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**WUSKWATIM GENERATION PROJECT**

**ENVIRONMENTAL IMPACT STATEMENT**

**Manitoba Hydro  
and  
Nisichawayasihk Cree Nation**

**April 2003**

**Volume 9  
Heritage Resources**



## PREFACE

Volume 9 (Heritage Resources) is one of a series of supporting technical volumes for Manitoba Hydro's and Nisichawayasihk Cree Nation's (NCN) application for environmental licensing of the Wuskwatim Generation Project (the Project) which is entitled Wuskwatim Generation Project Environmental Impact Statement, [Volume 1](#) (April 2003). Volume 9 has been prepared by independent discipline specialists who are members of the environmental study team retained to assist in the environmental assessment of the proposed Project and provides a Resource Use Impact Assessment prepared in accordance with Final Guidelines issued by provincial and federal regulators for the Project. The supporting volumes have contributed to the preparation of the summary Environmental Impact Statement ([Volume 1](#)) and also provide additional technical and professional supporting information to assist in the technical review of the EIS. The supporting documents have been reviewed by Manitoba Hydro and NCN and are technically consistent with the EIS. They have not been edited for consistency in format, style, or wording with either the Summary EIS ([Volume 1](#)) or other supporting volumes.

The Wuskwatim Generation Project EIS is comprised of the following:

[Volume 1](#) – Wuskwatim Generation Project: Environmental Impact Statement

[Volume 2](#) – Public Consultation and Involvement

[Volume 3](#) – Project Description and Evaluation of Alternatives

[Volume 4](#) – Physical Environment

[Volume 5](#) – Aquatic Environment

[Volume 6](#) – Terrestrial Environment

[Volume 7](#) – Resource Use

[Volume 8](#) – Socio-Economic Environment

Volume 9 – Heritage Resources

[Volume 10](#) – Cumulative Effects Assessment (Framework Approach)

Volume 9 (Heritage Resources) was prepared for Manitoba Hydro and Nisichawayasihk Cree Nation by Northern Lights Heritage Services Inc.

# HERITAGE RESOURCES VOLUME 9

## TABLE OF CONTENTS

|         |   |    |
|---------|---|----|
| 1.0     | Introduction.....   | 1  |
| 2.0     | Study Area .....  | 1  |
| 3.0     | Overview of Impacts to Heritage Resources .....   | 1  |
| 4.0     | Methods.....  | 3  |
| 4.1     | Previous Heritage Resource Surveys .....  | 3  |
| 4.2     | Predictive Modeling.....  | 4  |
| 4.3     | Preparatory Research .....  | 5  |
| 4.4     | Field Methods .....   | 6  |
| 5.0     | Heritage Resources Background.....  | 13 |
| 5.1     | Results of the Heritage Resource Impact Assessment.....                                   | 13 |
| 5.1.1   | Reach 1: Early Morning Rapids to Cranberry Lakes.....                                     | 13 |
| 5.1.2   | Reach 2: Wuskwatim Lake .....   | 14 |
| 5.1.3   | Reach 3: Wuskwatim Falls to Taskinigup Falls .....  | 15 |
| 5.1.3.1 | Channel Excavation at Wuskwatim Falls .....   | 15 |
| 5.1.3.2 | Generating Station at Taskinigup Falls.....   | 16 |
| 5.1.3.3 | North and South Banks of the Burntwood River: Wuskwatim<br>Falls to Taskinigup Falls..... | 18 |
| 5.1.3.4 | Water Intake on Wuskwatim Lake .....  | 19 |
| 5.1.4   | Reach 4: Taskinigup Falls to Jackpine Rapids .....  | 19 |
| 5.1.4.1 | Sewage Lagoon.....  | 20 |
| 5.1.5   | Reach 5: Mile 17 Access Road .....  | 21 |
| 5.1.6   | Reach 6: Borrow Areas.....  | 22 |
| 6.0     | Impacts and Mitigation .....  | 23 |
| 6.1     | Reach 1: Early Morning Rapids to Cranberry Lakes.....                                     | 23 |
| 6.2     | Reach 2: Wuskwatim Lake .....   | 23 |
| 6.3     | Reach 3: Wuskwatim Falls to Taskinigup Falls .....  | 23 |
| 6.4     | Reach 4: Taskinigup Falls to Jackpine Rapids .....  | 25 |
| 6.5     | Reach 5: Mile 17 Access Road .....  | 25 |
| 6.6     | Reach 6: Borrow Areas.....  | 26 |
| 7.0     | Residual Effects .....  | 26 |
| 8.0     | Cumulative Effects.....   | 26 |
| 9.0     | Environmental Monitoring.....   | 26 |
| 10.0    | Literature Cited.....   | 28 |
| 11.0    | Appendices.....   | 31 |

## LIST OF TABLES

|            |   |    |
|------------|---|----|
| Table 4-1. | Culturally identifiable archaeological sites on the Burntwood River between Early Morning Rapids and Opegano Lake ..... | 8  |
| Table 4-2. | Chronology of Manitoba Archaeology based on select technology .....   | 10 |

## LIST OF FIGURES

|             |   |    |
|-------------|---|----|
| Figure 2-1. | Location of the Wuskwatim Generation Project.....   | 2  |
| Figure 4-1. | Archaeological sites reported between Early Morning Rapids and Jackpine Falls on the Burntwood River including Wuskwatim and Opegano Lakes..... | 11 |
| Figure 4-2. | Approximate location of positive shovel test locations .....  | 12 |
| Figure 5-1. | Area of the proposed sewage lagoon. Reach 4: Taskinigup Falls to Jackpine Rapids .....  | 20 |
| Figure 6-1. | Trapper's cabin at Taskinigup Falls.....  | 24 |

## LIST OF APPENDICES

|              |   |    |
|--------------|---|----|
| Appendix 1.0 | Contact Eras .....                        | 31 |
| Appendix 2.0 | Summary of Wuskwatim GS Shovel Tests..... | 38 |

## **1.0 INTRODUCTION**

Heritage resources are indicators of past human activities. They provide valuable information about past lifeways, are the link between past and present generations, and are the surviving, tangible products of past culture. Culture can be described as the fabric of human existence and is the source of one's identity. The following section discusses the environmental impact to heritage resources resulting from the construction and operation of the Wuskwatim Generation Project (the Project).

The Heritage Resources Impact Assessment (HRIA) provided in this document addresses the guidelines for the Environmental Impact Statement (EIS) for the Wuskwatim Generation Project issued in April 2002.

## **2.0 STUDY AREA**

The Project is located within the traditional lands of Nisichawayasihk Cree Nation (NCN) (Figure 2-1). The traditional lands of NCN have a rich archaeological record that attests to a long history of land use and occupancy, especially in the Wuskwatim Lake area. Furthermore, many aspects of their history have been passed down verbally from generation to generation, thus preserving important cultural and physical heritage knowledge. The archaeological record lends support to the oral history of long-term occupation by NCN and their ancestors. In turn, the oral history record gives meaning to many of the archaeological sites discovered and the objects that are recovered. Together, these two techniques illustrate a continuity of land use and occupancy that extends back into the ancient past.

