AN ARCHEOLOGICAL SURVEY OF DEVELOPMENT PROJECTS WITHIN GRAND PORTAGE NATIONAL MONUMENT, COOK COUNTY, MINNESOTA
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by

VERGIL E. NOBLE

United States Department of the Interior
National Park Service
Midwest Archeological Center
Lincoln, Nebraska

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ABSTRACT

During the late summer of 1988, personnel from the Midwest Archeological Center conducted an archeological survey within Grand Portage National Monument. Those investigations were necessitated by several proposed development projects that would possibly involve ground disturbance on various land parcels. The projects included construction of new visitor/administration and maintenance facilities, stabilization of a section of Lake Superior shoreline, burial of a utility line, and installation of a parking lot gate.

For the most part, investigations revealed that construction would have no adverse effect on cultural resources. One early Historic period site was discovered on a parcel, identified as a maintenance facility alternate, near the eastern boundary of the Monument. Recommendations for mitigation are offered, should that parcel be selected for construction.

In addition, several surface dumps of relatively recent refuse were observed in the field. One such dump, located near the western boundary of the Monument, lies within the proposed visitor/administration facility project area. Preliminary evaluation of the deposit suggests that it probably dates from the turn of the last century and may have archeological significance. Avoidance of that refuse dump is recommended.
ACKNOWLEDGMENTS

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Regional Archeologist Mark Lynott maintained administrative oversight on the project from our offices in Lincoln, Nebraska. Others at the Midwest Archeological Center whose efforts are appreciated include Anastasia Steffen, who processed the artifact collections; Carrol Moxham, who produced the illustrations with typical excellence; Carol Raish, who kindly and ably edited the text; and Marie Johnson, who was most helpful in assisting with the editing and text preparation.

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Chapter 1

INTRODUCTION

Grand Portage National Monument (GRPO) is one of the most remote and scenic National Park Service (NPS) properties in the Midwest Region. Located on the shore of Lake Superior, in the extreme northeast corner of Minnesota, the Monument lies less than 5 mi from the Canadian border (Figure 1). First established as a National Historic Site in 1951, Grand Portage was designated a National Monument in 1960. Necessary land transfers from the Grand Portage Indian Reservation, administered by the Bureau of Indian Affairs (BIA), however, were not completed until 1962.

The primary focal point of Grand Portage National Monument is a reconstructed fur trading post (Figures 2 and 3), the original depot having been the eighteenth-century headquarters for inland operations of the influential North West Company. The 710-acre Monument, however, comprises three major segments: the reconstructed depot on Lake Superior's shore, the 13.6-km (8.5-mi) Grand Portage leading up from the lake to navigable waters of the Pigeon River, and the site of Fort Charlotte at the interior terminus of the portage path. The interpretive mission of the Monument emphasizes events and personages of the Fur Trade era during the years 1731-1802. Nevertheless, the fur trade was but one phase, albeit important, in the long and varied history of this region.

Several proposed development projects within Grand Portage National Monument were scheduled to be initiated during Fiscal Year 1988, at least at the planning stage. Four of those projects will involve ground disturbance. Therefore, an archeological team from the NPS's Midwest Archeological Center (MWAC) visited the Monument from July 24 through August 2, 1988, to investigate potential impacts of the various initiatives.

As part of the General Management Plan, construction of a visitor/administration center and maintenance facility is proposed for the Monument. Accordingly, land parcels identified as possible construction sites required archeological survey to determine whether any cultural resources might be present in those areas. Elsewhere in the Monument, efforts to stabilize the Lake Superior shoreline will be continued east of the reconstructed trading post.

In addition, the archeologists examined two minor project areas
Figure 1. Location of Grand Portage National Monument.
Figure 2. View of reconstructed depot at Grand Portage from northeast.

Figure 3. The Great Hall inside depot.
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that would be subject to excavation. The first was an overflow parking lot north of the reconstructed depot at Grand Portage, where a new gate was to be installed. The second was the alignment of a trench that would be needed for burial of utilities associated with a new security system for the reconstructed canoe warehouse. That line would run from inside the depot to the warehouse, which lies a short distance outside the western stockade wall.

This report presents the methods and results of those investigations carried out in conjunction with the above-mentioned development projects. Appropriate background information on the Grand Portage region is also provided. The report concludes with management recommendations for the cultural resources located during this survey. Appendix A describes the single archeological site that was discovered, and Appendix B provides an inventory of materials collected.
Chapter 2

ENVIRONMENT

GEOLOGY AND SOILS OF THE REGION

This region of Minnesota is underlain by the Middle Precambrian Rove Formation. That formation is composed of easily eroded sedimentary rock (argillites and slates), as well as more resistant diabasic sills and dikes of gabbroic rock. These combine to form the remarkable surface relief of northeastern Minnesota through the effects of differential erosion. Both running water and glacial scouring have worked to create the rugged landscape that typifies this region (Grout and Schwartz 1933:94; Grout et al. 1959:134-135; Ojakangas and Matsch 1982:161-163, 175-176).

It is interesting to observe that the bedrock geology of the area can be considered the primary influence on the development of the fur trading concern at Grand Portage. Although the Pigeon River, which today forms part of the international boundary between the United States and Canada, was recognized as the best natural route to the northwestern interior, a series of highfalls and rapids makes its last 20 mi impassable by watercraft. Fortunately, the same geological conditions that produced those impediments also helped create a large embayment some eight miles south of the Pigeon River’s mouth. Known today as Grand Portage Bay, that deep indentation into the Lake Superior coastline, which is further protected by Grand Portage Island, could provide safe haven for vessels transferring commodities of the fur trade. Furthermore, a small valley carved between stone dikes connected that bay with navigable waters of the Pigeon River. It was along that route that the portage was traced. Thus, it is the bedrock geology here that necessitated and enabled creation of the Grand Portage (cf. Woolworth and Woolworth 1982:1-3).

At this writing, no comprehensive soil survey data have been published for Cook County, Minnesota. Therefore, the soils about Grand Portage can be characterized only in the most general terms. Soils along the western shores of Lake Superior are, for the most part, post-Duluth glacial deposits representing former lakebeds and beach ridges. Consequently, they are composed largely of sand, with humic development in the upper reaches where vegetation has introduced organic materials. Gravels consisting of waterworn cobbles and pebbles are abundant throughout the soil column, especially in places
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where beaches were once active. That is most assuredly the case in the Grand Portage environs.

CLIMATE AND ECOLOGY OF THE REGION

The climate of northeastern Minnesota is influenced not only by its northern latitude, but also by its proximity to the waters of Lake Superior. Temperatures here are usually cool, with an average annual mean of 4.5° C (40° F). According to current climatological data, the average daily mean temperature in January is -11.5° C (11° F), whereas the average daily mean for July is 15.5° C (60° F). The number of frost-free days per year varies from 80 to 140, which makes agriculture generally unreliable as a local subsistence strategy. Climatological records from 1988 indicate that snow typically falls in the northeast at the rate of 178 cm (70 in) a year. Winters are cold, and heavy snows can cover the ground for 100-140 days per year (Woolworth and Woolworth 1982:4).

Grand Portage lies well within what Dice (1943) terms the Canadian biotic province in his description and categorization of North American presettlement natural resources. Conditions vary widely through that biome, of course, depending on peculiar environmental factors. No doubt the influence of Lake Superior has a great effect on the plant and animal communities indigenous to the Grand Portage region. Furthermore, everywhere in North America current conditions are products of natural and cultural forces that have been constantly at work. As a result, it should not be surprising to find that many species present in the early Historic period can no longer be found in the area today.

The Canadian biotic province is typically characterized by heavy stands of trees, especially along inland lakes and streams. Hardwoods dominate, though they are mixed with a variety of subclimax species. In such lake forest environments, sugar maple is generally the most common tree species, followed by yellow birch, red pine, elm, aspen, basswood, hemlock, and white pine. Major subclimax species include black spruce, tamarack, and cedar, among others. At the present time, the dominant tree species about Grand Portage National Monument include a variety of conifers, birch, and aspen. Maple is present in significant numbers where microclimatic conditions are favorable, but hemlock is entirely absent from the Monument area.

Mammalian species supported by this environment include whitetailed deer, beaver, muskrat, snowshoe hare, and caribou. Many of these, of course, were important commodity resources of the fur trade. In addition, elk, moose, and black bear are present in the region. Many kinds of birds and waterfowl visit the area seasonally, including spruce grouse, raven, and loon. Of course, given the proximity of Lake Superior, a variety of fishes can be exploited, especially in the summer months when they are abundant.
Mason (1981:59-60) points out that the Canadian biotic province also supports a wide variety of plant resources that were utilized by prehistoric and historic Indian groups. In fact, he estimates that somewhere around 500 species were used for diverse purposes. Most were food sources, including those employed for beverages and flavoring. Other plants were collected for medicines and ritual consumption. Plants also served in the making of dyes and paints, as well as a host of other utilitarian items (e.g., baskets, canoes, cordage, etc.).
Chapter 3

CULTURE HISTORY

In order to appreciate the duration and diversity of human occupation in northern Minnesota, it is appropriate to review the culture history of this region. The general area has been occupied by human populations virtually since it was opened to that possibility by the retreat of glaciers after the last Ice Age. Furthermore, it was the first area in what is now Minnesota to be settled by European peoples. Indeed, the region about Grand Portage probably reached its zenith in terms of population density and economic prosperity during the Fur Trade era of the late eighteenth century.

