . . .	70
Bay View Point, 21SL1015. . . . .	71
08-B, 21SL1098. . . . .	71
08-C, 21SL1099. . . . .	71
Furo #1, 21SL1111. . . . .	71
Andy Anderson Point, 21SL1116. . . . .	71
Jackson Huntley Point, 21SL1117. . . . .	72
Schaeffer Lake Point, 21SL1118. . . . .	72
Pat McCarthy Point, 21SL1119. . . . .	72
Pellman Trade Axe, 21SL1121. . . . .	72
Jasper Graver, 21SL1122. . . . .	72
Alpha Sites. . . . .	73
Site Leads. . . . .	73
Historic Sites. . . . .	73
Lake County. . . . .	73
Unnamed, 21LA0009. . . . .	75
Baptism River, 21LA0012. . . . .	75
Tettagouche, 21LA0014. . . . .	75

Stewart River, 21LA0020. . . . .	75
Superior Beach, 21LA00021. . . . .	75
Baptism River Terrace, 21LA0041. . . . .	76
Tettegouche Lake Overlook, 21LA0519. . . . .	76
Gitchi Gami Trail 1, 21LA0524. . . . .	76
Rock Ring Ridge, 21LA0543. . . . .	76
Todd's Bench, 21LA0544. . . . .	76
Two Harbors Park, 21LA0547. . . . .	77
Cleveland Stone, 21LA0549. . . . .	77
Isotta Medal, 21LA0550. . . . .	77
Dixie Knife, 21LA0551. . . . .	77
Larry Ronning Site, 21LA0553. . . . .	78
Baptism River Slope, 21LA0554. . . . .	78
Baptism River North Vista, 21LA0555. . . . .	78
Alpha Sites. . . . .	78
Site Leads. . . . .	78
Historic Sites. . . . .	79
Cook County. . . . .	79
Grand Portage, 21CK0006. . . . .	81
Fort Charlotte, 21CK0007. . . . .	81
East Temperance River Mound, 21CK0008. . . . .	81
Thompson's Ridge II, 21CK0348. . . . .	81
Horseshoe Bay Penta Arcanum, 21CK0370. . . . .	81
Cascade River State Park Campground, 21CK0372. . . . .	82
Cut Face Creek, 21CK0374. . . . .	82
Muehlenberg, 21CK0361. . . . .	82
Temperance River Washout, 21CK0362. . . . .	82
Netland Point, 21CK0363. . . . .	82
Tammy Cefalu Point, 21CK0364. . . . .	82
Chris Marken Spud, 21CK0365. . . . .	83
Alpha Sites. . . . .	83
Site Leads. . . . .	83
SITE DISTRIBUTION PATTERNS. . . . .	83
Site Statistics. . . . .	84
New Survey Results. . . . .	86
Recommendations. . . . .	88
HUMAN PREHISTORY OF REGION 9. . . . .	91
PALEOINDIAN TRADITION. . . . .	91
ARCHAIC TRADITION. . . . .	94
WOODLAND TRADITION. . . . .	95
THE JUDGE SCOTT COLLECTION. . . . .	96
FUTURE INVESTIGATIONS. . . . .	97
REFERENCES. . . . .	99

## List of Figures

Figure 1. Location of Region 9. ....	4
Figure 2. Location of the high priority tests areas and walkover survey areas, USGS. ....	31
Figure 3. Location of the high priority tests areas and survey areas, USGS. ....	32
Figure 4. Location of the high priority tests areas and walkover survey areas, USGS. ....	33
Figure 5. Location of the high priority tests areas and survey areas, USGS. ....	34
Figure 6. Location of the high priority tests areas and walkover survey areas, USGS. ....	37
Figure 7. Location of the high priority tests areas and survey areas, USGS. ....	38
Figure 8. Location of the high priority tests areas and walkover survey areas, USGS. ....	39
Figure 9. Location of the high priority tests areas and survey areas, USGS. ....	40
Figure 10. Location of the high priority tests areas and walkover survey areas, USGS. ....	43
Figure 11. Location of the high priority tests areas and survey areas, USGS. ....	44
Figure 12. Location of the high priority tests areas and walkover survey areas, USGS. ....	45
Figure 13. Location of the high priority tests areas and survey areas, USGS. ....	46
Figure 14. Location of the high priority tests areas and walkover survey areas, USGS. ....	47
Figure 15. Location of the high priority tests areas and walkover survey areas, USGS. ....	48
Figure 16. Location of the high priority tests areas and survey areas, USGS. ....	49
Figure 17. Location of the high priority tests areas and walkover survey areas, USGS. ....	50
Figure 18. Location of the high priority tests areas and survey areas, USGS. ....	51
Figure 19. Location of the high priority tests areas and survey areas, USGS. ....	52
Figure 20. Location of the high priority tests areas and walkover survey areas, USGS. ....	57
Figure 21. Location of the high priority tests areas and survey areas, USGS. ....	58
Figure 22. Location of the high priority tests areas and walkover survey areas, USGS. ....	59
Figure 23. Location of the high priority tests areas and survey areas, USGS. ....	60
Figure 24. Location of sites in Region 9. ....	85
Figure 25. Location of Region 9 survey areas. ....	87
Figure 26. Landmarks in Region 9 and adjacent regions. ....	92

List of Tables

Table 1. Location Data for Region 9, Lake Superior Shore. . . . .	2
Table 2. Previously Recorded Pre-Contact Sites in Carlton County (9s). . . . .	7
Table 3. Previously Recorded Pre-Contact Sites in St. Louis County (9s). . . . .	8
Table 4. Previously Recorded Pre-Contact Sites in Lake County (9n). . . . .	8
Table 5. Previously Recorded Pre-Contact Sites in Cook County (9n). . . . .	9
Table 6. Previously Recorded Pre-Contact Sites Receiving Excavation. . . . .	10
Table 7. Alpha Sites in Region 9. . . . .	10
Table 8. New Recorded Sites from Superior National Forest Records. . . . .	22
Table 9. Potential Site Materials in County Historical Society Museums. . . . .	23
Table 10. Public Responses to Media Releases. . . . .	24
Table 11. New Recorded Sites from NLAS Members. . . . .	26
Table 12. Unverified Site Leads from NLAS Members. . . . .	27
Table 13. New Reported Sites with Field Investigations. . . . .	28
Table 14. Sites Investigated with 2009 UMD Field School. . . . .	29
Table 15. Previously Recorded Sites Receiving Field Visits. . . . .	29
Table 16. Locations Surveyed in Cook County. . . . .	30
Table 17. Locations Surveyed in Lake County. . . . .	36
Table 18. Locations Surveyed in St. Louis County. . . . .	53
Table 19. Locations Surveyed in Carlton County. . . . .	56
Table 20. Prehistoric Sites in Carlton County Portion of Region 9. . . . .	65
Table 21. Prehistoric Sites in St. Louis County Portion of Region 9. . . . .	70
Table 22. Prehistoric Sites in Lake County Portion of Region 9. . . . .	74
Table 23. Prehistoric Sites in Cook County Portion of Region 9. . . . .	80



# BACKGROUND INFORMATION

## INTRODUCTION

The Minnesota Legislature allocated funds in FY 2010-2011 from the Arts and Cultural Heritage Fund of the Minnesota Legacy Amendment to support a *Statewide Survey of Historical and Archaeological Sites*. This program is administered by an Oversight Board consisting of representatives of the Office of the State Archaeologist (who conceived of the program), the Minnesota Historical Society (who administers the funding), and the Minnesota Indian Affairs Council (who is vitally interested in the objectives of the program). The overall goal of the program is to increase the information about archaeological sites in Minnesota, particularly those areas that are poorly known at present.

One project funded under this program is “An Archaeological Survey of the Lake Superior Region”, which focuses on the Minnesota State Historic Preservation Office (SHPO) Region 9 (Anfinson 1990). Region 9 includes the area along the North Shore of Lake Superior, extending from the Canadian border south into Carlton County. Under the hydrologic system employed to define regions (Anfinson 1990:139-143), this area is considered to be devoid of interior lakes (although bordered by Lake Superior for much of the area). Environmentally, it contains the steep gradient northern area with short, steep waterways (9n) and the flat glacial lake plain drained by the Nemadji and St. Louis Rivers (9s). This region contained at the time of the award only 34 previously recorded prehistoric archaeological sites.

The overall objective of the project was to increase information about prehistoric occupation and use of Region 9; this objective was to be addressed by identifying and recording additional prehistoric archaeological sites. This general objective was to be accomplished by three tasks. Task 1 was to assess current knowledge of prehistoric human occupation in Region 9 by reviewing the literature (published and unpublished), examining institutional collections (County historical societies), interviewing local artifact collectors, and reconstructing the paleoenvironment. The information from this task was to be used to in the research design for task 2, a field survey.

Task 2 was to be a field survey to identify new sites, both by following a research design and to visit leads from local collectors, unnumbered sites in the records, and numbered sites that had not been visited by professional archaeologists in over 10 years (excluding single artifact findspots). Survey for new sites was to follow the research design; at least half of the areas were to be selected by probabilistic methods (although not necessarily random). Task 3 was reporting the results of the project. Three deliverables were described: a technical report on the project; a narrative site locational model, and a short overview of the human prehistory of the region. The last two were to be for agency officials and the general public, respectively.

As with any plan, the good intentions clashed with reality and practicality. Given that the start date of the project was September 29, 2010, and the projected end date was May 31, 2011, not much time was possible in fall 2010 to accomplish the goals of Task 1. Field season time was limited in the fall by the onset of freezing rain, frozen ground, and snow, which occurred prior to Thanksgiving; spring field time was based on the thawing of the frozen ground. Even with an extension of a month, the opportunity for field work in spring 2011 was extremely limited.

What actually happened was that Task 2, field survey, had to be attempted in fall 2010 without a thorough investigation into either the literature or existing collections. Emphasis was placed on a) collating as much information on previously unreported artifact finds as possible, b)

pulling together GIS variables for Region 9 to select areas with desirable characteristics (low slope, close to water, glacial lake shoreline features) for survey, and c) obtaining permissions for field survey from public agencies. As much field work was conducted as possible before field conditions were impossible. Task 1, including writing the research design, was conducted after field work was suspended as a result of weather conditions.

While less than ideal, this timing did allow for a reasonable attempt to address all of the major issues in the project. The approach to field survey incorporated archaeological expertise to select environmental factors that seemed likely to correlate to prehistoric archaeological sites. The environmental factors were compiled and selected using Geographic Information System (GIS) software; GIS services were provided by the GIS Laboratory at the University of Minnesota Duluth. Archaeological expertise was supplied by one of the authors based on extensive work in the region. Additional factors of land ownership (for public lands) and ease of access were also used in the GIS approach for selection of survey areas.

The other major goal, collation of information from literature and institutional as well as private collections, was addressed by a variety of avenues. From the first, members of the local archaeological society, Northern Lakes Archaeological Society (NLAS), were enthusiastically supportive of the project. The vast majority of leads to previously unrecorded archaeological sites was obtained from these private individuals. In addition, several people responded to newspaper and other media stories on the project. Curators at the four county historical society museums were also very supportive, providing intimate knowledge of the collections and searching for the artifacts and any documentation. The following report is not a complete listing of all potential information that could be collected on prehistoric archaeological sites in Region 9 but does provide a starting point for future research.

## LOCATION AND SETTING

The Lake Superior Shore, SHPO Region 9, covers 1169 square miles of land from the Canadian border with Cook County through Lake and St. Louis Counties into the eastern quarter of Carlton County (Figure 1, Table 1). The eastern edge is, for much of the region, defined by the North Shore of Lake Superior; the exception is Carlton County where the glacial lake basin extended out of the Superior Basin. The western or inland edge is an artificial division that follows the edges of townships, allowing greater ease of identifying the region boundary (as opposed to a topographic or environmental factor, as indicated in Anfinson 1990:144, Figure 10.9). In the north, the region was extended to the west along the Canadian border to T65N; later, this was considered not useful and the boundary was shifted eastward, excluding T65N/3E and T64N/R3E. In the south, the region encompasses townships with glacial lake shoreline features along the eastern part of Carlton County.

**Table 1. Location Data for Region 9, Lake Superior Shore**

COUNTY	AREA	TOWNSHIPS
Cook	436 mi <sup>2</sup>	[65N/3E; 64N/3E, 4E, 5E, 6E, 7E; 63N/4E, 5E, 6E, & 7E; 62N/2E, 3E, 4E, 5E; 61N/1W, 1E, 2E, 3E; 60N/3W, 2W, 1W; 59N/5W, 4W, 3W; 58N/5W, 4W (9n)]
Lake	342 mi <sup>2</sup>	58N/6W; 57N/6W, 7W; 56N/7W, 8W; 55N/7W, 8W, 9W; 54N/8W, 9W, 10W; 53N/9W, 10W, 11W; 52N/11W (9n)

St. Louis	167 mi <sup>2</sup>	52N/12W; 51N/12W, 13W; 50N/13W, 14W (9n) 49N/13W, 14W, 15W; 48N/15W (9s)
Carlton	224 mi <sup>2</sup>	49N/16W; 48N/16W; 47N/16W, 17W; 46N/16W, 17W (9s)

Region 9 includes the Nemadji-Duluth Lacustrine Plain geomorphic area in Carlton, St. Louis and part of Lake Counties as well as parts of the Highland Flutes and Highland Moraine areas in St. Louis, Lake, and Cook Counties (University of Minnesota 1977, 1981). [These areas are also defined as the North Shore Highlands and the Lake Duluth area, respectively (Wright 1972:572).] The Nemadji-Duluth Lacustrine Plain geomorphic region is comprised of a prominent flat plain formed by glacial lakes at the end of the Wisconsin glaciation. Various named Glacial Lake Nemadji, Duluth, or Superior, the ponding of glacial meltwater between the Superior ice lobe and the higher ground to the southwest deposited thick clay layers. The plain is best expressed in Carlton County but extends north of Two Harbors before being replaced by the other two geomorphic areas. The Highland Moraine and Flutes were formed by deposition and erosion respectively on the lateral edge of the Superior lobe of glacial ice.

The sediments in the Lacustrine Plain are generally clayey although sandy deposits are not uncommon (University of Minnesota 1977:24). The Highland Moraine and Flutes are comprised of glacial till deposits with areas of clayey lacustrine sediments in the Flutes, as well as numerous bedrock outcrops (University of Minnesota 1977:22, 30). Soil data have been published for Carlton County (Lewis 1978) but are only available on-line for Carlton and St. Louis Counties; Lake and Cook Counties have no soil data available.

Few lakes are present in or adjacent to Region 9 (lack of lakes being the dominant characteristic of the region definition), with the exception of Lake Superior. This region does have numerous streams. In the Highland Moraine/Flute area (9n), the streams of the North Shore are short and have steep gradients, often producing waterfalls and rapids (Waters 1977:44). In the Lacustrine Plain area, streams are longer and with generally lower gradients, often deeply dissected into the glacial lake plain (9s). The Nemadji and St. Louis Rivers are the main streams, although smaller tributaries are also present (Waters 1977:13, 25).

Region 9 is in the Laurentian Mixed Forest provinces, one of the major ecological provinces defined in Minnesota (Minnesota Department of Natural Resources 1999). The Laurentian Mixed Forest has been coniferous or mixed coniferous/hardwood since shortly after the retreat of the glaciers. Region 9 contains Northern Superior Uplands section/North Shore Highlands subsection (Cook, Lake, and St. Louis Counties; northern portion of Carlton County) and Southern Superior Uplands section/Glacial Lake Superior Plain subsection (southern portion of Carlton County). The Northern Superior Uplands coincide mostly with the Canadian Shield in Minnesota, an area of thin soils from glacial activity. The North Shore Highlands has especially rugged terrain with climate moderated by Lake Superior. The Southern Superior Uplands are limited in Minnesota; the Glacial Lake Superior Plain roughly coincides with the Nemadji River basin in the clayey glacial lake sediments.

The pre-European settlement vegetation in this area from the General Land Office (GLO) Survey records shows a variety of vegetation associations in the area (Marschner 1974). Region 9n has two major associations. Aspen-birch (eventually changing to conifer) occurs in the northern half of the North Shore; white and Norway Pines, balsam fir, birch, spruce, and arborvitae are the major species. The southern half is mostly white and Norway pines. Small areas of conifer bogs and

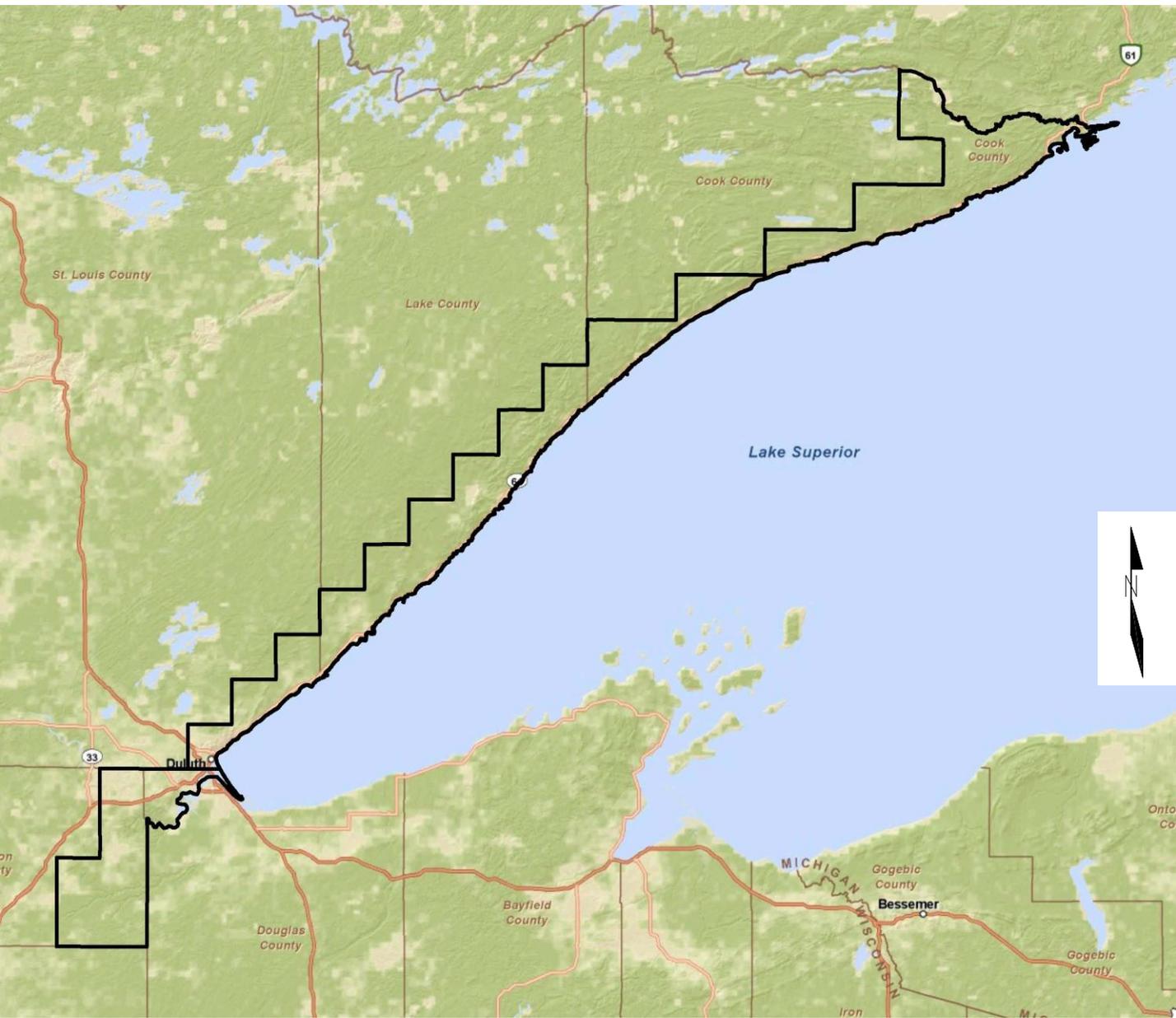


Figure 1. Location of Region 9.

swamps are interspersed within these larger vegetation types. Region 9s is more complex, with more patches of different types occurring within the two major associations. The Nemadji Basin is mostly pine flats with hemlock, spruce, fir, cedar, and white pine. Mixed pines and hardwoods (maple, white pine, basswood, oaks, hornbeam, ash, elm, aspen, birch, balsam fir) form a strip on the northern side of the basin.

Pollen cores record previous vegetation assemblages from the glacial retreat to the present (Huber 2001:14-30). The oldest pollen zone appears immediately above the glacial sediments and ends around 10,500 BP, although the start and end dates are time-transgressive to the north. This zone reflects either a shrub tundra or open boreal forest dominated by herbaceous plants; spruce and willow (perhaps dwarf) are present in small amounts. A shrub parkland dominated by birch but with spruce and willow is present by 10,500 BP. The herbaceous vegetation is still abundant but less than earlier. This assemblage is replaced by a conifer forest of spruce and pine by 10,200 BP. Larch, alder, birch, oak, black ash, fir, and elm are also present in the assemblage but at lower amounts; herbaceous vegetation continues to decrease. By 9000 BP the spruce-pine forest is changing to a mixed conifer-hardwood forest with pine dominant and birch/alder at lower amounts. Fir, oak, and elm are also present. Around 7000 BP the pine composition changes from red and/or jack pine species to dominantly white pine with birch and alder still important. At 4800 BP pine as a whole decreases but is still dominant as spruce increases; birch and other types are still present as well. This probably reflects the mid-Holocene temperature maximum with cooler conditions occurring since that time to the present.

## **ARCHAEOLOGICAL BACKGROUND**

Region 9 is the Lake Superior Shore, one of the SHPO archaeological regions defined for Minnesota (Anfinson 1990:151, Office of the State Archaeologist 2009). The definition of this region is based on the lack of lakes; excluding Lake Superior (which is large and has different subsistence resources than most lakes), there are very few lakes inland from the shore either along the steep North Shore or in the flat Nemadji Plain. Not coincidentally, the region includes much of the area of the glacial lakes that formed in the Superior basin at the end of the Pleistocene (although the use of townships to define the inland boundary has excluded some areas with glacial lake shoreline features). The Minnesota pre-Contact (prehistoric) contexts are based on a somewhat different system of districts (Dobbs 1988a:20-21). This system uses geomorphic data with some county borders to define boundaries. In this system the project area is located in the Northeastern Minnesota (4) district. District 4 extends far beyond the much more geographically limited Region 9, including glacial deposits from the Rainy and Des Moines lobes as well as that of the Superior lobe. Although subregions were not proposed for District 4, Region 9 does make a logical and cohesive subdistrict.

### ***Region 9 Historic Contexts***

Evidence for the Early Paleoindian contexts (Clovis, Folsom, Gainey, Holcombe) are absent to date from Region 9; one example is reported from each of Cook and St. Louis Counties (Higginbottom 1996:61) but both are outside the Region 9 boundaries (both political and natural). The Cook County example is from East Bearskin Lake, which is west of the original boundary in Region 8 (Border Lakes). Although originally reported as a Holcombe type (Mulholland et al. 1997:389), it has more recently been identified as a fluted point, possibly Gainey (Mulholland et al. 2007). The St. Louis County example is a fluted point from Island Lake Reservoir in the Cloquet River system (Romano and Johnson 1990), in Region 5 (Coniferous Lakes). This point was

originally considered to be Clovis but was later assigned to Gainey (Stoltman 1998:60). [Another fluted point has been recently reported from the Cloquet River drainage as well (Mulholland et al. 2009); additional examples have been photo documented but not published yet.]

The Late Paleoindian Plano context, as represented by unfluted projectile points, is not known in Region 9n but is recorded at the Ziebarth site (21CK0004) in Region 9s of Carlton County (Mulholland and Dahl 1988). Additional examples are present in both Region 5 and 8 in St. Louis, Lake, and Cook Counties (Florin 1996:191). The Reservoir Lakes Complex in the Cloquet River drainage is well known for the numerous examples of Agate Basin/Hell Gap, Scottsbluff/Eden, and other Plano-like point types (Harrison et al. 1995). The Superior National Forest also contains numerous sites that have yielded Late Paleoindian points (Mulholland et al. 2001). The area between these two loci is expected to contain similar cultural materials but has not been well examined.

The Archaic Period is represented in Minnesota by regional contexts based on environment (Dobbs 1988a:80). Northeastern Minnesota is considered to potentially contain Eastern Archaic in the south, Shield Archaic in the north, and Lake-Forest Archaic throughout much of the area. Archaic contexts, as represented by various types of notched point types, is strongly represented at the Fish Lake Dam site, 21SL0015, in the Cloquet River drainage (Mulholland et al. 2008). Both eastern (Wisconsin, Michigan, Illinois, Indiana) and western (Plains) point types have been identified at that site and in collections from the Reservoir Lakes. In addition, ground stone tools including axes and adzes (as well as the flaked trihedral adze type) are present in the Reservoir Lakes area. Copper tools are also recorded, both in the Cloquet River drainage (Pulford 2000) and in the Superior National Forest (Pulford 2009). Copper tools, both large utilitarian types typical of the Middle Archaic (Gibbon 1998) as well as smaller awls/beads/ decorative types, are definitely abundant in the Reservoir Lakes. In the Superior National Forest to the north, the copper materials at South Fowl Lake are well known (Platcek 1965); large copper tools are reported from other scattered locations.

Woodland contexts are also represented in Northeastern Minnesota (Hamilton 2009). The ceramic types of Laurel and Blackduck are well known throughout the district; Sandy Lake is present on the western side (Participants of the Lake Superior Basin Workshop 1988) and Selkirk in the northern edge (Mulholland and Woodward 2001). Region 9, characteristically, has not yielded many ceramics. One projectile point, a corner-notched type, was recovered at Gooseberry State Park campground (Radford and George 1994:143-146). Burial mounds associated with Laurel mound complex may also extend through the area, although more well represented to the north (Stoltman 1973).

The Border Route (Pigeon/Rainy Rivers to Rainy Lake) was a major travel and trade route during Contact and post-Contact times (Nute 1969); in the south, the St. Louis River was also a well traveled route connecting to the Mississippi River system and the northern river systems via portages (Luukkonen 2007). Both were probably used in pre-Contact times as well, as indicated by finds of prehistoric artifacts in Grand Portage National Monument and Jay Cooke State Park. Other travel routes from the Lake Superior shoreline to the interior are recorded by Trygg maps at Two Harbors and can be expected at other areas along the North Shore.

### ***Previously Recorded Pre-Contact Archaeology***

Only 34 pre-Contact archaeological sites had been recorded within Region 9 previous to this study, 15 in 9s and 19 in 9n (Anfinson, personal communication 2010). Of these, 11 are in Carlton County, 4 in St. Louis County, 12 in Lake County, and 7 in Cook County (Koenen, personal communication 2010). Most sites are artifact or lithic scatters although single artifact find spots and

earthworks are also included. Most are pre-Contact but several are multi-component with Contact or post-Contact materials in addition to the pre-Contact. However, four sites have been reconsidered as not representing archaeological sites; all are in Lake County, bringing totals to 8 in the county and 30 in Region 9. In addition, three sites in Carlton County are actually outside the Region 9 boundary into Region 5; removing these drops the totals to 8 in the county and 27 in the region.

Carlton County had 11 sites, although 3 are actually outside the Region 9 boundary (Table 2). Most are lithic or artifact scatters; one is an historic sawmill with associated lithics (21CL0016). Four are within Jay Cooke State Park; three were discovered during survey for gas pipelines. One site is associated with the Late Paleoindian historic context with two Agate Basin-like projectile points recorded. One site yielded ceramics, indicating a Woodland context; possible Laurel or Malmo types were recorded. The mound site is also probably associated with a Woodland context. The remaining sites are not associated with any specific pre-Contact context.

**Table 2: Previously Recorded Pre-Contact Sites in Carlton County (9s)**

SITE #	NAME	CONTENT
21CL0001*	none	mounds
21CL0004	Ziebarth	2 Agate Basin-like points
21CL0007	Silver Creek Overlook	quartz debitage
21CL0009	Fond du Lac 2	quartz debitage
21CL0010	Fond du Lac 3	quartz debitage
21CL0011	Fond du Lac 4	lithic debitage
21CL0016	Brooks-Scanlon Boarding House	lithics (with historic sawmill)
21CL0022*	IMAC 384-1	lithics and ceramics
21CL0023	IMAC 392-2	lithics
21CL0027*	IMAC 382-1	lithics
21CL0028	Knife Island 1	lithics

\*sites outside Region 9 boundary

St. Louis County has four sites, all in 9 south (Table 3). Three are lithic scatters in the Bay View School Forest on the Duluth hillside, discovered during survey with the UMD field school within the last five years. No diagnostics have been recovered so no historic context is assigned. The other site, 21SL0151, is a village and burial site recorded from the end of Minnesota Point. The materials include Contact period artifacts and the site is associated with Contact/post-Contact Ojibwa occupations, although pre-Contact occupation is also likely. In addition, the American Fur Company post in Fond du Lac was located at the head of navigation below (downstream) from the Grand Portage of the St. Louis (Luukkonen 2007:177). Ojibwa villages and cemeteries were associated with this general location in Contact period; pre-Contact occupations are likely as well.

**Table 3: Previously Recorded Pre-Contact Sites in St. Louis County (9s)**

SITE #	NAME	CONTENT
21SL0151	Minnesota Point	artifacts, burials, post-Contact era
21SL1015	Bay View Point	lithics
21SL1098	08-B	lithic debitage (2 flakes)
21SL1099	08-C	lithic debitage (2 flakes)

Lake County has 12 previously identified prehistoric sites, although 3 have since been removed as being not cultural in origin and one was split into separate sites (Table 4). Site 21LA13 was split into 21LA15, 21LA16, and 21LA17 (the latter is an historic logging camp and is not considered further here). The materials from 21LA15 and 21LA16 were reviewed in 2010 and considered to be naturally broken rock. In addition, 21LA22 was recognized from Phase II evaluation as representing mechanical rock crushing, not cultural knapping (Peterson et al. 1991:44).

**Table 4: Previously Recorded Pre-Contact Sites in Lake County (9n)**

SITE #	NAME	CONTENT
21LA0009	none	lithics
21LA0012	Baptism River	lithics
<i>21LA0013*</i>	<i>Alger Smith Logging Camp</i>	<i>split into 21LA15, 21LA16, 21LA17</i>
21LA0014	Tettegouche	single artifact
<i>21LA0015*</i>	<i>Nipisiquit North</i>	<i>natural rocks: NOT SITE</i>
<i>21LA0016*</i>	<i>Nipisiquit South</i>	<i>natural rocks: NOT SITE</i>
21LA0020	Stewart River	lithics
21LA0021	Superior Beach	lithics
<i>21LA0022*</i>	<i>Encampment River</i>	<i>crushed gravel from Hwy 61: NOT SITE</i>
21LA0041	Baptism River Terrace	lithics
21LA0519	Tettegouche Lake Overlook	single artifact (scraper)
21LA0524	Gitchi Gami Trail 1	lithics

\* not valid site or site number

The remaining eight sites are mostly lithic scatters with some represented by only a single artifact. Four are within Tettegouche State Park, one is in the Gitchi Gami Trail corridor in Split Rock State Park, one is in Gooseberry State Park, and two are from survey along Trunk Highway 61. No ceramics or projectile points are reported from any of these sites, although scrapers were

recovered in at least two. The preponderance of sites in State Parks is a direct reflection of the difficulty of survey in Region 9n coupled with the relatively greater amount of survey conducted for projects in the State Parks. However, it is also worth noting that a significant amount of survey was conducted for the reconstruction of T.H. 61 and only two prehistoric sites found. Since T.H. 61 is usually relatively close to the modern shoreline of Lake Superior, some factors other than distance to the large lake must have influenced site location.

Cook County has seven sites (Table 5). Three are associated with the Grand Portage National Monument; the large depots at each end of the portage trail have lithics as well as the abundant materials associated with the Contact era activities. In addition, prehistoric artifacts (lithics, ceramics, copper) have recently been recovered in various locations along the trail (William Clayton, personal communication 2011). Lithics were also found in the post-Contact Civilian Conservation Corps (CCC) camp located in the Cascade River State Park campgrounds. The other three sites consist of features. One mound has been reported on the Temperance River but the location is not verified and may be incorrect (Woolworth and Woolworth 1977:70, Arzigian and Stevenson 2003:365). Two concentrations of depressions similar to Pukaskaw pits were recorded as well, one in Cascade River State Park and one on the Lake Superior shoreline north of Hovland..

**Table 5: Previously Recorded Pre-Contact Sites in Cook County (9n)**

SITE #	NAME	CONTENT
21CK0006	Grand Portage	lithics; Contact era portage trail/depot
21CK0007	Fort Charlotte	lithics; Contact era portage trail/depot
21CK0008	Temperance River Mound	mound
21CK0348	Thompson Ridge II	lithics (within 21CK0006 boundaries)
21CK0370	Horseshoe Bay Penta Arcanum	pits
21CK0372	Cascade River State Park Campground	lithics; post-Contact CCC camp
21CK0374	Cut Face Creek	pits

The vast majority of these sites have not received archaeological investigations beyond the survey level (Table 6). Even when formal excavation has been conducted, in most cases it has not focused on the pre-Contact deposits. Numerous excavations at the Grand Portage National Monument, including underwater investigations in the Pigeon River at the Fort Charlotte end of the portage trail, remain the most intensive archaeological investigations in Region 9. The Brooks-Scanlon Boarding House received Phase III data recovery for mitigation but the investigations focused on the post-Contact deposits associated with the lumber mill/boarding house/tavern structures (Ward and McCarthy 1999). Prehistoric deposits (mostly lithics) were recovered at all three locations but not intensively investigated to date.

**Table 6: Previously Recorded Pre-Contact Sites Receiving Excavation**

SITE #	NAME	INVESTIGATIONS
21CL0016	Brooks-Scanlon Boarding House	Phase III excavations of the post-Contact sawmill: 10 units, 1995
21SL1015	Bay View Point	Phase II excavations: 8 units, 2008-2010
21LA0012	Baptism River	Phase I survey: 50 x 50 cm unit, 1984
21LA0021	Superior Beach	Phase II evaluation: 2 units, 1990
21LA0041	Baptism River Terrace	Phase II evaluation: 7 units, 1996
21CK0006	Grand Portage	numerous excavations of the Contact depot area
21CK0007	Fort Charlotte	excavations of the Contact depot and adjacent underwater areas

Other site excavations have been limited in scope, either for Phase II evaluation or as part of the Phase I survey. None have been over 10 square meters, which is the lower limit of a professional excavation as defined by the State Archaeologist. However, the scarcity of pre-Contact archaeological sites in Region 9 is a factor in assessing significance of the few sites that have been evaluated. Only 21LA0021, which yielded nothing in the 2 square meters of excavation, was considered not eligible for the National Register (Peterson et al. 1991: 43-44). Any pre-Contact site with even relatively few artifacts but decent sediment integrity therefore has the potential to add to the knowledge of Region 9 historic contexts.

In addition to sites that have received state site numbers, some site leads are recorded with letters; this designation (alpha sites) indicates that a precise location is not known or the site is not field verified or some other problem exists. Thirteen pre-Contact and Contact sites are recorded in Region 9 (Table 7). Four are Contact era sites, two associated with trading centers and two with the Grand Portage of the St. Louis. Two are surface features, four are lithic scatters, two are single artifacts and one is an artifact scatter with a possible cemetery. Two appear to be outside Region 9 (bolded) and two are listed for St. Louis County but the location is actually in Carlton County and may correlate to numbered sites (italicized). One appears to be a duplicate entry for a numbered site (underlined).

**Table 7. Alpha Sites in Region 9**

SITE	NAME	TYPE	COMMENT
21CKaa, Cook, 9n	XY Company Depot	HD	Contact era
<u>21CKad, Cook, 9n</u>	<u>Cascade River Campground</u>	<u>LS</u>	<u>same as 21CK0372</u>
21CKg, Cook, 9n	Temperance River Mouth	SA	copper lump
21CLd, Carlton, 9s	Grand Portage of St. Louis, start	TR	Contact era

21CLe, Carlton, 9s	Grand Portage of St. Louis, Roche Galet	TR	Contact era
21CLg, Carlton, 9s	Meadowbrook Dairy Farm	LS	
<b>21CLi, Carlton, 9s</b>		<b>EW</b>	<b>outside Region 9</b>
<b>21CLj, Carlton, 9s</b>	<b>Third Lake Mound</b>	<b>EW</b>	<b>outside Region 9</b>
21LAa, Lake, 9n	Wieland	SA	
21LAc, Lake, 9n	Quinn	AS	possible cemetery?
21LAd, Lake, 9n	Encampment Trade Center	HD	Contact era
<i>21SLan, St. Louis, 9s</i>	= 21CL0009?	LS	<i>48/16 - Carlton?</i>
<i>21SLao, St. Louis, 9s</i>	= 21CL0010?	LS	<i>48/16 - Carlton?</i>

LS: lithic scatter      AS: artifact scatter      SA: single artifact      EW: earthwork  
TR: trade route      HD: historic documentation



## PROJECT METHODOLOGY

### BACKGROUND

Why so few previously recorded pre-Contact archaeological sites in Region 9? It is no surprise that the rugged topography and dense vegetation (most pronounced in 9n) pose significant obstacles to locating sites. Even in 9s, large plowed fields are not widespread and although the tree cover is generally less dense, the flatter topography tends to produce water saturated areas that pose other problems for survey. With few areas exhibiting erosion or other ground disturbance suitable for pedestrian survey, the only survey method that is practical is shovel testing. This methodology samples the subsurface for buried cultural materials; it is standard on many surveys, although details often differ. However, the sample produced from shovel testing is usually extremely small in terms of the volume of area for potential sites (even considering the generally shallow nature of site burial in this region). Therefore survey is both labor intensive, time consuming, and expensive to conduct; in Region 9 particularly, finding any prehistoric materials is often more by chance than design.