## **3.0 OVERVIEW OF IMPACTS TO HERITAGE RESOURCES**

The major focus of the HRIA was at Taskinigup Falls, where the power house, cofferdam and spillway are to be constructed, at the proposed channel excavation at Wuskwatim Falls, along the banks of the Burntwood River below the 234 m contour level, and locations within the proposed construction camp site that were considered to have a moderate to high potential for heritage resources. Other areas assessed include borrow locations north of the Burntwood River, the Mile 17 Access Road, and a point on the east side of Wuskwatim Lake where NCN Elders recalled a former settlement. Impacts to areas upstream of Wuskwatim Falls as a result of the Project are expected to be minimal, therefore, these areas are only briefly discussed in the EIS.

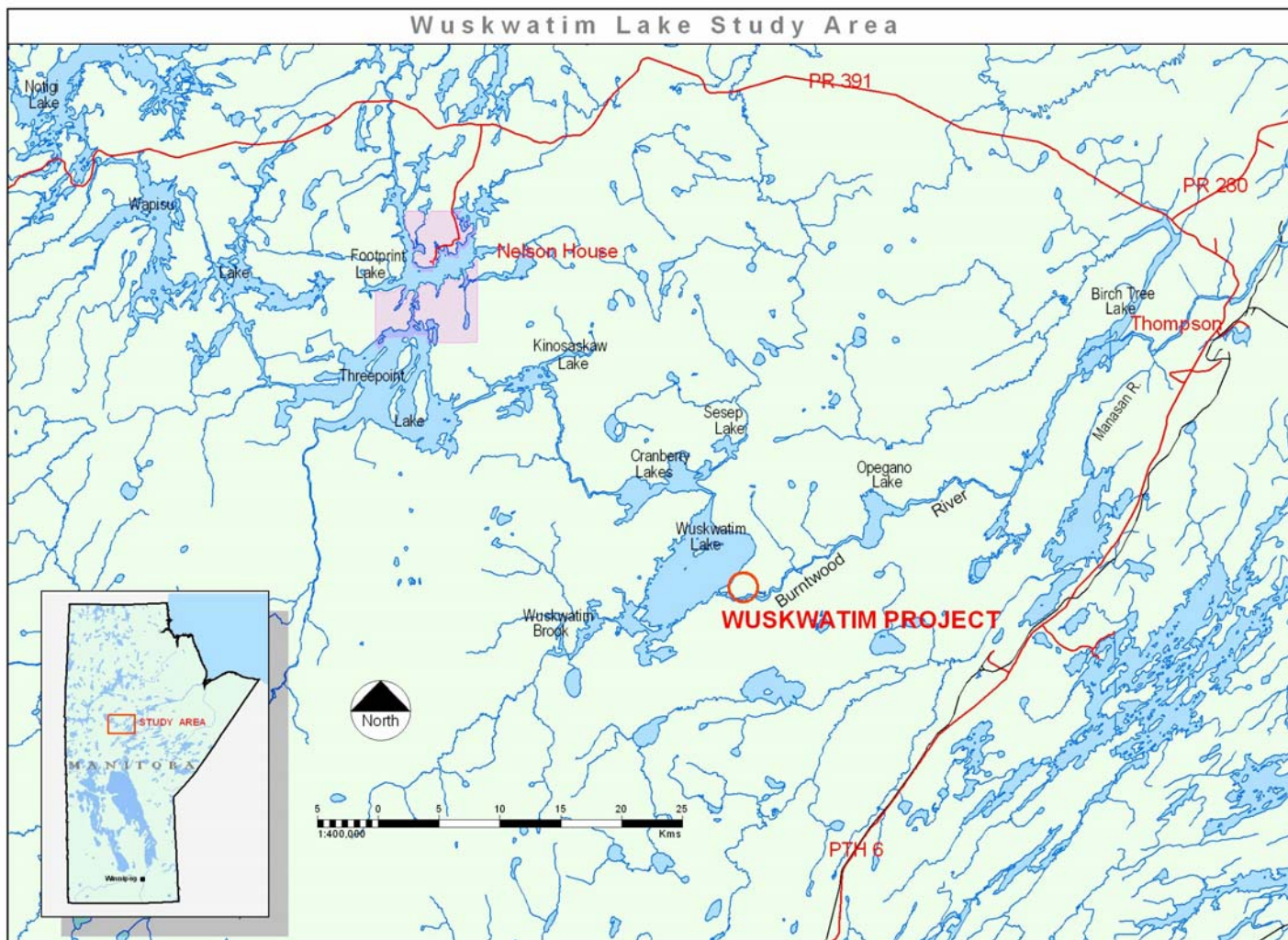


Figure 2-1. Location of the Wuskwatin Generation Project.

## **4.0 METHODS**

This document is based on the HRIA conducted by the archaeological study team between 2000 and 2002. Data from mitigation studies conducted by the Historic Resources Branch of Manitoba Culture, Heritage and Tourism as a result of impacts from the Churchill River Diversion (CRD) on the Burntwood River and Wuskwatim Lake also are included in the EIS.

Standard archaeological methods were used to conduct the HRIA:

- Literature review and data gathering regarding existing heritage resource sites;
- Plotting of known sites on appropriate maps;
- Study area characterization;
- Informal gathering of traditional knowledge;
- Field investigations to determine the nature, extent and significance of impacts; and
- Reporting of results.

### **4.1 PREVIOUS HERITAGE RESOURCE SURVEYS**

The first survey for heritage resources in the Wuskwatim study area was undertaken in 1971 as a result of the impending CRD, and became known as the Churchill River Diversion Archaeological Project (CRDAP). To compensate for the size of the area, the short length of time, and limited funding available, survey methodology consisted of examining high potential areas such as elevated rock outcrops, portages, and areas near the lake entrances (Wiersum 1972). Investigations were continued on Wuskwatim and Opegano lakes in 1972 (Weirsum and Mallory 1973) and the Wuskwatim Lake area was re-examined in 1975 (Tisdale 1975). Eight archaeological sites were recorded in the study area by CRDAP. In 1976, the CRDAP was dissolved.

Research resumed in the Wuskwatim Lake area during the early 1990s. Unusually low water levels had exposed a previously undiscovered burial site to the north in the Southern Indian Lake area and, as a result, Historic Resources Branch established an agreement with Manitoba Hydro to identify, study, preserve, and protect archaeological sites within the CRD watershed. The mitigation methodology has been to examine the shorelines created by CRD and identify burial and archaeological sites endangered by the newly established water levels.

Surveys have been conducted on Wuskwatim Lake and the section of the Burntwood River between Wuskwatim Falls and Opegano Lake in 1992 (Riddle 1994a), and 1993 (Riddle 1994b). A three-phase methodology was used to survey these areas. A surface collection along the shoreline, shovel testing of backwater areas to determine presence and significance of heritage resources, and block excavation of culturally significant sites. Seventeen new sites were recorded on Wuskwatim Lake and 15 along the Burntwood River between Wuskwatim Falls and Jackpine Rapids (Riddle 1994a and 1994b).

In 1999, a survey to inventory and assess the heritage resources between Early Morning Rapids and the outflow of Wuskwatim Lake at Wuskwatim Falls was undertaken (Smith and Brownlee 1999). Twenty-five previously recorded sites were assessed and four new archaeological sites were located. These surveys have documented the annual impact to archaeological sites as a result of erosion. For example, gravesites on the south shore of Wuskwatim Lake were over 2 m from the eroding bank when first identified in 1993. In 1999, the graves were within 1 m and in danger of slumping into the water (Smith and Brownlee 1999).