PREHISTORIC OCCUPATIONS

Little directed research has been carried out at prehistoric archeological sites in or around Grand Portage National Monument. Several apparent prehistoric sites are known to be present, but to date excavations have focused primarily on those sites that were contemporary with the trading post. Accordingly, the prehistory of this specific region is not well understood.

It should be noted, however, that considerable archeological research has been carried out on nearby Isle Royale in Lake Superior (e.g., Griffin 1961; Bastian 1963) and within the border lakes region to the west (e.g., Lynott et al. 1986; Stoltman 1973). Across the international border in Canada there also has been a good deal of prehistoric archeological research performed in recent years (cf. Reid 1988). Those efforts provide the basis for constructing the general culture history summarized in the paragraphs that follow.

Paleo-Indian Period

This is the earliest known period of human occupation in the eastern woodlands of North America. Date ranges for the Paleo-Indian period vary from region to region across the continent, depending partly on when particular areas were opened to the possibility of occupation after the retreat of glacial ice. In general, this period typified by big game hunting and lanceolate, fluted points can be said to begin around 10,000 B.C. and end around 6,000 B.C.

Archeological evidence representing the Paleo-Indian period is relatively sparse in the regions bordering the western end of Lake Superior. Further, the few known sites date from
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the final stages of the period, owing to
the fact that glaciers lingered longer
in those northern latitudes. In fact,
most of the evidence relates to the
last of three successive Paleo-Indian
complexes, the Plano complex (ca.
6,500 B.C.-6,000 B.C.). The Brohm
site, located near Thunder Bay in
Ontario, is one of the better known
Plano sites in the region.

Archaic Period

During the Archaic period, which
dates generally from 6,000 B.C. to 100
B.C. in this region, climatic changes of
the post-Pleistocene led to new hu­
man adaptations. Subsistence strate­
gies were now more generalized, with
populations exploiting a wide variety
of game and wild plant foods. Tool kits
typical of this time period are also
more diverse, including many varie­
ties of chipped and ground stone
artifacts. Furthermore, the Late
Archaic is known for its elaborate burial
ceremonialism expressed in regional
styles.

The Archaic period is better
represented in the archeological
record of northern Minnesota. In the
border lakes region, however, only a
few sites have been excavated. There­
fore, knowledge of Archaic peoples in
Minnesota’s far northeast is limited.
In view of the fact that the earliest sites
discovered thus far on Isle Royale
date from the Archaic, it is probable
that the Grand Portage area was occu­
pied at least seasonally during this
period.

Woodland Period

In much of the United States,
the Woodland period is divided into
three distinct substages, with mani­
festations dating as early as 2,500
B.C. in the Southeast. In northern
Minnesota, however, chronology does
not conform to the general sequence
elsewhere. Indeed, ceramics, which
are the hallmark of this period, do not
appear until about 100 B.C. Accor­
dingly, it is sufficient to divide the
period simply into two major substages:
the Initial Woodland and the Termi­
nal Woodland (Lynott et al. 1986:23).

The Initial Woodland in northern
Minnesota and neighboring re­
gions is typified by a prehistoric group
known as the Laurel culture (100 B.C.-
A.D. 700). Evidence indicates that the
Laurel peoples were hunter-gather­
ers who subsisted largely on fish,
moose, caribou, and beaver. It should
be noted, however, that most knowl­
dge of the Laurel culture derives from
burial mound sites; relatively few
habitation sites have been excavated
to date. Sites representing the Laurel
culture are known from as far west as
east central Saskatchewan and as far
east as the Upper Peninsula of Michi­
gan. The type site and several other
important locales, however, are lo­
cated in the border lakes region west
of Grand Portage.

The Terminal Woodland, which
is the last prehistoric period in north­
ern Minnesota, corresponds with a
culture called Blackduck. Economy
of the Blackduck culture differs from
Laurel adaptations largely in the former's intensive use of wild rice. Hunting and gathering of other resources continued to be important; however, inclusion of wild rice in the subsistence strategy enabled a more sedentary existence. Distinctive tool assemblages and ceramic types also make the two cultural groups readily discernible. What became of the Blackduck peoples is unknown; some have speculated that they migrated further west, whereas others believe that through continued adaptation they became the historic Cree. In any case, evidence of the Blackduck culture disappears from northern Minnesota about A.D. 1500.

HISTORIC OCCUPATIONS

The Grand Portage region has a long and interesting history, which extends back to the earliest French explorations of the western Great Lakes. It was, in fact, the first area settled by European peoples in what is now the State of Minnesota. Grand Portage enjoyed its greatest period of importance during the eighteenth century, particularly during British dominion of the fur trade in this area. After the nineteenth century, however, when most trading activities were moved north of the Canadian border, the post at Grand Portage fell into decline. In later years commercial fishing and lumbering bolstered the economy somewhat, but those eras were both short-lived.

Establishment of a reservation for the local Ojibway (Chippewa) band in the mid-1800s formalized the Indian community that had existed at Grand Portage for some years. Since that time, life on the reservation has involved continuous adaptation to changing government policy and economic conditions. Today, services related to tourism and recreation provide livelihoods for many of the local residents.

In the following paragraphs, a brief overview of the Historic period in this region is presented. The summary is necessarily cursory and deals only with the major events and trends of each dominant period up to establishment of the reservation. The early history of Grand Portage is chronicled in much greater detail by Woolworth and Woolworth (1982), and the reader is referred to their overview. Thompson (1969) also offers a well-referenced history of the fur trade era at Grand Portage, including several pertinent appendices. In addition, an excellent summary of historical developments on the reservation has been published by the tribe (MCT 1983).

French Period

Pierre Boucher is credited with providing the earliest descriptions of the Grand Portage vicinity in 1664, though the first known specific mention of Grand Portage (or "the great carrying place") in the historic record derives from the chronicles of Pierre Margary for the year 1722. It is likely, however, that earlier French explorers of Lake Superior, such as Groseilliers, Radisson, and Du Luth, were aware of its presence in the mid-1600s, as well as its potential as a
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transportation route. Moreover, it is virtually certain that native peoples were well acquainted with this land route to the interior waters long before the arrival of Europeans (Woolworth 1969:7-9; Woolworth and Woolworth 1982:22).

The trader La Verendrye landed at Grand Portage Bay on August 26, 1731, having left Montreal with his three sons and a party of 50 soldiers and voyageurs in June of that year. After wintering near the Pigeon River, several members of the party went up the portage and continued on to Rainy Lake, where they established Fort St. Pierre. In the summer of 1732, the rest of the party made their way across the portage and continued as far as Lake of the Woods to found Fort St. Charles. From that time forward, it seems that the Grand Portage was traversed frequently by French fur traders. Although many traders no doubt used the Wisconsin-Fox River route to the interior, the Grand Portage route became increasingly important during this period. Nevertheless, there is no good evidence that the French ever established a permanent trading post or settlement at the Lake Superior terminus during the eighteenth century. One can surmise that some sort of storage buildings existed, at the very least, but the historical record is silent on this matter (Blegen 1975:57; Woolworth and Woolworth 1982:26-30).

British Period

The trade was active through Grand Portage under the French, but it was not until after resolution of the French and Indian Wars transferred hegemony to the British that Grand Portage gained its significance as a center for the fur trade. Sometime around 1762 traders came in force to this area, and in 1768 John Askin, an entrepreneur from Michilimackinac, cleared land and erected buildings to service his trading interests (Blegen 1975:71; Woolworth and Woolworth 1982:34).

By 1783 a merger of several trading partnerships at Montreal created the North West Company, and thereafter Grand Portage was the primary entrepot for trade to the northwestern interior. At that time a more substantial post was built on the lakeshore at the western end of Grand Portage Bay. Goods could be transported there by ship, repackaged, and sent up the Grand Portage to the Pigeon River on the backs of voyageurs. From that point, goods could be taken to the interior by canoe. Meanwhile, bundles of furs were carried down the trail to be loaded on ships returning to the eastern ports.

Under the North West Company, the trade flourished at Grand Portage. In the 1790s, a stockade surrounded 16 buildings, and wharves and docks at the waterfront could accommodate a 95-ton schooner. At about this time, Fort Charlotte was built at the Pigeon River end of the portage in order to facilitate the transfer of trade goods and furs (Blegen 1975:72-73).

The trade was so lucrative at Grand Portage that the competing XY Company established a second
post there in 1797-1798. Some seven years later, that rival partnership was absorbed by the North West Company. By that time, however, much of the trade had moved north across the international boundary to Fort William (Blegen 1975:81).

The North West Company began construction of Fort William in 1802 after a land survey established the fact that Grand Portage was located within United States territory. Therefore, in order to avoid taxation and other complications derived from conducting their trade on foreign soil, the British abandoned Grand Portage by 1804 (Woolworth and Woolworth 1982:45).

American Period

The trade did not end at Grand Portage with departure of the North West Company; nor did the native population vacate the area. Smaller American concerns continued to keep the trade alive for a while, though the portage from Fort William to the Pigeon River dominated commerce in the area. By the early 1830s, the Grand Portage route was no longer a viable alternative.