Other factors also play a role. Region 9 was not included in the Statewide Archaeological Survey (SAS) conducted in the late 1970s, as was the rest of the four county area (Minnesota Historical Society 1981:4). Federal lands, which were excluded from the state-funded SAS, are abundant in the northern third of Minnesota. As a result, most SAS surveys were located farther south, most either south of the Minnesota River or in the Twin Cities vicinity northeast of the junction of the Mississippi and Minnesota Rivers. While results of the SAS (surveys based on probabilistic strategies) are informative beyond the immediate surveyed locations, the nature of the Minnesota environment is very complex so more detailed survey data is needed to predict site locations in the different areas of the state.

Mn/Model, the predictive model developed for the Minnesota Department of Transportation, also did not survey new areas of Region 9 or the rest of northeastern Minnesota, although portions of three counties in the northern third of the state were included in the seven survey areas (Johnson et al. 2002b). This project explicitly addressed distributions of both previously recorded archaeological sites and previous archaeological surveys within each of the 20 environmental subsections defined in Minnesota. The lack of survey (or the focus of survey on specific areas such as near current water features) influences the number and type of sites that are discovered. Basing a predictive model on areas that lack sufficient survey coverage of all types of environmental zones will bias the model. The two environmental subsections that correspond most closely to Region 9 (Glacial Lake Superior Plain in Carlton County and North Shore Highlands along the North Shore) contain low amounts of data: 6 and 44 sites as well as 107 and 698 surveyed places respectively (Hudak et al. 2002: Chapter 8.15). These subsections were analyzed in conjunction with two other subsections to increase the database. The site probability models were relatively successful in identifying variables that predicted the known site locations; however, the survey probability models indicate that surveys have been clustered in high and medium probability areas. Three zones of relatively intensive survey are at least partially in Region 9: the St. Louis River and tributaries (the portion near the estuary), the Manitou and Baptism River watersheds (portions on the North Shore), and the Lake Superior shoreline (Region 9n). The survey implementation model indicates 45% of the area (for all three subsections) is unknown as a result of inadequate survey.

Some survey has been conducted in Region 9, although usually related to specific projects rather than systematic surveys, even by the major land managing agencies. The nine State Parks along the North Shore have received survey only for specific parks projects, restricted to specific

APEs, within Park boundaries (David Radford, personal communication 2010). Many of the recorded sites were discovered as a direct result of those MnDNR projects but systematic surveys of entire parks are still needed. In addition, survey along T.H. 61 in advance of reconstruction was conducted by various contractors for MnDOT. As stated above, only two pre-Contact sites have been identified from those efforts.

Portions of Region 9 are within the Superior National Forest; however, relatively little land is currently owned by the SNF within Region 9. [The amount of Federal land was greater prior to land exchanges for BWCAW lands. Surveys of exchange parcels was conducted during the 1980s.] In addition, survey for SNF projects outside the BWCAW tends to focus on identification of historic sites rather than prehistoric; the major category of undertaking is timber sales, which tend to exclude water features. In contrast, the Grand Portage National Monument has received substantial survey by the National Park Service; two large Contact sites with prehistoric materials and at least one prehistoric site were recorded. Numerous surveys by Bureau of Indian Affairs archaeologists have also been conducted within the Grand Portage Reservation.

Additional surveys, in both 9n and 9s, have been smaller in scope in response to specific projects that triggered a Federal or State review by SHPO. No compilation of these projects is currently available, although a listing of all surveys, negative as well as positive, was started during this project. Both SHPO and OSA provided compilations of archaeological reports by county; the BIA was able to provide copies of reports for Grand Portage Reservation.

The current project was designed to address this gap in the knowledge of Minnesota pre-Contact contexts. The Request for Proposals of August 2, 2010, listed four objectives: summarize what is known about prehistoric human occupation in Region 9, update OSA state site files with status of previously recorded sites, find unrecorded sites, and build a predictive model for prehistoric site location. Three tasks were listed for the project: 1) assess present knowledge from site records, reports, institutional collections, private artifact collectors, and environmental (present and past) factors; 2) conduct field survey to find new sites and assess status of previously recorded sites; 3) compile reports including a technical report, a narrative site locational model, and a short overview of the human prehistory of Region 9. If conducted in sequence, these tasks would give a reasonable chance of adding to the knowledge of Region 9 in an efficient manner.

However, given the parameters of the project schedule, a thorough consideration of background parameters as described in Task 1 (previous surveyed areas, previously identified sites and site leads, consultation of county historical society museums and private collectors) to determine the best locations for survey was impossible. A compilation of previously recorded sites (those with state site numbers) was made and contacts with private individuals were initiated, as well as some visits to the county historical society museums. The approach to field survey involved a GIS compilation of selected environmental factors from past archaeological experience; factors of land ownership and access were also compiled. As much field survey as possible was conducted in Fall 2010 before the ground froze; the research design (Appendix I) was actually submitted in late 2010 after the field season ended. Additional work on reported new sites was conducted during the winter months, as well as compilation of reports from previous investigations in Region 9. After receiving an extension in time from the Oversight Board, limited additional field survey was conducted in May 2010 (the ground remained frozen in most areas until early May and patches of frozen ground were reported in mid May). Although not ideal, the timing of the project (fall award, June 30 final deadline) dictated the sequence of work.

## OBJECTIVES

The research problem, to increase the knowledge of prehistoric human occupations in SHPO Region 9, is important for management as well as research purposes. The low number of previously recorded prehistoric archaeological sites makes definition of the extent or nature of Native American occupations in the region is tenuous at best. Intelligent management decisions in regards to cultural resources, for land managers from the Federal and State levels down to individual municipalities, is based on known site data and predictions of unknown site locations. Four specific research objectives address the problem of increasing information about prehistoric human occupations in Region 9.

1) *Summarize the current knowledge of prehistoric human occupation in Region 9.* Only 34 prehistoric archaeological sites were previously documented, with varying levels of information recorded for each (three were subsequently found to be outside Region 9 and four are not valid sites). Review of this information, although sparse, informs the project by indicating what is known. In addition, archaeological investigations have been conducted in region 9. Compilation of the negative data from the surveys is an important part of the background. EXPECTED RESULTS: A summary of the previously recorded prehistoric archaeological sites will form the basis for incorporating additional site data into a regional synthesis. Compilation of the negative results from past investigations will inform the narrative model of site location.

2) *Update the present status of recorded prehistoric archaeological sites.* Of the 34 previously recorded sites in Region 9, 32 have either multiple artifacts or features; only two are single artifact findspots. Many of the sites have not been visited by professional archaeologists within the last 10 years (since 2000). The status of these sites needs to be reviewed in both the documentation and the field to determine whether each site is still intact or has been destroyed. EXPECTED RESULTS: Each site that is not a single artifact findspot will be reviewed to determine the current site status. The results will be documented on state site forms.

3) *Find unrecorded prehistoric archaeological sites.* The sparse nature of the recorded data on prehistoric human occupation is a direct reflection of the relative few number of recorded archaeological sites. Additional data is needed in order to better understand how Native Americans used the region. Undocumented materials in public institutions and private collections provide one source of information. Additional field survey targeted towards areas of suspected high potential is a second method to increase the number of recorded sites. EXPECTED RESULTS: Documentation of previously located but unrecorded archaeological sites will record additional prehistoric archaeological sites. Field survey of areas of high potential for archaeological sites may record additional prehistoric sites.

4) *Build a narrative predictive model of prehistoric archaeological site location in Region 9.* When additional prehistoric archaeological sites have been documented, the expanded number of recorded sites will be the basis of an assessment of site location parameters. Environmental parameters such as topography and hydrology tend to be important in determining where prehistoric sites are located. Without extensive environmental reconstruction efforts, a complete picture of the potential physical factors cannot be assessed. However, the most noticeable (and perhaps significant) factors are still present.

EXPECTED RESULTS: The narrative predictive model will incorporate physical environmental factors of topography and hydrology. It will be a first approximation of a predictive model, subject to future testing; however, it will guide agency officials in consideration of cultural resources.

## **RESEARCH METHODS**

Three major approaches were employed to address the research objectives listed above: archival research, collections documentation, and field survey. These approaches were designed to obtain maximum documentation of prehistoric archaeological sites in the schedule of the project. Although none of the approaches were as extensive as desired, the results were interesting.

### ***Archival Literature Research***

Review and summarization of the previously known information on prehistoric human occupation of Region 9 comprised several data sources. The previously recorded sites are recorded on state site forms on file at SHPO and OSA, as well as (in most cases) in individual reports. A greater number of reports document archaeological surveys that did not locate sites; these negative data are also useful in model building (Elizabeth Hobbs, personal communication 2010). In addition to State level repositories, sites are also recorded at the Superior National Forest Supervisors Office in Duluth; these sites are not necessarily reported by state site forms to OSA.

The review of previously recorded site data included archival research at the OSA and SHPO in St. Paul and the Superior National Forest in Duluth; additional information was requested from the Minnesota Department of Natural Resources regarding the sites found in State Parks. Both sites with state site numbers and alpha sites (without state site numbers, only letters) are recorded on maps and/or in files by state site forms and locational maps, photographs, and other documents. All data on the previously recorded sites in Region 9 as well as applicable unnumbered sites and previous surveys was obtained for the summary of known information.

Curated materials from the previously recorded sites is mostly with the Minnesota Historical Society, either in the main building or at the Fort Snelling History Center. The materials from sites in 9n were reviewed earlier in 2010 as part of another project (focusing on the North Shore).

### ***Collections Research***

Review of artifact collections from other sources than those described above was conducted to determine if reliable data on previously unrecorded sites was available. These reviews focused on nonprofessional sources, which can have various problems associated with the data. Two types of information were needed in order to consider recording a new site from these sources. First, there had to be proof of human occupation in the form of an artifact or a feature. Second, the location of the site needed to be reliable and fairly precise. If possible, a field visit was also conducted to record site-specific data.

The four county historical societies (Cook, Lake, St. Louis, Carlton) were visited to see if site information in the records and collections could be identified. Other local historical organizations and public entities, such as libraries, may contain donated artifact collections but the focus was on the four county historical societies. A number of potential problems can exist with the data from such sources, including missing provenience information, generalized location data (township or general area), misplaced records, and personnel unfamiliar with the collections. Any site with precise location data was documented, artifacts identified, and diagnostic pieces photographed.

Private collectors represent a potential vast source of site location information but several problems can reduce the information obtained from this source. Some individuals keep detailed

records of site locations and artifact provenience while others do not. Identifying individuals with relevant materials is difficult, especially if the collectors fear their collection may be confiscated. Requests for information were made through press releases in local media as well as contacts with local archaeological and historical societies. Collections were recorded, artifacts documented, and diagnostic pieces photographed if the collector was willing to share information on the location(s).

### ***Field Investigations***

Field investigations focused on two major types of work: investigation of known site locations (both recorded and unrecorded) and survey of high potential areas for new sites. Field methods included both pedestrian walkover and shovel testing as appropriate for the ground conditions and objectives. Standard survey methods for transect intervals, test sizes, screening, and recording were followed (Anfinson 2005), incorporating MnModel methods as possible (Johnson et al. 2002a). Field work on public lands was conducted under an annual state archaeology license and with permission (including applicable permits/licenses) of the land managing agency (Appendix II). Permissions were delayed from Cook and Carlton County boards for lands, including Minnesota tax forfeit lands, in these counties. In addition, permission was denied by the Grand Portage Band of Lake Superior Chippewa for any field work on the Grand Portage Reservation; since Band permission was required for work on Grand Portage State Park, that park was also excluded from consideration. The National Park Service personnel at Grand Portage National Monument advised that the process to obtain an ARPA permit would require more time than available.

*Previously Recorded Site Locations:* Previously recorded prehistoric archaeological sites form one category of survey locations. The objective was to determine the current condition of the site, not conduct any additional field work. A pre-field assessment was made to determine whether sufficient location information is present to find the site. To eliminate redundant site visits, visits to recorded sites were conducted concurrently with survey for new sites as possible.

Recorded sites were reviewed to determine which are find spots or have been visited by professional archaeologists in the last 10 years (as these do not require field visits). Those considered to not be archaeological sites or not eligible for the National Register were also not included. The remaining recorded sites were considered for field visits. However, on advice from the MnDNR archaeologist and the State Archaeologist, sites that were recorded by professional surveys were considered of lower priority than others even if the site form did not record a visit within the last 10 years. Relatively few previously recorded sites therefore need field visits.

Sites recorded from County or private collections were treated as unverified sites and visited during field survey if possible. However, the purpose for visits to these sites was to determine if any cultural materials are present and determine site boundaries if possible. Therefore field survey was conducted at these locations following techniques described below. Where possible, individuals who had collected at the locations accompanied the crew to identify the specific locations. Permission from landowners or land managing agencies was obtained before field visits.

*Survey for New Sites:* Survey to locate new archaeological sites focused on areas of high probability for prehistoric occupations. Delineation of areas of high probability was based on GIS compilation of environmental variables, including paleoenvironmental factors as possible. The environmental variables considered important for prehistoric archaeological site location include distance to water (Minnesota Historical Society 1981, Stark et al. 2008), slope and aspect derived from digital elevation data (Hudak et al. 2002), and topographic setting (Mulholland et al. 2001). Local landform

and soil drainage characteristics were be used in the two counties (St. Louis and Carlton) for which SSURGO data are available.

Paleoenvironmental factors focus on delineation of glacial water features, which are abundant in Region 9 (Anfinson 1990). Former shorelines of glacial lakes (Farrand 1960) are generally higher and flatter than surrounding terrain, often with better sorted sediments (sands and gravels as opposed to till or clay-rich sediments). As a consequence, these features provide better drainage (resulting in less water-saturated locations) that are more conducive to camping than other areas. Glacial water spillways and relict stream channels not only record former locations of water (a critical factor in site location) but also provide relatively easier transportation routes through the rugged terrain and dense vegetation of the region. Recent mapping of USGS quadrangles in Carlton and St. Louis Counties provide detailed information for the southern portion of region 9 (Hobbs 2009a, 2009b, 2009c). Glacial lakes and water features in the northern portion are also highly significant (Phillips and Hill 2004, Hill 2007), especially for older sites (Mulholland et al. 1997, Mulholland et al. 2001). Geomorphic mapping of three state parks (Tettegouche, Judge Magney, Grand Portage) provide fine-scale data for survey (Phillips and Hill 1993, 1994, 1995).

Other factors of importance for the analysis include access from roads or trails and ownership of parcels. Access is key to efficient use of the limited survey time during the project timeline; time spent walking to a survey location is time not spent surveying. Ownership information is important to determine what permits/licenses or private owner permission is necessary prior to survey. Data sets were obtained from public sources offering the highest resolution (generally 1:24,000). Previously recorded archaeological sites and other data from the records research that can be recorded spatially, the region 9 boundary, and MnModel output (if made available) can be integrated into this GIS.

The survey design used GIS to identify areas of most probable positive survey. A GIS was compiled to review previously surveyed areas, geomorphology, soils (SSURGO where available), lakes, streams, wetland, slope, access (roads and trails) and ownership for Region 9. USGS topographic quadrangles (1:24,000) were used as base data for field maps. MnModel output data were not provided from MnDOT for this region. All data was available from the Minnesota DNR except for land ownership, which was acquired directly from each County office.

Once all data were acquired and integrated into the GIS, ArcGIS map documents were created for each County, highlighting environmental variables specified by the archaeologists. GIS layers were created to identify areas of interest: 100 and 50 meter buffer areas around perennial open water, areas < 5% slope, < 7% slope, and < 10% slope. These specific values were used in combination to see which ones delineated areas that were neither too small nor too large. Ultimately, 100 m from water (both lakes and streams) in conjunction with < 7% slope identified relatively restricted areas that corresponded to likely areas on USGS topographic maps.

Published map documents (.pmf files to be viewed in the ESRI free ArcReader program) were generated for each of the four counties with the areas of interest and all of the base data. The archaeologists were then able to review the data closely in a digital format to plan survey on their own time. A digital mark-up file was created as a new layer in the ArcReader program, simply circling areas of potential survey as determined by the archaeologist. This mark-up file was then used by the GIS analysts to create field maps encompassing those areas.

Printed field maps included a section of 1:24k topographic quadrangle with access routes and highlighted areas of interest. Twenty field maps were used to subset Region 9 into appropriate sized areas. A digital subset of data was created for the field activity and uploaded to the Trimble Juno handheld GPS unit. Archaeologists were trained to use the GPS units with the digital field data to

review additional GIS layers while in the field. The 1-3 meter accuracy of these units facilitated field navigation and recording as well as allow interaction with the GIS in the field.

The pool of survey locations based on high probability and access/ownership was reviewed to determine specific areas to survey. These survey locations form the initial list of places for survey; however, survey was not restricted to only specific GPS coordinates. Any areas within the land ownership type for which permission has been obtained could be surveyed at the discretion of the survey supervisor. It was anticipated that approximately 100 survey locations across region 9 might be surveyed, although more or less could be actually surveyed depending on access and weather factors. Survey locations vary in size from less than 1-2 acres to approximately 10 acres.

*Field Methods:* Field survey of selected locations for unrecorded archaeological sites involved pedestrian walkover for surface features/cultural deposits and shovel testing for subsurface features/cultural deposits. Pedestrian walkover consists of walking over the topography on close interval (10 m or less) transects and noting artifacts or features on the surface. This methodology works best in areas where the ground surface is exposed (free of vegetation) and the subsurface sediments are mixed, such as plowed fields. In densely vegetated areas such as Region 9, pedestrian walkover only identifies sites with surface features or where eroded areas are present.

Shovel testing is the accepted methodology for survey in densely vegetated areas and was the prevalent survey methodology. Shovel tests were placed on a 10-15 m interval in a grid or transect pattern in selected survey locations. The generally small size of archaeological sites in northeastern Minnesota often required testing some locations at shorter intervals than the standard 15 m. Closer interval testing (5 m intervals) were conducted at the discretion of the field supervisor in order to adequately cover the survey location. Tests were 35-40 cm in diameter where possible and all sediment was screened through 1/4 inch mesh to recover artifacts. Tests were as deep as needed to either reach glacial sediments or determine that deep site testing is required (70+ cm depth). All tests were recorded for sediment stratigraphy as well as cultural materials.

Deep site testing for buried archaeological sites (Monaghan et al. 2006) was considered in the initial planning stages for this project. However, this methodology is time consuming and expensive; in addition, the areas within Region 9 where it could be employed are limited. Only the St. Louis River estuary has a relatively high potential for buried land surfaces; both 9500 BP to 6000 BP and 3000 BP to present are considered to be buried to varying depths (Norton 2000:58). Other rivers in Region 9 are either deeply incised through glacial lake sediments (Nemadji River in Carlton County) or tend to have steep gradients (most streams on the North Shore). Given the limited time for field work and budget constraints, it was decided that deep site testing was not a feasible method for this project.

*Laboratory Methods:* Artifact analysis on items recovered from survey was conducted in the laboratory at the Duluth Archaeology Center in Duluth, Minnesota. The initial step was to clean and dry artifacts collected. The cleaning method primarily involved washing the artifacts in water and lightly scrubbing them with a toothbrush. After cleaning, the artifacts were left to dry prior to being placed in their respective storage bag.

Only lithic debitage was recovered from field survey; the material type and (if possible) flake/shatter identifications were made. The data were recorded on an accession list that assigned a unique lot identification number to each specific collection set and item number for each artifact following the protocols set forth by the Minnesota Historical Society. When the recording of the identification data and artifact weights was completed, each artifact was labeled with its assigned

accession and lot numbers. The labeling of each item is conducted on all artifacts larger than 2 cm in size that have a suitable surface on which to record. Artifacts smaller than 2 cm in size were placed in plastic bags labeled with the identification information. Identification numbers for each artifact were printed acid free paper affixed to the surface of the artifact. First a thin strip of the artifact was treated with B-72. Once this layer partially dries, the paper slip with the catalog number were affixed to this strip and then sealed with B-72 as a protective barrier.

All artifacts and data from survey on public lands are the property of the State of Minnesota. These artifacts will be curated at the Minnesota Historical Society, under curation agreements 492 and 511 (Appendix III). New state site forms were prepared for sites recorded under this project. State site numbers were assigned by the OSA for sites meeting criteria. Other sites were considered site leads. Updated state site forms for some previously recorded sites were compiled as well.

Limited GIS analysis was conducted for existing prehistoric and pit sites in Region 9. The site locations were intersected with soils, geomorphology, and slope GIS layers to obtain a value of soil drainage class, geomorphic setting (soils), geologic association (geomorphology), and percent slope for each site. The GIS tool “near” was used to detect the nearest stream, lake, and wetland to the site. The distance to the nearest stream, lake, and wetland in meters is also included in the summary table.

## RESULTS OF INVESTIGATIONS

The three different approaches to archaeological investigations in Region 9 yielded varying results. Archival research reduced the previously recorded sites from 34 to 30 by identifying non-cultural materials and one redundant site number; an additional three sites are outside the Region 9 boundary. [Alpha sites were investigated as time permitted.] Four sites were identified within the SNF records that had not previously been provided to the OSA; two were in the townships reassigned to Region 8 by OSA. Collections research obtained the greatest number of new sites from collectors and private individuals; county historical societies had a few accessions that were prehistoric artifacts but the expected problems of poor, vague, or nonexistent provenience data were fully realized. Field survey was quite disappointing in the amount of new sites discovered, although testing the methods for survey parcel selection yielded interesting trends.

### ARCHIVAL LITERATURE RESEARCH

#### *Previously Recorded Sites*

Initial archival research focused on the previously recorded prehistoric sites in Region 9. State site forms were obtained from OSA and reviewed; previous collections review had indicated that some sites were questionable (Table 4). Where possible, reports of the investigations that discovered the sites were obtained as well for additional information. This research indicated that only 27 of the 34 sites on the list were pertinent to the investigation; one additional site was added. Prehistoric sites range from single artifact finds to large complex sites (including multi-component sites). Prehistoric artifacts are mostly lithics, including a few projectile points, but features are present on several sites. Three sites are within the Grand Portage National Monument, which is listed on the National Register. Most other sites are lithic or artifact scatters; one was evaluated as not eligible to the National Register and two are considered eligible.

Most sites were discovered as the result of professional surveys, mostly in State Parks. Even if the state site form indicated the discovery was more than 10 years previous, most of these sites were not considered to require a site visit to assess site condition. Sites in State Parks were most likely visited by professionals without updated site forms, unless additional survey was done or artifacts found or condition altered (David Radford, personal communication 2011). Sites in the Grand Portage National Monument are under the jurisdiction of the National Park Service and so not visited. The two mound sites, where the locations are uncertain, were also not visited as were the two single artifact findspots and the two sites with pits. The Ziebarth site was revisited, mainly to obtain digital photographs of the projectile point. The Stewart River site and the Minnesota Point site were revisited since these sites are subject to considerable visitor traffic.

Alpha sites were reviewed as time permitted. This review consisted mostly of identifying sites outside of Region 9 and potential duplicate entries. Location information for alpha sites is, by definition, either not field verified or nebulous; field review of these sites was not possible given the time constraints.

#### *Superior National Forest Records*

The SNF Supervisors Office was visited to review prehistoric sites within Region 9. All sites had been assigned state site numbers in the mid-1990s as part of the SHPO database and MnModel projects. However, sites discovered since that time are not automatically submitted for state site numbers. Review of the atlases of the USGS topographic quadrangles indicated that 16 sites were

within the Region 9 boundary but only 4 had not received state site numbers (Table 8). State site forms were filled out for these four sites and state site numbers assigned by OSA. One site is a single artifact and two are lithic scatters; the fourth contains historic features and artifacts in addition to the prehistoric materials.

**Table 8. New Recorded Sites from Superior National Forest Records**

STATE #	SNF #	NAME	CONTENT
21CK0359*	09-09-02-068	Dryfoot Buckley	lithic scatter
21CK0360*	09-09-02-679	East Pike Lake	artifact scatter, incl. side-notched point and historic
21CK0361	09-09-07-364	Muehlenberg	single artifact, lithic knife
21CK0362	09-09-07-425	Temperance River Washout	lithic scatter

\*sites located in Region 8 (townships reassigned from Region 9 by OSA)

Review by OSA indicated that two sites, 21CK0359 and 21CK0360, were located in Region 8 after the revision to the boundary in the northern part of Cook County was incorporated. [The other 12 sites of the 16 mentioned above were also in Region 8, which is why they did not appear on the list of previously recorded sites even though state site numbers had been previously assigned.] The revision of the Region 8/9 boundary in northern Cook County removed two townships from Region 9, which included 14 numbered sites and 20 lettered sites (Anfinson, personal communication 2011). The abundance of interior lakes in these townships does support the placement in Region 8, Border Lakes; this area is near or within the Boundary Waters Canoe Area Wilderness, which is characterized by numerous lakes.

### ***Literature Review***

Reports of excavations that did not locate cultural materials form negative evidence of site location. [However, lack of cultural materials recovered does not necessarily indicate that no site was present; absence of evidence is not evidence of absence for shovel testing methodology.]

Review of such reports (including letter reports) was conducted between the field seasons. Reports from all four counties were obtained and reviewed for location of survey area, type of survey conducted, and details of the survey. The review is not complete as annual reports for many of the MnDNR divisions were not included in the time available. Also, multi-county reports from contractors (particularly pipeline surveys) were not incorporated into the study. The resulting listing should be considered a work in progress.

## **COLLECTIONS RESEARCH**

### ***Institutions***

Collections review at the county historical societies and other institutions was explicitly a part of the methodology suggested in the Request for Proposals and the subsequent research design. Region 9 includes portions of four counties: Carlton, St. Louis, Lake, and Cook. All four counties have historical societies that maintain museums (Table 9). Visits to all four museums found prehistoric artifacts but the quality of provenience information varied greatly. Three potential sites

in Carlton County are represented by four copper artifacts. However, the location of each of the items needs to be verified with the original collector, who still lives in Superior. Only one of the three prehistoric collections in the Cook County Museum had sufficiently precise location information for site status. A copper spud was assigned 21CK0365; a collection of gunflints and a trade axe did not have specific proveniences. Two projectile points are reported from the Lake County Museum but the points could not be located for identification; the provenience information is also unknown at this time. Four potential sites are represented by artifacts at the St. Louis County Historical Society. Provenience information varies from a specific street address to near a landmark in parks to an island in a lake.

**Table 9. Potential Site Materials in County Historical Society Museums**

COUNTY/CITY	# SITES	MATERIALS	STATUS
Carlton/Cloquet	3	copper artifacts	locations need verification
Cook/Grand Marais	1	copper spud	21CK0365
Lake/Two Harbors	2	projectile points	need to locate points
St. Louis/Duluth	4*	lithic and copper tools	locations need verification

\*1 site is in Cloquet River valley

Other institutions in Region 9 may also have collections that include prehistoric artifacts. Inquiries were made at the Schroeder Historical Society with negative results. Additional efforts to connect with such institutions is recommended for future work. A meeting of regional historical societies was held May 25, 2011, but the authors were unable to attend; that type of meeting is an efficient method to reach many institutions. Carlton County also has several local historical societies that might be reached through the county historical society. Other leads for potential archaeological sites were not able to be verified from different institutions.

- The Sugarloaf Cove Nature Center is reported to have a grooved stone axe, at least at one time, brought by a visitor up from the beach at the cove. The lack of operation hours during the winter and spring precluded verification of this artifact, if it was retained at the Center.

- The Two Harbors Public Library has a collection of 72 projectile points and knives in a display case in the research room. The points are mostly Late Archaic to Woodland in affiliation (Mulholland and Mulholland 2008). No provenience information is present in the library records, although it might be from 5 miles outside Two Harbors.

***Private Individuals***

*Public Informational Releases:* In order to obtain information about artifacts in private collections, two approaches were tried. First, informational announcements were sent to various types of media, first to newspapers in all four counties. Some newspapers put the information on their web page as well as in print format. This release triggered an interview on KDAL television in Duluth and inquiries from a radio station in Grand Marais. In addition, the *Lake Superior Magazine* printed an article in the March issue on the project. Other public announcements included a flier at the Gopher State Archaeological Society fall 2010 convention (courtesy of Bruce Koenen, OSA) and a presentation at the February 2011 Council for Minnesota Archaeology symposium in Inver Grove

Heights. Responses to the various media stories were mixed (Table 10). Some people did not have cultural items; omars (a concavity formed by dissolution of encapsulated soft rocks) were especially considered to be “bowls” or other ground items. Some people reported items in Wisconsin, which was definitely outside the project scope. A few people wanted to volunteer or were looking for job; one suggested an area for survey. One person was concerned as to whether consultation had been done with Fond du Lac THPO, which had been conducted prior to the press releases.

**Table 10. Public Responses to Media Releases**

NAME/CONTACT	INFO	RESULT
Bruce Hauger	2 pits on Knife River	cf. Todd/Don/Larry (already reported)
Tony Gozski	human footprint in sandstone off Wisconsin Point	not in project area
Laurie Mattson	2 historic sites in Duluth	too late in time
David Everett	arrowhead in Island Lake	not in project area
Jerry Smith	animal bones in WI	not project area
Phil Johnson	“arrowhead” from Esko	<b>*late Paleo point 21CL0037 (Region 9s)</b>
Steve Benassi	Bean and Bear Lake near Beaver/Silver Bay	general info for survey
Keith Polley	petroglyph of eagle on Rock Island in St. Louis River	no access
Jeff Newman	rock from creek in Duluth area	is an omar, natural
Tammy Cefalu	spear point on beach in Grand Marais	<b>*poss. St. Charles point 21CK0364 (Region 9n)</b>
Brett Ewald	white flakes on trail in Jay Cooke S.P.  carved inscription in river	<b>*quartz debitage 21CL0033 (Region 9s)</b>  underwater, no access
Jared Dunlap	concerns about working on lands	previous talk with LeRoy DeFoe, THPO
Robert Cresap	has 2 items that may be ground stone artifacts	both natural - differential erosion

<a href="#">Steve Record</a>	has item from unknown location	rock with differential weathering
<a href="#">Steven Senenfelder</a>	wants to volunteer; suggest looking for comet fragments	n/a
<a href="#">Bob Abrahamson</a>	manuscript on John Beargrease	too late in time
Brian Schaap	wants to volunteer	n/a
<a href="#">Ken Netland</a>	has point from Devil Track Lake	<b>*late Paleo point w/o base, 21CK0363 (Region 9n)</b>
Michelle Kokash	has point from Schaeffer Lake	<b>*side-notched point 21SL1118 (Region 5e)</b>
Robert Meo	has point from lake 8 mi east of Hayward WI	not in project area
<a href="#">Trevor Gaede</a>	has copper piece from Kettle River near Sandstone	not in project area
Scott Davis	has collection of tools (Paleo?)	not cultural/not in project area
Bill Secord	copper axe from Little Yellow Lake, WI	not in project area

\* information leading to sites

Five responses from the public were real artifacts from within or close to Region 9. Four are single artifacts consisting of projectile points. Two are Late Paleoindian in affiliation, one is an Early Archaic point, and one appears to be a Woodland type. The Phillip Johnson Point is a lanceolate point from Carlton County (21CL0037). The Tammy Cefalu Point is a possible St. Charles point recovered from the Grand Marais beach after a severe fall storm (21CK0364). The Netland Point is a lanceolate point lacking the base and reused as a knife; it was found on the shoreline of Devils Track Lake north of Grand Marais. The Schaeffer Lake Point is a side-notched point similar to Sonota types. This point is actually from Region 5e but is relatively close to the Region 9 boundary; Schaeffer Lake is a man-made lake in a previous stream. If a natural topographic feature were used, it would be within the Region 9 area.

The fifth site is within Jay Cooke State Park and was verified during field survey. Brett's Quartz site, 21CL0033, is a scatter of quartz debitage on and adjacent to a trail. Brett Ewald (an archaeological technician) had noticed the flakes and shatter a few years earlier while hiking; he reported the location and was hired to assist in the survey. [He had noticed apparent flakes in a second location but that was negative in the survey.] This site therefore falls under both categories.

*Northern Lakes Archaeological Society:* The Northern Lakes Archaeological Society is an active group of professionals and avocationalists who participate in presenting public presentations and discussions on archaeology in the Duluth-Superior-Two Harbors area. One of the first actions upon learning of the project award was to enlist the support of NLAS members in the project. Several are active collectors and others are involved in historical and archaeological projects at the professional level. To say that the response was enthusiastic was an understatement. Two members, Todd Lindahl and Don Menuey, had been collecting information from newspapers, private individuals, and other sources for several decades. The list of potential leads from these individuals was almost overwhelming, comprising over two dozen separate sources (Table 11). Other members, notably Larry Furo and Jim Pellman, were also instrumental in this project.

**Table 11. New Recorded Sites from NLAS Members**

<b>SITE #/NAME</b>	<b>CONTENT/CONTEXT</b>	<b>SOURCE</b>
21SL1111/Furo #1	lithic debitage/ P	Larry Furo
21LA0547/Two Harbors Park	lithic debitage/ P	Todd Lindahl/Brad Nelson
21LA0549/Cleveland Stone	stone anvil/ P	Todd Lindahl
21LA0550/Isotta Medal	metal medallion/ C	Todd Lindahl
21LA0551/Dixie Knife	lithic tool/ P	Todd Lindahl
21SL1121/Pellman Axe	metal tool/ C	Jim Pellman
Brad Nelson Knife	lithic tool/ P	Brad Nelson/Larry Furo
21LA1122/Jasper Graver	lithic tool/ P	Todd Lindahl
21SL1112/Furo #2	mine pit/ H	Larry Furo
21SL1113/Furo #3	mine pit/ H	Larry Furo
21SL1114/ Furo #4	berm/ H	Larry Furo
21LA0552/Encampment Island	can dump & features/ H	Todd Lindahl, Louise Thureen
21SL1116/Andy Anderson Point	projectile point (Hell Gap)/ P	Todd Lindahl
21SL1119/Pat McCarthy Point	projectile point (Durst)/ P	Todd Lindahl
<b>UNNUMBERED SITES</b>		
Burlington Townsite	artifacts/ M (P, H)	Todd Lindahl, Don Menuey
Lindahl C	mine shaft/ H	Todd Lindahl, Don Menuey
Lindahl F	mine shaft/ H	Todd Lindahl, Don Menuey
Sexton Mine	mine shaft/ H	Todd Lindahl, Don Menuey

Britton Mine Shaft	mine shaft/ H	Todd Lindahl, Don Menuey
Knife River Church Shaft	mine shaft/ H	Todd Lindahl, Don Menuey
Trestle Creek Roothouse	root cellar/ H	Todd Lindahl, Don Menuey
Lindahl A	mine pit/ H	Todd Lindahl, Don Menuey
Lindahl B	mine pit/H	Todd Lindahl, Don Menuey
Flambeau Logging Camp	logging camp/ H	Todd Lindahl, Don Menuey
Walker Mine Shaft	mine shaft/ H	Todd Lindahl, Don Menuey
Glen Avon Mine Adit	mine shaft/ H	Todd Lindahl, Don Menuey
Greenwood Mine	mine shaft/ H	Todd Lindahl, Don Menuey
Buchanan Townsite	historic town/ H	Todd Lindahl, Don Menuey
Knife River Trail Camp	logging camp/ H	Todd Lindahl, Don Menuey

\* P: pre-Contact      C: Contact/fur trade    H: Historic (post-Contact)    M: multicomponent

Prehistoric sites mostly consist of single artifacts, although at least two sites contained multiple pieces of debitage. Most of the collected artifacts are stone tools, particularly projectile points. In addition, two sites associated with the fur trade in the Contact period were reported. One is a single artifact find and the other started out in that category; additional materials were collected during an attempt to verify the location.

Over half of the leads related to historic sites, including mines shafts/pits in the Knife River area as well as berms or root cellars probably associated with habitations. Logging camps area also represented in the list, often with associations to specific logging companies and time frames of use. Some of these historic sites were assigned state site numbers; others still require more specific information on age as well as field verification of condition and location before submission.

Some prehistoric leads were either not verified or considered not verifiable (Table 12). The Sugarloaf Cove axe described above is one such lead; others include the peninsula at Beaver Bay (historic photographs show teepee structures) and artifacts with either nature or location unverified. A historic burial was reported but appears to have been destroyed by earth-disturbing activities prior to State Archaeologist involvement in the Private Cemeteries Act (MS 307). Other interesting “sites” include rock piles; without associated artifacts or correlation to maps or documents, the nature (cultural or natural) of such features, as well as any age or function information, is essentially unknown at this time.

**Table 12. Unverified Site Leads from NLAS Members**

SITE NAME	CONTENT	PROBLEM
Karin Smith Biface	lithic tool	from road gravel
Steward River Hammer	lithic tool?	not seen (underwater)

Lindhahl D	rock pile	origin/age unknown
Trestle Creek Cabin	rock pile	origin/age unknown
Beaver Bay Peninsula	wigwams in photographs	no survey conducted
Agate Bay burial	human burial	early 1990s construction

## FIELD SURVEY

Field survey was conducted for two purposes: to review a reported site (including searching for additional artifacts) and to conduct new survey to find unknown archaeological sites. Both types of surveys consisted mostly of shovel testing; most of the reviews of reported sites did not include subsurface survey but only were to verify site locations and review surface conditions. Included in this category are four sites recorded in 2009 in conjunction with the University of Minnesota Duluth field school (reports are pending). Survey for known archaeological sites followed a more detailed research design involving GIS compilation of environmental and other factors to identify areas of high potential.