Historic Resources Branch completed a HRIA of a proposed construction camp site approximately 300 m north of the Taskinigup Falls in May 1999 (Riddle 1999). No heritage resources were recovered. As a consequence of low water levels at that time, a shoreline survey upstream and downstream of Taskinigup Falls also was completed. Two previously unrecorded sites were located.

From 1971 until the present, all archaeological sites found between Early Morning Rapids and Wuskwatim Lake were located at 240 m ASL and those below Wuskwatim Falls to Jackpine Rapids were situated below 216 m ASL. This coincided with the original average water elevations prior to the Churchill River Diversion Project. Since 1976, shoreline erosion has impacted most of the known archaeological sites on Burntwood River and Wuskwatim Lake. Priority for mitigative measures at most sites was determined to be low or non-existent (Smith and Brownlee 1999). Archaeological fieldwork at Wuskwatim Lake that is currently being undertaken by Historic Resources Branch consists of mitigation in the form of monitoring and salvage.

## **4.2 PREDICTIVE MODELING**

Areas of moderate to high heritage resource potential within the study area were identified based on the area characterization study, data collected during the pre-CRD impact surveys, the post-CRD Historic Resources Branch mitigation surveys, plus



additional predictive modeling information from research conducted in the Manitoba Model Forest on the east side of Lake Winnipeg (Petch *et al.* 2000). Predictive modeling uses standard physical variables (distance from water, slope, aspect, and vista) to determine if an area has a low to moderate potential for heritage resources. The Model Forest predictive modeling study determined that habitation sites were usually located close to water, between 5 and 50 m from water's edge, on a slope of less than 5° with a vista of between 60° to 90°. The Model Forest study also showed that campsites in areas well removed from water are rare. Regions distant from major watercourses were used primarily for the quarrying and primary reduction of lithic material for stone tools. The inland areas were probably also used to harvest game and plants when available and for specific ceremonies. This area was accessed either by canoeing up the small feeder streams, by foot along elevated ridges, or by dog-team in the winter.

Predictive modelling for this study was hampered by the paucity of data for areas well removed from the Burntwood River such as the Mile 17 Access Road and the proposed borrow areas. As per Historic Resources Branch policy, all stream crossings were ranked as having a moderate heritage resource potential, as were any upland areas, such as eskers, that were identified as potential borrow locations.

### **4.3 PREPARATORY RESEARCH**

Prior to field studies, a literature review of previous archaeological research was conducted as part of the preliminary preparation for field studies. Research revealed that 44 archaeological sites (see Figure 4-1) had been recorded between Early Morning and Jackpine Rapids on the Burntwood River. This included sites identified on Wuskwatim Lake. Of these sites, 17 were dateable based on the diagnostic artifacts that were recovered. Once the site records were reviewed at Historic Resources Branch they were plotted on 1:50,000 NTS maps. Table 4-1 was prepared to summarize information about the dateable sites. The majority of these sites, originally recorded during pre-CRD investigations, were found at elevations between 196 and 231 m ASL and within 0 to 10 m of the original shoreline. In general, the dateable sites cluster at three major locations: the debouchment of the Burntwood River into Wuskwatim Lake; the southwest quarter of Wuskwatim Lake; and between Wuskwatim and Taskinigup falls. All previously recorded sites have been severely impacted by raised water levels associated with CRD.

These data, plus previous research conducted in the study area, were used to draft an area characterization that summarized the history of land occupation. From the analysis of these data and information obtained from interviewing members of the Nisichawayasihk Cree Nation, locations within the area of the generating station facility, access road and

borrow pits were identified for field investigation. By placing the cultural history of the study area into a general framework the categories of potential artifact assemblages were identified. This was particularly useful in the field when training NCN field assistants on the range of artifacts that could be encountered (Table 4-2).

To facilitate discussion, the study area (Figure 2-1) was divided into six reaches:

1. Early Morning Rapids to Cranberry Lakes;
2. Wuskwatim Lake;
3. Wuskwatim Falls to Taskinigup Falls;
4. Taskinigup to Jackpine Rapids;
5. Mile 17 Access Road; and
6. Borrow Areas.

#### **4.4 FIELD METHODS**

The areas identified for investigation were accessed by helicopter. Pedestrian survey was the first type of field method used for the investigations. Crew members walked several metres apart from each other, scanning the ground cover for any surficially exposed signs of former human habitation, such as stone and metal tools, native ceramics and glazed earthenware china, and stone or earthen foundation features. Coloured flags were used to identify areas that suggested features or contained surface artifacts. Artifacts were then collected and their locations recorded using GPS. This type of survey was conducted along the access road, within the footprint of the generating station facility components and along the shorelines of the Burntwood River between Wuskwatim Falls and Taskinigup Falls.

Once the initial pedestrian survey was completed, transects were established using chain and compass and GPS to record coordinates. These were located along the north and south shores, between Wuskwatim Falls and Taskinigup Falls, and immediately below Taskinigup Falls. Shovel tests were then placed within each transect beginning at the shoreline to the 50 m mark and then at 10 m intervals to the 100 m mark. Shovel tests within the footprint of the generating station facility were placed at each of the proposed structure sites. Artifacts that were recovered from shovel testing were collected once their GPS coordinates were recorded.

Where shovel testing was positive for signs of former human activity (Figure 4-2), the test pit was enlarged to a 1 x 1 metre unit and excavated in 5.0 cm levels until sterile lacustrine clay or bedrock was encountered. Artifacts and features were measured and photographed *in situ* prior to removal from their original context. Changes in soil colour that were indicative of past hearths also were noted. One area near Taskinigup Falls that contained the remnants of a log cabin was investigated by remote sensing with an EM-38 electromagnetic ground conductivity meter.

In addition to the archaeological field methods, a set of anthropological methods was used to provide cultural data that could be relevant to interpreting the archaeological record. Nine cultural indicators were developed for the cultural component of the EIS. These are: language, kinship, traditional knowledge, worldview, cultural practices, leisure, law and order, cultural products and health and wellness. This is by no means an exhaustive list, but is believed to address aspects of culture that are most susceptible to change. The archaeological study team used these data to identify areas of medium to high potential for cultural significance.

Table 4-1. Culturally Identifiable Archaeological Sites on the Burntwood River Between Early Morning Rapids and Opegano Lake.