Nevertheless, it was during this period that history records the first conclusive mention of an Indian "band" at Grand Portage. Henry Rowe Schoolcraft notes in 1824 that some 60 souls were living at Grand Portage and dealing with British traders to the north. Of course, local Indians had been associated with the fur trade at Grand Portage since the very beginning, but no known source mentions the existence of a permanent native village until this time (Hickerson 1974:85-86).

The census of 1824 indicates that the village at Grand Portage was rather small in comparison with contemporary Ojibway settlements of the western Great Lakes. Subsequent counts show that population fluctuated from year to year. By 1842, however, the population had more than doubled, exceeding 150 persons by all counts (Hickerson 1974:85-86).

Shortly after the fur trade was eclipsed at Grand Portage, commercial fishing briefly arose. Beginning in 1836, the American Fur Company operated a fishing station of several buildings near the former trading post. That industry operated at Grand Portage into the 1840s, but it did not manage to draw natives away from the fur trade at Fort William as the British had feared. The increased commercial activity, however, is likely to have promoted growth of the population.

According to historian Nancy Woolworth (1965:305-308), Father Franz Pierz arrived in Grand Portage on July 29, 1838, to live among the local Ojibway. Soon thereafter he established a mission and school, both of which greatly influenced the populace. The missionary did not limit his efforts to the spiritual condition of his charges. Indeed, he sought to make radical changes in their lives, including the introduction of limited farming and several attempts at relocation.
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Hickerson (1974:119) points out that the Ojibway at Grand Portage traditionally were collectors, rather than producers, of food. They subsisted mainly on wild game and plant resources, especially fish, wild rice, and maple sugar. Furthermore, their hunting and trapping territory was quite extensive, including lands on either side of the international boundary.

The Grand Portage band was also something of a maverick faction of the Ojibway tribe, inasmuch as they had closer affiliations with the British. Perhaps for this reason, the Indians living at Grand Portage were excluded from negotiations that led to the American treaty of October 4, 1842. They were, however, party to the treaty signed at LaPointe, Wisconsin, on September 30, 1854, which established the Grand Portage Reservation. By that time, the native population at Grand Portage was between 150 and 200 (Hickerson 1974:89-90, 115).
Chapter 4

PREVIOUS RESEARCH

Since the late 1930s, numerous teams of researchers have conducted archeological research intermittently within Grand Portage National Monument. Almost all of the controlled excavations have taken place within and immediately about the trading post to provide data for its reconstruction and interpretation. Considerable survey and testing, however, has been performed throughout the Monument to elicit locational information on associated structures and activity areas. Furthermore, in the last decade several smaller scale investigations have been necessitated by the initiation of various NPS developments.

The Woolworths, in their historical inventory and overview of cultural resources, ably summarize the research efforts carried out at Grand Portage between the years 1936 and 1975 (Woolworth and Woolworth 1982). That work is briefly reviewed in the remainder of this chapter, along with additional information on the archeological research that has taken place in subsequent years.

The first real archeological research performed at Grand Portage began on June 10, 1936, under the direction of Ralph D. Brown. Those Minnesota Historical Society excavations sought to delineate the stockade line of the North West Company depot. Toward that end, the researchers cut a series of exploratory trenches through the depot, intersecting the palisade trenches at several points. This method effectively outlined the depot, enabling near-total excavation of the palisade remains before it was reconstructed. Brown also established a grid system and systematically investigated various areas within the stockade. Numerous structural features were thereby discovered (Woolworth and Woolworth 1982:225-226).

Brown continued work at the Grand Portage depot in 1937, specifically in search of the watch towers and the Great Hall. Not only were those features located and investigated, numerous other structures were partially excavated. Evidence showed that several different building techniques had been used on various structures and that some buildings had been superimposed over the remains of earlier ones (Woolworth and Woolworth 1982:228).

Archeology within Grand Portage National Monument did not re-
PREVIOUS RESEARCH

sume until the 1960s, when several individuals directed various projects in and around the site of the North West Company depot. In 1961, Eldon Johnson directed a five-week field school for the University of Minnesota east of Grand Portage Creek and north of County Road 17. Forty-eight test units were excavated in that area, and a few more were placed on the south side of the road. James Stoltman excavated a series of exploratory trenches near the northeastern Monument boundary in August of that year, and Alan Woolworth continued work in that same area during September. All of those excavations sought to locate archeological resources for National Park Service management. Most of the remains encountered were identified as dating from the turn of the last century, though some fur trade related materials were also found (Woolworth and Woolworth 1982:230-233).

Woolworth returned in 1962 to explore for remains of the XY Company post east of Grand Portage Creek and south of County Road 17; that area had been designated a possible location for the construction of a visitor center. Trenches and gridded excavations were employed, revealing four historic Ojibway burials and several other important structural features and activity areas. Those significant finds eliminated this area from consideration as a construction site (Woolworth and Woolworth 1982:234-235).

In 1963 and 1964 Woolworth directed larger scale excavations at the depot to provide information that would be used in furthering its reconstruction. In several instances, this simply involved relocating structural remains first observed during the 1937 excavations. Much new information on the structural arrangement of the depot, however, also was gathered, including more precise delineation of the palisade and gate locations (Woolworth and Woolworth 1982:236-239).

A week-long project occurred in late September, 1969, again under the direction of Alan Woolworth. The investigations focused on an area northeast of the reconstructed depot, where new water and sewer lines were to be installed. No significant cultural resources were present, and the development was given clearance. Earlier that year, Jake Hoffman monitored trenching for a new sewer line that was installed after the reconstructed Great Hall was struck by lightning and burned. His observations contributed some interesting new data on the interior of the depot (Woolworth and Woolworth 1982:241-242).

Work inside the palisade was directed by Woolworth in 1970 and 1971. Efforts in those years centered on remains of the Great Hall and a nearby kitchen building. In addition, two drainage trenches were partially investigated, and the date of construction for the central palisade trench was interpreted from excavated evidence (Woolworth and Woolworth 1982:244-249).

Minor exploratory excavations
were conducted by Woolworth in 1973 and 1975. In both of those years, investigations sought to inventory any cultural resources that might be present within areas of the Monument scheduled for development. The year 1973 saw efforts west of the newly reconstructed Great Hall, at a service road “Y” northwest of the depot, next to the eastern side of the main parking lot, and north of the depot’s main gate. In 1975, work resumed in the area east of Grand Portage Creek and south of County Road 17. Parts of that area had already been examined in 1962. This time, however, the primary purpose was to search for remains of the so-called “Boucher’s Little Fort.” A fur trade era enclosure was found, but the identity of those remains is still in question. In addition, the foundations of a BIA Indian School were mapped, and several other structure locations were found (Woolworth and Woolworth 1982:250-255).

The past decade has seen relatively little archeological research within the Monument, owing to the fact that few additional structural restorations have been initiated. Accordingly, survey and excavation efforts have been limited almost exclusively to the investigation of areas where other types of development are scheduled to occur, such as the utility line surveys undertaken in the early 1970s.

One such project occurred in the first week of November, 1984. At that time, MWAC Archeologist Susan Monk surveyed several proposed road alignments without discovering any significant cultural resources. However, she also examined parts of the area proposed for construction of a visitor/maintenance facility (the same general area identified as the visitor/administration parcel in 1988). There she recorded a large, turn-of-the-century refuse dump, which is apparently the same dump noted during the present survey and discussed in the following chapter. Further investigation was recommended for the dump site (Memorandum on File, MWAC, 11/5/84).

A year later, two other proposed road alignments were surveyed by MWAC personnel. No cultural resources were discovered within either right-of-way, though it was noted that one alignment came extremely close to a cemetery. Since there was a possibility that unmarked graves were present even closer to the right-of-way, it was recommended that the alignment be shifted slightly. Additional survey was performed at the request of Monument staff, including parcels that were then being considered for construction of personnel housing and the visitor/maintenance facility. No cultural resources were found; however, the investigations were rather cursory, owing to time constraints (Memorandum on File, MWAC, 10/15/85).

In 1986, Monk returned to Grand Portage for investigations related to the stabilization of eroding creek banks east of the reconstructed depot. In mid-August, she monitored stabilization efforts along Grand Portage Creek, making observations of the
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stratigraphic profiles and artifact distributions. She also photographed materials that had been collected by Monument staff during earlier stabilization of the Lake Superior shoreline in front of the depot (Monk 1986).

In May of 1988, only a few months before the present survey was initiated, Regional Archeologist Mark Lynott surveyed yet another proposed road alignment. Since the road would cross Monument lands administered by the National Park Service, as well as reservation lands administered by the Bureau of Indian Affairs, the survey was a cooperative venture. The 1,000-ft right-of-way passing through the northeastern sector of the Monument lies just north of the land parcel identified as Maintenance Alternate #1 in this report. Three small prehistoric sites were identified, all of which are located on reservation lands east of the Monument boundary (Lynott 1988).