### *Survey for Reported Sites*

*New Reported Sites:* Several sites reported from various sources (mostly NLAS members) were visited in fall 2010 to verify site locational data, review site condition and context, and (in some cases) conduct survey for additional artifacts (Table 13). The subsurface survey was negative in that additional prehistoric artifacts were not located at these sites (survey is described in more detail under site descriptions in a later section). However, the review of site locations and conditions did add substantial information on the state site forms. In general, pre-Contact and Contact sites were considered priorities for field visits; historic sites were visited if in the same area as other sites or encountered on the way to higher priority sites.

**Table 13. New Reported Sites with Field Investigations**

SITE #/NAME	SURVEY WORK	RESULTS
21SL1111/Furo #1	6 shovel tests	negative
21SL1112/Furo #2	review only	pit measured
21SL1113/Furo #3	review only	pits measured
21SL1114/Furo #4	review only	artifacts seen on surface
21SL1116/Andy Anderson Point	review only	site covered by steel barn
21SL1119/Pat McCarthy Point	review only	location reviewed
21LA0547/Two Harbors Park	review only	site covered by pavement/dirt
21LA0549/Cleveland Stone	6 shovel tests	negative
21LA0550/Isotta Medal	review only	n/a

21LA0552/Encampment Island	pedestrian	can dump, features
21CK0364/Tammy Cefalu Point	pedestrian	historic/modern only

*2009 UMD Field School Investigations:* Five sites, three prehistoric and two historic, that were reported by Todd Lindahl had field investigations conducted by the UMD archaeological field schools in 2009 and 2010 (Table 14). Separate reports are pending but these sites are included here since updates to the state site forms were requested by OSA as part of the project. Four sites are technically in Region 5e, Central Coniferous Forest eastern section; however, the locations are relatively close to the defined boundary with Region 9. More importantly, the sites are in the Highland Moraine complex, which is the natural topographic boundary between the Superior Basin (with the glacial lake shorelines) and the interior area (the Cloquet River drainage).

**Table 14. Sites Investigated with 2009 UMD Field School**

SITE #/NAME	SURVEY WORK	RESULTS
21LA0543/Rock Ring Ridge*	shovel tests	lithic debitage
21LA0544/ Todd's Bench*	shovel tests	lithic debitage, pits
21LA0545/Red Cliff Logging Camp*	pedestrian, mapping	berms, surface artifacts
West Bank Logging Camp*	pedestrian, mapping	berms, surface artifacts
21LA0553/Larry Ronning	shovel tests	lithic debitage

\*sites located in Region 5e

*Updates of Previously Recorded Sites:* A few previously recorded sites were visited to check on site conditions (Table 15). As indicated above, most sites had been recorded by professional archaeologists. Those in State Parks had been monitored by Parks archaeologists within the last 10 years; others had been discovered slightly earlier but were generally considered not to require visits. Most previously recorded sites were not revisited during this project.

**Table 15. Previously Recorded Sites Receiving Field Visits**

SITE #/NAME	CONDITION	COMMENT
21CL0004/Ziebarth	previously disturbed by agriculture; area in Schlafer lot highly disturbed	needs resurvey
21LA0020/Stewart River	some undisturbed areas present	found <u>21LA0548</u>
21SL0151/Minnesota Point	trails present through grass/brush	burials reported

One new site was found during the site revisit of 21LA0020. A metal pin to anchor log booms was discovered in the bedrock on the opposite side of the Stewart River from the prehistoric site. The Stewart River had been used for logging drives in 1883; this site, 21LA0548, relates directly to that activity (no other log drives were conducted here as the one in 1883 was a disaster).

**Survey for New Sites**

Archaeological survey to discover previously unknown sites was conducted in selected locations in all four counties. Locations were selected to maximize potential for prehistoric archaeological sites; environmental factors of distance to water and slope were the primary selection criteria. Land ownership was restricted to public lands in order to obtain permissions for multiple areas in an efficient manner. Access was also a major consideration, with remote areas excluded as a result of the limited field season time available under the project schedule.

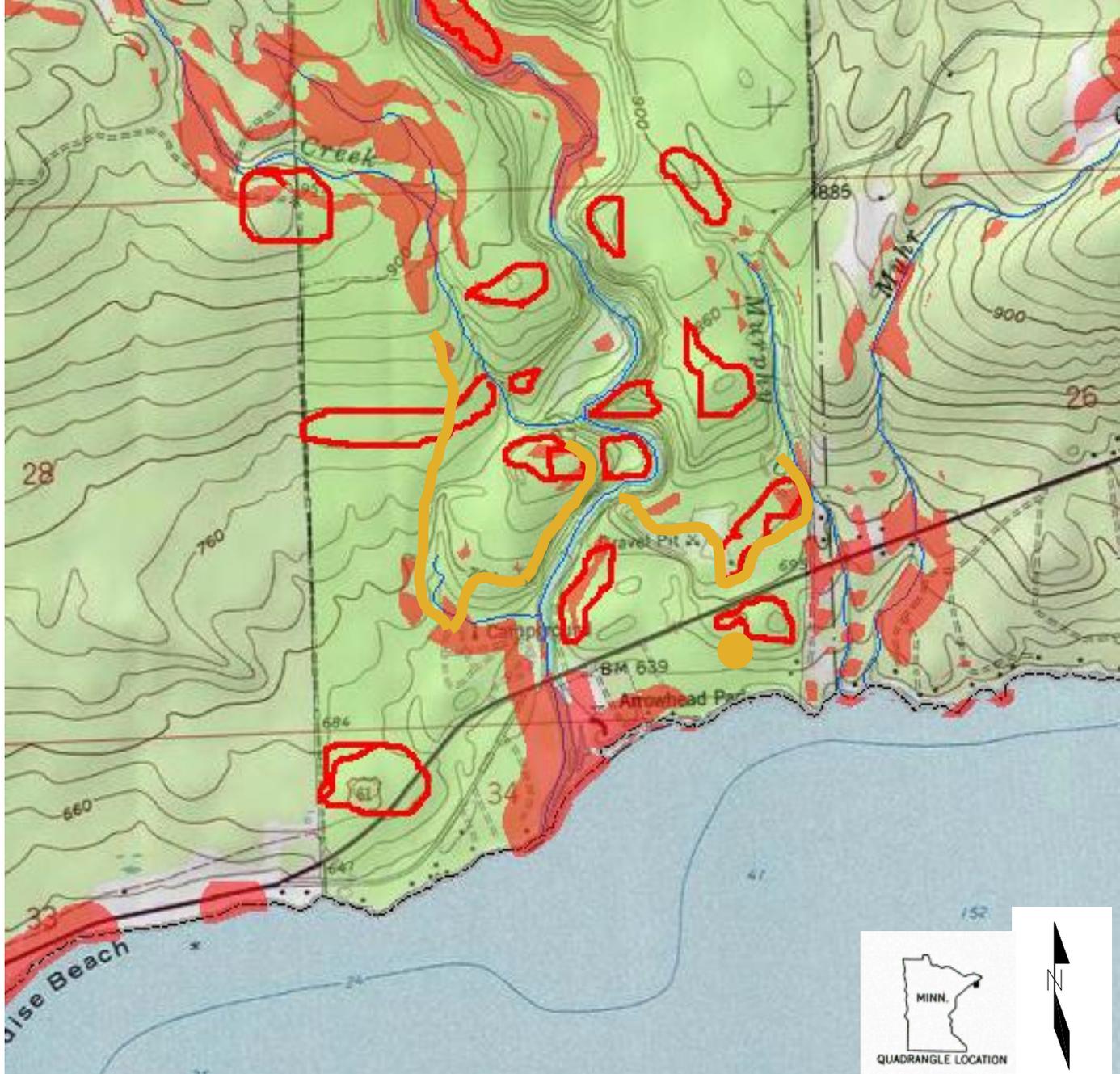
Cook County: Seven locations in two areas of Cook County were surveyed (Table 16, Figures 2-5). Three locations in Judge Magney State Park were shovel tested; one other area was walked without shovel testing, although root throws in all locations were reviewed. Two pits were recorded; one was previously unknown but one was previously reported as part of a pair of pits. Two locations on the Arrowhead Trail were surveyed. The Swamp River area was extensively shovel tested and root throws mostly reviewed at Irish Creek Road.

**Table 16. Locations Surveyed in Cook County**

AREA	LOCATION/ACREAGE	RESULTS
Judge Magney S.P.	Timberdoodle Trail/ 13.02 ac	ST in 3 spots negative
Judge Magney S.P.	Gauthier Creek Trail/ 15.27 ac	ST in 3 spots negative; <u>1 pit</u>
Judge Magney S.P.	gravel pit by Murphy Creek/4.48 ac	RT negative; <u>pit not accessed</u>
Judge Magney S.P.	eastern paleochannel/0.5 ac	<u>found reported pit</u>
Arrowhead Trail	Swamp River boat launch/2.23 ac	8 ST negative
Arrowhead Trail	Irish Creek Road/4.71 ac	RT negative throughout; ST negative (NE)

Judge C.R. Magney State Park: Survey in Magney SP focused on areas identified as glacial lake shoreline features (Phillips and Hill 1993). The current course of the Brule River is entrenched in a steep valley; areas close to that water feature are generally water saturated and subject to flooding. The various glacial lake shoreline features were considered to have a greater potential for intact archaeological deposits, particularly where tributaries to the Brule River cut through the higher and flatter terrain associated with the beaches and other features. However, many of the northern areas of the park were not easily accessed as a result of the distance from Park headquarters and relatively poor trail conditions. In addition, the area south of Highway 61 was privately owned (Nanabozhoo Lodge). Survey concentrated on areas north of but relatively close to Highway 61 (Figures 2, 3).

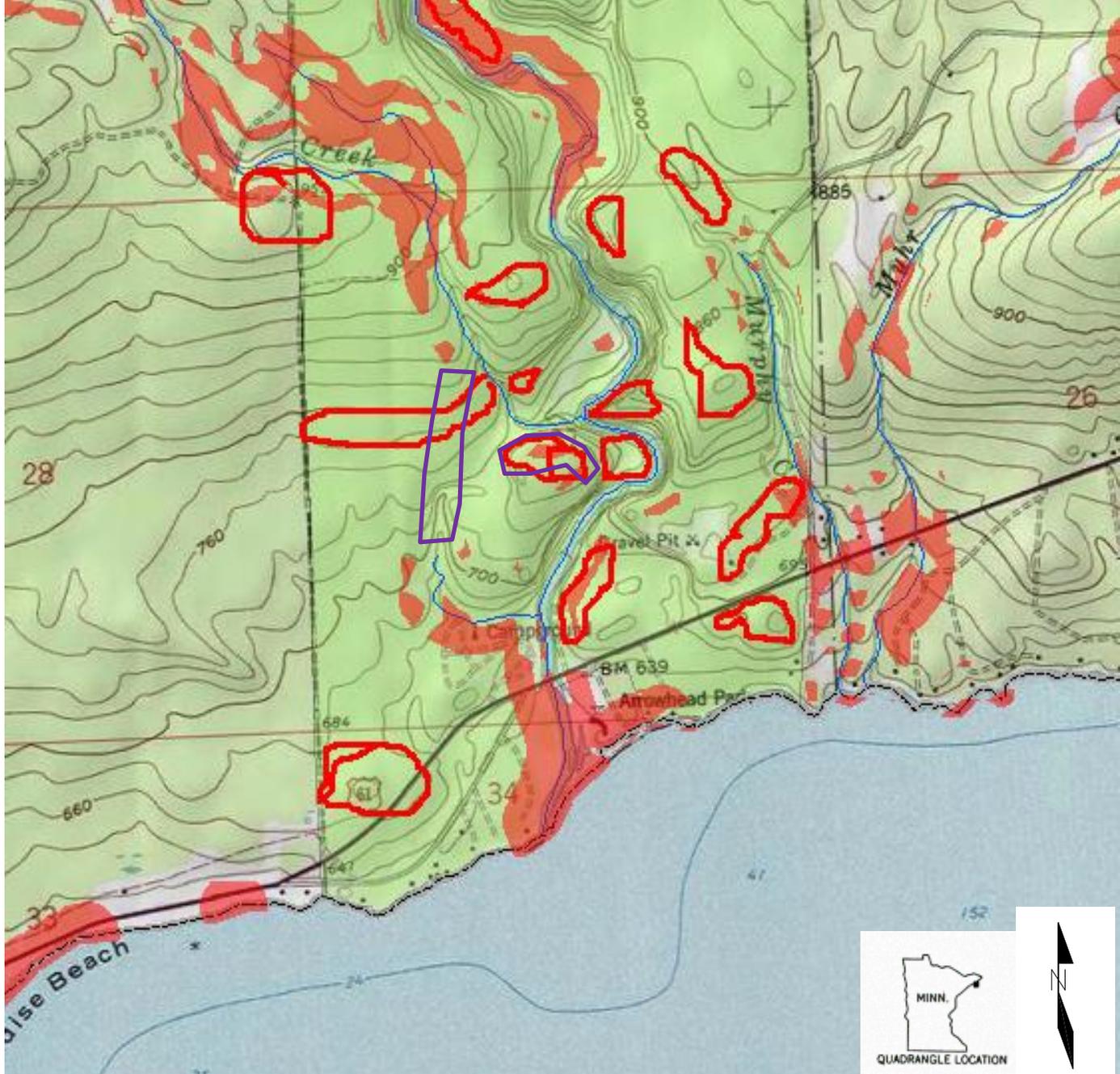
The Timberdoodle Trail is a trail loop on the west side of the Brule River and south of the junction of Gauthier Creek with the Brule; the west side is a paleochannel of the Brule. It had easy access and contained several glacial lake shoreline features, including a strongly developed ridge associated with the highest Beaver Bay shoreline (Phillips and Hill 1993:31). The trail was walked and root throws on the east side above the Brule River valley checked. Shovel tests were placed in three spots along the trail: above the junction of Gauthier Creek with Brule River (three ST), on the



-  High Priority Test areas (base on maps)
-  100m from lake, <7% slope
-  Visual Survey (walkover) area

0 SCALE 0.5  
Miles

Figure 2. Location of the high priority test areas and walkover survey areas, Marr Island 1960 (1986) quadrangle (1:24,000) USGS topographic map.



-  High Priority Test areas (base on maps)
-  100m from lake, <7% slope
-  Surveyed area

0 SCALE 0.5  
Miles

Figure 3. Location of the high priority test areas and survey areas, Marr Island 1960 (1986) quadrangle (1:24,000) USGS topographic map.

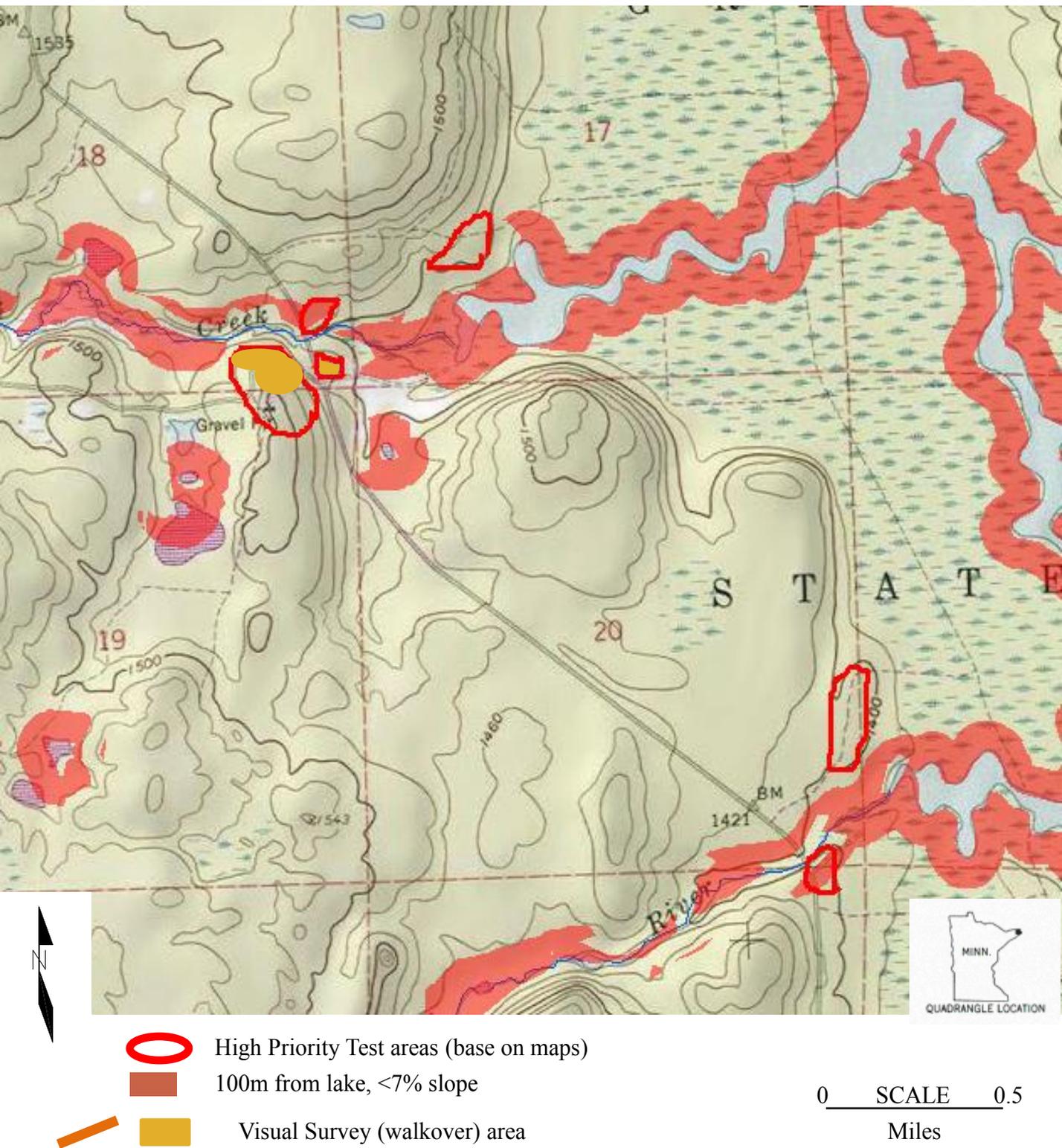


Figure 4. Location of the high priority test areas and walkover survey areas, Farquhar Peak, MN-Ont. 1960 (1986) quadrangle (1:24,000) USGS topographic map.

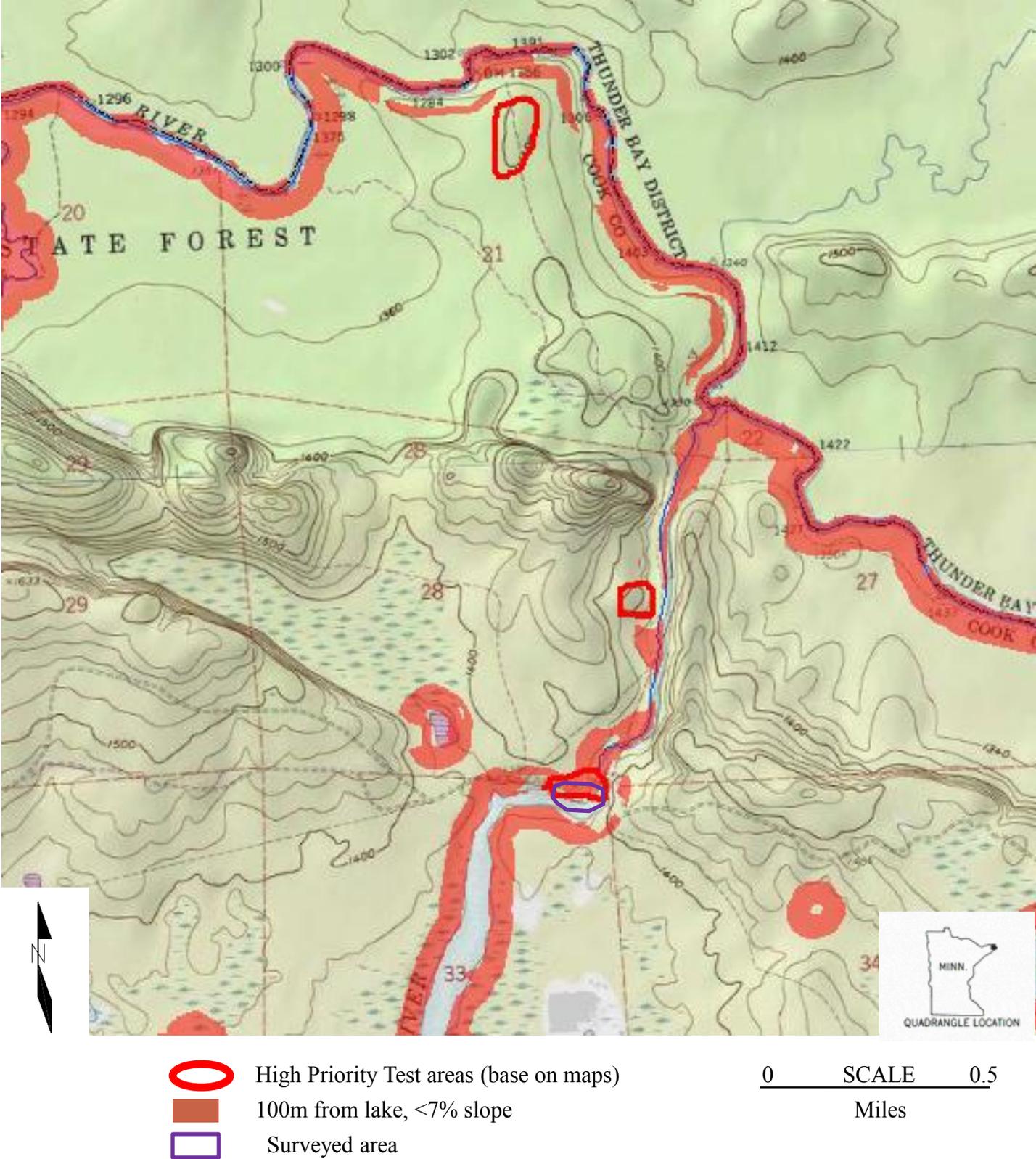


Figure 5. Location of the high priority test areas and survey areas, South Fowl Lake, MN-Ont. 1960 (1986) and Farquhar Peak, MN-Ont. 1960 (1986) quadrangles (1:24,000) USGS topographic map.

ridge where it is cut by the Gauthier Creek valley (2 ST), and on the ridge where it is cut by the paleochannel (4 ST). All were negative.

The Gauthier Creek Trail extends from the Magney campground north along the west side of the park, on the west side of the western paleochannel (which lie between this trail and the Timberdoodle). The trail was walked to the second tributary channel (the crossing of Gauthier Creek was not reached). Several slope breaks and lake shoreline features are crossed by this trail, including a continuation of the highest Beaver Bay ridge by the second tributary and three ridges marking lower Beaver Bay features between the two tributaries. The area northeast of the second tributary, on an elevation between two branches, was walked but was extremely rocky so shovel tests were impossible. Shovel tests were placed on the edge above the paleochannel in several locations. An area of the highest Beaver Bay shoreline was tested by four ST, the area of the three lower gravel and sand ridges was tested by three ST (behind the park storage area), and the area between the two tributaries was tested by three ST. All tests and inspection of root throws were negative. However, a depression (A) was recorded on the bench above the second tributary and about 100 feet east of the Gauthier Trail.

The area east of the Brule River was accessed from County Road 69 (North Road) and the park road to the gravel pit. An extremely prominent gravel ridge extends from the road to the eastern paleochannel of the Brule; part has been removed in the park gravel pit but some remains south of Murphy Creek. Numerous tree throws on this ridge were checked with negative results. The access road to the gravel pit was walked; a remnant of the old route of Highway 61 is still detectable extending from the corner of the road toward the paleochannel; scatters of modern materials are present in some area.

A depression on the east edge of this paleochannel was reported but unable to be recorded in the field as a result of extremely dense blowdown between old Highway 61 and the gravel pit. A second depression was reported to be on the west side of the paleochannel; this area was accessed from the trail system on the east side of the Brule. The depression was recorded and a large root throw about 10 feet away was checked. No artifacts were found.

Arrowhead Trail: Survey on the Arrowhead Trail focused on two locations identified from GIS compilations as having current water and flatter terrain. Areas within 100 m of water features were selected as high potential; 50 m was even higher potential but often included water saturated locations. Slope of less than 7% and 5% was also used, based on USGS topographic maps. Of the highlighted by GIS analysis, only two general areas were tested (Figures 4, 5).

The MnDNR boat access at Swamp River (on Otter Lake Road) has long been considered an area of high potential. MnDNR Forestry personnel have tested the area (Mike Magner, personal communication 2010) and SNF archaeologists have conducted survey there as well. All has been negative. The area west of the boat access road is of higher ground and offers a good view of two areas of the Swamp River. Eight shovel tests were placed in this location; all are negative. However, the sediment profiles and topographic situation suggest an explanation. The sediments in the open areas are quite coarse with little A horizon development. A push pile of sediment is located in a band of dense young fir trees south of the outhouse trail. Possible old logging road corridors are present north of the outhouse trail and at the west edge of the high ground. The area of highest potential appears to be artificially flattened by bulldozing the area and creation of the push pile. Three tests in the push pile failed to find any artifacts but any prehistoric occupation deposits could have been completely obliterated by ground disturbing activities in the recent past.

The area at the intersection of the Irish Creek Road and the Arrowhead Trail was investigated as there is higher ground above Irish Creek. The area north of the road (northwest quadrant of the

intersection) is sloping but several flatter areas were present. Shovel tests in these areas showed only shallow sediment and moss over rock. The area south of the road (southwest quadrant) is relatively hilly with several root throws and denser blowdown. All tipovers were checked but were negative. A large gravel pit is present south of this area. In the northeast quadrant of the intersection, one shovel test contained moss over gravel and cobbles. The southeast quadrant was much lower and was not tested.

The Tom Lake Road was walked into the Hovland Woods Scientific and Natural Area. An area of broken jasper taconite had been reported in the road (Phillips, personal communication 2010). Review of the surface materials indicated that the lithic was jasper taconite but it had been broken by vehicular traffic. No subsurface testing was conducted as permission to survey in the SNA had not been applied for and was not covered under the MnDNR research permit for State Parks and Waysides.

Lake County: Nine locations in three areas of Lake County were surveyed (Table 17, Figures 6-9). Five locations in Split Rock Lighthouse State Park were walked or shovel tested. Remains of two previously recorded historic sites were observed and an interesting source for possible knappable rock was seen. One location on Lake County Road 6 was surveyed by pedestrian walkover; a depression on the edge of a paleochannel was recorded. Three locations in Tettegouche State Park were intensively tested by shovel testing; two new prehistoric sites were recorded.

**Table 17. Locations Surveyed in Lake County**

AREA	LOCATION/ACREAGE	RESULTS
Split Rock Lighthouse S.P.	Pebble Beach Campground/1.1	RT negative
Split Rock Lighthouse S.P.	Little Two Harbors/0.5 ac	RT negative
Split Rock Lighthouse S.P.	Split Rock Creek west/0.95 ac	3 ST in 2 spots, negative
Split Rock Lighthouse S.P.	Split Rock Creek east/1.8 ac	2 ST & camp pedestrian neg
Split Rock Lighthouse S.P.	Split Rock River/0.62 ac	dump and berm (21LA0520)
Lake County Road 6	paleochannel/0.2 ac	1 pit recorded
Tettegouche S.P.	Baptism River east/0.94 ac	2 pos ST of 10, <u>21LA00554</u> 3 ST negative in 2 <sup>nd</sup> spot
Tettegouche S.P.	Baptism River [21LA41]/ 1.1	6 ST negative in 1 spot
Tettegouche S.P.	Baptism River north [21LA12]/ 4.91 ac	1 pos ST of 18, <u>21LA0555</u>

Split Rock Lighthouse State Park: Five locations in Split Rock were surveyed, with relatively few shovel tests placed but pedestrian walkover and root throw review conducted throughout (Figures 6, 7). Areas were chosen based in part on the GIS compilation of environmental and other factors; in addition, some trails were walked and interesting locations selected for survey. As in other areas, the actual topographic conditions varied somewhat from the GIS layers.

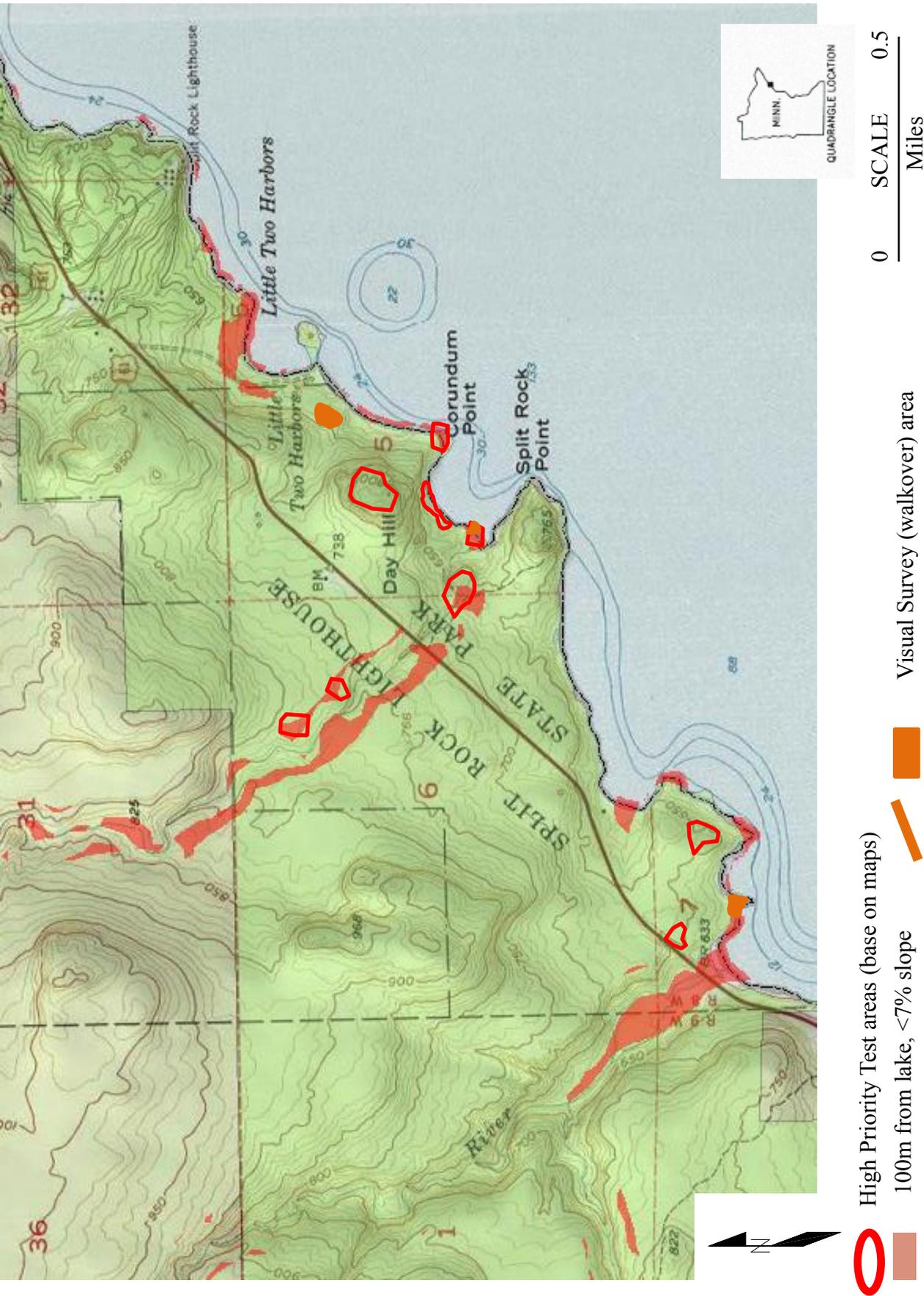


Figure 6. Location of the high priority test areas and walkover survey areas, Split Rock Point 1956 (1976) and Split Rock Point NE 1956 (1970) quadrangle (1:24,000) USGS topographic map.

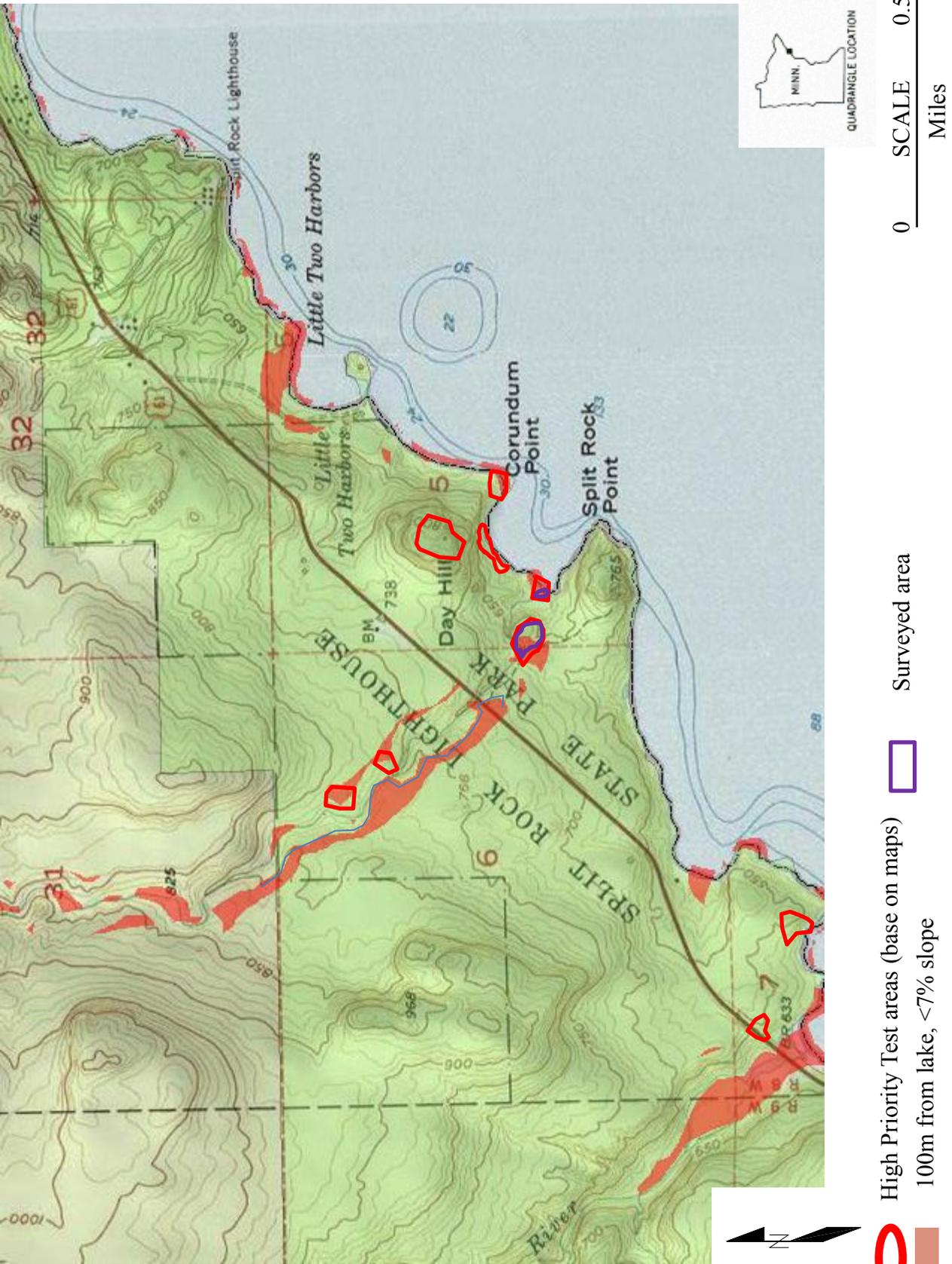
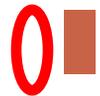
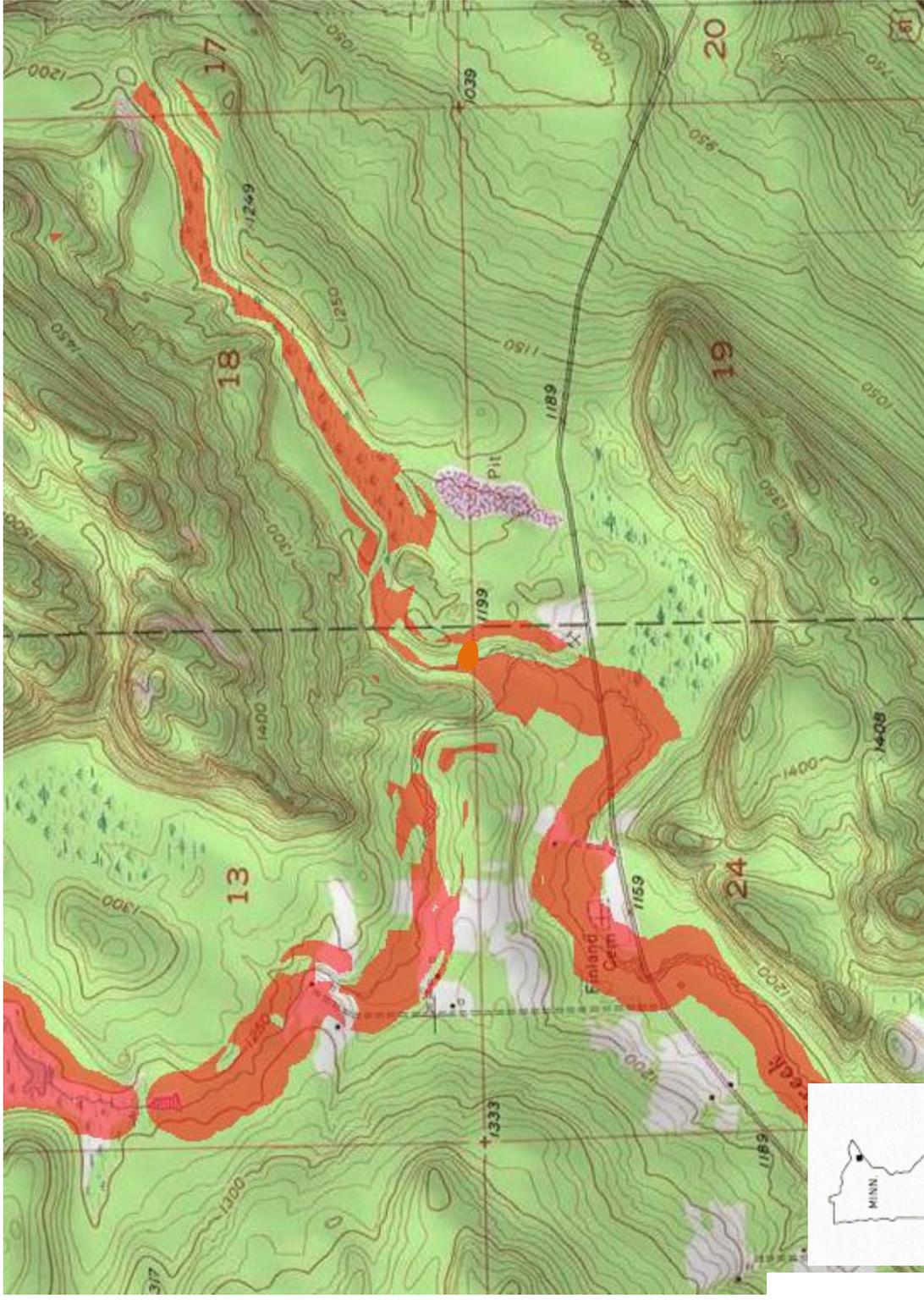


Figure 7. Location of the high priority test areas and survey areas, Split Rock Point 1956 (1976) and Split Rock Point NE 1956 (1970) quadrangle (1:24,000) USGS topographic map.