| Site    | Map    | UTMX<br>NAD27-Z14 | UTMY<br>NAD27-Z14 | Elev.<br>(m) | Description                                    | Type   | Culture    |
|---------|--------|-------------------|-------------------|--------------|--|--------|------------|
| GjLn-08 | 63O/09 | 546282            | 6162224           | 204          | East bank Burntwood R. 700 m from Opegano Lake | Camp   | Woodland   |
|         |        |                   |                   |              |  | Camp   | Historic   |
| GjLp-05 | 63O/10 | 529982            | 6160923           | 231          | East shore northeast part Wuskwatim Lake       | Camp   | Laurel     |
|         |        |                   |                   |              |  | Camp   | Selkirk    |
| GjLp-17 | 63O/10 | 529782            | 6162623           | 231          | West shore Burntwood R @ Wuskwatim Lake        | Burial | Historic   |
|         |        |                   |                   |              |  | Camp   | Archaic    |
| GjLp-16 | 63O/10 | 528982            | 6163723           | 231          | North side Burntwood R. @ Wuskwatim Lake       | Camp   | Laurel     |
|         |        |                   |                   |              |  | Camp   | Blackduck  |
|         |        |                   |                   |              |  | Camp   | Selkirk    |
|         |        |                   |                   |              |  | Camp   | Fur trade  |
|         |        |                   |                   |              |  | Camp   | Historic   |
| GjLp-07 | 63O/10 | 528682            | 6164123           | 231          | North bank Burntwood R. @ mouth of Muskoseu R. | Camp   | Archaic    |
|         |        |                   |                   |              |  | Camp   | Laurel     |
|         |        |                   |                   |              |  | Camp   | Clearwater |
|         |        |                   |                   |              |  | Camp   | Historic   |
| GjLp-13 | 63O/10 | 526182            | 6164023           | 231          | North shore Burntwood R.                       | Burial | Historic   |
|         |        |                   |                   |              |  | Camp   | Laurel     |
| GjLp-12 | 63O/10 | 525882            | 6152523           | 231          | Both sides small isle                          | Camp   | Archaic    |
|         |        |                   |                   |              |  | Camp   | Laurel     |
|         |        |                   |                   |              |  | Camp   | Kame Hills |
|         |        |                   |                   |              |  | Camp   | Fur trade  |

Table 4-1. Continued.

| Site    | Map    | UTMX<br>NAD27-Z14 | UTMY<br>NAD27-Z14 | Elev.<br>(m) | Description                                 | Type     | Culture       |
|---------|--------|-------------------|-------------------|--------------|---|----------|---------------|
| GjLp-03 | 63O/10 | 525882            | 5152223           | 231          | Peninsula in southwest part Wuskwatim Lake  | Camp     | Oxbow         |
|         |        |                   |                   |              |   | Camp     | Laurel        |
|         |        |                   |                   |              |   | Camp     | Besant        |
|         |        |                   |                   |              |   | Camp     | Blackduck     |
|         |        |                   |                   |              |   | Camp     | Fur trade     |
| GjLp-23 | 63O/10 | 525582            | 6152423           | 231          | Small bay on peninsula in Wuskwatim Lake    | Burial   | Laurel        |
|         |        |                   |                   |              |   | Camp     | Laurel        |
|         |        |                   |                   |              |   | Camp     | Blackduck     |
|         |        |                   |                   |              |   | Camp     | Selkirk       |
|         |        |                   |                   |              |   | Camp     | Historic      |
| GjLp-08 | 63O/10 | 525482            | 6152023           | 231          | South side point south shore Wuskwatim Lake | Burial   | Undated       |
|         |        |                   |                   |              |   | Camp     | Oxbow         |
|         |        |                   |                   |              |   | Camp     | Laurel        |
|         |        |                   |                   |              |   | Camp     | Blackduck     |
|         |        |                   |                   |              |   | Camp     | Historic      |
| GjLp-24 | 63O/10 | 525282            | 6151523           | 231          | Island in south part Wuskwatim Lake         | Camp     | Selkirk       |
|         |        |                   |                   |              |   | Camp     | Fur trade     |
|         |        |                   |                   |              |   | Camp     | Historic      |
| GjLp-27 | 63O/10 | 524781            | 6152022           | 231          | South shore south end Wuskwatim Lake        | Isolated | Oxbow         |
|         |        |                   |                   |              |   | Isolated | Fur trade     |
| GjLn-07 | 63O/09 | 542582            | 6162224           | 216          | West shore of Opegano                       | Camp     | Late Woodland |
| GjLn-09 | 63O/09 | 549982            | 6164424           | 204          | 1.6 km northeast of Jackpine Rapids         | Camp     | Pelican Lake  |
| GkLq-10 | 63O/10 | 515982            | 6172223           | 240          | South shore Burntwood R.                    | Camp     | Oxbow         |
|         |        |                   |                   |              |   | Camp     | Woodland      |
|         |        |                   |                   |              |   | Camp     | Fur trade     |

Table 4-2. Chronology of Manitoba Archaeology Based on Select Technology.

| <i>Archaeological Period</i>                                     | <i>Technology</i>   |  |
|--|---|--|
|  | <i>Container Type</i>   | <i>Food Procurement</i>  |
| <b>Late Post-European Contact Era</b><br>(ca. 130 – 70 B.P.)     | Porcelain Tableware<br>Earthenware Dinnerware<br>Stoneware Storage Jars<br>Tin Cans   | Repeating Rifles<br>Automatic Shotguns   |
| <b>Middle Post-European Contact Era</b><br>(ca. 179 – 130 B.P.)  | Earthenware Dinnerware<br>Stoneware Storage Jars<br>Copper Pots/Kettles   | Breach Loading Rifles/Shotguns<br>Percussion Cap Muskets   |
| <b>Early Post-European Contact Era</b><br>(ca. 360 – 179 B.P.)   | Copper Pots/Kettles   | Flintlock Muskets/Shotguns<br>Metal Traps<br>Projectile Points <ul style="list-style-type: none"> <li>• Metal</li> <li>• Side-notched</li> </ul>   |
| <b>Late Pre-European Contact Era</b><br>(ca. 2200 - 360 B.P.)    | Clay Vessels: <ul style="list-style-type: none"> <li>• Selkirk</li> <li>• Clearwater Lake Punctate</li> <li>• Duck Bay Punctate</li> <li>• Blackduck</li> <li>• Laurel</li> </ul> | Bow & Arrow<br>Bone harpoons<br>Nets<br>Projectile Points <ul style="list-style-type: none"> <li>• Side-notched</li> <li>• Eastern and Plains Triangular</li> <li>• Avonlea</li> <li>• Besant/Sonota</li> </ul>                |
| <b>Middle Pre-European Contact Era</b><br>(ca. 6500 - 2500 B.P.) | Fiber Baskets/Bags<br>Animal Viscera/Hide   | Atlatl<br>Bone harpoons<br>Nets<br>Projectile Points <ul style="list-style-type: none"> <li>• Larter Tanged - Pelican Lake</li> <li>• Duncan/Hanna/McKean</li> <li>• Old Copper</li> <li>• Raddatz</li> <li>• Oxbow</li> </ul> |
| <b>Early Pre-European Contact Era</b><br>(ca. 12000 – 6500 B.P.) | Fiber Baskets/Bags<br>Animal Viscera/Hide   | Spear<br>Bone harpoons<br>Projectile Points <ul style="list-style-type: none"> <li>• Agate Basin</li> <li>• Plano</li> </ul>   |