It is also worth noting that a proton magnetometer survey was performed across the site of Fort Charlotte by MWAC personnel in 1978 (Huggins and Weymouth 1979). Another team of archeologists visited that site in 1979 to map historic features previously documented by Dewey Albinson in 1922. That MWAC crew also extended the Fort Charlotte proton magnetometer survey begun in 1978 and conducted a systematic archeological survey north of Snow Creek in conjunction with a proposed primitive campground (Jones 1980). Furthermore, during a 13-year period underwater archeologists representing several institutions recovered numerous fur trade artifacts from the border waters west of Grand Portage (Wheeler et al. 1975).
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FIELD METHODS

Methods employed in the 1988 field investigations within Grand Portage National Monument varied according to the dictates of each proposed development project. In most cases, the survey team used a systematic shovel testing protocol to examine land parcels for archeological materials. In some cases, however, the investigators used less structured procedures, and in one instance monitoring of ground disturbing activities served in place of a preconstruction examination of the project area.

Since most of the proposed development areas are covered in vegetation, the standard procedure for archeological survey of a land parcel entailed close-interval shovel testing in a systematic fashion. The three members of the survey team paced across each alternate construction area in transects separated by 10 m. Along each transect the team members excavated a small shovel test (at least 30 cm in diameter and 50 cm deep) at 10-m intervals. Soil profiles were observed and recorded, and the excavated soils were examined for archeological materials. Collections taken from shovel test proveniences were bagged according to a coordinate system representing the transect and test interval. Thus, “ST 1-4” would indicate the fourth shovel test excavated along the first transect line in a study area.

This general procedure was continued back and forth across each major land parcel until the entire study area had been examined. Some parts of each parcel could not be shovel tested, owing to logistical difficulties (marshes, existing developments, etc.). Nevertheless, coverage of the various study areas was adequate for determining the presence or absence of cultural resources.

In smaller areas, such as the narrow corridor selected for burial of a canoe warehouse security system, random shovel tests were sufficient for purposes of probing the soil deposits. Inspection of the parking lot gate development, on the other hand, was accomplished simply by observing installation of the gate posts.

When an archeological site was discovered on a parcel, as in the case of Maintenance Alternate #1, more detailed investigation continued. Through the use of 1-m-by-1-m test units excavated in arbitrary 10-cm
Figure 4. Study area locations.
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levels, a larger sample of artifacts could be collected and the depositional context evaluated. In that way, the excavators gathered additional information relating to site type, age, complexity, and integrity.

The archeological team documented all controlled excavations through the use of plan and profile drawings, as well as photographic images. Pertinent records generated during all phases of the 1988 investigations at Grand Portage National Monument are on file at the Midwest Archeological Center in Lincoln, Nebraska.

RESULTS OF THE SURVEY

Descriptions of the areas surveyed within Grand Portage National Monument are offered below, according to the specific development project necessitating investigations. The findings of each survey are summarized along with comment on their significance to planners.

Facility Parcels

As stated previously, the construction of a visitor center with administrative offices is proposed for the Monument. In addition, a separate maintenance facility is planned. At the time this survey began, three land parcels had been identified as possible construction sites (Figure 4). The largest parcel, located at the southwestern edge of the Monument property on the west (landward) side of County Road 17, is proposed for the visitor/administration building. Two other parcels represent alternative locations for the maintenance facility. Alternate #1 is located at the extreme northeastern edge of the Monument property, where a National Park Service maintenance storage area (or “boneyard”) is currently located. Alternate #2 lies directly across the asphalt road from the proposed visitor/administration parcel, along the lakefront.

The visitor/administration facility plans provide for construction of the building itself, as well as a parking lot and access roads. When the archeological team arrived at the land parcel, it was found that the vehicular areas had been staked and flagged. Lacking copies of the preliminary construction drawings, those markers helped orient the team within the heavily wooded parcel.

Systematic shovel testing, which followed the standard routine previously outlined, yielded no evidence of cultural resources beneath the vegetation cover. Survey of the parcel, however, did result in the observation of several refuse dumps exposed on the ground surface. Most of the dumps were relatively recent in age, judging from the materials they contained. The Grand Portage Chief of Maintenance remarked that at one time a house had stood in this general vicinity. Further, he believed that it had been there since at least the 1930s and was removed shortly after the park was established. Therefore, it is likely that much of the refuse derives from that rather recently abandoned occupation.
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One refuse pile, however, was quite extensive and included artifacts dating roughly from the turn of the last century. Among the materials observed were numerous glass bottles made from a three-piece mold, indicating pre-1903 manufacture. The deposit, which was left undisturbed, may have significance for understanding late nineteenth- and early twentieth-century activities in this region. Fortunately, it seemed to lie well outside what appears to be the marked centerline of the access loop (Figure 5). If that is the case, it may be easily avoided during construction.

It should be noted that no evidence of a former structure could be seen in the course of surveying this parcel. It is quite possible, however, that demolition of the structure was so complete that no remains survive. It may also be that an existing fenced parking lot at the northern end of the proposed construction site was built atop the house site. The gravel surface within that enclosure prevented any exploration of the parking area.

The parcel identified as Maintenance Alternate #1 for purposes of this report surrounds the existing maintenance "boneyard" located at the eastern limits of the Monument (Figure 4). This area contains a low relict beach ridge of Lake Superior that is bordered to the east and north by marshy lowlands. Over 20 years ago archaeological surveys were conducted in this general area by Stoltman and Woolworth, but those earlier efforts did not examine the entire parcel now proposed as a possible construction site (Woolworth and Woolworth 1982:230-235). Therefore, continued investigation was in order.

A large surface dump is present in a marshy thicket near the eastern Monument boundary. Observable refuse, mostly cans and bottles, seems to date from relatively recent times. Therefore, the dump is not considered to be of any consequence. Systematic shovel testing across the ridge, however, revealed good evidence of what appears to be a previously unrecorded early Historic period archeological site (Figure 6), which is described more fully in Appendix A of this report.

In the grass covered clearing between the "boneyard" enclosure and the gravel lakefront road several shovel tests yielded probable late eighteenth- or early nineteenth-century materials (see Appendix B). Numerous seed beads used for embroidery, gunsiaff fragments, and wrought nails were among the artifacts collected from the site. In addition, a small silver cross with bulbar arms was recovered. Such items are typical of sites associated with the fur trade in North America, and the site is no doubt contemporary with the post at Grand Portage. It could not be determined, however, if the site, which lies approximately 400 m (1200 ft) east of Grand Portage Creek and 100 m (300 ft) north of Lake Superior, represents a European or a historic Indian occupation.

Continued shovel testing of the old beach ridge suggested that the archeological site is approximately 600
Figure 5. Location of dump site within proposed visitor center/administration facility parcel.
Figure 6. Location of Maintenance Alternate #1 site.
square meters in area, measuring 40 m on its east-west axis and 15 m from south to north. The subsequent excavation of two 1-m-by-1-m test units showed no evidence of stratified archaeological deposits. Natural strata do occur, but there does not seem to be any direct correlation of those deposits with the types of cultural materials they contain. Early Historic period materials appear to be present throughout the soil column, though modern debris is limited to the upper levels. It should also be noted that two cultural features were partially exposed and excavated. One is certainly recent, but the other possibly could date from the early Historic period.

Although it was not within the scope of this survey to evaluate any discovered archaeological sites fully, site integrity appears to be good. Some degree of disturbance is evident, however, in the form of more modern debris. For example, large amounts of wire nails and automobile safety glass are present in the upper soil deposits, especially at the site peripheries. Those materials, which are mixed with apparent early Historic materials, are not surprising in view of the fact that early twentieth-century maps of the area show many reservation structures in this general vicinity. In fact, a few nearby residences remained occupied until the late 1960s. There is no indication, however, that construction of the existing maintenance "boneyard" did any significant damage to the archeological site. A gravel driveway seems to bisect the site, but has probably served to seal undisturbed archeological deposits below it.

The Maintenance Alternate #1 site has been designated Site 21CK12 by the Office of the State Archaeologist for Minnesota. As stated above, the purpose of the 1988 survey was limited to making an inventory of cultural resources that might be present in the various development areas; it was not designed to assess the significance of sites so discovered in terms of eligibility for the National Register of Historic Places. Therefore, if there is any danger that the site might be disturbed by construction activities, further investigation will probably be in order.

It should be noted, however, that our preliminary study of the site indicates that it is rather small in size and appears to be entirely confined to the open field in front of the maintenance "boneyard." Therefore, it is possible that a new facility could be built within the parcel without impacting the archeological site. Should this alternate be chosen for construction, closer scrutiny will be required to determine whether the archeological site can be avoided.

The other parcel under consideration for construction of a maintenance facility is located directly across the access road from the proposed visitor/administration parcel (Figure 2). Maintenance Alternate #2 is a narrow strip of land between the blacktop road and Lake Superior. The level ground surface is perched approximately 2-3 m above the lake's waterline. Unlike Maintenance Alternate
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#1, this parcel is thickly wooded.

Systematic shovel testing and observation of the ground surface produced no evidence of the presence of any cultural resources on the parcel. Only a few isolated items of surface trash were noted, and those all seemed to lie within the "toss zone" of the nearby county road. Accordingly, there is no archeological basis for this alternate to be excluded from consideration as a possible construction site.