High Priority Test areas (base on maps)

100m from lake, <7% slope



Visual Survey (walkover) area



0 SCALE 0.5

Miles

Figure 8. Location of the high priority test areas and walkover survey areas, Finland 1956 (1976) quadrangle (1:24,000) USGS topographic map.

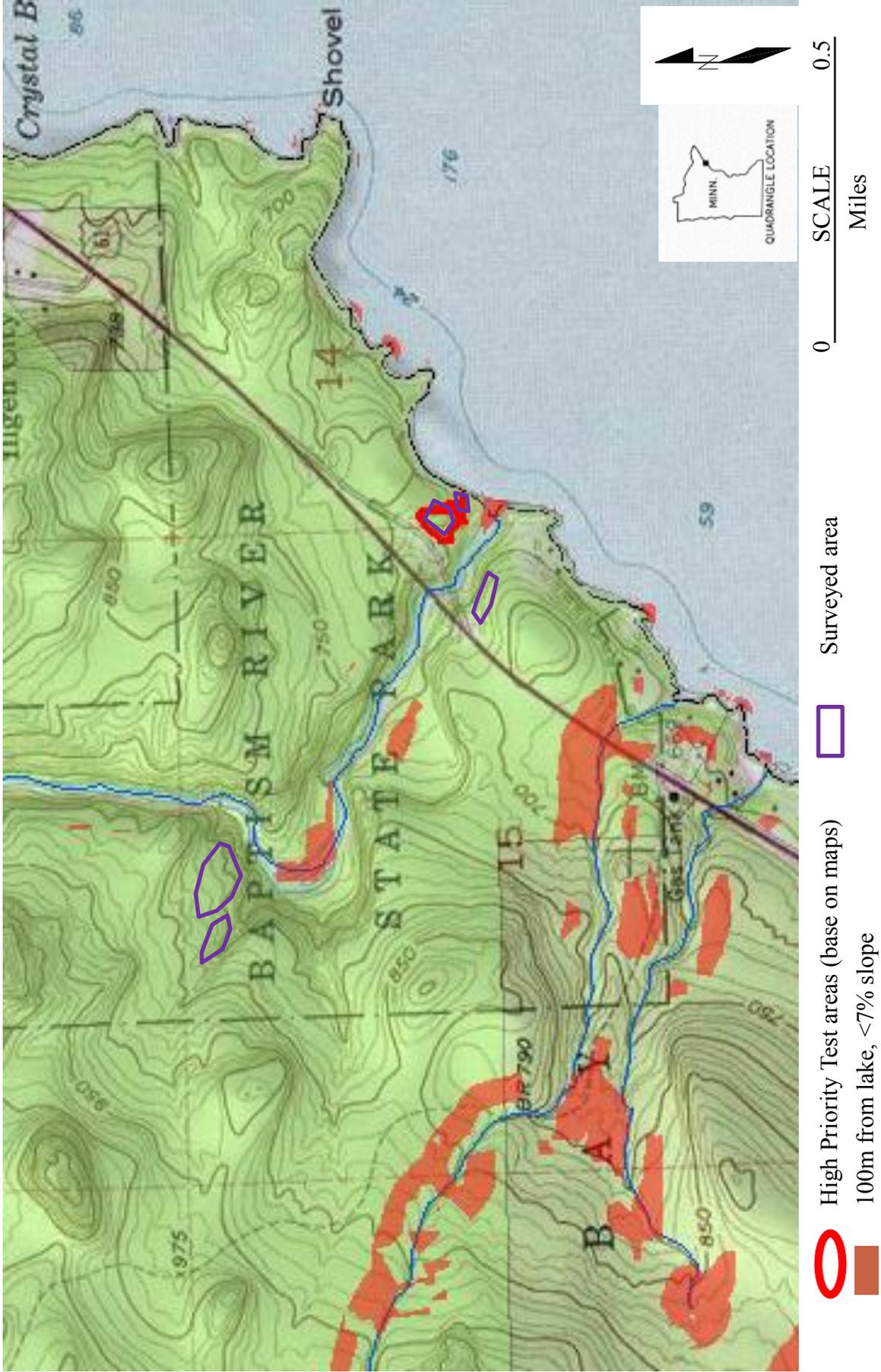


Figure 9. Location of the high priority test areas and survey areas, Illgen City 1956 (1:24,000) quadrangle (1:24,000) USGS topographic map.

A root throw at the Pebble Beach Campground (unit 3) was checked for artifacts. Other root throws between the campground and the Little Two Harbors site were also checked. No artifacts were observed, although a concrete foundation next to a trail and other concrete bases near the beach were observed. These are structural remnants from the Little Two Harbors historic site (21LA0011).

Areas on the west and east sides of Split Rock Creek were shovel tested as possible given ground terrain. Two spots on the west side of the creek were tested by a total of four shovel tests, placed on flatter areas along the slope. A campsite on the east side of the creek was checked by pedestrian walkover of the exposed ground in the user area. A flatter area farther inland was shovel tested with two tests. All of this survey was negative.

The east side of the Split Rock River was walked in an attempt to find any flat ground. No shovel tests were placed but a rectangular berm and associated can dump were noted on the surface. These features are probably part of the Split Rock Logging Camp, 21LA0520. A borrow source was noted near the river and pilings (remnants of the dam) were also visible.

Lake County Road 6: A paleochannel located inland along County Road 6 was recommended as an early geomorphic feature (Brian Phillips, personal communication 2010). This valley is considered an outlet for glacial meltwater very early in the retreat of the Rainy or Superior lobes of ice. It was investigated by pedestrian walkover (Figure 8). A depression on the edge of the bench overlooking the paleochannel was recorded. No other surface indications of features were observed and no shovel tests were placed.

Tettegouche State Park: Three locations in Tettegouche were selected by David Radford, MnDNR Parks archaeologist, as having high potential for previously unknown archaeological sites (Figure 9). Tettegouche was one of three parks on the North Shore for which geomorphic mapping had been conducted on a fine scale (Phillips and Hill 1994). The selected areas (like those in Magney State Park) were based on flatter slopes near shoreline features attributed to former stands of glacial lakes. Two of the specific areas were adjacent to previously recorded prehistoric sites while the third was in an area considered to have high archaeological potential; all had good access from trails and roads.

One location east of the Baptism River mouth was located between the park road, the trails opposite the visitor center, and the steep slopes to Lake Superior and the Baptism River. This is an area of higher ground; portions farther to the north have been tested by MnDNR Parks archaeologists for various specific projects. Two shovel tests were placed between the Lake Superior slope and the trail near an observation post. Both were negative. Testing west of the trail yielded one negative test before an extensive area of water saturated ground was encountered. Several attempted tests in this terrain failed to find ground suitable for testing.

However, on the far western side is an area of drier ground above a tributary to the Baptism River (the park road is immediately on the west side of the tributary, which drains the water saturated terrain discussed above). A ridge of sandy material is cut by this tributary at the edge above a gentle slope; the ridge is attributed to one of the Beaver Bay levels. A depression is located in this ridge at the edge overlooking the tributary.

Shovel tests were placed in this spot: one (#1) in the ridge, one (#2) 10 m to the north, one (#3) 20 m south on a flat area, and one (#4) an additional 15 m farther south. Test #4 yielded a single Gunflint silica flake. Additional shovel tests included #5 about 5 m from #3 and three tests on cardinal directions from #4. Test 4a, 4 m to the east, yielded an agate flake. Two tests were placed about 15 m farther east, on the east side of a hiking trail (probably placed on an old route of Highway 61) but both tests were negative.

The Baptism River Slope site, 21LA0554, was considered to include both the area of the positive shovel tests and the depression about 35 m farther north. The depression is on the ridge associated with one Beaver Bay shoreline while the positive shovel tests are located on a fairly gentle slope area just above the steeper slope into the Baptism River valley. However, both are adjacent to the tributary to the Baptism River.

Shovel testing was also conducted on the west side of the Baptism River near the mouth. Site 21LA0041 had previously been recorded on a higher Beaver Bay shoreline; shovel tests and seven units had recovered substantial materials. However, testing had been restricted to the trail project corridor and not extended to the slope above the Baptism River. Six shovel tests were placed on the flat area downslope and north of 21LA0041. A large root throw was also checked. All were negative.

The third area to be surveyed was farther north, above the valley of the Baptism River in the vicinity of 21LA0012. This site had been located during trail survey; again, survey had been limited to the trail corridor. Six shovel tests were placed along the edge of the flatter terrain above the Baptism River valley, starting about 20 m south of 21LA0012 and extending first along a tributary drainage and then along the slope break of the valley edge. The last was near the larger tributary to the west where it entered the Baptism River valley. All of these tests were negative.

The area east of 21LA0012 and across the head of the small tributary was tested as well. One test was on a small hillock similar in topography to the location of 21LA0012; it was negative. The valley edge was then tested, starting on the east side of the small tributary. This location was water saturated and rocky. The next area surveyed was a small point to the east, protruding into the valley. Three tests were placed, one at the beginning of the point and two on it, one to each side of a root throw depression. All were negative. Single tests were placed on each of the two small points farther east. The farthest test was negative but the intermediate one, #12, yielded a medium sized piece of jasper taconite with flake scars. One edge appears to be shaped into a scraping edge. Four tests on cardinal directions were negative, as was a final test about 13 m to the north.

The Baptism River North Vista site, 21LA0555, is a single artifact from a single shovel test. The artifact appears to be at least partially a scraper, although not well defined. It is jasper taconite; very few pebbles of jasper taconite were recovered from all the testing in Tettegouche. The test also was remarkable for the large amount of charcoal present, up to half the material retained in the screen. The artifact was recovered from roughly the same depth as the charcoal, although the charcoal may represent a forest fire rather than cultural materials. The positive test was at the center of the location where this small point started to extend into the valley. The area was relatively flat with lower ground to the north and the gently sloping point to the south.

*St. Louis County:* Twenty-three locations in six areas were surveyed in St. Louis County (Table 18, Figures 10-19). Most areas are County land (including Minnesota State tax-forfeit lands) but City land in one park was also surveyed. Seven locations in Lester Park were tested by a combination of shovel testing and walkover. Four locations in the Sucker River, four in Lakewood Township, and six in the Beyer Road area were selected based on GIS compilations. Hegberg Road was reviewed and found too water saturated to do any field work, as were several locations in Lakewood Township and Beyer. One location in Enger Park was selected based on a previous findspot. All areas were negative for prehistoric cultural materials, although modern debris was noted in many locations.

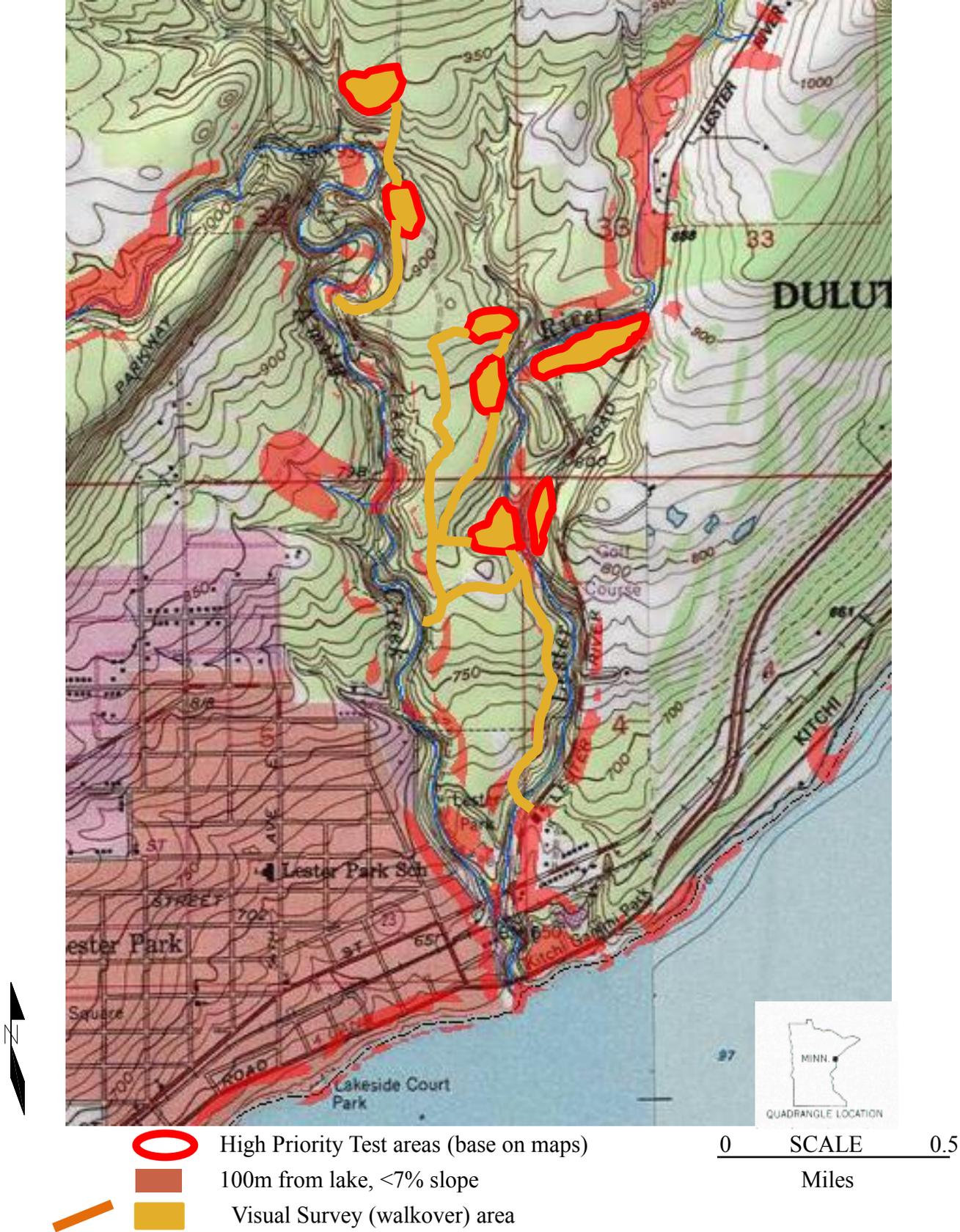


Figure 10. Location of the high priority test areas and walkover survey areas, Duluth 1953 (1993) and Lakewood, MN-WI 1992 quadrangles (1:24,000) USGS topographic map.

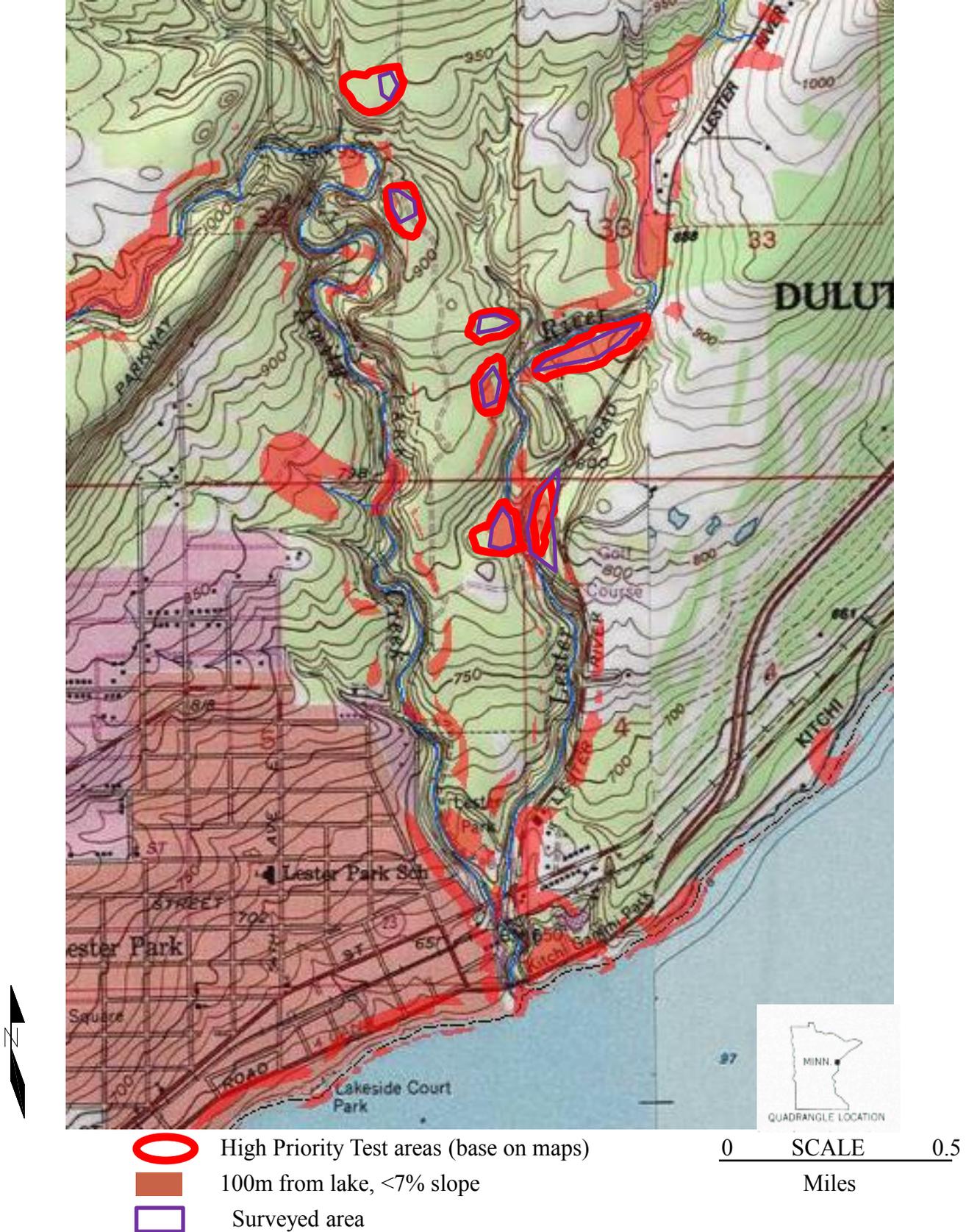


Figure 11. Location of the high priority test areas and survey areas, Duluth 1953 (1993) and Lakewood, MN-WI 1992 quadrangles (1:24,000) USGS topographic map.

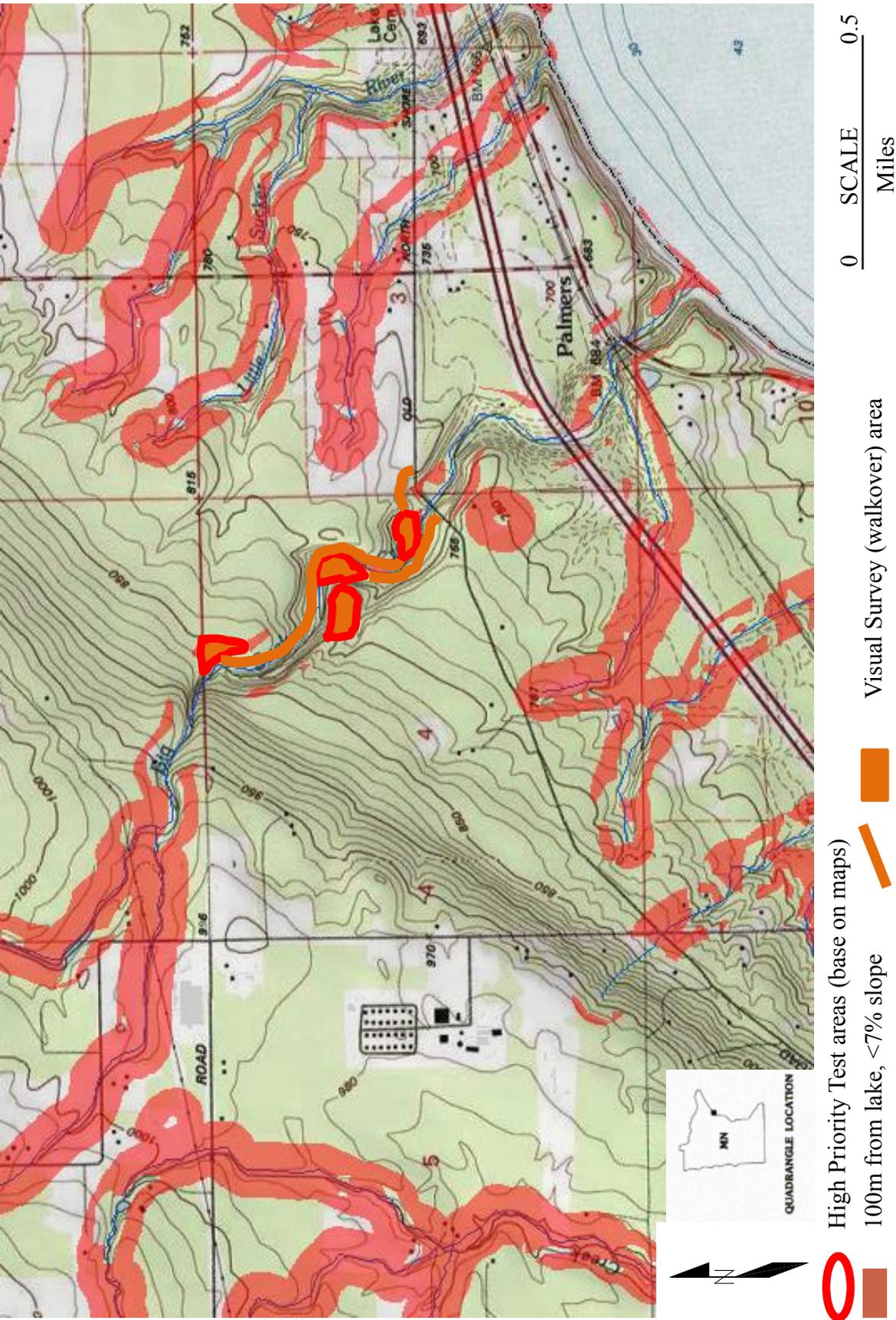


Figure 12. Location of the high priority test areas and walkover survey areas, French River 1992 and Knife River 1992 quadrangle (1:24,000) USGS topographic map.

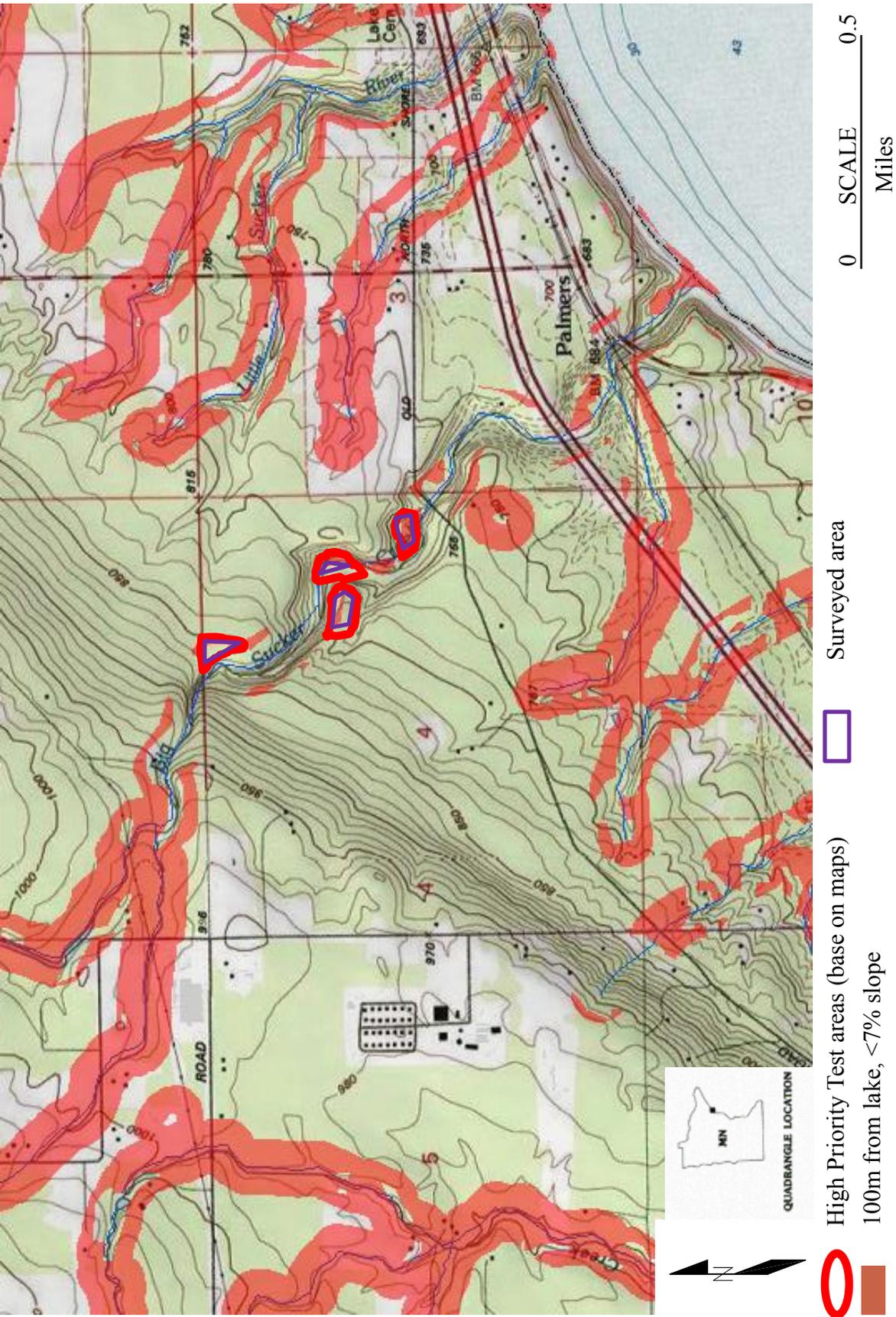


Figure 13. Location of the high priority test areas and survey areas, French River 1992 and Knife River 1992 quadrangle (1:24,000) USGS topographic map.

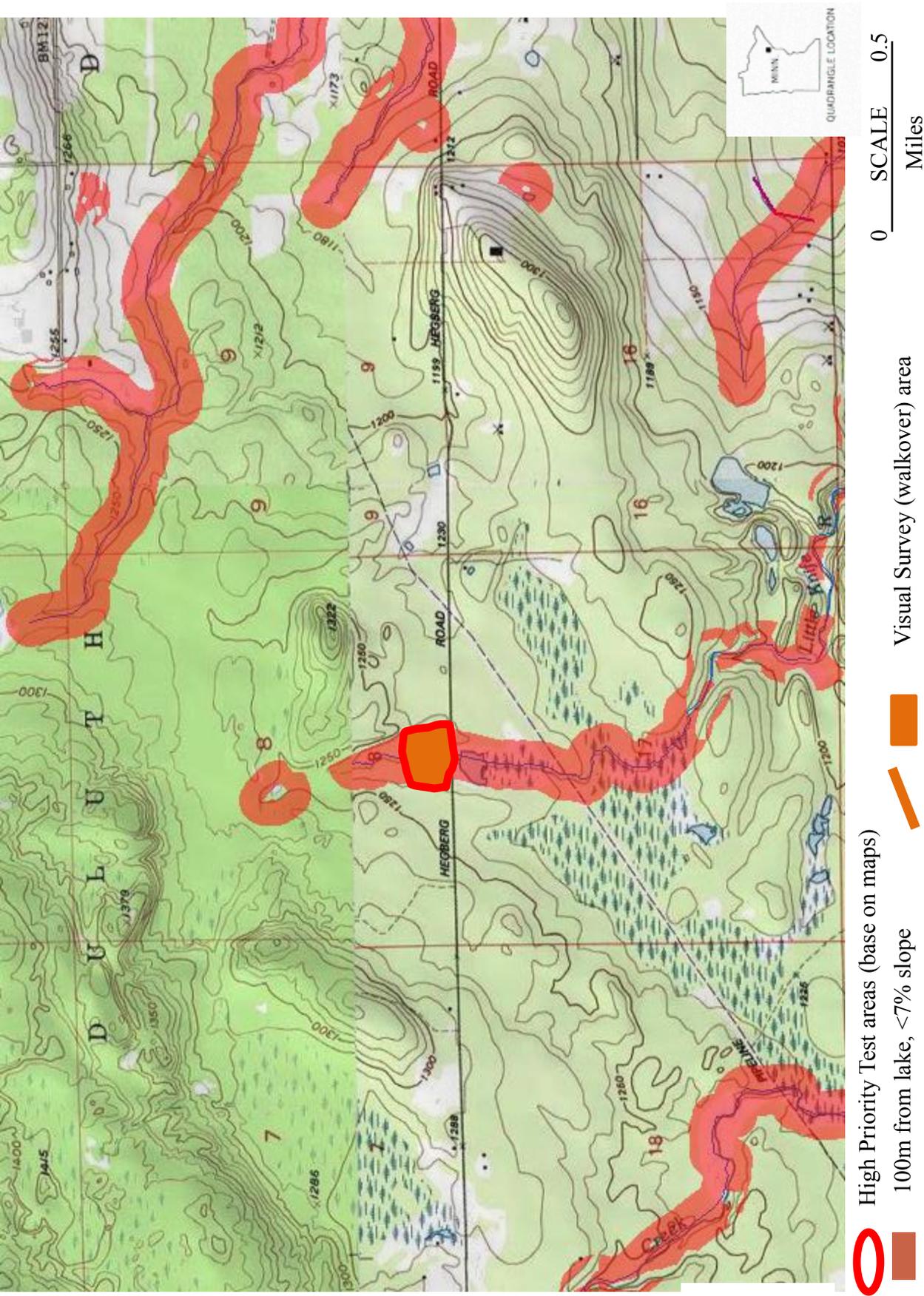
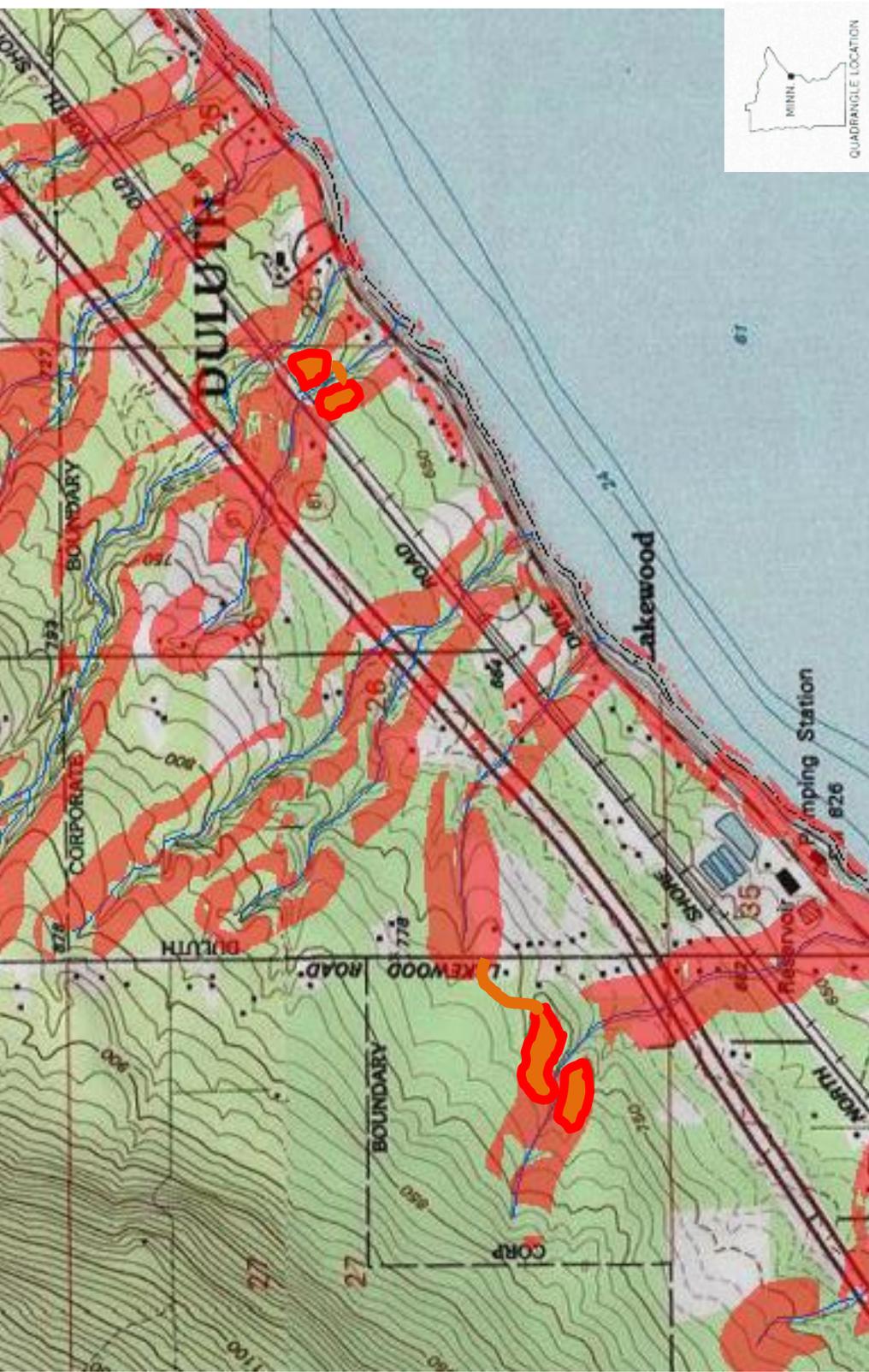


Figure 14. Location of the high priority test areas and walkover survey areas, Barrs Lake 1954 (1976), McCarthy Creek 1954 (1976), French River 1992, and Knife River 1992 quadrangles (1:24,000) USGS topographic map.



-  High Priority Test areas (base on maps)
  -  100m from lake, <7% slope
  -  Visual Survey (walkover) area
- 0 SCALE 0.5 Miles

Figure 15. Location of the high priority test areas and walkover survey areas, Lakewood MN-WI 1992 and French River, MN 1992 quadrangles (1:24,000) USGS topographic map.