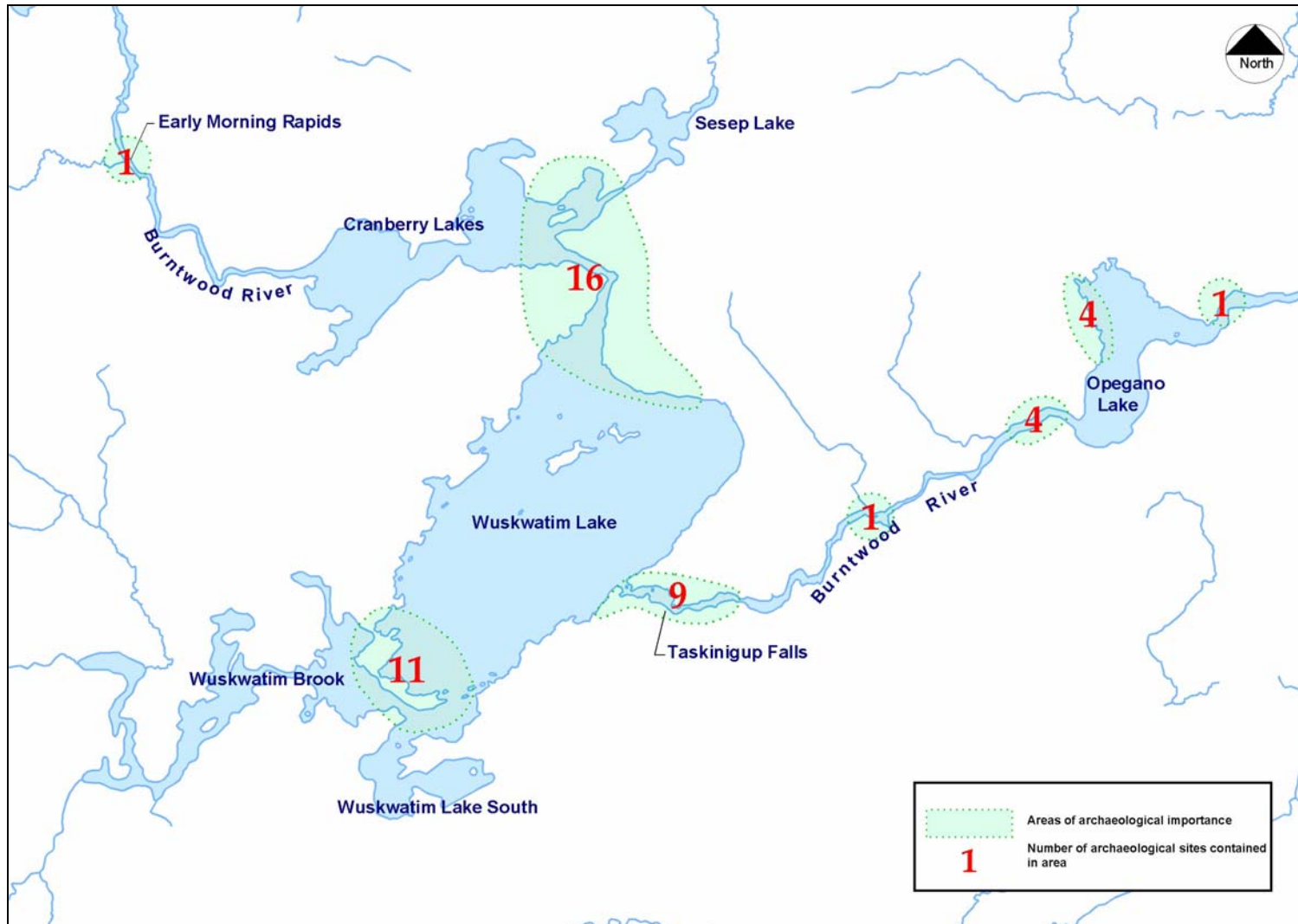


Figure 4-1. Archaeological sites reported between Early Morning Rapids and Jackpine Falls on the Burntwood River including Wuskwatim and Opegano lakes.



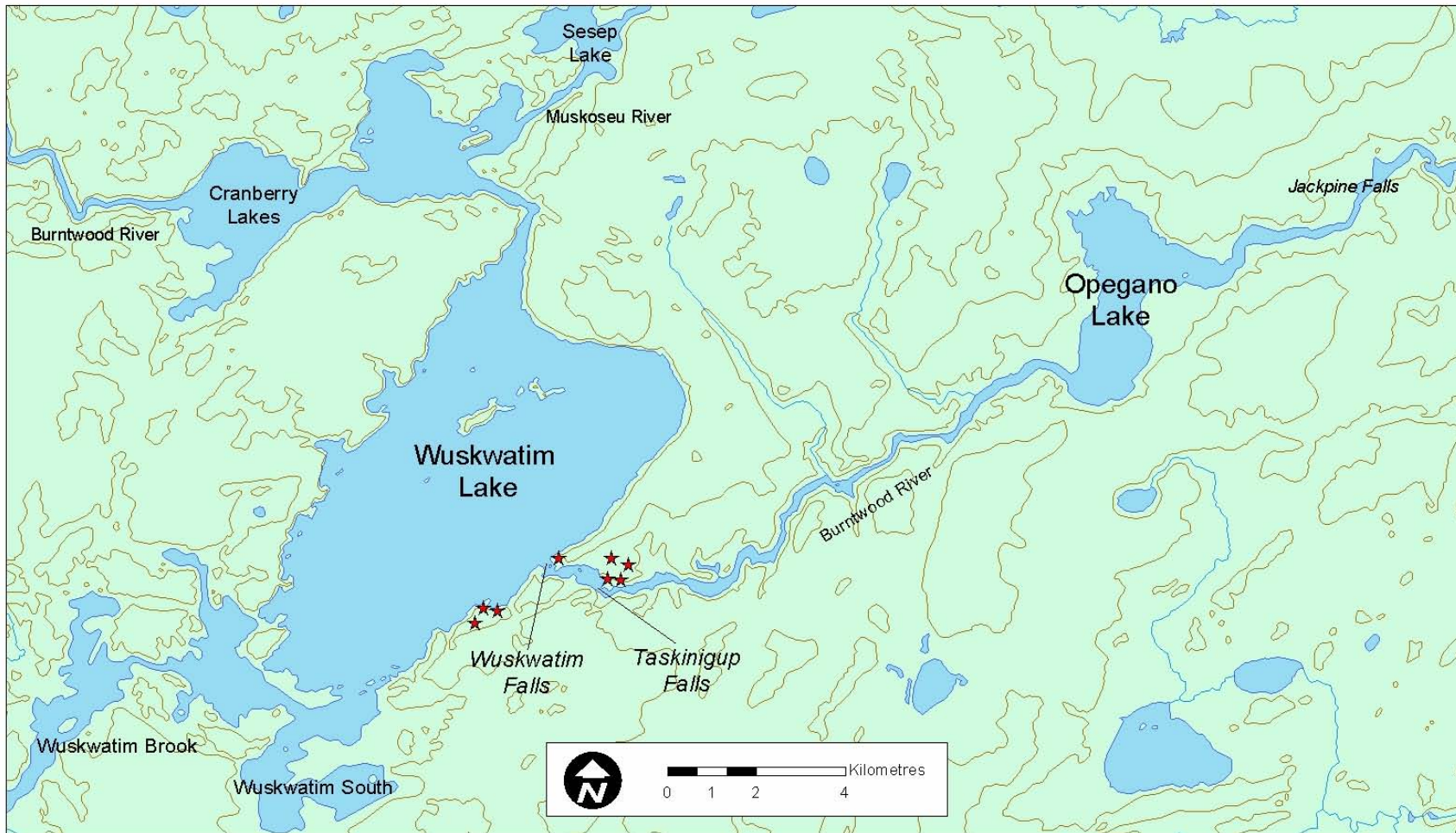


Figure 4-2. Approximate location of positive shovel test locations (Scale 1:80,000)



## **5.0 HERITAGE RESOURCES BACKGROUND**

The heritage resources that have been found by previous archaeological field research within the Wuskwatim Lake area represent the physical evidence of past people, dating to 6500 BP. Generally, the archaeological record is divided into time periods that are based on changes in technology. A basic description of the culture history for the Wuskwatim GS study area, as identified by the archaeological record, is found in [Appendix 1](#).