Lakeshore Stabilization

The second major development project that was investigated during the 1988 archeological survey is the proposed continuation of lakeshore stabilization within the Monument. Previously, a section of lakeshore immediately in front of the reconstructed stockade had been stabilized with rip-rap (Figure 7). In addition, the banks of nearby Grand Portage Creek had received similar treatment (Monk 1986).

The currently proposed stabilization project covers a section of Lake Superior shoreline running east from the mouth of Grand Portage Creek (Figure 8) for a distance of approximately 215 m (700 ft). In order to facilitate placement of large boulders that will serve to reduce bank erosion in this area, this development will require the establishment of temporary haul roads along the top of the bank (Figures 4 and 9).

It was known through previous archeological research within the Monument, that the area east of Grand Portage Creek was used extensively during the early Historic period (Woolworth and Woolworth 1982). Immediately adjacent to the creek are the presumed locations of a historic Ojibway burial ground and a voyageurs' campground. Both of those sites, however, are believed to lie at a distance back from the edge of the lakeshore bank. A small lithic site is also known to lie near the southern end of the Grand Portage, where a picnic grove is now located. In addition, several structures formerly used by the Bureau of Indian Affairs once stood in this general vicinity. Therefore, the 1988 archeological survey sought to determine whether any unknown cultural resources might be present within the zone of potential construction impacts.

Along the entire length of the shoreline scheduled for stabilization, the archeological team visually inspected the eroding bank face. Those efforts, however, revealed no indication of a buried soil horizon or cultural features. Nor were any artifacts observed eroding out of the cut bank.

Attention then shifted to the ground surface on top of the embankment. Shovel tests excavated at regular intervals within a 10 m corridor along the bank edge yielded no evidence that would suggest an archeological site of any consequence. Some Historic period materials were observed in shovel tests near the grassy picnic area, approximately at the terminus of the Grand Portage. The
Figure 7. Stabilized shoreline on lake (south) side of reconstructed depot (facing west).

Figure 8. Lake Superior shoreline scheduled for stabilization (facing east).
Figure 9. Proposed lakeshore stabilization area.
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Materials were in low density, however, and seemed to represent relatively recent deposition.

Despite the fact that no potentially significant cultural resources seem to be present within the direct impact zone of the project area, several historic and prehistoric sites are known to be located in close proximity. Therefore, extreme caution must be exercised when the rip-rap is laid along the shoreline. Grading and other earth-moving activities should be kept to the absolute minimum.

Canoe Warehouse Security Line

A minor development project investigated during the 1988 survey relates to the proposed burial of a utility line connecting the post's reconstructed Great Hall and a canoe warehouse located outside the west stockade curtain (Figures 4 and 10). That line, which constitutes part of a new security system for the canoe warehouse, will run a distance of approximately 75 m (250 ft). More than half the distance, however, will lie within the reconstructed stockade, where an active utility trench already exists. Since plans call for burial of the new line within that existing trench, only the area between the stockade line and the canoe warehouse required examination. That length of new ground disturbance is approximately 30 m (100 ft).

The archeological team excavated several random shovel tests within the clearing where the line is proposed. No cultural materials were present, and it appeared that the grounds had already been greatly disturbed. The first 20 cm (8 in) below ground surface are composed of a dense slaty fill, which is doubtless the result of modern deposition. Subsequent examination of an aerial photograph, apparently taken in the early 1960s, shows that the ground surface in this area was at that time churned and rutted by the movement of heavy machinery (perhaps during construction of the nearby toilet facilities). It seems likely that the fill noted in 1988 derives from that earlier development episode.

In view of the fact that the fill zone in this area is deep, and burial of the utility line will be immediately below the ground surface, this development should have no adverse effect on any cultural resources. If plans change, however, to include trenching at a greater depth or along a different route, the Regional Archeologist should be so advised. It can then be determined if additional reconnaissance will be necessary.

Parking Lot Gate

The last development project to be considered involved the least amount of ground disturbance and was the first investigated during the 1988 survey at Grand Portage. The project entailed installation of two wooden gate posts for an overflow parking lot off County Road 17 directly north of the reconstructed stockade and east of the Monument maintenance complex (Figures 4 and 11). Since this only required augering two post holes, which
Figure 10. Reconstructed canoe warehouse viewed through west palisade gate.

Figure 11. Overflow parking lot, showing new gate.
would not be much larger than standard shovel tests, monitoring of the activity was sufficient for our purposes.

The soil profiles exposed in both auger holes were examined for any indication of cultural deposits, but no such evidence could be observed. In fact, it appeared that fill had been deposited in the upper reaches of the soil column, probably during construction of the adjacent roadway. Furthermore, examination of the soils removed by the auger yielded no artifacts whatsoever. The negative evidence derived from this location, however, does not preclude the possibility that archeological remains may be present in the immediate vicinity. Indeed, given the proximity of the trading post, it is likely that this area saw frequent use during the early Historic period. Therefore, should other developments be contemplated at or near this location, additional archeological review will be required.
Chapter 6

SUMMARY AND RECOMMENDATIONS

The week-long survey of several proposed development projects within Grand Portage National Monument provided new information on three large land parcels, as well as a lengthy tract of lakeshore east of Grand Portage Creek. Two smaller project areas also received scrutiny by the archeological team in 1988.

Investigation of the land parcels identified as possible construction sites for a visitor/administration building and a maintenance facility produced the only new evidence of cultural resources within the Monument. Maintenance Alternate #1 yielded numerous artifacts indicating the presence of an apparent early Historic period archeological site, probably contemporary with active use of the trading post at Grand Portage. In addition, survey of the proposed visitor/administration facility location revealed the presence of a late nineteenth-early twentieth-century refuse dump, which appears to be quite extensive.

Although it was not within the scope of the 1988 survey to evaluate the significance of any sites inventoried, it is clear that the Maintenance Alternate #1 site is potentially very important. The site, which contains abundant late eighteenth- or early nineteenth-century materials, seems to be relatively undisturbed and may contain intact early Historic period cultural features. Not only is its research potential high, the site relates directly to the GRPO interpretive mission.

If Maintenance Alternate #1 is selected for construction of the new facility, steps must be taken in order to mitigate any adverse effects of the development. It is conceivable that the archeological site could be avoided by construction, given its small size and nearness to the gravel lakefront road. However, if disturbance of the area cannot be avoided, further investigation of the site should be undertaken. Continued excavations at the site should be designed to collect a representative sample of archeological data from the zone of potential ground disturbance.

The turn-of-the-century dump found within the proposed visitor/administration center parking area should be considered an archeologically sensitive area. Although the dump was not tested, surface materials include a high proportion of artifacts that pre-date the twentieth century. Those, of course, do not relate to the
SUMMARY AND RECOMMENDATIONS

period specifically designated for interpretation at Grand Portage National Monument, but they may be informative about life on the Indian reservation nearly 100 years ago. Therefore, the deposit may possess significant research potential.

Given the fact that the dump is located away from what seems to be the centerline of the visitor/administration facility parking loop, it seems likely that the feature could be avoided during construction of the facility and its associated elements. Should that be the case, additional steps may be necessary to insure its preservation. Covering the dump with sterile fill would accomplish that end, while removing the unsightly deposit from public view. If it cannot be avoided, however, the dump merits further examination and, perhaps, collection.

No new cultural resources were encountered during survey of the shoreline tract scheduled for stabilization. Nevertheless, the lands immediately adjacent to that shoreline are known to contain several early Historic period activity areas, including an Ojibway burial ground. Therefore, the contractor should take care not to cause undue disturbance of the area when establishing temporary haul roads.

Monitoring of the overflow parking lot gate installation revealed no evidence of the presence of cultural resources. This should not be interpreted, however, as confirming that no such resources exist in the parking lot or other neighboring areas. In deed, given its proximity to the trading post site, it seems probable that this general area would have been subject to intensive use during the early Historic period. Therefore, should any additional development be contemplated in this vicinity, an archeological survey will be required prior to the start of construction.

The 1988 archeological survey produced information that should alert planners to the existence of cultural resources that may affect proposed construction activities. Once firm plans have been made, communication between planners and MWAC personnel will be required to determine the extent of potential impacts on the two sensitive areas. Options for mitigation of adverse effects, if deemed appropriate, can then be explored. Further, should plans change to include other possible construction areas not surveyed as part of the 1988 investigations, additional research at Grand Portage National Monument may be necessary.

Planners should also keep the Midwest Archeological Center apprised of locations for utility lines that will service the new facilities. It is certain that water, sewerage, telephone, and electrical lines will be connected to the facilities from existing lines. Further, it is possible that such connections will entail trenching across areas not yet subject to archeological survey or through areas containing known cultural resources. Therefore, once the paths of various new utility lines are determined, survey or archeological monitoring may be required.
REFERENCES CITED

Bastian, Tyler

Blegen, Theodore

Dice, Lee R.

Griffin, James B. (editor)

Grout, Frank F., and George M. Schwartz

Grout, Frank F., Robert P. Sharp, and George M. Schwartz

Hickerson, Harold

Huggins, Robert, and John W. Wymouth

Jones, Bruce A.
1980 Historic Site Archeology at Fort Charlotte, Grand Portage National Monument, Minnesota. Ms. on file, Midwest Archeological Center, Lincoln, Nebraska.