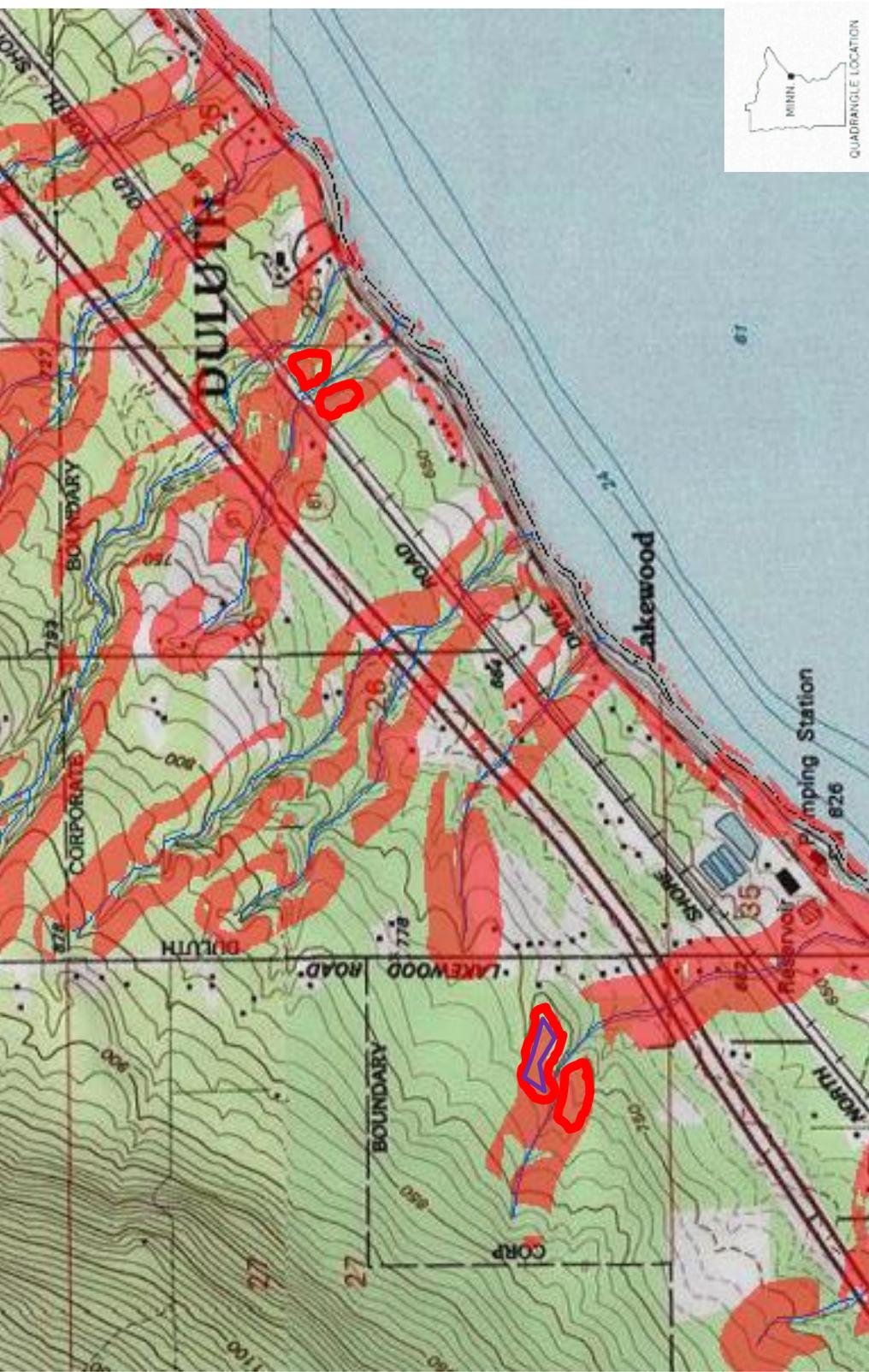


Figure 16. Location of the high priority test areas and survey areas, Lakewood MN-WI 1992 and French River, MN 1992 quadrangles (1:24,000) USGS topographic map.

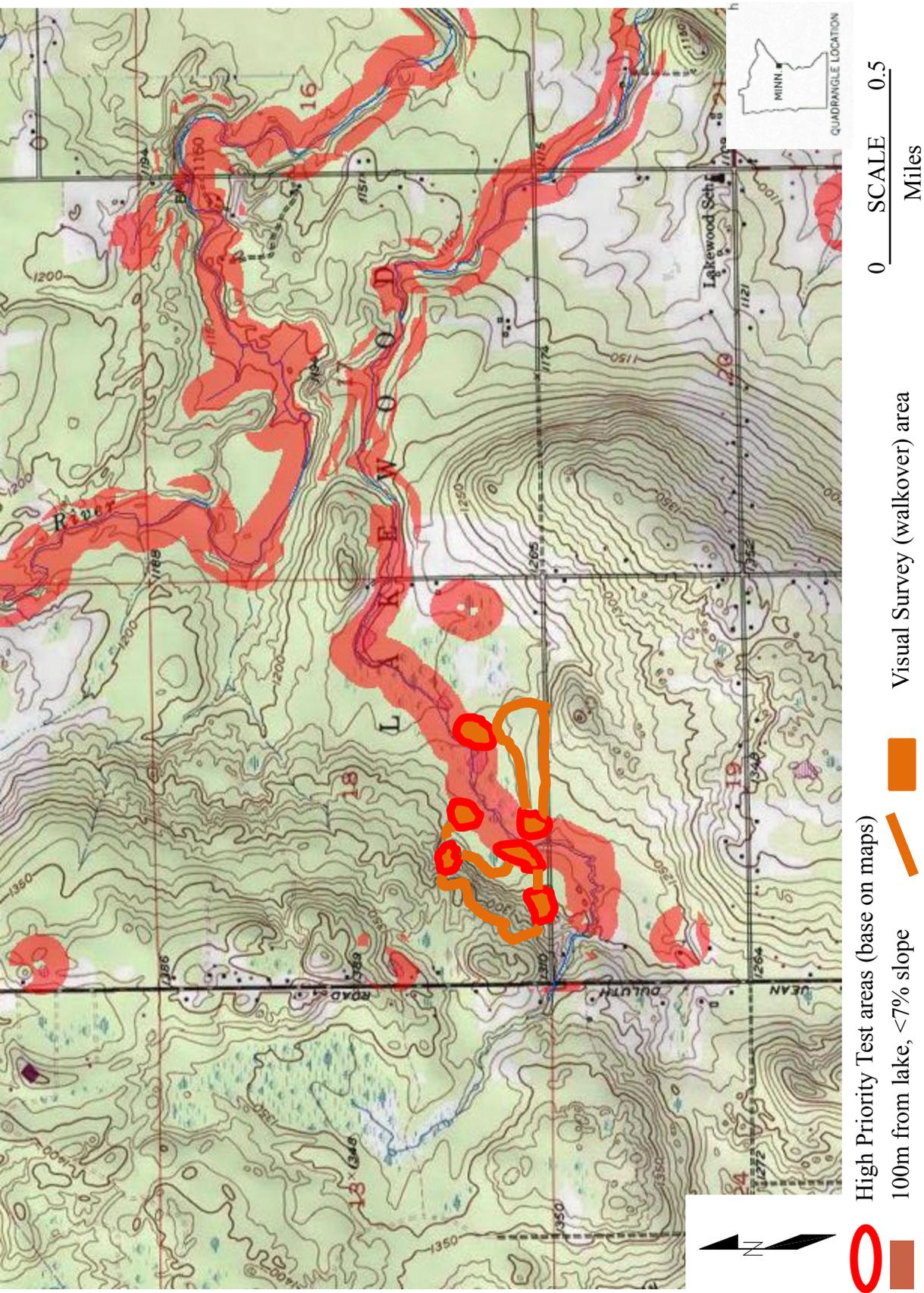


Figure 17. Location of the high priority test areas and walkover survey areas, Arnold 1953 (1993) quadrangle (1:24,000) USGS topographic map.

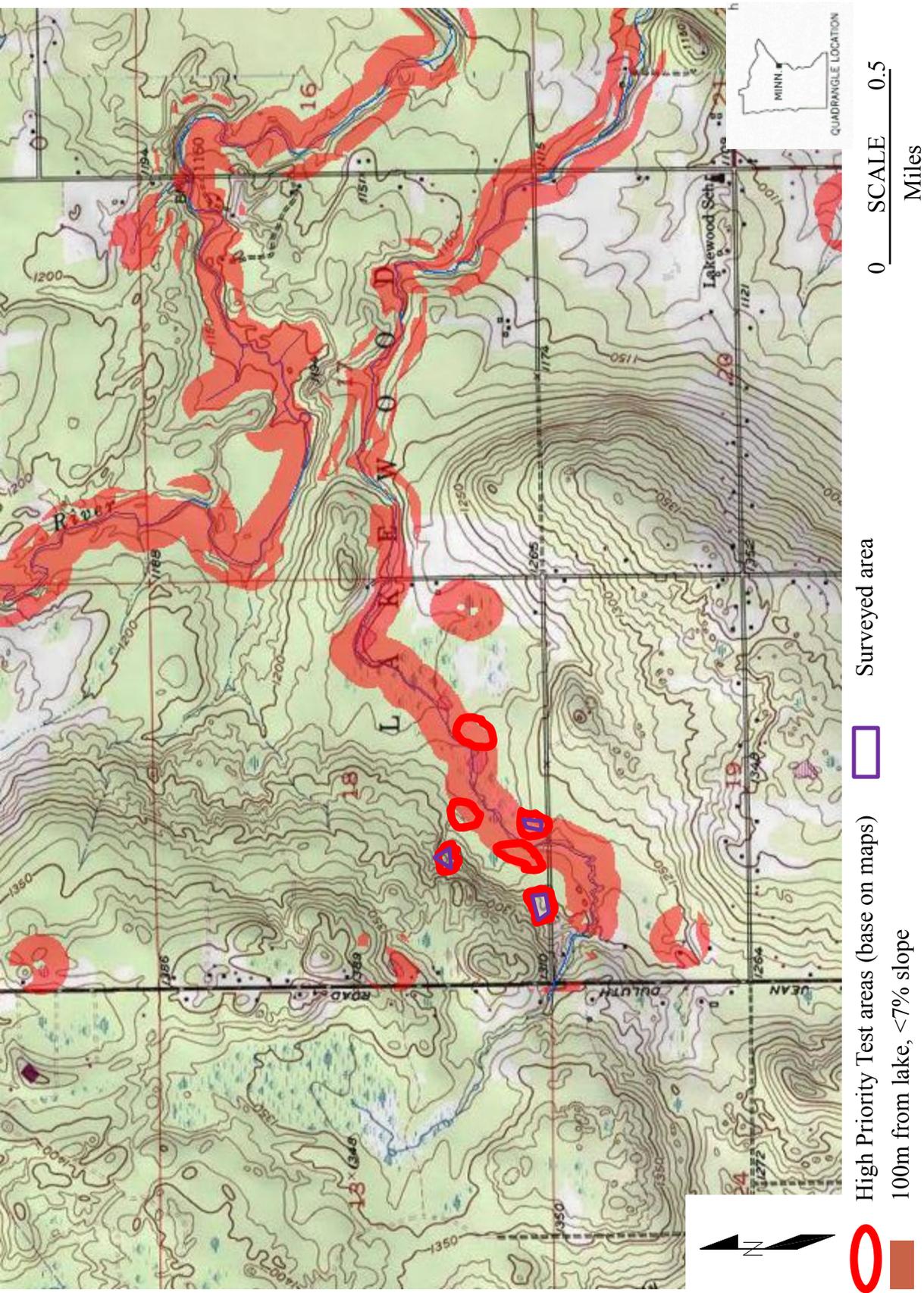


Figure 18. Location of the high priority test areas and survey areas, Arnold 1953 (1993) quadrangle (1:24,000) USGS topographic map.

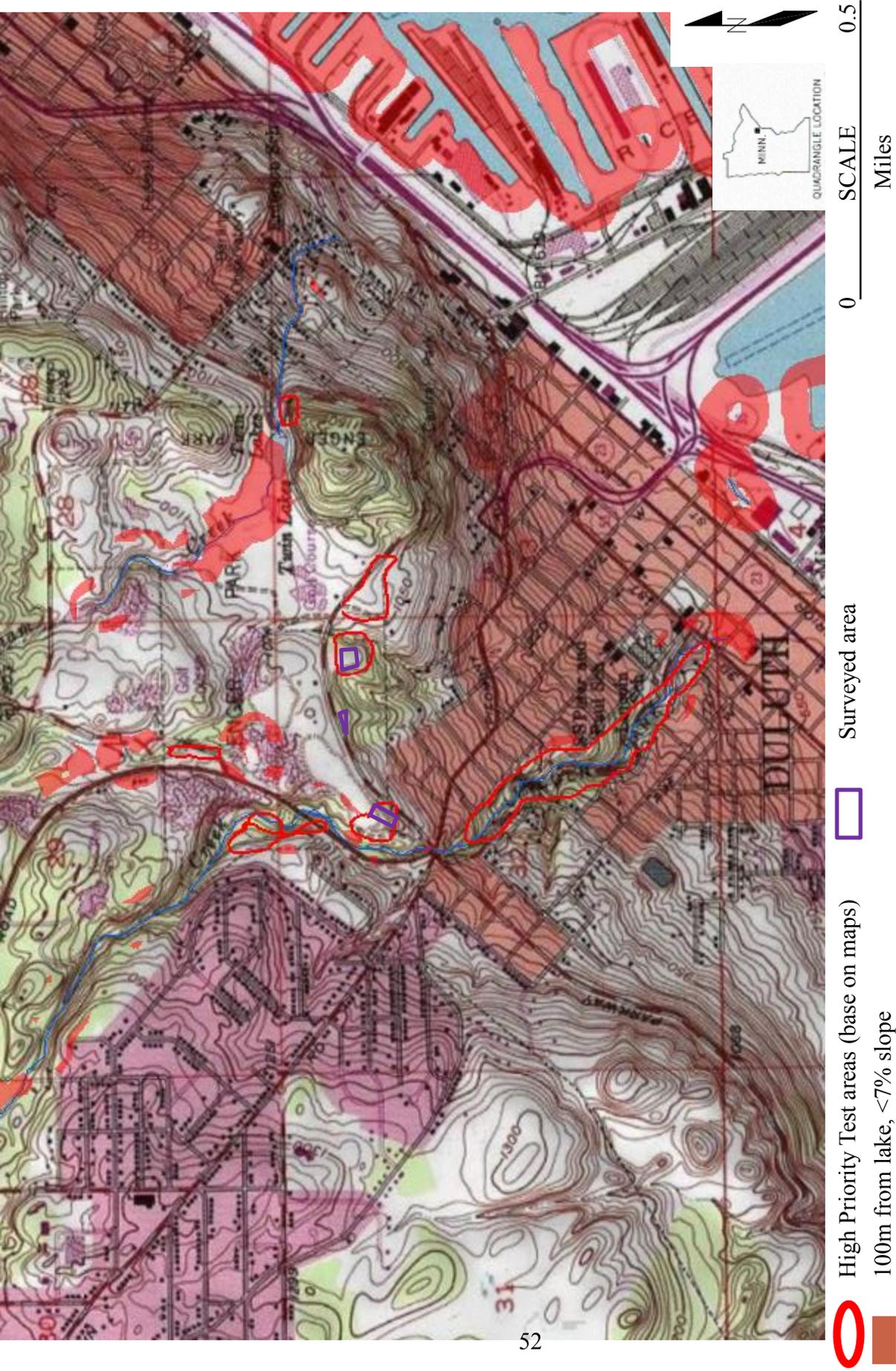


Figure 19. Location of the high priority test areas and survey areas, Duluth Heights 1953 (1993) and Duluth 1953 (1993) quadrangle (1:24,000) USGS topographic map.

**Table 18. Locations Surveyed in St. Louis County**

<b>AREA</b>	<b>LOCATION/ ACREAGE</b>	<b>RESULTS</b>
Lester Park	1/3.86 ac	6 ST, negative
Lester Park	2/2.75 ac	8 ST, negative
Lester Park	3/3.22 ac	6 ST, negative
Lester Park	4/2.2 ac	10 ST, negative
Lester Park	5/6.52 ac	9 ST, negative
Lester Park	6/3.57 ac	8 ST, negative
Lester Park	7/4.96 ac	3 ST, negative
Sucker Creek	1/2.16 ac	4 ST, negative
Sucker Creek	2/1.41 ac	2 ST, negative
Sucker Creek	3/2.78 ac	9 ST, negative
Sucker Creek	4/2.56 ac	7 ST, negative
Hegberg Road	1/2.9 ac	water saturated ground
Lakewood Township	1/1.23 ac	2 ST, negative
Lakewood Township	2/1.07 ac	water saturated ground
Lakewood Township	3/3.72 ac	water saturated ground
Lakewood Township	4/3.6 ac	water saturated ground
Beyer Road	1/1.0 ac	water saturated ground
Beyer Road	2/1.0 ac	9 ST, negative
Beyer Road	3/1.02 ac	4 ST, negative
Beyer Road	4/1.25 ac	water saturated ground
Beyer Road	5/2.25 ac	water saturated ground
Beyer Road	6/1.15 ac	1 ST, negative
Enger Park	below golf course/1.67 ac	6 ST negative, foundation

Lester Park: The Lester Park area is on County land north of Lester Park and east of Amity Creek Park on the western end of the city. Seven locations were selected from areas of high potential as compiled by GIS factors (Figures 10, 11). The locations are on both sides of Lester River and the east side of Amity Creek. Terrain mostly consists of flatter terraces and benches above the valley

of the Lester River and Amity Creek. All shovel tests were negative and many encountered thick red clay, often at shallow depths. The park trails used for access were grass covered and had no surface visibility.

Location 1 is located between the Lester River Road and an old roadbed or path on a flatter hill. The terrain slopes gently to the south and more steeply to the west toward the river. This parcel was found to contain a series of depressions, possible borrow sources, and can dumps with bottles, shingles, and other modern debris.

Location 2 is a flatter expanse on the west side of the Lester River, opposite location 1. It is a narrow terrace between lower swampy terraces; steep slopes separate the terraces. A transect of shovel tests was placed north-south along the terrace center.

Location 3 is north of location 2, situated on the west bank above the junction of a tributary and the Lester River. A transect of shovel tests was placed parallel to the ski trail and the river. Shallow clay deposits were present in many tests. Steep slopes at the edges of this area prevent easy access to the river.

Location 4 is north of location 3 on a ridge above the tributary that enters the Lester River. Tests were placed on an approximate grid pattern across the area. Clay was again located, at shallow depths in many tests. Similar to location 3, the river was difficult to access as a result of steep slopes.

Location 5 is located on the south side of Lester River where it runs east-west. The terrain is a generally shallow slope to the west. Shovel tests were placed along this terrace; can dumps were observed in hummocky terrain near a grassy opening (possible campsite). The eastern end of the terrace is rocky and steeper with eroded areas. A path extends the length of this terrace, providing good surface visibility; however, no cultural materials were observed.

Location 6 is on the east side of Amity Creek on a ridge above a deeply incised meander in the creek. Grassed park trails are present on either side of this parcel. Tests were placed along this ridge, which was accessed by a snowmobile trail. The water was not visible from most of the parcel; at least 50 feet of steep slope separated the parcel from the creek. Clay was present in most tests, often at shallow depths.

Location 7 is north of location 6, on the east side of a tributary to Amity Creek but north of the junction. The water was again about 50 feet below the parcel. Clay was even more abundant and at extremely shallow depths in this location.

Big Sucker Creek: Four locations adjacent to the Big Sucker Creek inland from the town of Palmers were surveyed (Figures 12, 13). These locations are all within County administered lands. The locations were high potential parcels as indicated by GIS compilations. Two each are on the west and east sides of the creek. All shovel tests were negative. The locations on the east side of the creek were accessed by a fishing trail with good surface visibility; however, no cultural materials were observed.

Location 1 is the farthest south and on the east side of the creek. The flatter terrace overlooks an oxbow meander scar; tests were placed along this older channel. The general vicinity is filled with old channels. The sediments in this parcel are sandy river sediments with gravels between 20-30 cm.

Location 2 is on the west side of the creek upstream from location 1; it is between the creek and an old channel. Additional old channels are visible on this parcel, which is bounded by vertical banks. Sediments indicate river deposits form the parcel. One location across from location 2 is used as a picnic and camping spot. The surface had good visibility and was checked without finding cultural materials.

Location 3 is much farther upstream, on the east side of the creek at the north end of the County land. Terrain is a terrace about 30 feet above the water. Tests were placed across the terrace to the east and south before encountering steeper slopes.

Location 4 is near location 2 but west of the old channels; it consists of a grassy clearing above a steep slope. Tests were placed across the terrace, which was bounded on three sides by steep slopes. Clay was found in several tests. The creek is not visible from this spot but a meander scar is present at the base of the slope.

Hegberg Road: One location on Hegberg Road was reviewed from the road (Figure 14). It is a water saturated area around a tributary to the Little Knife River. The land to the south shows as swamp on the USGS topographic map but land to the north of the road is equally water saturated. No shovel testing was conducted.

Lakewood Township: Four locations in two areas of Lakewood Township were surveyed; both areas are on unnamed streams that flow to Lake Superior (Figures 15, 16). Locations 1 and 2 are on the east and west sides of the southern stream while locations 3 and 4 are the west and east sides of the northern stream. All four locations were water saturated. Shovel tests were placed in location 1 only and encountered clays at shallow depths. No cultural materials were observed.

Beyer Road: Six locations were surveyed on County administered lands around a tributary to the Lester River (Figures 17, 18). Higher ground above the water saturated and swampy terrain was selected; two areas appeared to be small knobs in a steep slope while the other four were larger but lower in elevation. Shovel tests were placed where possible; all were negative.

Location 1 is water saturated except for the very west edge. Root throws were reviewed in this area but shovel tests were not possible. The terrain is very hummocky.

Location 2 is a series of narrow finger-like terraces west of location 1, extending east-west above the water saturated ground. Tests were placed on the terraces and root throws checked.

Location 3 is a gently sloping terrace near a water-filled depression. The tests and the surface indicate a very rocky sediment. An ATV trail with good surface visibility crosses the area; it was checked but no cultural materials were observed.

Location 4 is water saturated ground closer to the water feature and down slope from location 3. Although shown on the USGS topographic map as slightly higher ground, the terrain was untestable.

Location 5 is also water saturated ground but on the eastern side of the water feature. The route to it had series of low swampy areas mixed with slightly higher terraces with numerous root throws. The root throws were checked but no shovel tests could be placed.

Location 6 has rough terrain rather than distinct terraces or areas of higher ground. Numerous root throws, stumps and hummocks cover the ground, which is rocky and full of cobbles. Only one test was placed and it contained abundant cobbles.

Enger Park: The slopes in Enger Park in Duluth below the Enger Golf Course were surveyed by shovel testing (Figure 19). This part of the park is comprised of a series of slopes above Coffee Creek; the Superior Hiking Trail crosses this area and provides good access. Two small flatter areas form points out above the creek and tributary valleys. These flatter areas were shovel tested but with negative results.

Carlton County: Sixteen locations were surveyed in a single area of Carlton County, Jay Cooke State Park (Table 19, Figures 20-23). The locations were selected from GIS compilation of variables, focusing on the slope and distance to water. However, one location (#4) had previously been reported as having white flakes scattered in the trail; it was considered a high priority for survey.

Survey included both shovel testing and pedestrian walkover, as appropriate for the ground conditions. Access was good along the existing Park trails. The park trails were mostly bare ground, providing good visibility of the ground surface for pedestrian walkover. Locations 1 through 9 are north of the St. Louis River while the rest are to the southwest.

**Table 19. Locations Surveyed in Carlton County**

AREA	LOCATION/ACREAGE	RESULTS
Jay Cooke State Park	1: Grand Portage Trail/0.83 ac	2 ST negative
Jay Cooke State Park	2: terrace by railroad & river/0.81 ac	6 ST negative
Jay Cooke State Park	3: /0.42 ac	not testable
Jay Cooke State Park	4: west of creek/1.23 ac	2 SF & 3 ST of 6 positive, <u>21CL0033</u>
Jay Cooke State Park	5: /0.96 ac	SF & 1 ST of 3 positive, <u>21CL0034</u>
Jay Cooke State Park	6: MP hydro to Grand Portage/10.61	5 ST negative
Jay Cooke State Park	7: Munger-Shaw to Greely Trails/2.3	16 ST negative
Jay Cooke State Park	8: Grand Portage by Little River/4.28	pedestrian for quarries
Jay Cooke State Park	9: Oak Trail/2.63 ac	3 ST negative
Jay Cooke State Park	8 to 9	metal detection negative
Jay Cooke State Park	10: Silver Creek Trail/0.44 ac	SF & ST positive, <u>21CL0035</u>
Jay Cooke State Park	11:river and trail/1.6 ac	5 ST negative
Jay Cooke State Park	12: /2.14 ac	pedestrian/too wet
Jay Cooke State Park	13: High Landing/1.54 ac	SF positive, 6 ST negative, <u>21CL0036</u>
Jay Cooke State Park	13 lower terrace	6 ST negative
Jay Cooke State Park	14:/1.37 ac	pedestrian negative
Jay Cooke State Park	15:/1.06 ac	standing water
Jay Cooke State Park	16:/1.66 ac	standing water

North of St. Louis River: Nine locations were tested north of the river, including some very close to the river and some farther inland on bluffs overlooking the dissected river valley (Figures 20, 21). Two sites were recorded in this part of the survey; both are quartz debitage scatters. Some prehistoric sites are known from this area of the park as well.

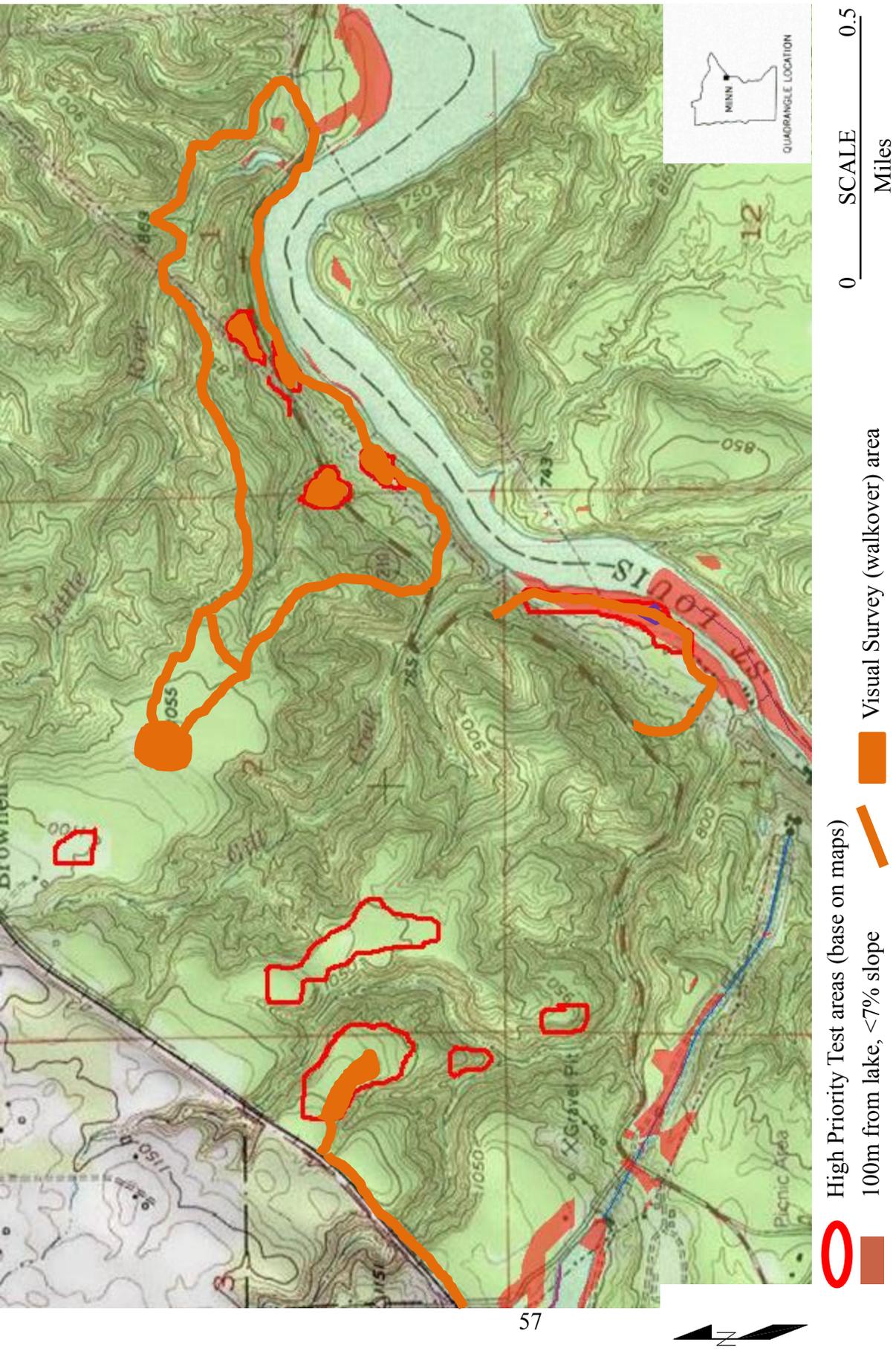


Figure 20. Location of the high priority test areas and walkover survey areas, Esko, MN-WI 1954 (1993) quadrangle (1:24,000) USGS topographic map.

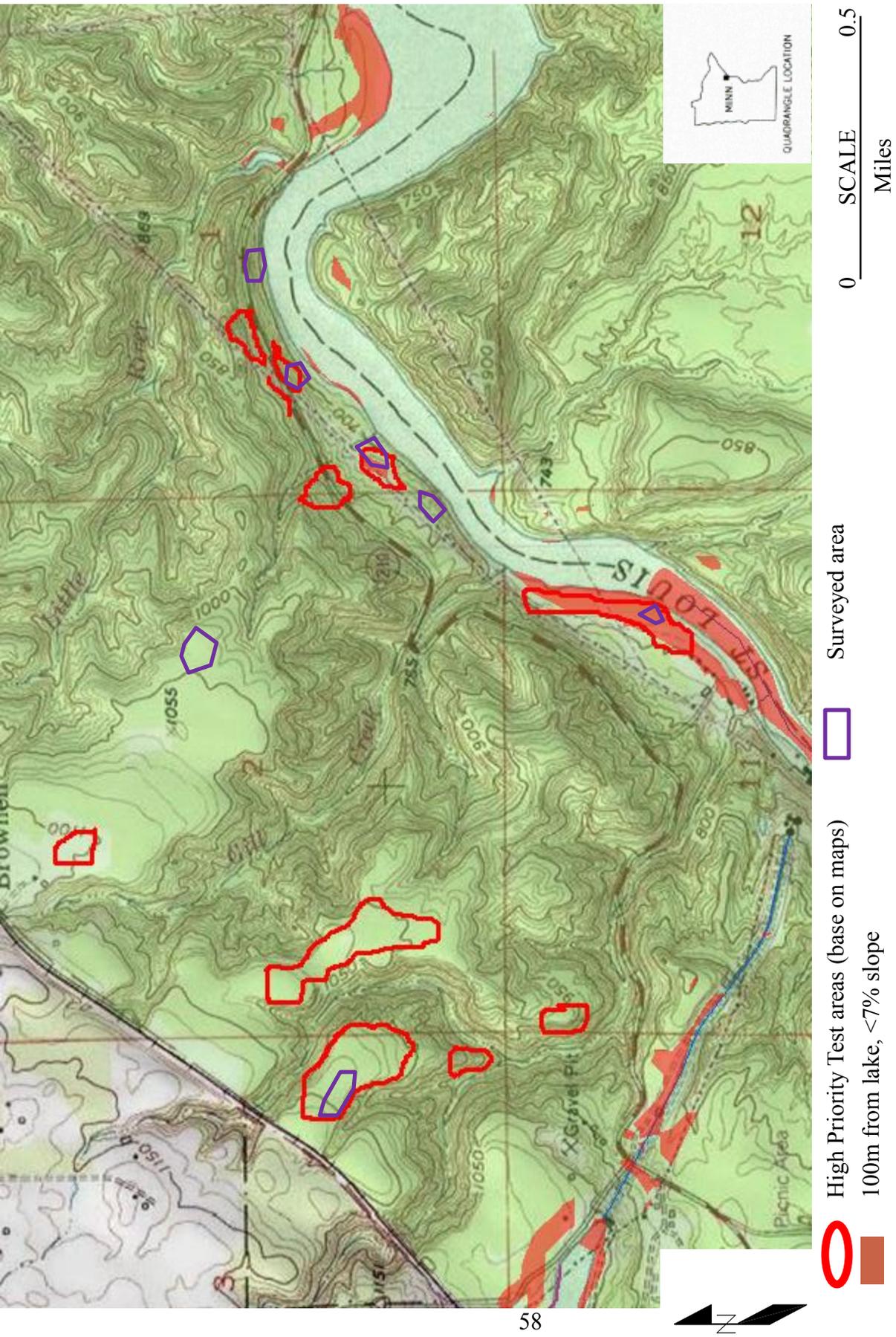


Figure 21. Location of the high priority test areas and survey areas, Esko, MN-WI 1954 (1993) quadrangle (1:24,000) USGS topographic map.

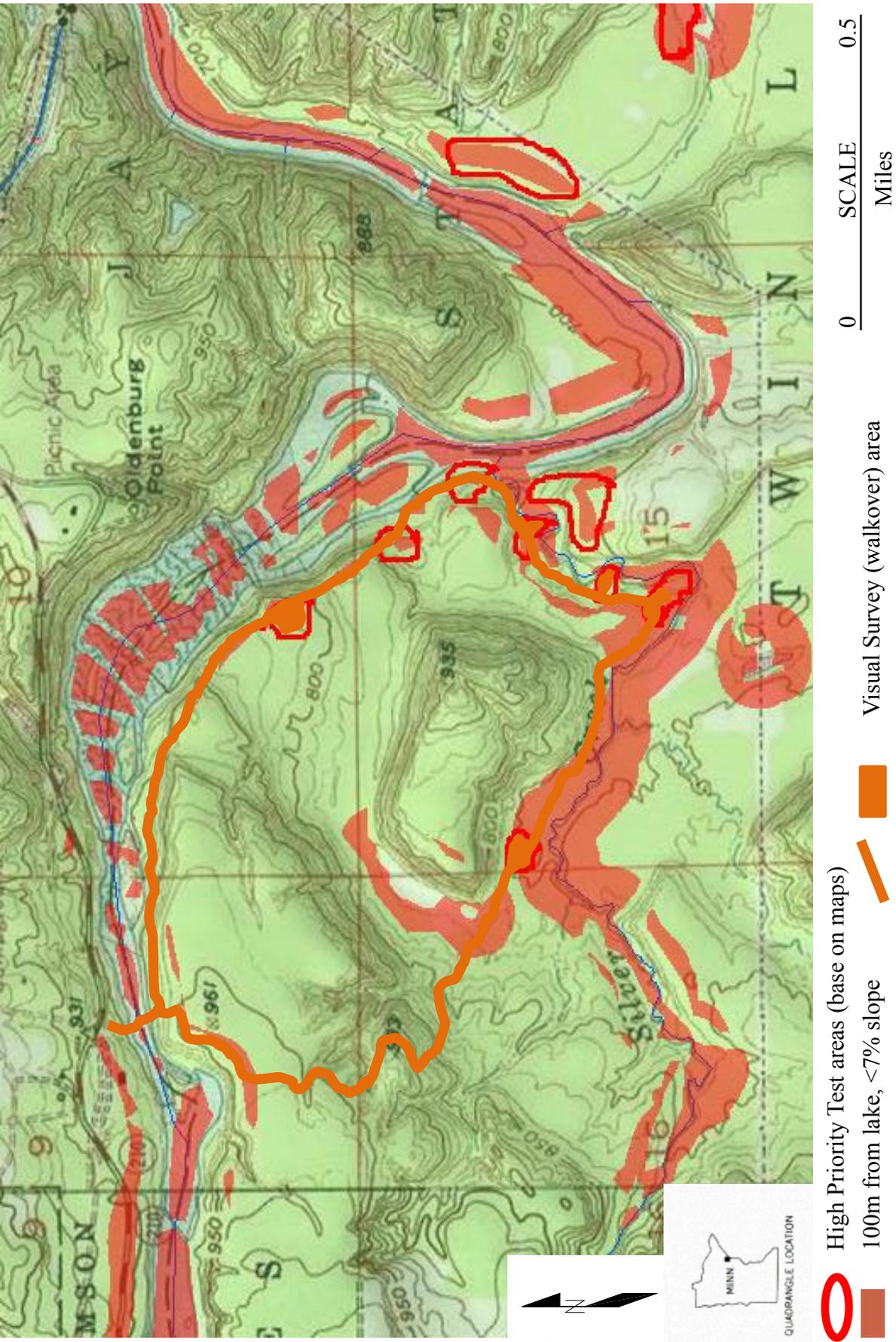


Figure 22. Location of the high priority test areas and walkover survey areas, Esko, MN-WI 1954 (1993) quadrangle (1:24,000) USGS topographic map.