### **5.1 RESULTS OF THE HERITAGE RESOURCE IMPACT ASSESSMENT**

Reaches 1 and 2 were not assessed by the project's archaeological study team during the 2000 to 2002 HRIA. These locations were assessed by the Historic Resources Branch staff under the CRD mitigation program (Smith and Brownlee 1999). Therefore, it is expected that any mitigation that would be required in this area as a result of the Project will be incorporated into the ongoing mitigation program.

#### **5.1.1 Reach 1: Early Morning Rapids to Cranberry Lakes**

Seven archaeological sites have been recorded in the reach of river from Early Morning Rapids to the Cranberry Lakes ([Figure 4-1](#)). All except one occur at the east end of the Cranberry Lakes near the Burntwood River's entrance into Wuskwatim Lake. There is the potential for culturally significant sites to be present, particularly at Early Morning Rapids. Based on an archaeological understanding of the cultural history of Pre-contact people, there is a moderate to high potential for ceremonial sites to occur at rapids and waterfalls. The oral tradition for NCN relates that Early Morning Rapids is the site where a Medicine Man once prayed all night. Such a site would not likely contain any physical evidence, but as part of the oral tradition identifies cultural activity at specific locations. These sites are characterized by a specific place name that becomes a mnemonic device for remembering past events. They are an integral part of the collective identity of NCN. In addition, elevated locations overlooking water bodies, frequently on the convex banks of rivers, are often preferred burial sites because of their aesthetic setting.

The archaeological sites that at one time lined the shores of the Burntwood River before its entrance into Wuskwatim Lake represented 7000 years of cultural history. Most of the physical evidence of past people has been collected by archaeological salvage related to the CRD project. Archaeological sites GjLp-13, 14 and 15 (see co-ordinates in [Table 4-](#)

1) contained human skeletal elements. GjLp-06, 07, 11 and 16 (see co-ordinates [Table 4-1](#)) have been completely impacted and no longer exist as recognizable sites.

### **5.1.2 Reach 2: Wuskwatim Lake**

Twenty-one archaeological sites ([Figure 4-1](#)) have been identified on Wuskwatim Lake, the majority of which have been impacted by active erosion. Historic Resources Branch has continued to conduct salvage archaeology of these sites as part of a mitigative program requested by NCN.

In the spring of 2002, during interviews with NCN Elders as part of the Cultural Impact component of the assessment, information was obtained on possible clay stove features along the east shore of Wuskwatim Lake dating to Early Post-European Contact Era. This site is approximately 1.5 km southwest of Wuskwatim Falls. The archaeological study team was requested to ground truth this location.

There may have been a number of canoe landing spots on the northeast tip of the point (529245E6154373N) prior to CRD but today the banks are extremely steep. A large section of the shoreline toward the southwest end of the point is covered in deadfall as a result of strong onshore winds. While the south side of the point is protected from prevailing winds, it also suffers from severe erosion and bank slumpage.

Remains of a log structure, the foundation of a second structure, two storage pits and several garbage middens were recorded 30 m southwest of the northern tip of the peninsula. A metal stove was observed in the northeast corner of the cabin foundation but was diagnostic of the post-1900 period. Test excavations in and adjacent to the cabin foundation recovered a quantity of material from the *ca.* 1950 period. Other diagnostic artifacts recovered from the site suggested a *ca.* 1930 to 1950 date for occupation. Faunal remains recovered from inside the foundation included lynx, caribou or moose, rabbit, and northern pike. Testing was implemented north and northeast of the foundation to determine presence of any earlier occupations closer to the lakeshore. No artifacts diagnostic of the pre-1900 period were recovered in any of the tests. Where possible, the shoreline was subjected to a pedestrian survey for eroding cultural material. The shore immediately north of the cabin features is primarily an eroded outcrop, while the extreme northeastern tip of the point is an eroding clay beach. No heritage resources were observed along the shoreline.

A pedestrian survey along the north shore of the point from its northeast tip to a small cove approximately 350 m southwest was conducted to locate the purported chimney

features. No suspicious mounds, stone piles suggestive of chimneys, or artifacts eroding from the embankment were observed. A similar transect on the south side of the point northeast back to the peninsula tip was also conducted with negative results (Figure 4-1).

The absence of pre-1900 recoveries could be a function of erosion having removed all vestiges of the chimney features or that the chimney features are located elsewhere in the area. However, it can be concluded that either the chimneys have already eroded into the lake or are far enough back from the shoreline that erosion has not impacted them. If the former, then the heritage resources are lost; if the latter, then the features will not be in danger of impact from the proposed generating station. By way of example, the cabin foundation found at GjLp-32 is in no immediate danger of destruction given that the site is at least 5 m above the lake.

### **5.1.3 Reach 3: Wuskwatim Falls to Taskinigup Falls**

The majority of the 2000 to 2002 HRIA conducted by the archaeological study team was concentrated between Wuskwatim Falls and Taskinigup Falls as this is the primary location of the generating station and associated facilities and the area that will be flooded. Areas examined included the channel excavation at Wuskwatim Falls; the main dam, powerhouse and generating station sites at Taskinigup Falls; the construction camp water intake facility on Wuskwatim Lake and associated construction camp facilities north of Taskinigup Falls. Appendix 2 summarizes the results of all shovel tests excavated during the HRIA.

#### **5.1.3.1 Channel Excavation at Wuskwatim Falls**

Testing at Wuskwatim Falls at the proposed channel excavation site consisted of a 50 m long transect through a narrow corridor that had been recently cleared. A metal benchmark placed into the rock outcrop along the shoreline was used as the 0/0 point, at 14-6155256N/530634E, and tests were placed at 10 m intervals along a line that extended 15° East of Magnetic North. Shovel tests were also placed west of the transect line.

Heritage resources were recorded in two shovel tests. N20/0 contained a large rock concentration that lay beneath the organic humus layer and above the B-horizon clay. It was concluded that the feature was of some antiquity because the stones lay beneath the organic layer. Furthermore, given that no other similar alignment or stones of similar size were recorded in any other test, it was concluded that this was a cultural feature and not a natural alignment. The stones were scattered over an area measuring approximately

0.9 m north-south and 0.9 m east. It was concluded that the stones were most likely the remains of a way marker on the Wuskwatim Falls portage.

The test at N16.8/5.5W produced a gray chert waste flake 0.15 m below ground surface. The artifact measured 3.75 cm long, 2.08 cm wide and was 1.21 cm thick. Small stone flakes had been removed from the dorsal and ventral surfaces of the artifact. The flake probably marks a location where a Pre-European Contact Era hunter was manufacturing a stone tool.

The channel excavation will also impact a narrow point of land below Wuskwatim Falls. The north side of the point has suffered severe erosion as would be expected, given that the waters of the falls flow directly towards this shoreline. The water's edge along this side of the point is a 15 to 20 m wide expanse of eroded bedrock with the vegetated area rising steeply behind. There is a steep rock outcrop through the centre of the point with ground cover alternating between exposed rock, moss, or black spruce. This spine along the point would not have been a good camping spot. The south shore of the point is not as severely eroded with a 3 to 5 m wide beach of rocky shoreline.