Lynott, Mark J.

Lynott, Mark J., Jeffrey J. Richner, and Mona Thompson

Margry, Pierre
REFERENCES CITED

Mason, Ronald J.

MCT (Minnesota Chippewa Tribe)

Monk, Susan M.
1986 *A Summary of Archeological Monitoring at Grand Portage National Monument during Creek Bank Stabilization, August 18-21, 1986.* Ms. on file, Midwest Archeological Center, Lincoln, Nebraska.

Ojakangas, Richard W., and Charles L. Matsch

Reid, C. S.

Stoltman, James B.

Thompson, Erwin N.

Wheeler, R. C., W. A. Kenyon, A. R. Woolworth, and D. A. Birk

Woolworth, Alan R.
1969 *Archaeological Excavations at Grand Portage National Monument, 1963-164 Field Seasons.* Ms. on file, Midwest Archeological Center, Lincoln, Nebraska.

Woolworth, Alan R., and Nancy L. Woolworth
1982 *Grand Portage National Monument: An Historical Overview and an Inventory of Its Cultural Resources.* 2 vols. Ms. on file, Midwest Archeological Center, Lincoln, Nebraska.

Woolworth, Nancy L.
This appendix constitutes a formal description of the Maintenance Alternate #1 site, henceforth referred to as MA1. The site, which was discovered during the 1988 archaeological survey of Grand Portage National Monument, has been designated Site 21CK12 by the Minnesota State Archaeologist's Office. Complete artifact inventories from the site are presented in Appendix B of this report.

MA1 is located in the NE 1/4, NE 1/4, SW 1/4, SE 1/4 of Section 4, Township 63N, Range 6E. The site lies in the extreme northeast sector of Grand Portage National Monument, approximately 50 m west of the eastern boundary line and 300 m east of Grand Portage Creek. It is situated between a gravel county road, which parallels the lakeshore, and an existing maintenance storage facility (or "boneyard") employed by the Monument staff (Figures 4, 6, and 12).

The area in which the site is located is composed of glacial lakebed deposits, and the site itself lies atop a relict beach ridge approximately 40 m north of the present shoreline. The ridge forms a low prominence, bordered to the north and east by marshy lowlands. Its elevation is between 188.4 m (618 ft) and 189 m (620 ft) amsl, or approximately 4.9-5.5 m (16-18 ft) above the current level of Lake Superior. The ridge appears to be well drained and today is covered with grasses and a few saplings.

It was obvious immediately that the former beach ridge had been disturbed to some extent in relatively recent times. Foremost, of course, was the "boneyard" enclosure, which is surfaced with a bed of gravel. Further, the maintenance yard appears to sit on thick fill at the northern edge of the ridge. In front of the 24-m-wide enclosure, a narrow drive connects the gateway with the lakefront road, and a small trash dumpster on a concrete pad is west of the driveway. It was also apparent that buried telephone lines are present in the ridge. A junction box of sorts stands above ground approximately 7 m east of the gravel driveway and 8.5 m north of the lakefront road.

It was also known from documents and previous archaeological research that several residential structures had stood in this general vicinity as late as the 1960s; the nearest of those former structures, the La Plante
Figure 12. Detail of Maintenance Area #1 site.
APPENDIX A

residence, was occupied until 1967. No surface evidence of the houses or their associated outbuildings appears to survive, though it seemed probable that subsurface deposits from those occupations would still be present. Upon further investigation of the ridge, that proved to be the case.

PREVIOUS RESEARCH IN THE AREA

According to Woolworth and Woolworth (1982:230-235), the extreme northeastern sector of Grand Portage National Monument was previously investigated in 1961 and 1962. In late August of 1961, James Stoltman directed the excavation of seven test trenches in this vicinity. Stoltman’s work centered on an “elevated knoll near the northeast monument boundary,” which is identified as an “earlier beach stage of Lake Superior” (Woolworth and Woolworth 1982:231). Subsequently, Alan R. Woolworth continued investigations in September of that same year. He was responsible for the excavation of a series of parallel test trenches near the La Plante residence, which was then still occupied. The structure, as well as several others in the area, was removed later in that decade.

In Woolworth’s estimation, “nothing of any significance was found” near the La Plante residence (Woolworth and Woolworth 1982:232). He attributes the general artifact assemblage to the turn of the century (1890-1910), but without adequate description of the materials it is difficult to know on what basis. Some of the artifact types (beads, clay pipes, etc.) conceivably could represent earlier occupations. It is also possible that earlier deposits were missed, owing to the fact that some areas of the sector were not tested in deference to residents who still occupied the property.

Other archeological surveys have been conducted in this general area in recent years. The most recent was Lynott’s (1988) inspection of a proposed road alignment a few months before the investigations reported here.

THE 1988 SURVEY AND TESTING

Systematic shovel testing of the Maintenance Alternate #1 land parcel revealed an apparent late eighteenth- or early nineteenth-century occupation roughly centered on the relict beach ridge that occurs here. The MA1 site appears to have area of about 600 sq m. Along its east-west axis, the site measures approximately 40 m, whereas the north-south dimension is approximately 15 m. Archeological materials do occur outside of those limits; however, they represent a later occupation of the parcel dating from this century.

It should be acknowledged that many of the artifacts identified as representing the early Historic period, derived both from shovel tests and excavation units, possibly could be later in age. Many bead varieties, for example, continued to see use in the area long after the close of the fur trade, and other objects are too frag-
APPENDIX A

mentary to be absolutely certain of their period of manufacture. Never­theless, the frequent occurrence of gunspalls and wrought iron nails, as well as a single trade cross, tends to argue for a component at the site that is roughly contemporary with the post at Grand Portage.

Two 1-m-by-1-m test units were excavated within the site limits established through systematic shovel testing (Figure 13). Test Unit 1 was located between the “boneyard” driveway and the eastern edge of the site, whereas Test Unit 2 was placed close to the western site limit. Both units produced a mixture of early Historic and modern artifacts, with the latter generally concentrated in the upper levels. Both also suggested the presence of archeological features but none that definitely dated to the early Historic period.

Test Unit 1

Test Unit 1 (Figure 14), when examined in profile, shows that the site is topped by a layer of sod approximately 10 cm thick. This zone is developed in a soil that contains abundant waterworn cobbles and pebbles. Most of the materials recovered from the sod zone were twentieth-century artifacts, particularly safety glass from an automobile window. Only a few probable late eighteenth-century items, such as wrought nails and a cuprous kettle rim, were present at this level.

Beneath the sod zone is a layer 14 cm thick of brown sandy loam, again littered with beach cobbles and pebbles. Early Historic period materials are more frequent at this level, though still in low proportion relative to more recent debris. Here, as elsewhere at the site, small seed beads and gunflint chips are present. Furthermore, both artifact types show discol­oration typically the result of having been exposed to fire.

It was noted that almost all of the artifacts at this level of Test Unit 1 derived from the western third of the unit. In plan view, it appeared that soils in that part of the square were somewhat darker than the remaining excavation floor. As excavation continued, a culturally sterile subsoil made up of yellowish brown coarse sand helped define the limits of a linear feature in the western third of the unit. That zone of black sandy loam ran along the entire west wall of the unit, its eastern edge forming a straight line approximately 30 cm from the west profile. That line showed up clearly in the unit’s north profile wall (Figure 14).

The bottom of the feature, which was found at approximately 40 cm below surface (cmbs) proved to be essentially flat. Further, it seemed to be purposefully lined with a thin lens of gray clay. The function of this feature is unknown, as is its full size. The mixture of early and more modern materials, however, indicates that the feature was a recent intrusion into the site that incorporated materials already present when filled.
Figure 13. Testing at Maintenance Area #1 site (facing northeast).
Figure 14. North profile, Test Unit 1.

A -- Brown (10YR 4/3) Sandy Loam with Abundant Waterworn Cobbles and Pebbles
B -- Yellowish Brown (10YR 5/8) Coarse Sand with Dense Cobbles and Pebbles
C -- Black (10YR 2/1) Sandy Loam, Charcoal Rich with Abundant Cobbles and Pebbles
D₁ -- Dark Brown (10YR 3/3) Sandy Loam
D₂ -- Dark Gray (10YR 4/1) Clay with Cobbles and Pebbles
A second, smaller feature was evident in the northeast corner of the test unit. When viewed in plan, the black loamy sand deposit formed a rough rectangle. Its western edge met the north profile at 30 cm from the northeast corner stake, whereas the feature extended 20 cm to the south along the east profile wall. The deposit contained a heavy concentration of charcoal, but no artifacts whatsoever were recovered from its fill. Therefore, it is not possible to infer the age of this feature for lack of temporally-diagnostic materials. It is interesting to note, however, that the depth of this deposit corresponds closely to that of the feature that is certainly modern.

Test Unit 2

Test Unit 2 (Figure 15) exhibits a sod layer similar to that evident in Test Unit 1. As in the other unit, this upper 10 cm of soil contained a mixture of late eighteenth- and twentieth-century artifacts, with the latter forming the bulk of the assemblage. In addition, some materials (e.g., ceramics) found at this level and lower in the unit seem to represent the latter part of the nineteenth century.