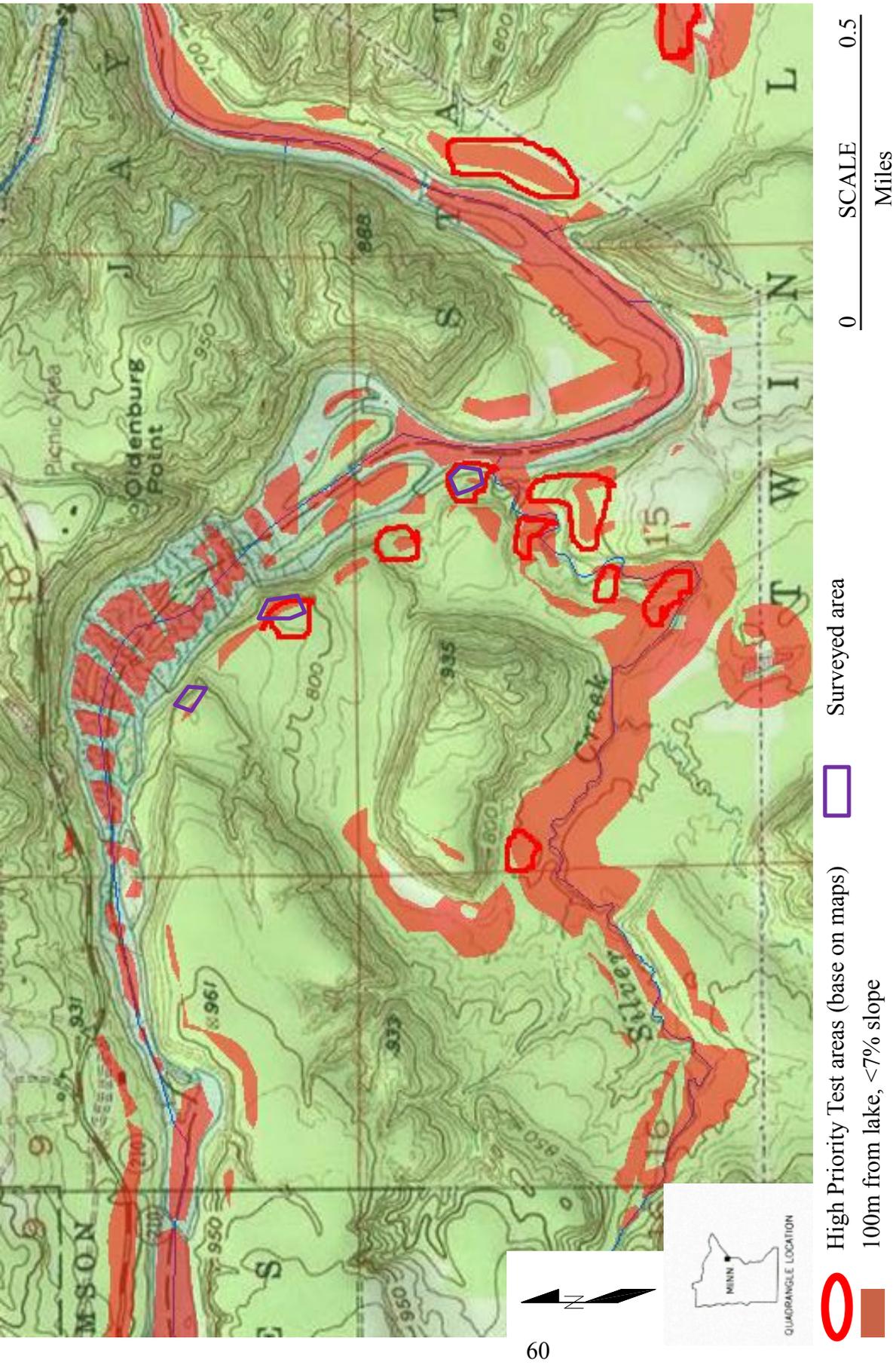


Figure 23. Location of the high priority test areas and survey areas, Esko, MN-WI 1954 (1993) quadrangle (1:24,000) USGS topographic map.

Location 1 is on the Grand Portage park trail above a steep slope at a bend in the St. Louis River. Flakes had been reported in this general location; tests were placed where possible on terraces to search for cultural deposits. Nothing was found but the terrace is relatively low and narrow with disturbances from the trail and extensive areas of sloping ground. An old railroad grade exists on the inland side of the terrace and caused extensive disturbance there.

Location 2 is a selected area on a terrace above the St. Louis River; there was somewhat more ground between the railroad and the park trail. Tests along the terrace were negative with little to no rock. The ground on the other side of the railroad grade toward the road was all fairly steep slopes; no testable areas were found.

Location 3 is just to the north of location 2 and is very similar in general topography. No testable ground was located, just slopes between the railroad grade and the park trail.

Location 4 is along the Grand Portage park trail on the west side of an unnamed creek, a tributary to the St. Louis River. Quartz debitage was recovered on the surface of the trail and in a root throw as well as three shovel tests off the trail. The site area appears to be above the slope to the creek; the park trail runs through the center of the site. Negative shovel tests indicate the site does not extend much to the west or north. The east side of the creek was also negative, even though a flat terrace was present.

The Brett's Quartz site, 21CL0033, is a lithic scatter of quartz debitage. Over 300 quartz items were recovered, most from a 13 m section of the park trail. This part of the trail was at about 50 degree slope up from the creek valley; the steepness of the slope is probably the reason so much quartz was eroded and at the surface. This is the second area where cultural material had been reported but unlike location 1, cultural materials were actually present. Site 21CLe, the Roche Galet part of the Grand Portage of the St. Louis, is possibly in the vicinity.

Location 5 is immediately to the southwest along the same section of park trail as location 4. A nice terrace is present with a rest stop and bench; It is about 850 feet upstream from location 4 and site 21CL0033. Quartz debitage was found in two locations on the surface of the trail near where it bends. The trail in this location is on the lower terrace at the foot of the slope to the upper terrace. Shovel testing on the terrace above the trail was negative (two tests) but one positive test was found between the trail and the river on the lower terrace.

The Trail Rest Stop site, 21CL0034, yielded a total of 11 quartz debitage pieces. The positive test was only a meter inland from the slope to the river; the section of the trail yielding debitage was also only 1-2 m from the slope break. The lower terrace and the site is relatively small and narrow. However, the St. Louis River in this location is dammed as part of the Fond du Lac Pond and higher than the original water level. Additional cultural materials might be present under the water surface similar to the lithic scatters found on the north bank (Mulholland and Rapp 1990), although later survey of the same area failed to relocate those sites (Mulholland 2008).

Location 6 is farther upstream from location 5 but is very low and water saturated. Five tests were placed on the east side of an intermittent stream at the western end but were negative. This area was slightly higher than the rest, which was untestable. The narrow terrace was somewhat drier than the rest of the parcel, which was selected from GIS compilation. West of the creek, the terrace contained obvious indications of disturbance associated with the Minnesota Power hydroelectric facility. The historic site of Forebay town, 21CL0008, may have extended to this area (Mulholland and Rapp 1990:4-5, Mulholland 2008:6).

Location 7 is on an upper bench off the Munger Shaw Trail, overlooking the valley of the St. Louis River. An extremely steep slope defines the edges of the bench; the tributaries are in the

bottom of the deep ravines. The western edge of the flatter area near the trail was tested with multiple tests; the southern part of the parcel had an increasing slope. All tests were negative.

Location 8 was a pedestrian walkover off the Grand Portage park trail to the quartz and slate outcrops along the Little River. The river bed downstream from the trail crossing was the quartz conglomerate from which quartz nodules could be obtained. No indications of quarrying were observed in the outcrop above the river banks on the east side; the west side had some bedrock outcrops. No testable ground was observed as the terrain is quite sloping except at the trail crossing. Upstream from the trail crossing, the slate outcropped on the east bank about 5-10 m from the trail. No quartz conglomerate outcrops were seen north of the trail on the banks, although some were still in the river bed itself. The slate outcrop is recorded as the Little River Quarry site, 21CL0015.

Location 9 is another upland bench overlooking the river valley; this parcel was off the Oak Trail. Tests were placed in a relatively flat area but numerous depressions and root throws were present. The tests were on the west side of the trail; pedestrian walkover farther west indicated this part of the parcel was not testable from the root throws. No surface items were observed in any of the exposed areas and the tests were negative.

South of the St. Louis River: Seven locations were surveyed on the south side of the river along the Silver Creek Trail (Figures 22, 23).

Location 10 yielded three pieces of possible quartz shatter in one spot on the trail, just before the slope downhill toward the river. Although not a selected area, testing was conducted just inland from the trail but the test was negative. The flat terrain is very small and has disturbance from the trail. The Rapids Overlook site, 21CL0035, is a small lithic scatter.

Location 11 is on a bench overlooking the downstream end of the rapids. The selected area was fairly flat above the steep slope to the river. Tests were placed on two transects perpendicular to the river; clay was present in all tests at shallow depths. Water saturation increased as distance from the river increased. All tests were negative.

Location 12 overlooks the islands in the river; a small pond is on the north side. The remainder of this selected parcel was low, brushy, and water saturated. No tests were placed but the parcel was covered by pedestrian walkover.

Location 13 is a ski shelter (High Landing) and camping stop on an upper terrace overlooking the junction of Silver Creek with the St. Louis. In addition, the water channels between the islands upstream join together at this spot. A surface find of quartz and a Knife Lake siltstone flake was found in the trail near the picnic table. The surface find was just above the slope break to the river slope. Tests on the upper terrace were all negative; some were inland from the trail and the rest were in the High Landing use area. A lower terrace below the trail was also tested. Although flat and with good access to the junction of Silver Creek and the river, all tests were negative on the lower terrace.

Location 14 is inland along Silver Creek; although appearing to be a flat area, it was water saturated and wet. No tests were conducted. The banks of the creek were eroding and checked, although no cultural materials were observed.

Location 15 was very similar to location 14, with standing water visible in some spots. The parcel was observed from the trail to be untestable.

Location 16 was farther upstream; even more standing water was observed so no testing was done. The parcel could not be accessed for pedestrian walkover as a result of the standing water. Slate outcrops were present between the water pools, indicating bedrock is very close to the surface in this area of Silver Creek.

The Silver Creek Trail loop from the Swinging Bridge was walked in its entirety. No additional locations were observed that appeared to be high potential for shovel testing.



## SITES IN REGION 9

### DOCUMENTED ARCHAEOLOGICAL SITES

New archaeological sites were recorded from all four counties; most were from information supplied by members of the public but some are from survey for new sites. When combined with the list of previously recorded sites, there are currently 46 prehistoric sites in Region 9: 11 in Cook, 14 in Carlton, 8 in St. Louis, and 13 in Lake. Without an extensive search, there are an additional 10 sites in adjoining areas: 1 in Cook (Region 8), 3 in Carlton (Region 5s), 3 in St. Louis (Region 5e), and 3 in Lake (Region 5e). Additional sites recorded include Contact sites (two) and site leads (those not researched or without specific provenience). Historic sites were recorded as time permitted but several require additional information before submission for site numbers.

#### *Carlton County*

Carlton County had nine previously recorded prehistoric sites and one alpha prehistoric site within Region 9 areas, as well as the Grand Portage of the St. Louis (two alpha sites). The Region 9 investigations recorded four new prehistoric sites from survey activities and one from informant reports. The total of prehistoric sites in the Region 9 portion of Carlton County is now 14 for numbered sites and 1 alpha site; the Grand Portage of the St. Louis is considered primarily Contact in age, although it was likely used in pre-Contact times as well (Table 20).

**Table 20. Prehistoric Sites in Carlton County Portion of Region 9**

SITE #/NAME	SOURCE	CONTENT
21CL0004/Ziebarth	informant report	LS with 2 Late Paleo points
21CL0007/Silver Creek Overlook	survey of park trail	LS
21CL0009/Fond du Lac 2	survey of reservoir	LS
21CL0010/Fond du Lac 3	survey of reservoir	LS
21CL0011/Fond du Lac 4	survey of reservoir	LS
21CL0016/Brooks-Scanlon Boarding House	Ph. II and III excavations	LS in a post-Contact sawmill and boarding house complex
21CL0023/IMAC 392-2	survey for pipeline	LS
21CL0028/Knife Island 1	survey for camp ground	LS
21CL0032/Harlis 1	survey for County road	LS
21CL0033/Brett's Quartz	Region 9 survey	LS
21CL0034/Trail Rest Stop	Region 9 survey	LS
21CL0035/Rapids Overlook	Region 9 survey	LS
21CL0036/High Landing	Region 9 survey	LS

21CL0037/ Phillip Johnson Point	Region 9 informant	SA
21CLd/Grand Portage of the St. Louis, beginning	historic documents	TR
21CLe/Grand Portage of the St. Louis, Roche Galet	historic documents	TR
21CLg/Meadowbrook Dairy Farm		LS

Ziebarth Site, 21CL0004

The Ziebarth site was reported based on the recovery of two Late Paleoindian lanceolate projectile points by members of the general public (Mulholland and Dahl 1988). The points were reported to have come from the area immediately east of and below a prominent glacial moraine. [“Triangular” points reported from the top of the moraine were not available for viewing in 1989 or this project.] The flatter area below the moraine has several low swales and ridges that are probably associated with old shoreline features of Glacial Lake Nemadji/Duluth. More prominent shoreline features were mapped in the general vicinity (Farrand 1960).

An informal survey was conducted in 1989 at the request of one of the landowners; the other was applying for permits to mine gravel from a moraine and was not cooperative. Shovel tests were placed in several areas in the vicinity of the southern of the two findspots and no additional cultural materials observed. However, a recent revisit to the Ziebarth family not only documented one of the two projectile points but a selection of rocks “from the survey” that included flakes. It is unknown if the flakes came from the same location as the point or from the slope or top of the moraine.

The second point was not rephotographed in this project since the owner could not be contacted. It is reportedly from the Schlafer property to the north of the Ziebarth land; the gravel pit has removed much of the moraine on this parcel and associated vehicular traffic has caused impacts to the area of suspected shoreline features.

Silver Creek Overlook, 21CL0007

The Silver Creek Overlook site was identified by survey for rehabilitation of the existing Silver Creek Trail in Jay Cooke State Park (Radford and George 1990). Quartz debitage was recovered from the trail surface as well as 2 positive shovel tests out of 10 placed in the vicinity of the surface find. A total of 13 pieces of quartz were recovered; no excavation units were placed. The lithic scatter is on the edge of a terrace or bench about 30 feet above the west side of Silver Creek. This location is about 0.2 mile upstream from the junction of Silver Creek with the St. Louis River. The site was interpreted as a lithic reduction workshop.

Fond du Lac 2, 21CL0009

The Fond du Lac 2 site was identified during survey of submerged areas on the Fond du Lac Pond or Reservoir of the St. Louis River (Mulholland and Rapp 1990:5). Quartz debitage was recovered from the north shore of the river at the small eroded bank formed at the ordinary high water mark (OHM). Materials were largely quartz (83 pieces) but 1 Hudson Bay Lowland chert flake was also recovered. A single shovel test above OHM on the dry ground was negative and no bedrock source for the quartz was observed. The water level of the river in this portion is elevated as a result of the Fond du Lac dam farther downstream. The dam had been opened to let water out

for maintenance so the site location is above the original water levels. The site is located upstream from Gill Creek and on the upstream side of the power line that crosses the river. No materials were observed in this location during more recent survey (Mulholland 2008).

#### Fond du Lac 3, 21CL0010

The Fond du Lac 3 site is very similar to Fond du Lac 2, occurring in the same topographic setting and only several hundred feet downstream (Mulholland and Rapp 1990:5). The majority of the materials are similar, although less items were recovered: 25 quartz debitage pieces, a quartz wedge, a hammerstone, and a hammerstone/anvil. No shovel tests were placed on the bank above the site; no bedrock source of quartz was observed in this location. This site is downstream from the power line but still upstream from Gill Creek on the north shore of the St. Louis River. No materials were observed during more recent survey (Mulholland 2008).

#### Fond du Lac 4, 21CL0011

The Fond du Lac 4 site is a lithic scatter located on the south shore of the St. Louis River immediately upstream from the Fond du Lac dam (Mulholland and Rapp 1990:5). Unlike the other lithic scatters discussed above, the site contains a variety of lithic material types: jasper taconite (52), Gunflint silica (4), Kakabeka Falls chert (1), Hudson Bay Lowland chert (1). One jasper silica graver was recovered, as was a potential hammerstone. The pre-Contact lithics were distributed across the surface of an exposed sandy flat that normally is underwater; most were close to the eroded bank formed by highwater levels. No shovel tests were placed above the OHM at this location on the downstream side of an aggrading meander bend. The site area was not reviewed during more recent survey (Mulholland 2008).

#### Brooks-Scanlon Boarding House, 21CL0016

The Brooks-Scanlon Boarding House is associated with an early 1900s sawmill near Scanlon (Ward and McCarthy 1999). It is located west of the Thomson Reservoir on the St. Louis River downstream from the City of Cloquet. The Brooks-Scanlon Mill Complex Archaeological Site incorporates many industrial features including the sawmill, railroad, and other residential or commercial components dating between 1901 and 1909. The boarding house was later reused as a tavern; post-Contact deposits are the dominant type at the site. The pre-Contact component consists of a flake, a lithic tool, and possibly a bone pipe stem recovered during excavation. Little is known about this occupation.

#### IMAC 392-2, 21CL0023

Site 21CL0023 is a lithic scatter identified by survey for the Great Lakes Gas pipeline (Florin 1997:47). Debitage was recovered from the bed of an unnamed creek (one quartz flake) and a single positive shovel test (of 14) on a terrace to the east above the creek. The quartz flake in the creek was considered to have a good chance to not be in situ; it could have possibly been moved by floodwaters. The positive shovel test yielded only a single piece of jasper taconite, a possible shatter or natural rock; the 13 negative shovel tests indicate that the site is small. No further investigation was recommended.

#### Knife Island 1, 21CL0028

The Knife Island 1 site is a lithic scatter identified on the north end of Knife Island in the St. Louis River between the Interstate 35 and County Road 45 bridges (Mulholland et al. 1998:7). The

island is attached to the east shore of the St. Louis River at low water intervals; development of a private campground on adjacent lands led to a survey requested by the land owner. The site is located on a small knoll facing upstream on the river. Two shovel tests were positive out of three placed. A total of three flakes were recovered, one each of Gunflint silica, an unidentified chert, and jasper taconite. The two positive tests had relatively deep sediments but the site area appears to be on a limited area with slate bedrock at shallow depths to all sides. Previous cabins and other modern structures had been present on the island, although not at the immediate site location. A substantial cut into the slate outcrop to the east appeared to be associated with late 19<sup>th</sup> century slate mining at the island.

#### Harlis 1, 21CL0032

The Harlis 1 site was identified by surface finds on a disturbed area of cleared ground west of the existing Harlis Road (Mulholland and Mulholland 2010:12). Two pieces of quartz debitage were recovered by pedestrian walkover with fair to good visibility. Two shovel tests placed adjacent to the surface finds were negative. The site was recommended as not eligible for the National Register.

#### Brett's Quartz, 21CL0033

The Brett's Quartz site was identified by surface finds and shovel testing during the Region 9 survey; it was one of two areas on the Grand Portage park trail in Jay Cooke State Park that Brett Ewald remembered seeing potential debitage (see above). The site is located on the west side of an unnamed creek where the park trail goes uphill to a small flat bench. Over 300 pieces of quartz debitage were recovered, most from a 13 m section of the trail but some from positive shovel tests and a root throw as well. Much of the quartz was eroding out of the trail as it went uphill toward the west but the positive shovel tests and root throw are on the top of the flat bench. No units were placed.

#### Trail Rest Stop, 21CL0034

The Trail Rest Stop site is located several hundred feet farther west along the same section of trail as the Brett's Quartz site and was identified during the Region 9 survey (see above). Two areas of the trail yielded quartz debitage; tests above the trail on a flat bench area were negative but the test between the trail and the river was positive. A total of 11 quartz pieces were recovered between the three spots, all on a lower terrace immediately above the river OHM (which is artificially elevated in this portion of the river).

#### Rapids Overlook, 21CL0035

The Rapids Overlook site is located on the Silver Creek trail south of the St. Louis River in Jay Cooke State Park; it was found during the Region 9 survey (see above). Surface finds of quartz debitage (three pieces) were recovered on the trail surface. A shovel test off the trail in wooded area was negative; relatively little area was testable in this location, which was overlooking the trail down towards the edge of the gorge above the river.

#### High Landing, 21CL0036

The High Landing site is located farther southeast on the Silver Creek trail in Jay Cooke State Park and was located during the Region 9 survey (see above). This site location overlooks the junction of Silver Creek and the St. Louis, just downstream from islands in the river. Two pieces

of debitage were in the section of the trail closest to the valley slope, a quartz and a Knife Lake siltstone flake. The rest of the trail (which splits around the High Landing ski shelter and camp) was negative for cultural materials. Shovel tests in the High Landing use area between the trail segments was negative, as were tests on a lower terrace farther downslope toward the river.

#### Phillip Johnson, 21CL0037

The Phillip Johnson Point site consists of a single projectile point of Hixton silicified sandstone. The point was recovered during leveling of the ground around the house on Rolling Road in Thompson Township. Part of the base and tip are broken so specific type is not identifiable but the flaking pattern suggests Late Paleoindian affiliation. The location is on higher ground overlooking a swamp or intermittent stream north of the Midway River.

#### Alpha Sites

Three alpha sites are in the Region 9 portion of Carlton County. 21CLd is the beginning of the Grand Portage of the St. Louis. It is on the north shore of the St. Louis River, probably at the large flat area just upstream from the Fond du Lac dam. 21CLe is the Roche Galet of the Grand Portage of the St. Louis. "Roche Galet" means shingle rock and refers to a sandstone ledge that the river flows over; this was Pause 3 of the portage (Fritzen 1978:6). This portion of the portage trail is possibly by the unnamed creek near Brett's Quartz site. 21CLg, the Meadowbrook Dairy Farm, is a lithic scatter.

#### Other Site Leads

Three potential sites are indicated by copper artifacts curated at the Carlton County Historical Society in Cloquet. A copper adze and three socketed copper projectile points are present but generally are not labeled well. Accompanying artifact sheets indicate two artifacts (the adze and one point) are from Jay Cooke State Park (by the band stand) and two projectile points are from Pinehurst Park in Cloquet. Conflicting documentation of the same copper artifacts, however, has the adze from Pinehurst Park and the projectile points from the south side of Kettle Lake, Wakefield Michigan, and Alborn Minnesota. Additional research, including interviews with the original collector, are needed to determine if provenience can be assigned with any degree of confidence.

#### ***St. Louis County***

St. Louis County had four previously recorded prehistoric sites and two alpha prehistoric sites within Region 9, all within the 9s subsection. The Region 9 investigations recorded six new prehistoric sites from informant reports in the 9n subsection. [Although three are just outside Region 9 in 5e, they are considered here since they are on the eastern side of the Highland Moraine, a more natural boundary than the townships.] One new Contact site was identified in 9s and four additional prehistoric sites are probable site leads. The total of prehistoric sites in the Region 9 portion of St. Louis County is now seven numbered sites (excluding the three in 5e); one additional site is Contact (Table 21).

**Table 21. Prehistoric Sites in St. Louis County Portion of Region 9**

<b>SITE #/NAME</b>	<b>SOURCE</b>	<b>CONTENT</b>
21SL0151/Minnesota Point	documents	historic Ojibwa village and cemetery
21SL1015/Bay View Point	survey for trail; Ph II excavations	LS
21SL1098/[08-B]	survey for trail	LS
21SL1099/[08-C]	survey for trail	LS
21SL1111/Furo #1	Region 9: informant	LS
21SL1116/Andy Anderson Point*	Region 9: informant	SA
21SL1117/Jackson Huntley Point	Region 9: informant	SA
21SL1118/Schaeffer Lake Point*	Region 9: informant	SA
21SL1119/Pat McCarthy Point*	Region 9: informant	SA
21SL1121/Pellman Trade Axe	Region9: informant	AS
21SL1122/Jasper Graver	Region 9: informant	SA
<i>21SLan/48/16=Carlton?</i>	OSA: = 21CL0009?	LS
<i>21SLao/48/16=Carlton?</i>	OSA: = 21CL0010?	LS
Brad Nelson Knife	Region 9 informant	SA
Fond du Lac Park	County historical	AS
Park Point Knife	County historical	SA
Bernard McMillian	County historical	SA

\* site located in Region 5e

Minnesota Point, 21SL0151

The Minnesota Point site is located near or west of the remains of the old lighthouse at the end of Minnesota Point; the lighthouse is reportedly on the location of George Stuntz's cabin/trading post established in 1853. Early documents of the Duluth-Superior area record wigwams on this end of the point as well as other Native American use including a portage trail where the Duluth Ship Canal is now located (Mulholland and Mulholland 2008b). The original site form appears to have been recorded from an article (Brown 1914:57) that cites an earlier report of skeletal parts eroding from the site during a winter storm in 1876 (Bardon 1927). Whether any field work was conducted at this site is not documented, although the report of burials would have made any subsurface investigations difficult.

Bay View Point, 21SL1015

The Bay View Point site is a lithic scatter located in the Bay View School Forest on the hillside between Proctor and West Duluth. It is on top of a prominent bench above Skyline Parkway on the east side of the 62<sup>nd</sup> Avenue Creek; this bench is at or just above the 1100 foot contour (glacial lake shorelines occur at 1085 feet in this area). The site was identified during survey in advance of trail construction by a series of positive shovel tests. A total of eight excavation units have been placed in the site in attempts to determine the function and age of the cultural occupation. Numerous pieces of debitage have been recovered, mostly Gunflint silica and jasper taconite with a scattering of Kakabeka chert and other regional types. No distinctive tools have been recovered, although a few possible expedient tools of basalt or rhyolite are present. The site is recommended as eligible for the National Register.

08-B, 21SL1098

A small site (field number 08-B) was identified west of the 62<sup>nd</sup> Avenue Creek on approximately the same elevation as the Bay View Point site. Two positive shovel tests yielded one flake each, both of jasper taconite. The tests are about 5 m apart; all other shovel testing in the area was negative but did not extend north beyond the positive tests. This site is on a relatively gently sloping area above a much steeper slope into the area between the 62<sup>nd</sup> Avenue Creek and an unnamed drainage to the west. No current water feature is close to the site.

08-C, 21SL1099

A second small site (field number 08-C) was identified farther uphill from 08-B, also within the Bay View School Forest. Two positive shovel tests were found on a slight elevation on the northeast side of an unnamed tributary to the 62<sup>nd</sup> Avenue Creek. Each test yielded one flake (Knife Lake siltstone and jasper taconite). The site is on the north end of a large, grassy clearing that has the unnamed creek on the west side; brushy vegetation is to the north and east. The clearing was extensively surveyed by shovel testing but testing did not extend north into the brushy area

Furo #1, 21SL1111

The Furo #1 site is on the bank of the Little Knife River and consists of three flakes (two of Knife Lake siltstone and one of jasper taconite) recovered by Larry Furo previous to this study. These flakes remain in the Furo collection but have been examined and photographed. The site was surveyed by shovel testing in October 2010. Three shovel tests were placed in a slump block and three on the terrace above the slump block; nothing was recovered. Mr. Furo has stated that the bank in this location has eroded back about 15-18 feet since 1995.

Andy Anderson Point, 21SL1116

This site consists of a late Paleoindian projectile point of jasper taconite; the point is Hell Gap-like in style, although the base is broken. It was discovered in a garden on Mr. Anderson's former property outside of Two Harbors. The specific location of the find is currently covered by a steel pole barn. No subsurface testing was conducted in October 2010 as the land is under new ownership. The point is in the possession of Andy Anderson. [This site is technically in Region 5e but is included here as it is on the eastern or lake side of the Highland Moraine.]

Jackson Huntley Point, 21SL1117

This site consists of a projectile point of unknown material, probably Hixton silicified sandstone. The style may be similar a late Paleoindian type (Scottsbluff), although the rounded base is more similar to Adena (a type of Early Woodland point). It was discovered in a garden on Mr. Huntley's property on Baylis Street in Duluth. No subsurface testing has been conducted. The artifact was given by Mr. Huntley to Lester Gibbs, an enrollee in the Red Lake Band of Chippewa. Efforts to talk to Mr. Gibbs to obtain a clear photograph and additional artifact data were unsuccessful at this time.

Schaeffer Lake Point, 21SL1118

This site consists of a projectile point of Knife River flint; it is a side-notched point that resembles a Sonota type of the Middle Woodland. The point was found on the shoreline of the south side of Schaeffer Lake, which is an artificially dammed lake (for logging) on a former creek. It is in the possession of Michelle Kokosh, who found it. No survey has yet been conducted at this site. [This site is technically in Region 5e but is included here as it is on the eastern or lake side of the Highland Moraine.]

Pat McCarthy Point, 21SL1119

This site consists of a projectile point of jasper taconite that is probably a Durst type. Mr. McCarthy could not find the point for closer examination but was able to draw the outline. The point was found his garden on Hill Road outside of Two Harbors. An examination of the garden surface in October 2010 failed to find any additional artifacts. [This site is technically in Region 5e but is included here as it is on the eastern or lake side of the Highland Moraine.]

Pellman Trade Axe, 21SL1121

This site originally consisted of an iron trade axe discovered by metal detection in the late 1970s past Sky Harbor Airport on Minnesota Point (but not in the vicinity of 21SL0151, which was about a half mile farther to the east). The axe was found in the road that served the Point residents (currently used as a hiking trail); the location was near a series of recreational cabins that have since been removed. The axe was given by Mr. Pellman to someone at the American Indian Studies department at the University of Minnesota Duluth in the early 1980s. Efforts to relocate the artifact have been unsuccessful to date.

The axe outline was drawn by Mr. Pellman and identified by David H. Peterson as most closely resembling the French style (Peterson 2009). Efforts to identify the location of the find in May 2011 by Pellman and Peterson involved metal detection to relocate the original pattern of strikes. The site location was identified as being in an area in a narrow strip of City of Duluth land that is an exclusion within the Minnesota Point Pine Forest Scientific and Natural Area. Additional materials included two brass pieces that appear to be cut from a brass kettle by a knife (Todd Lindahl, personal communication 2011). No professional survey has been conducted at this site to date.

Jasper Graver, 21SL1122

This site consists of a jasper taconite graver found on the south shore of the Knife River near an eroding bank. The river meanders widely at this location, which is downstream from an old channel that connected the Knife and Little Knife Rivers (the current junction is about half a mile

downstream just north of Highway 61). No additional artifacts were observed and no subsurface investigations have been conducted.

### Alpha Sites

Two alpha sites are recorded for the Region 9 area in St. Louis County. 21SLan and 21SLao are lithic scatters; however, the location for both is T48N R16W, which is in Carlton County. These sites may correspond to 21CL0009 and 21CL0010 respectively (Koenen, personal communication 2011).

### Site Leads

Several sites have not yet been assigned state site numbers since the locations are somewhat ambiguous and need field verification. The Brad Nelson Knife consists of a knife of Hudson Bay Lowland chert found about 30 years ago east of the Knife River. This general location has been logged recently, which has removed landmarks and may have caused impacts to trails and older logging roads that are crucial to relocating the find spot.

Three sites are represented by four artifacts curated at the St. Louis County Historical Society Museum in Duluth. The Park Point Knife consists of a knife of jasper taconite. The documentation states only that the artifact came from Park Point, which could refer specifically to the City park or the peninsula formally known as Minnesota Point (if the latter, the artifact might be from 21SL0151). The Fond du Lac Park site has two artifacts, a stemmed projectile point (similar to the Kramer style, Justice 1987:184-187) of chert and an adze of Burlington chert. Both are recorded as being found at Fond du Lac “near the ski jump” in 1959. Fond du Lac Park in Duluth had a ski jump, which is now demolished but the location is known. The Bernard McMillan site consists of a projectile point or knife, possibly of Knife Lake siltstone. The artifact was recovered in 1928 by Bernard McMillan from a garden on Arlington Avenue. This location was visited in October 2010 but was found to be covered by trees; as it is private property, it was not surveyed.

### Historic Sites

Numerous historic sites were reported by informants during the Region 9 project. Only a few were submitted for state site numbers; they were visited in the field. Other sites require additional information on age, function, and associated documentation before submission.

Furo #2 (21SL1112) is a square pit near the Little Knife River, probably for copper exploration. Metal detection did not find artifacts but a structure is mapped on an 1858 map of the area. The site was reviewed in October 2010 but no subsurface survey conducted. The pit was measured, sketched, and location recorded.

Furo #3 (21SL1113) consists of three pits near the Little Knife River, on the opposite side from Furo #2. The site was visited in October 2010 and the features measured, sketched, and location recorded. No subsurface survey was conducted, although iron felling wedges were recovered from the middle pit.

Furo #4 (21SL1114) is a rectangular berm with various historic artifacts (hinges, 19<sup>th</sup> century lock, cut nails) in association. A pile of rock appears to represent a collapsed chimney inside the berm. This location is marked on a map dating to 1858.

### **Lake County**

Lake County had eight previously recorded prehistoric sites and two alpha prehistoric sites (and a Contact site) within Region 9. The Region 9 investigations recorded eight new prehistoric

sites from informant reports and survey as well as one Contact site; three additional prehistoric sites are probable leads. The total of prehistoric sites in the Region 9 portion of Lake County is now 13 for numbered sites (plus 3 in adjacent portions of Region 5e) and 2 alpha sites. Two additional sites are of Contact affiliation, one numbered and one alpha (Table 22).

**Table 22. Prehistoric Sites in Lake County Portion of Region 9**

<b>SITE #/NAME</b>	<b>SOURCE</b>	<b>CONTENT</b>
21LA0009/unnamed site	survey for park projects	LS
21LA0012/Baptism River	survey for trail	LS
21LA0014/Tettagouche	survey for trail	SA
21LA0020/Stewart River	survey for Hwy 61	LS
21LA0021/Superior Beach	survey for Hwy 61	LS/not eligible
21LA0041/Baptism River Terrace	survey for park trail	LS
21LA0519/Tettegouche Lake Overlook	survey for park trail	LS
21LA0524/Gitchi Gami Trail 1	survey for state trail	LS
21LA0543/Rock Ring Ridge*	survey with field school	LS
21LA0544/Todd's Bench*	survey with field school	LS
21LA0547/Two Harbors Park	Region 9: informant	LS
21LA0549/Cleveland Stone	Region 9: informant	SA
21LA0550/Isotta Medal	Region 9: informant	SA
21LA0551/Dixie Knife*	Region 9: informant	SA
21LA0553/Larry Ronning site	Region 9: informant; 2010 survey with field school	LS
21LA0554/Baptism River Slope	Region 9: survey	LS
21LA0555/Baptism River North Vista	Region 9: survey	SA
21LAa/Wieland	OSA:	SA
21LAc/Quinn	OSA:	AS, cemetery?
21LAd/Encampment Trade Center	OSA	HD
Burlington Townsite	Region 9: informant	SA + post Contact
Karin Smith Biface	Region 9: informant	SA
Scott Collection	Two Harbors Library	display

Lake County 6 Pit	field survey	pit
-------------------	--------------	-----

\* site located in Region 5e

unnamed, 21LA0009

This unnamed site is a lithic scatter in the upper campground area at Gooseberry Falls State Park; several investigations recovered lithic materials on the surface in this area. Two areas were collected in the 1977 survey in advance of campground rehabilitation. Additional materials were found during survey for a 1989 tree planting project and a 1991 site monitor. Lithic debitage was collected on campsites 6,8,28, and 31. Materials include jasper taconite, Gunflint silica, basalt, quartz, agate, and unidentified chert and flint.

In 1993, a projectile point was found by a camp visitor on the lower campground (campsite 49), about 200 m away from the lithic scatter (Radford and George 1994:143-146). This area had been surveyed in 1977 with negative results. The chert point is similar to the Snyders cluster of the early Middle Woodland (Justice 1987:201-204).

Baptism River, 21LA0012

The Baptism River site is a lithic scatter on an upland area inland from the Baptism River in Tettegouche State Park (Radford 1984). One shovel test for a proposed campground loop yielded 71 flakes Gunflint silica; all other shovel tests were negative but a 50x50cm unit adjacent to the positive test contained 13 flakes of Gunflint silica and jasper taconite. This site is very localized; it is some distance from the edge of the slope overlooking the Baptism River valley but adjacent to a small drainage.

Tettegouche, 21LA0014

A single artifact was recovered on the surface of a saddle between two hills southwest of Tettegouche Lake in Tettegouche State Park. However, the accession number (UM 881) is the same as that assigned to materials from 21LA0013 (which was later renumbered as 21LA0015 and 21LA0016). All materials in this accession number were reviewed and considered to be naturally broken rocks. The artifact recovered from 21LA0014 may also be natural but the notes as to which items came from which location are unclear.

Stewart River, 21LA0020

The Stewart River site was identified during survey in advance of reconstruction of Trunk Highway 61 (Peterson et al. 1991:42-43). Four agate artifacts, a scraper and three flakes, were recovered from the surface south of the Stewart River (west shore) and east of the highway. One additional agate flake was recovered from a shovel test. Since the site area was outside the projected disturbance area, no further investigations were recommended. In October 2010, the site was revisited by pedestrian walkover only. The surface exhibits extensive erosion from visitor foot traffic; one possible flake of agate was observed on the surface of the eroding bank but not collected.

Superior Beach, 21LA0021

The Superior Beach site was identified by recovery of two flakes, one siltstone and one jasper taconite, from a shovel test on the inland (western) side of Highway 61 within the Encampment Forest Association (Peterson et al. 1991:43-44). This portion of the highway is on a former shoreline feature of a higher level of Lake Superior, which was considered to have high potential for

archaeological sites. Additional shovel tests around the positive test (7 in 1989 and 18 in 1990) were all negative, as were a 1x2 meter excavation unit. The site was considered to have been mostly destroyed by previous highway construction and was recommended as not eligible for the National Register.

#### Baptism River Terrace, 21LA0041

The Baptism River Terrace site was identified from a positive shovel test during survey for a cart-in campground in Tettegouche State Park (Radford et al. 1997:129-150). A total of 26 flakes (including one retouched flake) were recovered; additional shovel tests including on cardinal directions were negative. Excavation units totaling seven square meters were placed around the positive shovel test. The site yielded a total of 284 flakes, 5 flake tools (2 utilized, 3 retouched), and a core fragment as well as a .22 caliber bullet. Material types included banded jasper (196), jasper taconite (19), rhyolite (55), siltstone (19), and agate (1). The site is on the highest shoreline of the Beaver Bay glacial lakes.

Historic activity in the general area was relatively common. A logging road was present in the site area prior to the survey. The Baptism River Club (21LA0042), also known as the St. Paul Club and the Cliff Club, was also present on the bluff overlooking the Baptism River mouth at the Lake Superior shore. A road connected it to Highway 61.