Given the amount of erosion along the shoreline at this location, conventional predictive modelling using relevant criteria was difficult. The ground surface of the vegetated area through the centre of the point on either side of the rock outcrop is undulating. In addition, the majority of areas along the shoreline have a slope of greater than 10°. Seven test pits were excavated across the point. Neither heritage resources nor soil strata indicative of human habitation were exposed in any of the tests. One test, located at 14-530785mE/61544900mN, contained a black burn lens between 0.16 and 0.18 m below the surface. No heritage resources were found in association and it was concluded this represented a natural burn. The 1927 oblique aerial photographs show that the entire Wuskwatim Falls to Taskinigup Falls area had been burned shortly before that time. This lens may relate to that burn.

### **5.1.3.2 *Generating Station at Taskinigup Falls***

Shovel testing was conducted at the west terminus of the Taskinigup Falls portage. This location corresponds with the approximate northwest edge of the proposed spillway. The tests were placed at 10 m intervals on a 50 m long transect that began 4.0 m east of the water's edge and proceeded along a course 80° east of Magnetic North. The starting point (datum or 0/0) was located at 6154994N/531824E. No heritage resources were found in any of the shovel tests. The paucity of heritage resources may be the result of:

1. erosion which has removed any site materials that were originally deposited along the shore;
2. pre-CRD exploration activities;
3. no deposition of artifacts along the trail although this portage was probably used over an extended period of time; or
4. the tests were not placed in areas of intact archaeological site materials.

A pedestrian survey along the north shore of the Burntwood River upstream of the falls was conducted to access two known cabin locations (NCN Resource user pers. comm. 2000). One foundation was located at 14-6155050mN/531790mE and stood 27.5 m north of the shoreline. This feature consisted of two intact walls, three logs high. Cabin dimensions were approximately 4.3 m north-south x 3.9 m east-west and the walls of the structure were set 45° west of Magnetic North. The corners of the walls were saddle-notched and earth had been mounded around the base of the sill log.

A remote sensing survey was conducted across the cabin area using an EM-38 electromagnetic ground conductivity meter. Shovel testing inside the cabin and between the south structure wall and the Burntwood River recovered artifacts diagnostic of the 1920 to 1950 period. The remains of a canoe, along with butchered porcupine and moose bone, were found in the interior of the cabin. Elders from NCN could not recollect who lived there, but it may have been a former cabin of Mr. Duncan Hart (NCN Elder pers. comm. 2002).

A second possible cabin feature, found at 14-6155039mN/531726mE, consisted of a rectangular earth mound. The structure sat 14.5 m north of the riverbank and measured approximately 3.5 m x 3.5 m. The east wall was positioned the 165° east of Magnetic North. Four shovel tests were excavated and neither heritage resources nor soils strata indicative of past cultural activity were recorded.

A concentration of lithic flakes was found along the water's edge below the area tested and had probably eroded from the riverbank. The assemblage consisted of five quartz flakes, one of which displayed lateral retouch, three chert flakes, and one basalt flake. A shovel test was dug on the bank above the shoreline deposit but no additional heritage resources were recovered. It was concluded that there were no *in situ* remains of this small site.

### **5.1.3.3 North and South Banks of the Burntwood River: Wuskwatim Falls to Taskinigup Falls**

The south and north banks of the Burntwood River between Wuskwatim Falls and Taskinigup Falls below the 234 m contour were examined by pedestrian survey and shovel testing. The riverbank throughout most of this area is undergoing erosion and slumping and the steep banks are currently unstable. The traverse on the south bank began at 14-531609mE/6154680mN and proceeded southwesterly. The initial 40 to 50 m of the segment was cleared by Manitoba Hydro surveyors and several lathe survey points are still standing. The locations of several of these stations were recorded by GPS as reference points.

One site was recorded along the south bank on the basis of material found in a tree throw (the roots and soil that are exposed when a tree falls over) at 14-531144mE/6154960mN. Site material consisted of 15 small burnt bone fragments, one 15.15 cm-long granite hammerstone, and a granite thinning flake. None of the artifacts collected suggested a date for occupation. Shovel testing was conducted on the shoreline terrace above the tree throw but neither additional artifacts nor soil strata indicative of past human activity were observed. Based on examination of the exposed shoreline embankment and shovel testing, it is evident that most of this site has slumped into the river.

No cabin foundations, chimney mounds or potential burial mounds were observed along the south shore of the Burntwood River. Furthermore, the amount of shoreline slump and density of tree throws increases as one moves upstream toward Wuskwatim Falls past a point at approximately 530820mE/6154900mN. Therefore, the potential for any intact heritage resources along this portion of the riverbank is low.

The north bank of the Burntwood River was traversed from the point of land just below Wuskwatim Falls at 14-530750mE/6154900mN to the west side of the Taskinigup Falls portage at 14-531863mE/6154986mN. Three concentrations of lithic tools and reduction flakes were recovered along a 60 m section of the shoreline starting at 14-530846mE/61655136mN. Quartz bifaces, lithic reduction flakes, a quartz scraper, and a possible granite projectile point were recovered. The point was side notched, suggesting a Late Precontact date for a portion of the site assemblage. No additional site material could be observed in the embankment profiles at any of the three concentrations. The terraces above the eroded embankments were at a slope of greater than 10° and, therefore, were not tested.

#### **5.1.3.4 Water Intake on Wuskwatim Lake**

The proposed water intake facility for the construction camp is located along the east shore of Wuskwatim Lake approximately 1.7 km northeast of Wuskwatim Falls at 14-531700mE/6156200mN. The shoreline at the water intake site is eroded bedrock that steeply rises to an upper terrace. Height of the terrace above the shoreline is 1.5 to 2.0 m and, at a distance of about 25 m, rises an additional 2 to 3 m to a second terrace. The water intake is confined to the shoreline and the first terrace.

Two shovel tests were dug in the approximate centre of the site for the proposed facility and no heritage resources were exposed in either test. This area has an extremely low potential for heritage resources given the steep slope from the lakeshore up to the terrace. The first test produced a charred wood lens 0.16 to 0.17 m below the surface. The second test contained fired clay fragments within a charred lens 0.37 to 0.38 m below the ground surface. These appeared to be natural rather than cultural given the paucity of associated heritage resources.

#### **5.1.4 Reach 4: Taskinigup Falls to Jackpine Rapids**

Ten archaeological sites representing Precontact campsites and workshops have been identified along this section of river. All have been subjected to some degree of impact due to flooding and extensive erosion. This river section is called “the place where Barbara was laughing”, so named because of a woman from Nelson House who was always happy and laughing (NCN Elder pers. comm. 2002). There are also burials located along the Burntwood River in the vicinity of Opegano Lake (NCN Elder pers. comm. 2002).

Only the shoreline and upper terrace below Taskinigup Falls along the north bank of the Burntwood River, which corresponds with the proposed east terminus of the proposed spillway, were examined by pedestrian survey and shovel testing. This area is severely eroded and the steep banks are currently unstable. A metal survey pin, imbedded in the shoreline at 14-532252mE/6154521mN, was used as a reference point for the pedestrian survey along the shoreline. No heritage resources were observed along the 300 m of shoreline examined.

A shovel test was dug on the upper terrace downstream of the rapids at 14-532190mE/6154577mN near Manitoba Hydro stake PT99-WN-3. The test was 50 m from the river in a fairly level area that had been cleared of standing vegetation. No heritage resources were exposed.