Again in Test Unit 2, the sod zone lies atop a layer of brown sandy loam that probably developed through leaching of organic materials. The layer forms a horizontal bed, extending slightly more than 30 cmbs. Two arbitrary 10-cm levels were excavated in this deposit yielding a wide range of eighteenth- through twentieth-century artifacts. Seed beads were recovered in large numbers (more than 900 in two levels combined), with most of them concentrated in the northeast corner of the unit.

Continued excavation revealed an area of reddish orange burned clay in that corner; by Level 4 (30-40 cmbs), the rest of the unit floor was a culturally sterile deposit of black muck. In plan view at 40 cmbs, the feature met the north wall of the unit approximately 40 cm from the northeast corner stage; the fill edge ran at an angle to the southeast, intersecting the unit's southeast corner. Large pieces of burned wood were present in this clay fill along with numerous seed beads and other eighteenth-century artifacts. When viewed in profile, it is clear that the visible part of this feature is somewhat basin shaped, with its deepest point at the unit's northeast corner approximately 70 cmbs. Although its function cannot be determined, it appears that the feature is cultural, and despite the occurrence of some recent materials in the fill, it is probable that the feature dates from the early Historic period.

Synthesis

The two test units, in combination with a number of shovel tests systematically excavated across the relict beach ridge, demonstrate that a potentially significant early Historic archeological deposit is present in the land parcel identified as Maintenance Alternate #1. Although the site is small and unstratified, it
Figure 15. North and east profiles, Test Unit 2.
possesses large numbers of late eighteenth- or early nineteenth-century materials and may include intact cultural features. Despite some obvious areas of disturbance, the site also appears to exhibit a surprising amount of integrity. This is particularly remarkable in view of the fact that the general site area was occupied until the 1960s, and it still is used by GRPO maintenance personnel.

Raw frequencies of artifacts recovered from the beach ridge (see Appendix B) tend to misrepresent the amount of disturbance that has occurred at the MAI site. Actual artifacts total 3,216, of which 1,606 are almost definitely from the early Historic period. At face value, those figures would suggest that slightly more than half the artifacts recovered in our limited investigations are recent debris. However, if one considers that some 1,423 pieces of clear glass appear to derive from a single broken automobile windshield, the relative proportions change dramatically. Artifact totals excluding those sherds indicate that 1,606 items out of 1,793 (or nearly 90%) represent the early Historic period. In those terms, it appears that the degree of modern site disturbance has been rather minimal.

Accordingly, the Maintenance Alternate #1 site (21CK12) must be considered a potentially significant cultural resource. Testing sufficient to assess the site's possible eligibility to the National Register of Historic Places was not undertaken in 1988, since such investigations would have been beyond the project scope-of-

APPENDIX A
APPENDIX B

ARTIFACT INVENTORIES BY PROVENIENCE

GRAND PORTAGE NATIONAL MONUMENT

1988 FACILITIES SURVEY

The archeological team observed numerous Historic period artifacts during the 1988 archeological survey within Grand Portage National Monument. Of the several proposed development areas, however, only one produced materials worthy of collection and further study: Maintenance Alternate #1. Shovel testing revealed an early Historic period site (21CK12) at that location, as well as debris representing more recent occupation or use of the parcel. Two 1-m-by-1-m excavation units yielded additional data.

The collections derived from Maintenance Alternate #1 are listed below according to their provenience. Some of the shovel tests correspond with the 18th-century site proper, whereas others lie outside the inferred site limits. Those shovel tests that represent the site are noted with an asterisk (*). Totals for the 18th-century artifact types are summarized at the end of this appendix. All materials collected as part of the 1988 survey are now curated at the Midwest Archeological Center in Lincoln, Nebraska, under Accession Number 285.

NOTE: Barrel-shaped and donut-shaped seed beads are tumbled. Most tubular seed beads are not.

Test Unit 1

Level 1:

1 automobile mirror frame
4 wrought nails
4 iron staples
1 iron washer
1 sheet iron
1 large cuprous kettle rim
1 heavy iron hardware
1 fragmentary iron ring
1 lead scrap
70 automobile windshield glass
398 flat clear glass (probable auto windshield)
2 clear bottle glass
2 amber bottle glass
3 rocks
APPENDIX B

Level 2:

8 wrought nails
4 wrought nail fragments
1 wire nail
2 iron washers
1 sheet iron
1 lead splatter
1 lead shot
.45 cal. center fire cartridge
1 gunflint chip
3 deep red transparent tubular seed beads
9 white tubular seed beads
14 compound white barrel-shaped seed beads with clear veneer
1 burnt orange barrel-shaped seed bead
1 white clay pipestem fragment (bore: 5/64)
2 whiteware bowl rim sherds
1 whiteware body sherd
4 white porcelain bowl body sherds
8 green bottle glass
3 amber bottle glass
3 automobile windshield glass
108 flat clear glass (probable auto windshield)
4 automobile mirror sherds
1 shale
7 mammal bone
4 calcined bone

Level 3:

3 wrought nails
1 iron washer fragment
7 white porcelain body sherds
2 white clay pipestems (bore: 5/64)
4 compound white barrel-shaped seed beads with clear veneer
1 white tubular seed bead
232 automobile windshield glass
1 flat clear glass
5 thick flat clear glass (crizzled)
2 amber bottle glass
3 green bottle glass
1 quartzite

Level 3 (organic zone):

9 white barrel-shaped seed beads
1 deep red transparent tubular seed bead
3 calcined bone

Level 4:

1 whiteware rim sherd
80 flat clear glass (probable auto windshield)
2 green bottle glass
1 amber bottle glass
6 white tubular seed beads
5 compound white barrel-shaped seed beads with clear veneer
4 plaster?

Level 4 (organic zone):

2 chert nodules (glacial?)

Test Unit 2

Level 1:

1 wrought nail
1 wire nail
2 crown cap bottle closure fragments
2 foil bottle closure liners
1 whiteware body sherd
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 annular banded whiteware rim sherd</td>
<td>1</td>
</tr>
<tr>
<td>1 blue transparent tubular seed bead</td>
<td>1</td>
</tr>
<tr>
<td>1 white tubular seed bead</td>
<td>1</td>
</tr>
<tr>
<td>2 compound white barrel-shaped seed beads</td>
<td>2</td>
</tr>
<tr>
<td>2 blue transparent barrel-shaped seed beads</td>
<td>2</td>
</tr>
<tr>
<td>5 flat clear glass</td>
<td>5</td>
</tr>
<tr>
<td>3 clear bottle glass</td>
<td>3</td>
</tr>
<tr>
<td>1 burned gunspall fragment</td>
<td>1</td>
</tr>
<tr>
<td>1 bone</td>
<td>1</td>
</tr>
<tr>
<td>1 calcined bone</td>
<td>1</td>
</tr>
<tr>
<td>2 blue plastic</td>
<td>2</td>
</tr>
</tbody>
</table>

**Level 2:**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 cut nails</td>
<td>14</td>
</tr>
<tr>
<td>15 cut nail fragments</td>
<td>15</td>
</tr>
<tr>
<td>1 iron staple</td>
<td>1</td>
</tr>
<tr>
<td>1 iron tableware handle</td>
<td>1</td>
</tr>
<tr>
<td>16 iron scrap</td>
<td>16</td>
</tr>
<tr>
<td>3 crown cap bottle closures</td>
<td>3</td>
</tr>
<tr>
<td>7 crown cap bottle closure fragments</td>
<td>7</td>
</tr>
<tr>
<td>4 foil bottle closure liners</td>
<td>4</td>
</tr>
<tr>
<td>1 twisted wire loop</td>
<td>1</td>
</tr>
<tr>
<td>1.22 cal. rim fire cartridge</td>
<td>1</td>
</tr>
<tr>
<td>1.38 cal. center fire cartridge</td>
<td>1</td>
</tr>
<tr>
<td>12-piece pewter button with engraved face (dia: 19mm)</td>
<td>1</td>
</tr>
<tr>
<td>1 aluminum foil wrapper</td>
<td>1</td>
</tr>
<tr>
<td>1 hard rubber comb fragment</td>
<td>1</td>
</tr>
<tr>
<td>2 white clay pipestems (bore: 5/64 &amp; 6/64)</td>
<td>2</td>
</tr>
<tr>
<td>1 white clay pipebowl fragment</td>
<td>1</td>
</tr>
<tr>
<td>4 whiteware body sherds</td>
<td>4</td>
</tr>
<tr>
<td>6 blue transfer-printed white ware body sherds</td>
<td>6</td>
</tr>
<tr>
<td>3 blue transfer-printed white ware rim sherds</td>
<td>3</td>
</tr>
<tr>
<td>2 annular banded yellowware body sherds</td>
<td>2</td>
</tr>
<tr>
<td>1 Rockingham glazed yellowware body sherd</td>
<td>1</td>
</tr>
<tr>
<td>20 flat clear glass</td>
<td>20</td>
</tr>
<tr>
<td>12 flat clear glass with blue tint</td>
<td>12</td>
</tr>
<tr>
<td>1 flat clear glass with green tint</td>
<td>1</td>
</tr>
<tr>
<td>32 clear bottle glass</td>
<td>32</td>
</tr>
<tr>
<td>4 clear bottle glass with blue tint</td>
<td>4</td>
</tr>
<tr>
<td>3 amber bottle glass</td>
<td>3</td>
</tr>
<tr>
<td>1 green bottle glass</td>
<td>1</td>
</tr>
<tr>
<td>1 melted glass</td>
<td>1</td>
</tr>
<tr>
<td>79 blue transparent tubular seed beads</td>
<td>79</td>
</tr>
<tr>
<td>104 blue transparent barrel-shaped seed beads</td>
<td>104</td>
</tr>
<tr>
<td>39 white tubular seed beads</td>
<td>39</td>
</tr>
<tr>
<td>65 white barrel-shaped seed beads</td>
<td>65</td>
</tr>
<tr>
<td>8 tiny white donut-shaped seed beads</td>
<td>8</td>
</tr>
<tr>
<td>2 tiny green donut-shaped seed beads</td>
<td>2</td>
</tr>
<tr>
<td>2 tiny blue donut-shaped seed beads</td>
<td>2</td>
</tr>
<tr>
<td>2 tiny red-on-white donut-shaped seed beads</td>
<td>2</td>
</tr>
<tr>
<td>6 fused lumps of blue and white seed beads</td>
<td>6</td>
</tr>
<tr>
<td>9 bone (1 saw-cut)</td>
<td>9</td>
</tr>
<tr>
<td>3 calcined bone</td>
<td>3</td>
</tr>
<tr>
<td>4 slag (42 g)</td>
<td>4</td>
</tr>
<tr>
<td>14 burned gunflint chips</td>
<td>14</td>
</tr>
<tr>
<td>1 peach pit</td>
<td>1</td>
</tr>
</tbody>
</table>