#### Tettegouche Lake Overlook, 21LA0519

A single jasper taconite scraper fragment was found on the bedrock at the Tettegouche Lake overlook in Tettegouche State Park (state site form, S. Allen, 1999). No other artifacts were observed on this exposed bedrock surface; no shovel testing was possible in the vicinity.

#### Gitchi Gami Trail 1, 21LA0524

The Gitchi Gami Trail 1 site was identified from survey in advance of trail construction for the Gitchi-Gami Trail through Split Rock Lighthouse State Park (Gonsior and Radford 2001:9-12). Three shovel tests yielded 11 lithics, 8 pieces of debitage and 3 tools (a scraper and 2 flake tools). An additional six tests in the immediate vicinity, as well as tests along the rest of this portion of the trail corridor, were negative. The positive tests are on a post-Nipissing shoreline feature of a higher level of Lake Superior; the site area appears to be small. The Gitchi-Gami Trail was rerouted around the site, which is located between it and the Little Two Harbors Trail.

#### Rock Ring Ridge, 21LA0543

The Rock Ring Ridge site was identified during survey with the 2009 UMD archaeological field school. Two rings of rocks on a ridge in the Highland Moraine were found by Todd Lindahl; shovel testing along the ridge recovered several lithics of a Gunflint silica variation from two tests. These tests were at the very end of the ridge overlooking a large and deep kettle depression. The rock rings and a depression closer to the main ridge could possibly be natural from old root throws but age, function, and affiliation are uncertain. This site is in Region 5e but is included in this summary as it is on the eastern or lake side of the Highland Moraine.

#### Todd's Bench, 21LA0544

The Todd's Bench site was identified during survey above the Gooseberry River with the 2009 UMD archaeological field school. A bench above the floodplain of the river was shovel tested between a small tributary on the south, the slope downhill to the floodplain on the west, the hillside

to the east, and a drop to a logging camp (21LA0545) on the north. Four of the 18 tests were positive, all on the southern end of the bench. A total of 19 jasper taconite pieces of debitage and 9 pieces of Kakabeka chert shatter were recovered.

In addition to the pre-Contact materials, two types of surface features were noted. A railroad grade extended from the logging camp south along the eastern edge of the bench, approximately at the foot of the hill. This grade was not very distinct as the flat bench allowed the railroad to be placed without significant disturbance to the till ground surface. In addition to the grade, 13 pits of various sizes were located on the northern half of the bench, clustering near the western edge above the slope to the floodplain. No artifacts were recovered from shovel tests in this area, which is mostly north of the pre-Contact cultural deposits. The pits were some distance from the railroad grade; it is unlikely the pits represent borrow for this grade, which was placed on the stable surface of the bench and not noticeably built up above the original ground level.

#### Two Harbors Park, 21LA0547

The Two Harbors Park site is identified by two reports from informants. Brad Nelson collected a biface of Lake Superior rhyolite from an eroding slope south of the soccer fields that has since been covered by an asphalt basketball court. Todd Lindahl photographed but did not collect a concentration of Knife Lake siltstone flakes west of the soccer fields; this area is an eroding bank adjacent to a ditch that drains the soccer fields. The original concentration has been covered by sediment but one small flake of Knife Lake siltstone was recovered during the October 2010 visit. No subsurface testing was done but additional flakes may be buried in this location.

#### Cleveland Stone, 21LA0549

The Cleveland Stone is a large basalt stone with apparent modifications including a beveled edge around the flat top that is consistent with mashing from copper hammering (Romano and Mulholland 2000). In addition, a pecked or ground groove is present around most of the circumference a few centimeters below the top. The base of the stone appears to have been knapped to produce a conical shape. It was recovered in the Knife River in a lee bend of the river. Shovel testing on two terraces or benches above the location were negative. The stone has been acquired by Todd Lindahl in order to prevent its sale outside the region; it is currently on display at the Lake County Historical Society Museum in Two Harbors.

#### Isotta Medal, 21LA0550

The Isotta Medal is a bronze medallion recovered from the back dirt of a gas line excavation by E.E. Kari, the land owner in Two Harbors. The medallion exhibits a woman's bust (Lady Isotta) on one side and an elephant on the other. Four other finds of this type of medallion are reported in Minnesota (Kimball 1967), corresponding to the Dakota territories prior to 1711. The medallions may have been brought into the region by the 1680 Hennepin expedition, which was captured by the Dakota. This site is located near Skunk Creek in Two Harbors and on or near a trail marked on the Trygg maps.

#### Dixie Knife, 21LA0551

The Dixie Knife site consists of a knife of an unknown material, a dark grey rough basalt-like stone (possibly Rove slate). It was discovered in the ditch on the side of County Road 2 north of Two Harbors, in the Five Mile Hill locality during a road construction project. No professional

survey was conducted in this area. Note that the material of this artifact is similar to that of many artifacts in the Judge Scott Collection (on display in the Two Harbors Public Library).

#### Larry Ronning Site, 21LA0553

The Larry Ronning site is a prehistoric lithic scatter above the Little Stewart River north of Two Harbors. The site was shovel tested with the 2010 UMD archaeological field school. Nine shovel tests and a surface find yielded flakes and shatter of basalt (8), jasper taconite (4), Swan River chert (2), and Gunflint silica (2). Two bifaces had previously been found by the landowner in the garden area. Although sparse, this site appears to be associated with a gravel deposit within an area of red clay sediments; it is above the 1100 foot contour and may be on a glacial lake feature.

#### Baptism River Slope, 21LA0554

The Baptism River Slope site was identified during survey for the Region 9 investigations in Tettegouche State Park. The location was suggested by David Radford and was one marked by high archaeological potential based on the geomorphic situation (Phillips and Hill 1994:63). The site is represented by two positive shovel tests about 5 m apart, yielding a flake each (Gunflint silica, agate). The positive tests are about 35 m downslope from a distinct shoreline feature and immediately above both the steep slope into the Baptism River valley and a tributary to the west. Four negative tests are in the immediate vicinity; additional negative tests were placed to the north and east. A pit feature is recorded as part of the same site on the shoreline just above the tributary valley. This site is at about the same elevation but the opposite side of the Baptism River from 21LA0041.

#### Baptism River North Vista, 21LA0555

The Baptism River North Vista site was identified during survey for the Region 9 project in Tettegouche State Park. The location was suggested by David Radford; it is on the north edge of the Baptism River valley in the general vicinity of 21LA0012. The site is represented by a single positive shovel test; four tests on cardinal directions and additional tests along the valley edge were negative. The test yielded one artifact, a jasper taconite shatter with a scraper edge. This was the only non-pebble piece of jasper taconite encountered. The positive test is at a small point of land projecting into the valley; a small drainage is present to the east.

#### Alpha Sites

Three alpha sites were recorded in the Region 9 portion of Lake County. 21LAa is a single artifact (Wieland site). 21LAc, the Quinn site, is recorded as an artifact scatter and possible cemetery. 21LAd is the Encampment Trade Center, a Contact period location recorded from historic documentation. The section is recorded as 12 but it is suspected that is a typographical error as the mouth of the Encampment River is located in Section 1.

#### Site Leads

Several leads to prehistoric sites were not assigned state site numbers. Two projectile points in the Lake County Historical Society Museum were seen earlier but have not been located for recording. Provenience for these points is unknown at this date. A biface was recovered by Karin Smith from road gravel in a road outside of Two Harbors. The find location is obviously disturbed but the gravel may be traced to a specific gravel pit; if so, survey of that location might identify the original site. In addition, an agate flake was recovered from an eroded location at the Burlington

townsite on Burlington Bay in Two Harbors; post-Contact materials were more abundant. This location is on the edge of the Burlington Bay campground operated by the city of Two Harbors.

The Judge Scott Collection is a display of artifacts in the Two Harbors Library. It was photographed (without removal from the board but with the glass cover removed); most of the artifacts are Late Archaic to Woodland points as well as knives and bifaces (Mulholland and Mulholland 2008). The material of many artifacts may be Rove slate. No provenience information is present with the collection or in the library records. However, two local avocationalists remember the collection was once displayed with a label that the materials came from Five Mile Hill. This location is 5 miles inland from Two Harbors on County Highway 2. However, the collection was donated by Judge William E. Scott, a prominent local person who is since deceased so there is no way to determine if the materials are from that location or if they are from multiple locations.

A pit was recorded above a paleochannel that cuts Lake County Road 6 near Finland. This pit is similar to those seen at 21SL0554 in Tettegouche State Park. No testing was done in the area of this pit.

### Historic Sites

Four historic sites were recorded during this project, including from the 2009 UMD field school. Other historic sites were reported but have not been submitted for state site numbers yet. Additional research and documentation is needed to determine age and associations.

Stewart River Pin (21LA0548) consists of an iron pin in the bedrock area on the bank of the Stewart River near the junction with Lake Superior. The pin was most likely used to anchor a logging boom and was probably associated with logging drives in this area in 1883. No subsurface testing was conducted in October 2010, when the site was discovered during review of site 21LA0020. The pin remains embedded in the bedrock at the site.

Red Cliff Logging Camp (21LA0545) consists of a series of berms (including a root cellar) and surface scatter of artifacts associated with the Red Cliff logging operation in 1901. The site was mapped by the 2009 UMD field school. The camp is located between two railroad spurs on a terrace slightly above the current floodplain of the Gooseberry River. Additional historic artifacts are located north of the camp itself, near remnants of a dam across the Gooseberry River. This site is on the east side of the river.

West Bank Logging Camp (no SS#) is a second camp with several berms and surface artifacts located on the west bank of the Gooseberry River. It is north of the Red Cliff Camp and the dam remnants. Some field mapping was conducted in 2009. Association and age are not certain at this time; additional research and field survey is needed.

Encampment Island (21LA0552) is a post-Contact and probable Contact site associated with fishing in Lake Superior. The American Fur Company had a fishing station on this island (Fritzen 1974:12); a modern fishing camp is documented as well. A surface survey in October 2010 located a root cellar, associated artifacts and possible structural remnants, and a can dump.

### **Cook County**

Cook County had seven previously recorded prehistoric sites and two alpha prehistoric sites within Region 9, as well as a Contact site. The Region 9 investigations recorded four new prehistoric sites from informant reports and survey plus one in adjacent portion of Region 8; three additional prehistoric sites are possible leads. The total of prehistoric sites in the Region 9 portion of Cook County is now 11 for numbered sites (plus one in Region 8). One alpha site is an apparent

duplication and one may be a natural specimen of copper. One alpha site is of Contact affiliation, as are the major known components of two numbered sites (Table 23).

**Table 23. Prehistoric Sites in Cook County Portion of Region 9**

SITE #/NAME	SOURCE	CONTENT
21CK0006/Grand Portage	National Monument site	AS, EW
21CK0007/Fort Charlotte	part of 21CK0006	AS, EW
21CK0008/East Temperance River Mound	historic documents	EW (mound)
21CK0348/Thomson's Ridge	survey within 21CK0006	LS
21CK0370/Horseshoe Bay Penta Arcanum	survey	EW (pits)
21CK0372/Cascade River State Park Campground	survey for park projects	LS & CCC camp
21CK0374/Cut Face Creek	survey for park	EW (pits)
21CK0361/Muehlenberg	informant/SNF records	SA
21CK0362/Temperance River Washout	survey/SNF records	LS
21CK0363/Netland Point*	Region 9: informant	SA
21CK0364/Tammy Cefalu Point	Region 9: informant	SA
21CK0365/Chris Marken Spud	County historical	SA
21CKaa/X Y Company Depot	OSA	HD
21CKad/Cascade River Camp	OSA	LS
21CKg/Temperance River Mouth	OSA	SA
20 gunflints	County historical	unknown
stone axe	County historical	SA
Sugarloaf Cove axe	Region 9: informant	SA
Magney Pit 1	field survey	pit
Magney Pit 2	field survey	pit

\* site located in Region 8

### Grand Portage, 21CK0006

Grand Portage is an extremely large complex of sites extending from the depot area on Lake Superior to Fort Charlotte (21CK0007) on the Pigeon River; the portage itself is a series of trails and pauses that connect the two areas. The Grand Portage is a National Monument within the National Park Service and is lies within the Grand Portage Reservation for the Grand Portage Band of Lake Superior Chippewa. Significant archaeological investigations have been conducted in the various components of this site complex (Hamilton et al. 2005).

Although the Contact era contexts are the most well known, considerable pre-Contact activity is probably represented at the site as well (note that 21CK0348 is a prehistoric site within 21CK0006). Some artifacts have been recovered from previous investigations (Boszhardt and Bednarchuk 2008:Table 2), including projectile points and ceramics (William Clayton, personal communication 2010). A summary of information on the prehistoric occupations is currently underway.

### Fort Charlotte, 21CK0007

Fort Charlotte is the North West Company's fort on the Pigeon River at the inland end of the Grand Portage. As with the Grand Portage depot, this site is a complex of different buildings at different times, including those of rival companies. One aspect that was investigated is the underwater cultural deposits from the loss of goods while loading. As with 21CK0006, pre-Contact occupations are possible but have been overshadowed to present by the abundant and well documented Contact activities.

### East Temperance River Mound, 21CK0008

A mound was reported on the east shore of the Temperance River (Woolworth and Woolworth 1977:70). Although numerous field efforts were made by SNF archaeologists to locate the feature, they have been unsuccessful. The specific location (the section) may be incorrect. A review of the historic documentation on which the initial report was based needs to be made; these documents are archived at the Minnesota Historical Society library in St. Paul.

### Thompson's Ridge II, 21CK0348

Thompson's Ridge II is a lithic scatter identified by shovel testing on selected areas of the portage route in the Grand Portage National Monument (Boszhardt and Bednarchuk 2008:19-20). Two flakes (Gunflint silica and jasper taconite) were recovered from a shovel test and a 50x50cm unit respectively. The site is near the Poplar Creek area, midway along the portage trail. It could reflect early Contact period Native American use or earlier pre-Contact use of either the portage trail or the Poplar Creek drainage.

### Horseshoe Bay Penta Arcanum, 21CK0370

The Horseshoe Bay Penta Arcanum site is comprised of a series of at least five pits or depressions just above the current level of Lake Superior north of Hovland. The pits appeared to have been formed by removing cobbles from the beach to form the depressions, which range from 24 inches to 96 inches in length and up to 48 inches deep. Some are very shallow. The affiliation and function of these features has not been determined, although some similarities to Pukaskaw pits in northern Ontario have been noted.

Cascade River State Park Campground, 21CK0372

This site includes both a post-Contact CCC camp and a pre-Contact lithic scatter, both within the campground at the Cascade River State Park (Radford and George 1993:117-120). The Spruce Creek CCC camp occupies the western half of the campground but portions have been covered by fill to make the area seem more natural. Flakes of basalt and jasper taconite were recovered from the surface of trails in the southwest part of the campground; two positive shovel tests yielded additional flakes in the campground loops.

Cut Face Creek, 21CK0374

The Cut Face Creek site consists of 18 depressions or pits on a bench above Cut Face Creek inland from the junction of the creek with Lake Superior (Gonsior and Radford 1999). The pits are generally 3 to 8 feet in diameter and 1 to 3 feet in depth; all have at least partial berms of sediment on one or more sides. They cluster along a old shoreline feature but are both above and below as well as on the topographic feature. Some are on either side of a remnant paleochannel of the Cut Face Creek. A metal detection survey failed to find metal artifacts in association. The pits have been suggested to be storage or cache pits of pre-Contact or historic Native American groups, potentially similar to Pukaskaw pits of northern Ontario.

Muehlenberg, 21CK0361

The Muehlenberg site consists of a broken knife found in a garden on the northwest side of Caribou Lake. It was recorded as Superior National Forest site 09-09-07-364 and discovered during review of those records. The knife is broken and appears to be a pink rhyolite; flaking patterns suggest it is a Late Paleoindian artifact. The artifact was found by the Muehlenberg's at their property on Evergreen Road; it is currently in the possession of Dean Zeitz, retired SNF paraprofessional. No other artifacts were observed by either the Muehlenbergs or Zeitz (their son-in-law) in the garden.

Temperance River Washout, 21CK0362

The Temperance River Washout site was identified during survey by employees of the SNF. The site is a lithic scatter of jasper taconite and Gunflint silica found in a washout of the Superior Hiking Trail on the east bank of the Temperance River. Shovel tests in the vicinity were negative.

Netland Point, 21CK0363

The Netland Point consists of a late stage preform for a projectile point or knife; the base is broken. It was found on the north shore of Devil's Track Lake and is either a basalt, Rove slate, or possibly a poor quality variation of jasper taconite. Flaking patterns suggest it is affiliated with the Late Paleoindian Tradition. The site is actually in Region 8 but is just across boundary with Region 9.

Tammy Cefalu Point, 21CK0364

The Tammy Cefalu Point site consists of a projectile point of Hudson Bay Lowland chert. It appears to be in the St. Charles-like style. The point was recovered on the sand beach behind a lakeshore motel in Grand Marais after a storm; this location is below the Beaver Bay glacial lake shoreline. It apparently eroded out of the vegetated area (along with abundant historic artifacts). No subsurface testing was conducted in November 2010, although a pedestrian survey of the exposed

sediments was done with negative results. The point is now in the Cook County Historical Society Museum.

#### Chris Marken Spud, 21CK0365

The Chris Marken Spud site consists of a copper socketed tool located at the Cook County Historical Society Museum. The documentation with the artifact states it had been found during excavation of the basement for Chris Marken's house. Deeds in the County records office indicated that Chris Marken had lived on Fourth Avenue in Grand Marais; a house still occupies this location on the corner of Fourth Avenue and First Street. First Street is on an elevation above the current corridor for Highway 61; this elevation appears to correspond to the Beaver Bay shoreline.

#### Alpha Sites

Three alpha sites are recorded for Region 9 in Cook County. 21CKaa is the XY company Depot of Contact era. 21CKad is listed as the Cascade River Camp; it is a duplicate listing for 21CK0372, the Cascade River State Park Campground. 21CKg is the Temperance River Mouth site, which consists of a copper specimen from in the bed of the Temperance River. Winchell (1911:501) discusses the "alloy" of silver with copper and cites it as from "near the mouth of the Temperance River" but later lists it as 3 miles above the river mouth and about 8 pound in weight (Winchell 1911:505). The original publication of the find discusses mostly the mixture of silver and copper; however, it also includes depositions by the various owners (Winchell 1886:319-324). In that citation, the item is referred to as a specimen, not a disk; the finder, Augustus Taylor, states he found it in 1883 about 2 miles from the mouth of the river. The last mention of the item is that he delivered it to Winchell at the University of Minnesota Museum.

#### Site Leads

Two collections at the Cook County Historical Society Museum were observed that did not have sufficient provenience data to be assigned a site number. A collection of about 20 gunflints was listed as "cherts" and geology specimens. No information on location was in the documents. A full grooved axe of basalt was donated by Art Madsen, who lived at Sageo Resort on the north side of Gunflint Lake. No other information was recorded.

A grooved axe was reported to have been found by a visitor and taken to the Sugarloaf Cove Nature Center. Todd Lindahl saw the artifact there and was told it had been found on the beach. The Nature Center was not open during the winter and time did not permit a visit this spring; however, if the axe is still at the Center it should be recorded.

Two pits were recorded at Judge Magney State Park and a third known but not field verified. One pit is on a tributary to the western paleochannel of the Brule River. The other two are on either side of the eastern paleochannel; these were noted earlier but not recorded as sites (Phillips and Hill 1993:52-53).

### **SITE DISTRIBUTION PATTERNS**

Even with the additional sites documented during this investigation, the number of sites is somewhat low to make a predictive model of site location patterns (Figure 24). However, some data are available from the sites recorded to present. All prehistoric sites, including multicomponent sites, were used for the analysis (including site leads if considered to be fairly certain). Some sites consist only of pits or mounds; others are single artifacts or lithic scatters.

### *Site Statistics*

Statistical analysis of sites by various environmental factors considered to be important predictors does not show significant patterns. Two factors considered to be the most important predictors of site location were distance to water and slope. Additional environmental factors of drainage class, geomorphic setting, and geologic association were also considered in the analysis as these data were available.

Distance to water was considered in three categories: less than 50 m, 50 to 100 m, and more than 100 m. Three types of water were considered from GIS data: streams, lakes, and wetlands. No clear pattern was identified in the statistics, although it is interesting that the greatest number of sites in each of the three water types is in the greater than 100 m category. All three water types showed a bimodal pattern with most sites either in less than 50 m or more than 100 m categories and relatively fewer in the 50 to 100 m category. No clear preference for being close to a specific type of water was indicated. For distance to lake, about half the sites are more than 100 m from water; for stream and wetland, the amount of sites more than 100 m from water is higher at about two-thirds.

Slope is somewhat more consistent with the initial predictions. Of the 67 sites analyzed, 51% have less than 5% slope and 22% have up to 10% slope. However, 27% are still over 10% slope. Flatter areas therefore do seem to be a relatively good predictor of site locations, with about three-quarters of the sites but not the complete picture when over a quarter of the sites have steeper slopes.

Drainage class and geomorphic setting were taken from SSURGO, which was only available for Carlton and St. Louis Counties. Sites appear to be slightly more likely to be on well drained areas than other types of drainage classes but very poorly drained situations are also represented at some sites. Geomorphic setting was scattered throughout all types. Geological association is also scattered among many categories.

No simple predictive factor for site locations appears to be indicated from this analysis. Most surprisingly, distance to water is not a strong positive factor in the statistical analysis; half to two-thirds of sites are over 100 m from stream or lake or wetlands (taken individually). Many sites appear to be close to water but others are not. However, when the data are analyzed in a more general manner some interesting trends appear to be present.

Most sites (40 of 60) are within about 100 m of some type of water: lake, stream, or wetland. Lakes (including Lake Superior and inland lakes) and streams (perennial) were taken from MnDNR data deli website. Wetlands are from the National Wetlands database. The type of water does not appear to be consistent but some correlation to water seems indicated relatively close to most sites. However, 17 sites are significantly greater than 100 m from water of any type. Data for three sites are not available but two (21LA0554, 21LA0555) are considered to be greater than 100 m from water and one (21CK008) is considered to probably be within 100 m of water.

Of the 17 sites more than 100 m from current water, 5 are on or near glacial lake shorelines (as well as the 2 sites for which data are not available). Given that glacial lake shoreline data are not readily available along the entire Region 9 area, this seems to be suggestive of a trend for higher and drier areas. It should also be noted that at least three sites closer to water are also on glacial lake shorelines; others may be as well.

Areas of low potential for sites (as based on the factors of distance to water and slope) were not surveyed in this project. However, lowest potential for sites is considered to be on steep slopes, permanently saturated ground, or out of easy walking distance from water. Most areas selected as high potential from digital data were negative during survey. Some such areas were not testable as

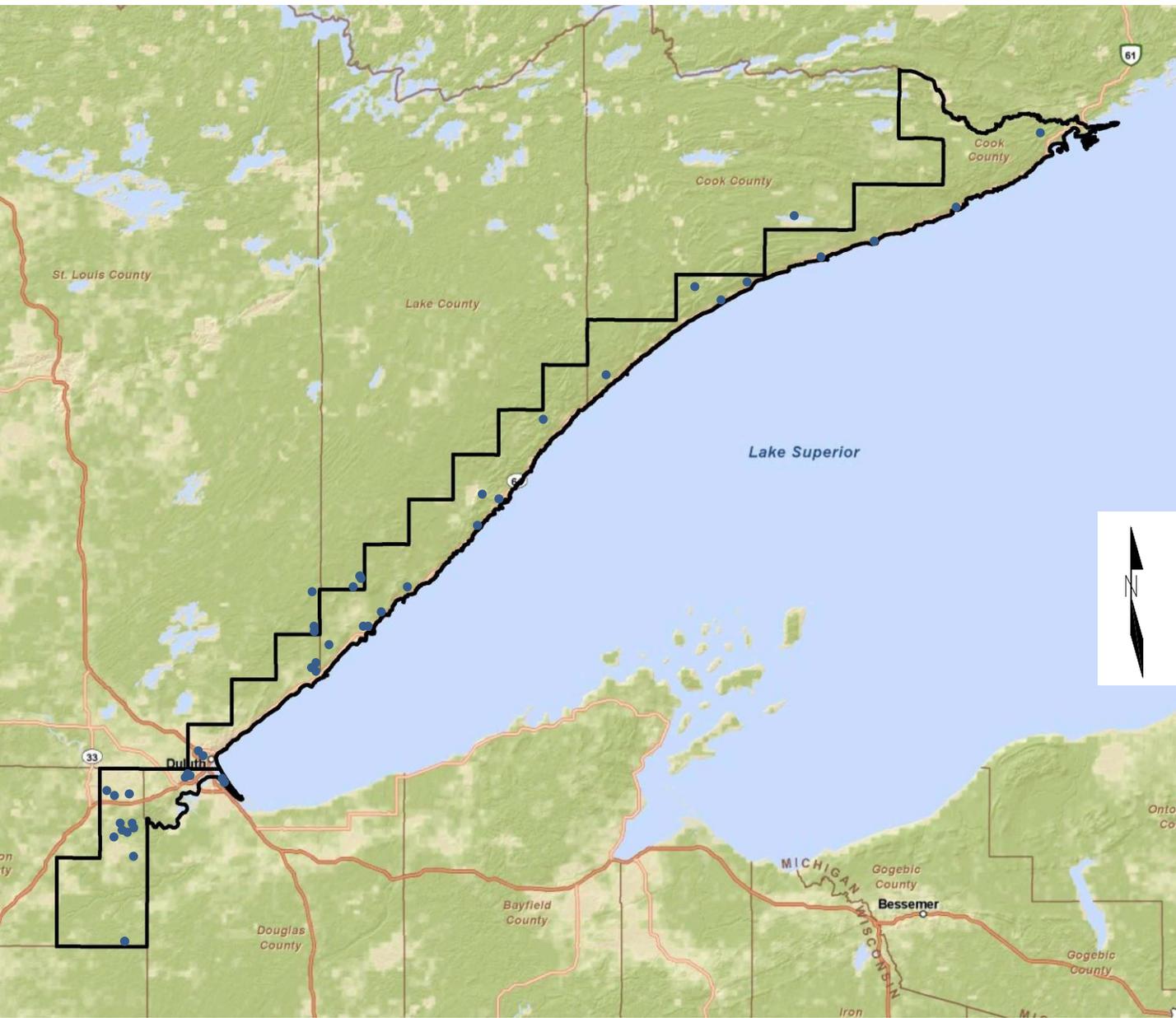


Figure 24. Location of sites in Region 9.

a result of water saturation or excessive slope (which were not indicated in the digital data). Other areas appeared as high potential in the field but shovel testing failed to locate any cultural materials.

No one factor seems to be a predictor for site location. However, water of some type (either current or relict) is probably involved in site location. In addition, slope is probably important as well. However, other factors should be explored as even flat areas near water are not always locations of prehistoric sites. Inland trails (such as on Trygg maps) could provide information on likely corridors where artifacts might be expected. Overlooks and vista sites, with long viewsheds (especially before forest vegetation returned) might be another category where sites could be expected. Areas with knappable rock, either bedrock or in the till, would also be of higher potential (Bakken 1997, Mulholland 2002). Potable water is probably an important factor, as is slope (and perhaps aspect as well), but other factors are also important.

Specific factors of the analysis also need to be considered. Primarily, the number of data points (known sites) is relatively low. If there is not sufficient data, even the best analysis will not produce much information. The scale at which digital data is available is also a consideration. USGS topographic maps do not show all small, flat benches on which sites might be located. The wetlands also are not always well indicated (compared to the field - see below). Finally, data on glacial water features (both lakes and outlet streams) needs to be compiled for larger areas. To date, such fine-scale information is only compiled for three state parks (Grand Portage, Magney, Tettegouche) with some data on the oldest glacial lake available for Carlton County.

### ***New Survey Results***

Survey for new sites (excluding survey of areas where artifacts were reported) was not as productive as expected. Only six new sites were found by survey, four in Jay Cooke State Park and two in Tettegouche State Park. The four sites in Jay Cooke were initially located by surface finds in the park trails; one had been noted earlier so could be considered a reported site. All were in areas that were identified by GIS compilation of water and slope as potential site areas. The two sites in Tettegouche were found by shovel testing survey in areas selected from advice from an archaeologist experienced in the area. Neither is close to water; one is a small flat area on a considerable slope.

All shovel testing survey in areas selected from GIS compilation of environmental factors (Figure 25) was negative (these areas lacked surface visibility). [The four sites discovered during survey in Jay Cooke State Park were all found from surface finds in hiking trails; some also had positive shovel tests.] Many of the areas selected were water saturated and untestable. Others appeared to be good candidates for sites but shovel tests were uniformly negative. It should be pointed out that the survey in Judge Magney State Park, like survey in Tettegouche, was able to focus on areas of high archaeological potential as identified in earlier geomorphic surveys (Phillips and Hill 1993, 1994). However, the survey in Magney was almost completely negative; two pits were recorded (one of which had been known previously) but no prehistoric artifacts were found during the survey.

Factors associated with digital data (scale of mapping, types of layers, reliability of information) affect the approach used in much of the new survey. The addition of LiDAR data for the North Shore (flown in spring 2011) would increase the identification of small flatter benches that might be targets for survey. Greater mapping of glacial shorelines is also possible with finer topographic data. Intermittent streams, particularly tributaries that have greater accessibility than streams entrenched in gorges, should also be identified. Potential water sources have to be accessible to people and easy access may be a greater factor than simple distance.

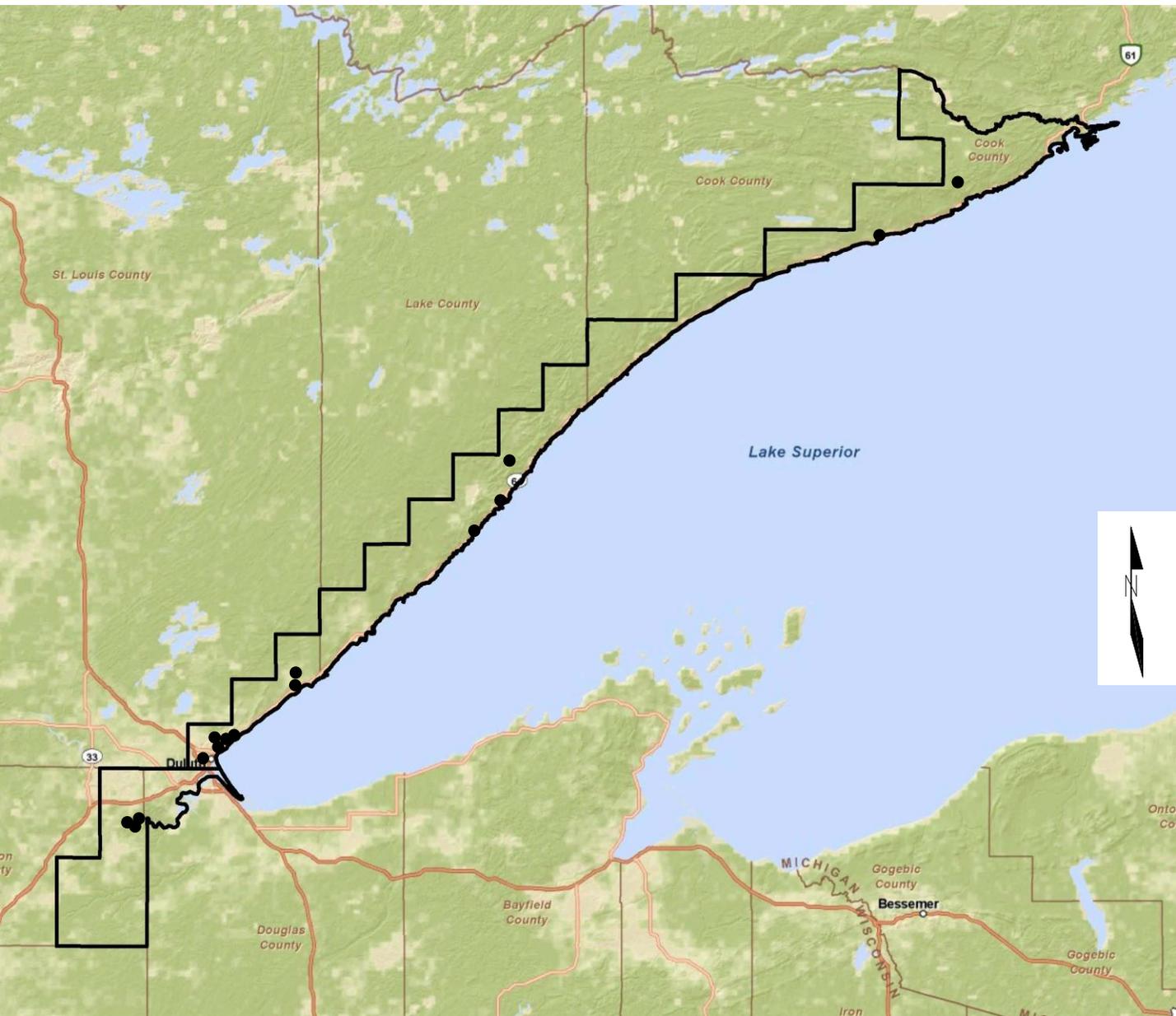


Figure 25. Location of Region 9 survey areas.

The practical restriction of new survey to public lands was also a factor in the survey; although it reduced the acquisition of permissions to a manageable task, it also eliminated much land from consideration. County, State, and Federal lands are widespread in Region 9 but many areas suitable for sites (flat, near water, dry) are privately owned for residential or recreational purposes.

### ***Recommendations***

Additional survey and compilation of site/artifact data from the public is critical to increasing the known site information. This project has substantially added to that database, increasing the number of known prehistoric sites in Region 9. However, most of the sites are single artifact finds of tools. Sites with multiple artifacts, particularly debitage, are potentially better for archaeological research as they are likely to record more activities. Single artifacts, particularly projectile points, may be lost along trails away from habitation sites where more activities take place. On the other hand, projectile points are diagnostics that can inform us about time periods when people were present. Both are important in reconstruction of culture histories.

Survey for new sites should focus on fine-scale information about topography, water features, glacial landforms, and sources of knappable rock. Digital data and GIS methodology has advanced considerably in the last few years but the landscape as seen by experienced archaeologists is still a better indicator of site potential. Maps and other documents cannot substitute for, only supplement, the judgement of personnel familiar with the area. Although not conclusive, the identification of two new sites (neither of which were within the high potential area from GIS data) in areas considered high potential by archaeologists suggests that looking at topographic and other factors in the field is an important part of any survey.

Future surveys should have a dual focus: analysis of mapped data and observation of field conditions. GIS compilation of digital data can be an important tool, as long as the limitations of the source data are understood. Finer-scale data on topography (particularly the LiDAR data flown recently), water features (addition of intermittent streams and relict water features), wetlands (current ground water saturation), and soils (availability for Cook and Lake Counties unknown at this point) can only enhance this approach. However, the variability in environmental conditions (both over time and distance) must also be considered. In addition, better understanding of which environmental variables are significant for site location is needed from the archaeological side. People's use of natural resources changes both with environmental availability and cultural preference. It is somewhat circular to state that more information on site distribution patterns is needed in order to build a predictive model of site distribution patterns. However, that is the state of the matter.

The second focus should be field review of on-the-ground conditions. Nothing substitutes for being in the field and looking at the area for which documentation (whether paper maps of USGS topographic quadrangles or computer graphics from digital data) is available. Areas that look good on maps may be obviously unsuitable in the field (such as the Hegberg Road and other areas surveyed in St. Louis County). Areas that would not be selected from maps or digital data may have high potential (such as the Baptism River Slope and Baptism River North Vista sites, not to mention most previously known sites). The scale at which environmental variables are mapped (either on paper or in digital) is currently not fine enough to replicate field conditions.

An ideal survey strategy might consist of several steps. First, select areas for field visits from either GIS compilations or previous investigations. Such areas may focus on natural units such as a watershed or on artificial units such as a township or state park. Second, get into the field and see what the terrain actually is; maps and other tools (such as units with GIS data) can be helpful in

supporting this task. Third, once areas have been identified in the field as potential survey areas, either survey them immediately if permissions have been obtained or ask for permission to survey once firm locational data is obtained. The drawback is that if permission must be obtained and survey done later, there will be duplicate trips to the same location. However, such a strategy is more likely to locate additional sites than just relying on preselection of survey areas from the office.

This project is the third major survey based on predictive models for northeastern Minnesota with which the primary authors have been associated. The first, conducted by the Superior National Forest in 1982, was based on selection in the office of Environmental Land Types (Peters et al. 1983:16-59). The only sites found in that survey were on water bodies; no other sites were found during extensive shovel testing inland from water. The second project was conducted under a Center for Transportation Study to the University of Minnesota and funded by MnDOT (Mulholland et al. 2001). No sites were found during the survey portion, primarily as a result of the random selection of survey locations imposed on the research design by MnDOT personnel. This selection process included very few locations with high potential as most of the population universe was extremely low in potential according to the model. The current project had better results but still most of the areas surveyed were negative. It is strongly recommended that any future survey be designed to incorporate observation of actual field conditions as a primary approach.

Another recommendation is to adjust the internal boundary of Region 9 with Regions 8 and 5. The present boundary follows the edges of townships and, as such, forms a “stair-step” pattern of east-west and north-south lines. These do not simulate very well natural boundaries such as the topographic top of the Highland Moraine or the drainages of water features. In some locations, the boundary approaches the current shoreline of Lake Superior. With the stated definition of Region 9 as the area that lacks many inland lakes and/or is coincident with glacial lake basins, some portions assigned to Region 8 are more likely to fit Region 9. However, the practical aspect of using political boundaries for ease of identification of region for sites is undeniable. One potential solution is to follow section lines rather than township lines, which would give a boundary closer to natural but still with some practical advantages.