**Level 3:**

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 wrought nails</td>
<td>7</td>
</tr>
<tr>
<td>12 wrought nail fragments</td>
<td>12</td>
</tr>
<tr>
<td>1 iron hafting ring</td>
<td>1</td>
</tr>
<tr>
<td>2 cuprous tinkling cones</td>
<td>2</td>
</tr>
<tr>
<td>1 white clay pipestem (bore: 5/64)</td>
<td>1</td>
</tr>
<tr>
<td>5 burned gunspall fragments</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX B

20 burned gunspall chips
1 black gunspall chip
1 hard rubber comb fragment
6 flat clear glass
7 clear bottle glass
1 clear embossed panel bottle glass
5 green bottle glass
6 melted green glass
2 clear melted glass
3 burned bone utensil handle fragments with cross-hatched incising
9 calcined bone (1 fish vertebra)
2 slag (8 g)
69 white tubular seed beads
200 white barrel-shaped seed beads
126 blue transparent tubular seed beads
228 blue transparent barrel-shaped seed beads
3 Cornaline d'Allepo seed beads
5 tiny white donut-shaped seed beads
2 tiny blue donut-shaped seed beads
2 tiny red-on-white donut-shaped seed beads
50 fused lumps of blue and white seed beads
1 shell wampum bead

Level 4:

2 wrought nails
3 cut nails
3 nail fragments
2 iron scrap
1 lead shot
5 burned gunspall fragments
17 burned gunspall chips
1 pearlware body sherd
2 blue transfer-printed white ware body sherds
5 flat clear glass
2 clear bottle glass
2 clear melted glass
50 blue transparent tubular seed beads
121 blue transparent barrel-shaped seed beads
15 fused lumps of blue seed beads
104 white tubular seed beads
27 white barrel-shaped seed beads
2 fused lumps of white seed beads
3 tiny white donut-shaped seed beads
2 tiny blue donut-shaped seed beads
1 tiny clear donut-shaped seed beads
1 fused sand or daub (12 g)
10 slag (90 g)
2 charred wood (12 g)
5 calcined bone

Level 5:

1 cut nail fragment
1 cuprous wire vent prick
1 burned gunspall
2 burned gunspall chips
4 flat clear glass
1 thick clear glass (crizzled)
9 white tubular seed beads
28 compound white barrel-shaped seed beads with clear veneer
15 blue transparent tubular seed beads
18 blue transparent barrel-shaped seed beads
9 burned blue barrel-shaped seed beads
4 fused lumps of blue seed beads
1 fused lump of white seed beads
3 calcined bone
4 fused sand or daub (14 g)
APPENDIX B

1 melted yellow plastic

Level 6:

3 blue transparent barrel-shaped seed beads
2 white barrel-shaped seed beads
1 mass of organic material (seeds?)

Site Shovel Tests

ST 1:

1 whiteware
2 flat clear glass
1 quartzite
1 mammal bone

ST 3:

2 iron bucket rim fragments
1 wrought nail
1 cut nail
1 round-headed bolt
1 rolled iron scrap
264 flat clear glass (probable auto windshield)

Transect Shovel Tests

ST 1-2:

2 flat clear glass
1 slate

ST 1-3:

1 solarized storage jar
1 solarized storage jar neck with lightning closure

ST 1-4:

1 clear bottle neck with improved-tool finish
2 rocks

ST 1-5 (*):

1 wrought nail
1 white clay pipestem (bore: 5/64)
1 bulbar-arm silver trade cross
1 flat clear glass
1 green bottle glass

ST 1-6 (*):

2 solarized bottle glass
1 clear bottle glass

ST 1-7 (*):

1 wrought spike
1 wrought nail fragment

ST 1-8 (*):

1 wrought nail fragment
1 .45 cal. center fire cartridge
1 burned gunsall fragment
3 burned gunsall chips
1 clear storage jar base
1 green bottle glass
1 flat clear glass
1 whiteware body sherd
1 rosary bead
2 blue barrel-shaped seed beads
3 white barrel-shaped seed beads
1 white tubular seed bead
1 deep red tubular seed bead
1 deep red barrel-shaped seed bead

ST 1-9:

14 clear Mason jar glass (4 with
### APPENDIX B

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 clear bottle glass neck fragments with fully-automatic finish and cork closure</td>
<td></td>
</tr>
<tr>
<td>3 amber bottle glass</td>
<td></td>
</tr>
<tr>
<td>ST 2-5 (*):</td>
<td></td>
</tr>
<tr>
<td>1 Bristol glazed stoneware bottle lip fragment</td>
<td></td>
</tr>
<tr>
<td>1 white clay pipestem (bore: 6/64)</td>
<td></td>
</tr>
<tr>
<td>ST 2-7:</td>
<td></td>
</tr>
<tr>
<td>3 wire nails</td>
<td></td>
</tr>
<tr>
<td>1 flat clear glass</td>
<td></td>
</tr>
<tr>
<td>2 wood</td>
<td></td>
</tr>
<tr>
<td>ST 3-2:</td>
<td></td>
</tr>
<tr>
<td>1 rock</td>
<td></td>
</tr>
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### Early Historic Period Artifact Totals

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Count</th>
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<tbody>
<tr>
<td>wrought nails</td>
<td>27</td>
</tr>
<tr>
<td>wrought nail fragments</td>
<td>16</td>
</tr>
<tr>
<td>wrought spike</td>
<td>1</td>
</tr>
<tr>
<td>lead shot</td>
<td>2</td>
</tr>
<tr>
<td>lead scrap/splatter</td>
<td>2</td>
</tr>
<tr>
<td>cuprous vent prick</td>
<td>1</td>
</tr>
<tr>
<td>cuprous kettle rim</td>
<td>1</td>
</tr>
<tr>
<td>cuprous tinkling cones</td>
<td>2</td>
</tr>
<tr>
<td>pewter button</td>
<td>1</td>
</tr>
<tr>
<td>small silver cross</td>
<td>1</td>
</tr>
<tr>
<td>white clay pipestem</td>
<td>6</td>
</tr>
<tr>
<td>white clay pipebowl</td>
<td>1</td>
</tr>
<tr>
<td>gunspall</td>
<td>1</td>
</tr>
<tr>
<td>gunspall fragments</td>
<td>12</td>
</tr>
<tr>
<td>gunspall chips</td>
<td>58</td>
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<tr>
<td>seed beads</td>
<td>1,394</td>
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<tr>
<td>tubular</td>
<td>515</td>
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<tr>
<td>white</td>
<td>239</td>
</tr>
<tr>
<td>blue</td>
<td>271</td>
</tr>
<tr>
<td>deep red</td>
<td>5</td>
</tr>
<tr>
<td>barrel-shaped</td>
<td>851</td>
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<tr>
<td>white</td>
<td>359</td>
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<tr>
<td>blue</td>
<td>487</td>
</tr>
<tr>
<td>deep red</td>
<td>1</td>
</tr>
<tr>
<td>burnt orange</td>
<td>1</td>
</tr>
<tr>
<td>Cornaline d'Allepo</td>
<td>3</td>
</tr>
<tr>
<td>tiny donut-shaped</td>
<td>28</td>
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<tr>
<td>white</td>
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<td>blue</td>
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<td>red-on-white</td>
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<td>clear</td>
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<td>green</td>
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<td>fused seed bead lumps</td>
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<tr>
<td>white</td>
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<tr>
<td>blue</td>
<td>19</td>
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<tr>
<td>blue and white</td>
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<tr>
<td>shell wampum</td>
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</tr>
<tr>
<td>rosary bead</td>
<td>1</td>
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