Finally, it is obvious from this study that there is more information to be gained from talking to the people who live and work in the area. Most of the new sites recorded in this project are from artifact finds that were reported from non-professionals. It is certain that there are a lot of people who spend a lot of time in Region 9, certainly more individuals than there are archaeologists in the state and definitely a lot more person-hours than can be supported by any amount of funding. These are the people that have to be reached, by one way or another, and persuaded to share their information on prehistoric artifacts and sites. If that source can be accessed in a more systematic manner, the number of known prehistoric sites will increase. Such an increase is the best and most efficient way to obtain sufficient information on which to base a predictive model of site location, which can then be tested in future professional surveys.



## HUMAN PREHISTORY OF REGION 9

Relatively little is known about the specifics of human occupation in Region 9, the Lake Superior Shore (Figure 26), prior to Contact times. Not only are relatively few prehistoric sites identified to date in this region, few of the known sites are known by more than a few artifacts derived from survey or accidental surface finds. Better detail as well as more information is derived from formal excavations of sites. In Region 9, site excavations are few and generally small in extent, mostly less than 10 square meters. The present data appear to indicate that prehistoric sites are small in size and limited in cultural materials to primarily lithic debitage, with formal tools extremely rare.

In spite of this general low amount of evidence, some indication of the sequence of occupations is indicated by the diagnostic artifacts that have been recorded. Most of these diagnostics are projectile points - spear points and arrowheads that are distinctive to various time periods (at least as indicated by finds in other areas where datable materials are present). It is unusual that a series of projectile points are now identified from the region with little association with the typically more abundant artifacts that occur at most archaeological sites. Therefore the following descriptions of the prehistoric occupations also draw upon information from excavated sites in adjacent regions of Minnesota, as well as a summary of information from other geographic areas in North America. In particular, the dates for different traditions below should be considered approximate and generalized as they are extrapolated from sites outside Minnesota. Relatively few firm dates are known in northeastern Minnesota and none from within Region 9.

### PALEOINDIAN TRADITION

The earliest well-documented tradition is the Paleoindian, dating to about 11,500 to 8,500 years before present (BP). [The earlier Pre-Paleo Tradition is at present not well defined and the subject of intensive archaeological research.] The Paleoindian was first based on a series of excavations in the Great Plains in which large lance-shaped spear points were found in association with extinct and modern animal kill sites. Later, similar shaped points were also found east of the Mississippi River and north into Alaska, as well as west of the Rocky Mountains. Two divisions are generally recognized, the Early Paleoindian (about 11,500 to 10,000 BP) and the Late Paleoindian (about 10,000 to 8,500 BP).

No fluted projectile points, the diagnostic artifact type for the Early Paleoindian Tradition, have been identified to date within Region 9. While not conclusive since it is based on an absence of evidence, either the earliest groups of Paleoindians were not present or were present only in extremely low populations in the region. Various environmental factors could have made Region 9 less hospitable compared to areas farther inland: stagnant ice from the retreat of the Superior lobe, higher water levels in glacial lakes, colder temperatures (and less vegetation as a result) from the ice and glacial meltwater. Fine scale reconstructions of geomorphic and vegetational zones are needed to address the timing of ice retreat and subsequent vegetation advance into the various portions of this region.

Fluted points are relatively rare in Minnesota as a whole but especially so in the northern third of the state. Some examples have been identified from the Cloquet River valley in Region 5e (Central Coniferous Forest), just north and west of the Highland Moraine inland from the Lake Superior Shore; these points have been recovered from eroded areas within the Reservoir Lakes northwest of Duluth. At least one fluted point is known from Region 8 (the Border Lakes) in the

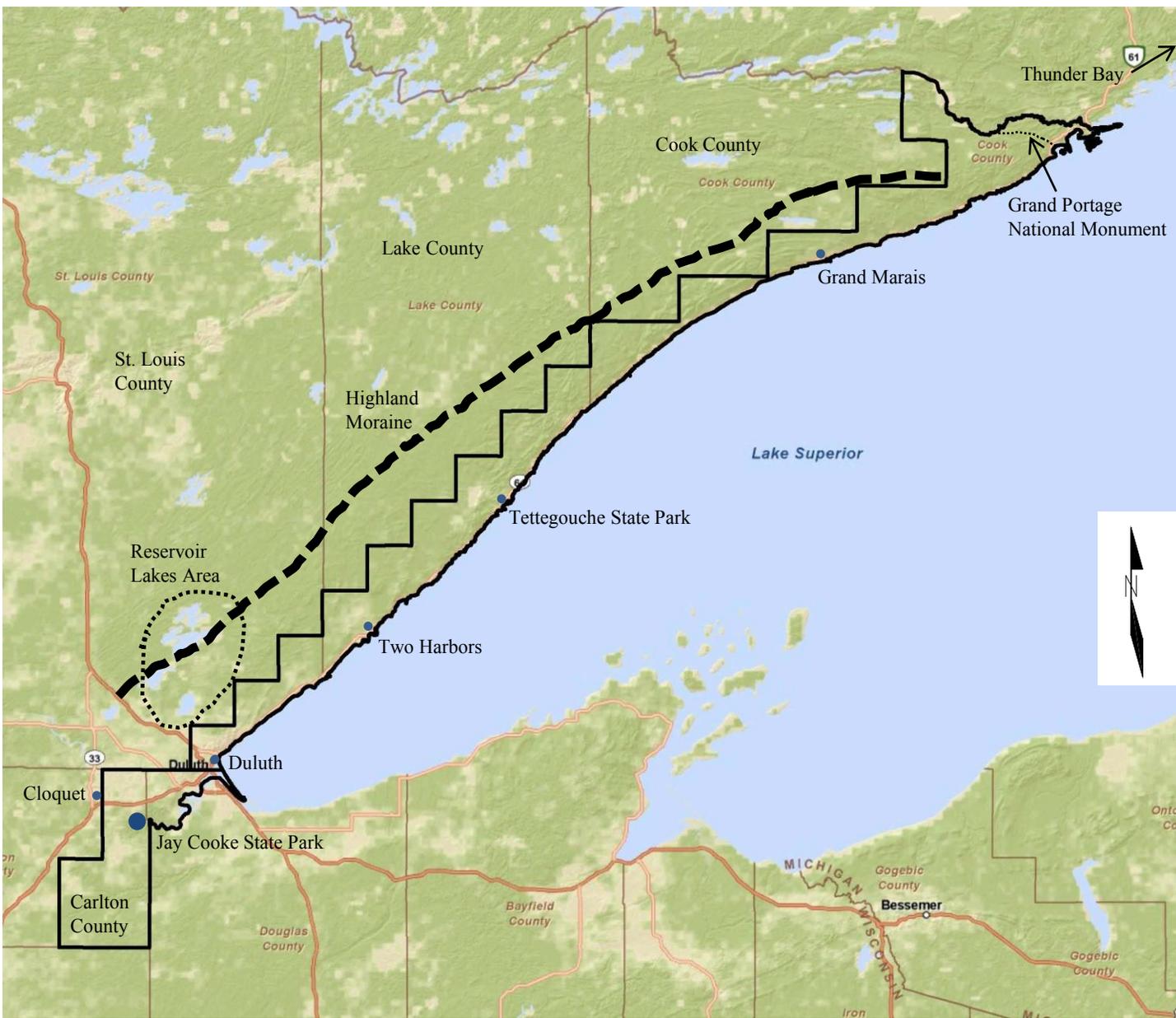


Figure 26. Landmarks in Region 9 and adjacent regions.

area to the west of the Grand Portage Reservation and National Monument. The Bearskin Point site on East Bearskin Lake was a campsite used repeatedly over time, although no firm dates are available. With at least some occupation indicated inland from the Lake Superior shoreline, it is reasonable to expect evidence could be forthcoming in the future to document occupations by Early Paleoindian groups along glacial lake shorelines.

In contrast, unfluted lanceolate projectile points characteristic of the Late Paleoindian Tradition are represented from Region 9. Two such points, most similar to the Agate Basin type, were previously known from the Ziebarth site (21CL0004) in Carlton County near Wrenshall. The project recorded an additional five sites with similar points or bifaces with flaking patterns indicative of the Late Paleoindian. The Phillip Johnson Point site (21CL0037) in Carlton County is marked by one point, although the specific type is not identifiable as a result of breakage. The Andy Anderson Point site (21SL1116) in St. Louis County has one projectile point similar to the Hell Gap type, although the base is broken. One site has yielded a projectile point that could be the Scottsbluff type, although not available for examination: the Jackson Huntley site, 21SL1117, in Duluth Heights. Although reported to be a Scottsbluff type, the only image available shows a rounded base more similar to Adena. The Muehlenberg site (21CK0361) from Caribou Lake consists of a knife with flaking patterns indicative of the Late Paleoindian. The Netland site (21CK0363) is also represented by a knife from the north side of Devil Track Lake; the parallel and collateral flaking pattern is indicative of Late Paleoindian.

This evidence is certainly not overwhelming. Of the six sites, one may actually represent a later time period (Woodland) but cannot be confirmed as the projectile point is not available for review. Two sites are in Region 9 south and the other four are farther north; one is actually in Region 5e and one in Region 8 as a result of the artificial boundary imposed by use of townships rather than topographic or drainage features. Two sites are assigned to Late Paleoindian based on flaking patterns rather than a definitive point style. On the other hand, a concentration of Late Paleoindian sites is well known from the Thunder Bay area in Ontario, farther north along the North Shore of Lake Superior (essentially the same environment as Region 9). Another regional site concentration of the Late Paleoindian Tradition is located in the Reservoir Lakes northwest of Duluth (in Region 5, Central Coniferous Forest). Other sites are recorded in the Superior National Forest immediately west of the Highland Moraine. Given these data, it is reasonable to expect sites from the Late Paleoindian to be in Region 9.

During this time frame, glacial ice was definitely absent from the Lake Superior basin and coniferous vegetation was probably established, at least spruce and fir with pine gradually moving in from the south during the later times. The Thunder Bay concentration appears to be focused on bedrock quarries for jasper taconite; campsites and lithic workshops contain abundant debris from stone tool making. A date of 8,500 BP from the Cummins quarry site (Ross 1997:249) squarely places the occupation in the Late Paleoindian. The Reservoir Lakes sites are associated with the Cloquet River and tributaries, including several lakes. Many sites appear to be workshops associated with the Knife Lake siltstone in the tills; others are probably campsites with many functions. Unfortunately most of the sites were flooded by creation of the reservoirs and lack vertical stratigraphy. Both site concentrations suggest that rock suitable for making stone tools was a focus for repeated and more intensive occupations.

## ARCHAIC TRADITION

The second prehistoric tradition is the Archaic, dating to 9,000 BP (and perhaps older) to 2,500 BP (or earlier or later, depending on the location). The Archaic was first defined in New York and adjacent areas as similar to but without the pottery that was characteristic of the later Woodland Tradition. Further research identified a series of sites in large river valleys that were somewhat similar to the earlier Paleoindian sites but containing notched and stemmed spear points rather than the older fluted types (the Late Paleoindian unfluted lanceolate points are rare in this area). Eventually sequences of different projectile point types were recognized in various areas; a greater number of point types, as well as a general reduction in size, are general trends through time in these sequences. In general, the various point type sequences have been organized into Early, Middle, and Late Archaic periods.

The Archaic Tradition is more sparsely represented than the Paleoindian in Region 9 (although see the discussion of the Judge Scott Collection below). Only two sites have yielded the notched projectile point types that are diagnostic of the Archaic. The Tammy Cefalu site (21CK0364) is comprised of one spear point found on the present Lake Superior beach at Grand Marais. The point is similar to a St. Charles type, which is Early Archaic in affiliation but found primarily to the east and south. The only other Archaic point may be the Pat McCarthy site; that spear point appears to be a Durst type which is Late Archaic in affiliation. Durst points were defined from excavations in southwestern Wisconsin but have strong similarities to point types extending east to New York. Examples of both types (as well as other Archaic point types from both eastern and western areas) have been identified in the Reservoir Lakes in Region 5.

In addition to projectile points, the Archaic Tradition is marked by the appearance of other artifact types as well. Copper tools, especially large utilitarian types (as opposed to primarily decorative pieces), are especially well documented in the Upper Midwest for the Middle Archaic period. The Chris Marken Spud (21CK0365) is definitely in this tradition. In addition, three sites in Carlton County are represented by four large copper tools (socketed projectile points, adze) in the county museum. The original collector for these items needs to be interviewed to try to confirm specific locations. Large copper tools indicative of the Middle Archaic (the “Old Copper” types) are present in eastern Minnesota and extend west into the Plains areas.

Ground stone tools can also be considered to be indicative of the Archaic Tradition, although not as specific to it as notched projectile points or large copper tools. A grooved stone axe was reported from Sugarloaf Cove but was not confirmed. A second stone axe in the Cook County Historical Society Museum lacks specific location information but could be from the area around Grand Marais. In addition, the Cleveland Stone (21LA0549) near Two Harbors appears to exhibit the mashed surface typical of copper pounding as well as a groove about 3/4 of the way around it. Although not definitive, this artifact might be affiliated with the Archaic as well. Although ground stone tools are also used in the later Woodland tradition and cannot be assigned to the Archaic for certain, these items suggest that Region 9 did have occupation during the Archaic.

During the Archaic, the water levels in the Lake Superior basin were fluctuating greatly. The complex interplay of erosion and glacial rebound (land initially compressed by thick glacial ice is gradually rising) at the Sault Ste. Marie outlet combined with the general warming trend since the glacial times to form a series of lakes in the Superior basin. With lower lake levels, the steep North Shore streams had even steeper gradients; incision of streams in the glacial lake plain in Carlton County and southern St. Louis County would also be increased. Vegetation in the middle part of the Archaic included more deciduous cover (such as oaks) than at present, although remnants of deciduous forest on south facing slopes still exist. Archaic type spear points, large copper tools, and

ground stone implements have been recovered from Boulder Lake Reservoir northwest of Duluth. Similar artifacts are also present in the other reservoirs but have not yet been photodocumented; all of these sites are eroded within modern reservoir basins. However, a series of Archaic occupations (based on spear point types) is documented at the Fish Lake Dam site northwest of Duluth (Mulholland et al. 2008). Other Archaic sites include the South Fowl Lake copper concentrations just west of Region 9 and scatters of large copper artifacts at other sites in the Superior National Forest.

## **WOODLAND TRADITION**

The third and final prehistoric tradition (at least in northeastern Minnesota) is the Woodland, dated from about 2,500 BP to the AD 1600s. The Woodland is generally characterized by ceramics, use of horticulture, and burial mounds, although the three technologies do not always start at the same time. Horticulture is often difficult to detect since the evidence consists of seeds, which often decay relatively quickly. Burial mounds are present in northeastern Minnesota but are not as widespread as in other parts of the state. Ceramics tend to be the most used item since they preserve well and form many artifacts when pots are broken. Although the Woodland is usually divided into Early, Middle, and Late periods, the Early Woodland (characterized by thick and crude ceramic types) is not found in most of Minnesota. In northeastern Minnesota, Middle (also called Initial) Woodland is represented by Laurel and Brainerd ceramics and Late (also called Terminal) Woodland is represented by Blackduck, Sandy Lake, and Selkirk ceramics.

The Woodland is better represented in Region 9 than the Archaic, although again not in abundance. Three and possibly four sites have yielded projectile points similar to Woodland types. Site 21LA0009 has a Snyders-like point, found in a different location from the debitage associated with this site number. Snyders is an early Middle Woodland type affiliated with the Hopewell in the Ohio River valley. The Schaeffer Lake site (21SL1118) consists of a Sonota-like point, a Middle Woodland type typical of the Great Plains. The Jackson Huntley site (21SL1117) yielded a point that might be Adena-like, another Early Woodland type (although it may be a Late Paleoindian type instead). Two artifacts from Fond du Lac Park in West Duluth include a projectile point similar to the Kramer style (Early Woodland) and a stone adze; this site has not yet been assigned a number pending further field verification.

Ceramics, which are a diagnostic artifact for the Woodland, are rare from Region 9. One piece was previously reported from the Grand Portage National Monument, 21CK0006 (William Clayton, personal communication 2011). Ceramics were also reported from 21CL0022, outside but close to the Region 9 south area in Carlton County. Burial mounds, another characteristic of the Woodland, are also relatively rare from Region 9 counties (Arzigian and Stevenson 2003:354, 365, 429, 483-486). One mound is reported from 21CK0008 in Cook County, although the location is ambiguous. Mounds are reported in Carlton County from 21CL0001, 21CLi, and 21CLj but again require field verification. Woodland occupation is probable in at least portions of Region 9.

Some Woodland occupation is recorded from Region 5, particularly in the Reservoir Lakes but appears more restricted in scope compared to the Archaic and Paleoindian occupations. Woodland sites are also recorded in Region 8, the Border Lakes, inland from Region 9 in the Superior National Forest. Contact period occupations tend to be best documented at specific locations such as the mouth of the St. Louis River (sites on both Minnesota and Wisconsin Points as well as upstream at Fond du Lac) and at Grand Portage. Both locations are at or near documented ends of major portage routes. Although the documentation focuses on the Contact period, earlier use

of these routes in the Woodland should also be considered as feasible (and perhaps even into the Archaic or Paleoindian).

### **THE JUDGE SCOTT COLLECTION**

A framed display of stone tools on display in the Two Harbors Library consists of 72 artifacts including spear and arrow points, drills, knives, and possible adzes. The majority of the projectile points are Late Archaic through Late Woodland types but one each of Middle Archaic and Late Paleoindian are present. Materials include mostly regional types: Knife Lake siltstone, Lake of the Woods rhyolite, Hudson Bay Lowland chert, and some others. However, 10 artifacts appear to be made of unidentified cherts that are not from the region; close examination suggests an origin of the stone in southeastern Minnesota or even farther south in Iowa or Illinois.

The collection is reported to have been donated by Judge William E. Scott but specifics as to the original collection location(s) of any artifact are not documented. Two people have stated separately that in years past, the display was accompanied by a label stating the artifacts were collected at Five Mile Hill (the same general location as the Dixie Knife site, 21LA0551). However, this label or any other documentation is not in the library records. Until more specific information can be obtained about the origin of this collection, site status cannot be assigned. However, the collection with the predominantly local to regional material types suggests that the artifacts were collected locally. If the artifacts are actually from the Five Mile Hill locality, then a significant amount of activity from Late Paleoindian through Late Woodland is indicated for this location near Two Harbors.

### **FUTURE INVESTIGATIONS**

The number of prehistoric sites known from Region 9 is still low; additional efforts to record new sites is needed to expand the information on which both management and research activities rely. Additional field investigation of the recorded site data is a good first step. Site leads (reported but not documented sites) need to be confirmed and, if possible, ambiguous site location data resolved. Examination of recovered projectile points should be continued, particularly for the Jackson Huntley, Pat McCarthy, and other specimens reported but not examined. Finally, additional survey at locations of reported artifact finds as well as new survey locations should be conducted. New survey locations should include both areas similar to known sites and some areas that are different.

Other types of investigations would also increase the quality of information about prehistoric human occupations. Formal excavations of known sites would provide greater artifact assemblages as well as provide vital data on vertical and horizontal distribution of artifacts within the site. Better data on key environmental factors such as previous shoreline locations and vegetation zones is also needed. Specifically, mapping of glacial and post-glacial lake shoreline features would be crucial for focusing survey on higher potential areas. The feasibility of underwater survey of shoreline features that are submerged beneath the current Lake Superior level should be explored; both integrity of such deposits and practical factors of visibility and access need to be considered. Locations of rock suitable for stone tools, either in bedrock or sediments, is also a factor that needs more research; in general the North Shore is poor in rock sources but localized areas may contain suitable rock that could have been used in the past.

Region 9 remains relatively poorly known for prehistoric occupations but some progress has been made in adding to the database for this region. Although many recorded sites are single artifacts, these data provide the rough outline of human occupation before Contact times. Other sites with multiple but non-diagnostic artifacts could provide greater data on human activities. Much more remains to be discovered about the prehistoric occupations on the Lake Superior shoreline.



## REFERENCES

Anfinson, S. F.

1990 Archaeological Regions in Minnesota and the Woodland Period. In *The Woodland Tradition in the Western Great Lakes: Papers Presented to Elden Johnson*, edited by G. E. Gibbon, pp. 135-166. University of Minnesota Publications in Anthropology No. 4, Minneapolis.

2005 *SHPO Manual for Archaeological Projects in Minnesota*. Minnesota Historical Society, State Historic Preservation Office, St. Paul.

Arzigian, C. M. and K. P. Stevenson

2003 *Minnesota's Indian Mounds and Burial Sites: A Synthesis of Prehistoric and Early Historic Archaeological Data*. Minnesota Office of the State Archaeologist, Publication No. 1, St. Paul.

Bakken, K.

1997 Lithic Raw Material Resources in Minnesota. *The Minnesota Archaeologist* 56:51-83.

Bardon, J. A.

1927 Bardon Remembers time Minnesota Blew Across Bay into Wisconsin. *Superior Telegram*, October 21, 1927. Newspaper clipping on file in "Cemeteries" file, Northeast Minnesota Historical Center, University of Minnesota Duluth.

Boszhardt, R. F. and M. A. Bednarchuk

2008 *An Archaeological Survey for Prehistoric Cultural Resources at Selected Locations within the Grand Portage National Monument, Northeastern Minnesota*. Reports of Investigations No. 707, Mississippi Valley Archaeology Center, LaCrosse.

Brown, C. E.

1914 Aboriginal Evidences in Northwestern Wisconsin. *The Wisconsin Archaeologist* 13(1):7-59.

Dobbs, C. A.

1988a *Outline of Historic Contexts for the Prehistoric Period (ca. 12,000 B.P. -A.D. 1700)*. Institute for Minnesota Archaeology, Reports of Investigations No. 37, Minneapolis.

1988b *Historic Context Outlines: The Contact Period Contexts (ca. 1630 A.D. – 1820 A.D.)*. Institute for Minnesota Archaeology, Reports of Investigations No. 39, Minneapolis.

Farrand, W. R.

1960 *Former Shorelines in Western and Northern Lake Superior Basin*. Ph. D. Dissertation, University of Michigan, Lansing.

Florin, F.

1996 *Late Paleo-Indians of Minnesota and Vegetation Changes from 10,500-8000 BP*. M.A. thesis, University of Minnesota, Minneapolis.

1997 *A Phase I Archaeological Survey of the Great Lakes Gas Transmission Limited Partnership Pipeline Corridor Between Mileposts 0.7 - 22.7, Kittson County, Mileposts 132.5 - 140.6, Clearwater and Beltrami Counties, and Mileposts 283.5 - 294.0, Carlton County, Minnesota*. Institute for Minnesota Archaeology, Reports of Investigation No. 418, Minneapolis.

Fritzen, J.

1978 *The History of Fond du Lac and Jay Cooke State Park*. St. Louis County Historical Society, Duluth.

1974 *Historic Sites and Name Places of Minnesota's North Shore*, St. Louis County Historical Society, Duluth

Gibbon, G.

1998 Old Copper in Minnesota: A Review. *Plains Anthropologist* 43(163):27-50.

Gonsior, L. and D. S. Radford

2001 *Minnesota State Park Cultural Resource Management Program: Cultural Resource Reconnaissance Survey of the Proposed Gitchi-Gami Trail, MnDNR Portion of the Split Rock River to Beaver Bay Segment, Split Rock Lighthouse State Park, Lake County, Minnesota*. Minnesota Historical Society, St. Paul.

Hamilton, J. R.

2009 Ceramic Types of Northeastern Minnesota. *The Minnesota Archaeologist* 68:131-141.

Hamilton, S., J. Graham, and D. Norris

2005 *If These Walls Could Speak: Using GIS to Explore the Fort at Grand Portage National Monument (21CK6)*. Lakehead University, Thunder Bay.

Harrison, C., E. Redepenning, C. L. Hill, G. Rapp, Jr., S. E. Aschenbrenner, J. K. Huber, and S. C. Mulholland

1995 *The Paleo-Indian of Southern St. Louis County, Minnesota: The Reservoir Lakes Complex*. Interdisciplinary Archaeological Studies Monograph No. 4, University of Minnesota, Kendall-Hunt Publishing Company, Dubuque.

Higginbottom, D. K.

1996 An Inventory of Fluted Projectile Points from Minnesota. Paper, 54th Annual Plains Conference, Iowa City, Iowa.

Hill, C. L.

2007 Geoarchaeology and Late Glacial Landscapes in the Western Lake Superior Region, Central North America. *Geoarchaeology* 22(1):15-47,

Hobbs, H. C.

2009a *Surficial Geology of the Duluth Heights Quadrangle, St. Louis County, Minnesota*. Minnesota Geological Survey, Miscellaneous Map M-186.

2009b *Surficial Geology of the Duluth Quadrangle, St. Louis County, Minnesota*. Minnesota Geological Survey, Miscellaneous Map M-187.

2009c *Surficial Geology of the West Duluth Quadrangle, St. Louis County, Minnesota*. Minnesota Geological Survey, Miscellaneous Map M-188.

Huber, J. K.

2001 *Palynological Investigations Related to Archaeological Sites and the Expansion of Wild Rice (Zizania aquatica L.) In Northeast Minnesota*. Ph.D. dissertation, University of Minnesota.

Hudak, G. J., E. Hobbs, A. Brooks, C. A. Sersland, and C. Phillips, editors

2002 *Mn/Model: A Predictive Model of Precontact Archaeological Site Location for the State of Minnesota*. Minnesota Department of Transportation, St. Paul.

Johnson, C. M., C. Arzigian, and J. Gallagher

2002a Archaeology Field Survey Standards, Procedures, and Rationale. In *Mn/Model: A Predictive Model of Precontact Archaeological Site Location for the State of Minnesota*, G. J. Hudak, E. Hobbs, A. Brooks, C. A. Sersland, and C. Phillips, Appendix C. Minnesota Department of Transportation, St. Paul.

Johnson, C. M., C. Maki, C. Arzigian, H. Halverson, R. Kluth, and D. Kluth

2002b Archaeological Field Survey Results. In *Mn/Model: A Predictive Model of Precontact Archaeological Site Location for the State of Minnesota*, G. J. Hudak, E. Hobbs, A. Brooks, C. A. Sersland, and C. Phillips, Appendix D. Minnesota Department of Transportation, St. Paul.

Justice, N. D.

1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States: A Modern Survey and Reference*. Indiana University Press, Bloomington.

Kimball, C. M.

1967 Renaissance "Trade" Medals in Minnesota. *The Minnesota Archaeologist*. 29(1):22-25.

Lewis, R. R.

1878 *Soil Survey of Carlton County, Minnesota*. U.S. D.A. Soil Conservation Service in cooperation with the Minnesota Agricultural Experiment Station, Barnum.

Luukkonen, L.

2007 *Between the Waters: Tracing the Northwest Trail from Lake Superior to the Mississippi*. Dovetailed Press, Duluth.

Marschner, F. J.

1974 *The Original Vegetation of Minnesota*. University of Minnesota, Agricultural Experiment Station.

Minnesota Department of Natural Resources

1999 Ecological Classification System. Webpage <http://www.dnr.state.mn.us/ecs/index.html>. Accessed on August 20, 2007.

Minnesota Historical Society

1981 *Minnesota Statewide Archaeological Survey - Summary: 1977-1980*. Minnesota Historical Society, St. Paul.

Monaghan, G. W., K. C. Egan-Bruhy, M. J. Hambacher, D. R. Hayes, M. F. Kolb, S. R. Kuehn, S. Peterson, J. A. Robertson, and N. R. Shaffer

2006 *Minnesota Deep Test Protocol Project*. Commonwealth Cultural Resources Group, Report WR-200.

Mulholland, S. C.

2008 *Archaeological Survey of Submerged Beaches on the Fond du Lac Reservoir, St. Louis River Hydroelectric Project, FERC Project no. 2360, Carlton and St. Louis Counties, Minnesota: 2008*. Duluth Archaeology Center Report No. 08-41.

Mulholland, S. C., and E. Dahl

1988 Two Late Paleoindian Projectile Points Associated with a Glacial Lake Duluth Beach, Carlton County, Minnesota. *The Minnesota Archaeologist* 47(2):41-50.

Mulholland, S. C. and S. L. Mulholland

2008a *Photodocumentation of an Artifact Collection from the Two Harbors Public Library, Lake County, Minnesota: Preliminary Analysis*. Duluth Archaeology Center, Duluth.

2008b *Sky Harbor Airport: Cultural Resources Review Task 1 - Literature Review*. Duluth Archaeology Center Report No. 08-27.

Mulholland, S. C., S. L. Mulholland, and R. C. Donahue

2008 *The Archaeology of the Fish Lake Dam Site: Pre-Contact Occupations on the East Bank*. Minnesota Archaeological Society, Occasional Publications No. 12, St. Paul.

Mulholland, S. C., S. L. Mulholland, G. R. Peters, J. K. Huber, and H. D. Mooers

1997 Paleo-Indian Occupations in Northeastern Minnesota: How Early? *North American Archaeologist* 18(4):371-400.

Mulholland, S. C. and G. Rapp, Jr.

1990 *Archaeological Survey on Submerged Portions of the Fond du Lac Pond, on the St. Louis River, Carlton and St. Louis Counties, Minnesota*. Archaeometry Laboratory, Duluth

- Mulholland, S. C., G. Rapp, S. L. Mulholland, R. Rothe, and J. K. Huber  
 2001 *Site/Environmental Correlations in Northeastern Minnesota*. Archaeometry Laboratory Report 01-20, University of Minnesota Duluth.
- Mulholland, S. C., A. D. Romano, and S. L. Mulholland  
 2007 A Fluted Point fro East Bearskin Lake, Minnesota. *Current Research in the Pleistocene* 24:121-124.
- Mulholland, S. C., J. R. Shafer, and G. Rapp, Jr.  
 1998 *Archaeological Survey on Knife Island, Carlton County, Minnesota*. Archaeometry Laboratory Report No. 98-20, Duluth.
- Mulholland, S. L.  
 2002 *Paleo-Indian Lithic Resource Utilization in Northeastern Minnesota*. M.S. thesis, University of Minnesota, Minneapolis.
- Mulholland, S. L. and S. C. Mulholland  
 2010 *Phase I Archaeological Investigations of the Harlis Road (T-363) Reconstruction, Carlton County, Minnesota*. Duluth Archaeology Center Report No. 10-09, Duluth.
- Mulholland, S. L., S. C. Mulholland, and L. Furo  
 2009 A Newly Discovered Fluted Point from Northeastern Minnesota. *Current Research in the Pleistocene* 26:95-97.
- Mulholland, S. L. and D. Woodward  
 2001 Pauline Lake Site: A Selkirk Occupation in Northeastern Minnesota. *The Minnesota Archaeologist* 60:71-85.
- Norton, K. P.  
 2000 *Quaternary History of the Lower St. Louis River and Estuary, Lake Superior, Northeastern Minnesota*. M.S. thesis, University of Minnesota Duluth.
- Nute, G. L.  
 1969 *The Voyageur's Highway*. Minnesota Historical Society, St. Paul.
- Office of the State Archaeologist  
 2009 Minnesota Archaeological Site Form Instructions. Created/updated August 2009. Webpage: [www.osa.admin.state.mn.us/documents/ArchaeologySiteFormInstructions2009.pdf](http://www.osa.admin.state.mn.us/documents/ArchaeologySiteFormInstructions2009.pdf)
- Participants of the Lake Superior Basin Workshop  
 1988 Desperately Seeking Siouans: The Distribution of Sandy Lake Ware. *The Minnesota Archaeologist* 47(1):43-48.
- Peterson, D. H.  
 2009 The Fur Trade Axe: A Preliminary Report of Iron Trade Axes Found in Northern Minnesota, Northern Wisconsin, and Northwestern Ontario. *The Minnesota Archaeologist* 68:165-186.

- Peters, G. R., J. O. Hunn, K. A. Motivans, and W. A. Okstad  
 1983 *Cultural Resource Management on the Superior National Forest: 1982 Annual Report.*  
 Cultural Resource Report #1, Superior National Forest, Duluth.
- Peterson, L. D., T. A. Olmanson, and W. W. Radford, editors  
 1991 *The Minnesota Trunk Highway Archaeological Reconnaissance Study: Annual Report, 1990.*  
 Minnesota Historical Society, St. Paul.
- Phillips, B. A. M. and C. L. Hill  
 1993 *Judge C. R. Magney State Park: Geomorphological Features and Potential Archaeological Sites.* Report to Minnesota Department of Natural Resources.  
 1994 *Tettegouche State Park: Geomorphological Features and Potential Archaeological Sites.* Report to Minnesota Department of Natural Resources.  
 1995 *Grand Portage State Park: Geomorphological Features and Potential Archaeological Sites.* Report to Minnesota Department of Natural Resources.  
 2004 Deglaciation History and Geomorphological Character of the Region Between the Agassiz and Superior Basins, Associated with the "Interlakes Composite" of Minnesota and Ontario. In *The Late Palaeo-Indian Great Lakes: Geological and Archaeological Investigations of Late Pleistocene and Early Holocene Environments*, edited by L. J. Jackson and A. Hinshelwood, pp. 275-300, Mercury Series, Archaeology Paper 165, Canadian Museum of Civilization, Gatineau.
- Platcek, E. P.  
 1965 A Preliminary Survey of a Fowl Lakes Site. *The Minnesota Archaeologist* 27(2):51-92.
- Pulford, M. H.  
 2009 Copper Types of Northeastern Minnesota. *The Minnesota Archaeologist* 68:93-106.  
 2000 Initial Review of Northeastern Minnesota Reservoir Copper. *The Minnesota Archaeologist* 59:64-80.
- Radford, D. S.  
 1984 *Minnesota State Park Cultural Resource Management Program: Proposed Park Road and Campground, Tettegouche State Park, Lake County, Minnesota.* Minnesota Department of Natural Resources, St. Paul.
- Radford, D. S. and D. C. George  
 1994 *Minnesota State Park Cultural Resource Management Program Annual Report 1993.* Minnesota Historical Society, St. Paul.  
 1993 *Minnesota State Park Cultural Resource Management Program Annual Report 1992.* Minnesota Historical Society, St. Paul.

Radford, D. S., L. Gonsior, and D. C. George

1997 *Minnesota State Park Cultural Resource Management Program Annual Report - 1996*.  
Minnesota Historical Society, St. Paul.

Romano, A. D. and E. Johnson

1990 A Northern Minnesota Gunflint Silica Clovis Point. *The Wisconsin Archaeologist*  
71(3/4):204-215.

Romano, A. D. and S. L. Mulholland

2000 The Robert and Debra Neubauer Site (21PN86), Pine County, Minnesota: An Archaic  
Habitation and Copper Working Site on Mission Creek. *The Minnesota Archaeologist*  
59:120-141.

Ross, W.

1997 The Interlakes Composite: A Re-Definition of the Initial Settlement of the Agassiz-Minong  
Peninsula. *The Wisconsin Archaeologist* 76(3/4):244-268.

Stark, S., P. Farrell, and S. C. Mulholland

2008 *Methods to Incorporate Historic Surface Hydrology Layer in Mn/Model [Phase 4] Using  
Existing Geographic Information System Data*. MN/RC 2008-13. Minnesota Department  
of Transportation, Research Services Section, St. Paul.

Stoltman, J. B.

1998 Paleoindian Adaptive Strategies in Wisconsin during Late Pleistocene Times. *The Wisconsin  
Archaeologist* 79(1):63-67.

University of Minnesota

1977 *Minnesota Soil Atlas: Duluth Sheet*. Miscellaneous Report 148, Agricultural Experiment  
Station, University of Minnesota, St. Paul.

1981 *Minnesota Soil Atlas: Two Harbors-International Falls Sheets*. Miscellaneous Report 177,  
Agricultural Experiment Station, University of Minnesota, St. Paul.

Ward, J. A. and J. P. McCarthy

1999 *Phase II Evaluation of the Brooks-Scanlon Lumbermill Complex (21CL16) and Phase III  
Data Recovery Investigations of the Brooks-Scanlon Lumbermill Boardinghouse: Life in a  
Lumber Town During and After the Boom, Old Trunk Highway 45 Reconstruction, Scanlon,  
Carlton County, Minnesota*. IMA Consulting Reports of Investigations Nol 548,  
Minneapolis.

Waters, T. F.

1977 *The Streams and Waters of Minnesota*. University of Minnesota, Minneapolis.

Winchell, N. H.

1886 A Supposed Natural Alloy of Copper and Silver from the North Shore of Lake Superior. In *The Geological and Natural History Survey of Minnesota: The Fourteenth Annual Report for the Year 1885*, N. H. Winchell, pp. 319-323, J. W. Cunningham & Co., St. Paul.

1911 *The Aborigines of Minnesota: A Report Based on the Collections of Jacob V. Brower, and on the Field Surveys and Notes of Alfred J. Hill and Theodore H. Lewis*. Minnesota Historical Society, St. Paul.

Woolworth, N. E. and A. R. Woolworth

1977 *A Cultural Resources Survey of the Superior National Forest Located in Cook, Lake, and St. Louis Counties, Minnesota*. Unpublished report, White Bear Lake.

Wright, H. E., Jr.

1972 Physiography of Minnesota. In *Geology of Minnesota: A Centennial Volume*, edited by P. K. Sims and G. B. Morey, pp. 561-578. Minnesota Geological Survey, St. Paul.