#### **5.1.4.1 Sewage Lagoon**

The site for the proposed sewage lagoon covers an area of 365 m long by 140 m wide with the intake at the northwest corner and an outflow at the southeast corner. The centre of the facility is located approximately 0.6 km north of the Burntwood River in an area that has an extremely low potential for heritage resources given its distance from water (Figure 5-1). This location was accessed by traversing a cut line northeast of Taskinigup Falls and then along a second, smaller cut line that extended southeast and terminated in a large clearing at 14-533467mE/6155499mN. Shovel testing in the lagoon clearing exposed neither heritage resources nor soil strata indicative of cultural activity.

No assessment of the outflow to the Burntwood River was completed. The riverbank is extremely steep at the outflow terminus and has been severely impacted by erosion. Therefore, the potential for any archaeological site material to be present appears to be low.



Figure 5-1. Area of the proposed sewage lagoon. Reach 4: Taskinigup Falls to Jackpine Rapids



### 5.1.5 Reach 5: Mile 17 Access Road

The access road route from Mile 17 on PR391 to the proposed generating station was surveyed from helicopter on three occasions: (1) during the route selection process (survey completed by the archaeological study team staff); (2) after route selection (survey completed by NCN Elders); and (3) after the access road was cleared (survey completed by the archaeological study team). Predictive modeling using standard physical variables (distance from water, slope, aspect, and vista) indicated that much of the area had a low to moderate potential for heritage resources.

The cultural variables (land use, place names, oral history, and cosmology), determined that this area has a medium to high potential for cultural significance. The ridge between Eagle Hill, a culturally significant site, and Wuskwatim Lake was identified as the overland route used by NCN ancestors traveling from Eagle Hill to Partridge Crop Hill (NCN Elder pers. comm. 2002). The land between two small lakes just west of the access road in the vicinity of 14-537500mE/6163500mN called *Ka-peyetuwikamisik*, may be a waymarker for this ancient travel route. Specific landforms were used in the past and continue to be used today as mnemonic devices for mapping and oral history purposes (Hallendy 1994).

The access road route was cleared between January 2002 and April 2002 using heavy machinery. Prior to clearing, Manitoba Hydro filed an environmental protection plan that outlined guidelines to minimize and prevent adverse environmental effects caused by construction of the road (Bukowsky 2002). The plan classified the stream crossings, while terrain was categorized using criteria such as relief, slope, soil texture, landforms, and topography. Length of the access road from PR391 to Wuskwatim was approximately 48 km with a maximum right-of-way of 10 m.

When the area was assessed most of the cleared vegetation had been removed from the centre of the access road. Ten locations, six stream crossings, and four upland areas were examined. Five of the stream crossings were rated as Class 2, while one was rated Class 3. A Class 2 stream is described as a stream where the combined upstream drainage area is in excess of 10 km<sup>2</sup> (4 miles<sup>2</sup>); a Class 3 stream is one where the combined upstream drainage area is less than 10 km<sup>2</sup> (4 miles<sup>2</sup>) (Bukowsky 2002).

No heritage resources were recovered from any exposed surface along the right-of-way, or from the shovel tests at any of the locations assessed. Furthermore, examinations of exposed embankments along the stream courses revealed neither heritage resources nor soil strata indicative of cultural activity. Several potential lithic reduction flakes were collected from the edge of the road surface, however, these quartz fragments were found

in close proximity to the machinery track and could have been fractured during road clearing.

Based on the July 2002 assessment of the access route the cultural use of the inland area appears limited. Before establishment of the fur blocks, groups from the main camps on Wuskwatim Lake often accessed the inland region in winter to trap (NCN Elder: pers. comm.. 2002). The majority of the access road is contained in Registered Trapline 4 in the Nelson House RMA. If the minor streams were used during the Post-European Contact Era, it was by small groups for short periods of time as they travelled from their main camps on the lake to satellite camps in their traditional trapping areas.

Access to the interior by Precontact groups may also have been limited or non-existent depending on the catchment area required to sustain the families living on Wuskwatim Lake. It has been estimated that a family requires approximately 10 km<sup>2</sup> as a roving catchment area (Petch 2001). While there are no estimates of population size during the Pre-European Contact Era, the approximate population of the settlement on the northwest side of Wuskwatim Lake during the 1930s and 1940s was about 200 people (NCN Elder: pers. comm. 2002). However, any forays into the interior were probably by small groups for only a short period of time and any archaeological sites relating to this land use would cover only a small vertical and horizontal area.

#### **5.1.6 Reach 6: Borrow Areas**

Two borrow locations, Areas H and J, were examined in 2000 by a pedestrian survey and arbitrary testing. Area H is located on a ridge that rises some 75 m above Birch Tree Brook and extends in an east-west direction for approximately 7 km. The ridge could have been used as a corridor to link the interior resource area with Wuskwatim Lake and could have been a migration route for large game. Brush clearing in 1999 for geotechnical tests created lines of linear trails approximately 20 m wide and of various lengths throughout the area. Portions of several trails were examined for heritage resources and several arbitrary shovel tests were placed to record soil strata. In July 2002, a cut line on the northeast tip of the upland was examined by pedestrian survey and shovel tests placed at regular intervals along the cut lines. Start point was at Manitoba Hydro Survey marker WC3134 at 14-552950mE/6172968mN (NAD83). A 90 m long segment was examined with tests at approximately 10 m intervals. The soil matrix of this area is characterized by a thin mantle of organic soil 5 to 8 cm thick over dense and compact gravel deposit. No significant heritage resources were recovered from the tests. However, there may be potential for palaeontological material such as mammoth tusk to be deeply buried in gravel deposits. Therefore, while Borrow Area H has a low potential

for archaeological heritage resources there may be palaeontological heritage resources *in situ*. Neither further assessments nor monitoring during borrow extraction is required at this location. However, construction workers should be aware that palaeontological heritage resources might be present.

## **6.0 IMPACTS AND MITIGATION**

Impacts to heritage resources as a result of construction of the Project and associated facilities will primarily be confined to the area between Wuskwatim Falls and Taskinigup Falls. In addition, there is the potential for areas on the Burntwood River above Wuskwatim Lake and portions of the lakeshore to be affected by erosion associated with the Project.

### **6.1 REACH 1: EARLY MORNING RAPIDS TO CRANBERRY LAKES**

Areas of the riverbank in the vicinity of Early Morning Rapids have the potential to be impacted through erosion. However, this reach was re-evaluated in 1999 and recommendations were made for mitigative action at all known archaeological sites along the river (Smith and Brownlee 1999). Therefore, it is recommended that these sites continue to be salvaged according to programs developed by Historic Resources Branch, Nisichawayasihk Cree Nation, and Manitoba Hydro.

### **6.2 REACH 2: WUSKWATIM LAKE**

Archaeological sites at the south end of Wuskwatim Lake would be at risk due to erosion. Similar to Reach 1, the Wuskwatim Lake reach continues to be the subject of mitigation projects undertaken by Historic Resources Branch. Therefore, it is expected that any archaeological sites that will be affected by accelerated erosion resulting from the operation of the Project will be mitigated by this government agency.

The one site assessed by the archaeological study team during the HRIA is in no immediate danger of impact from the generating station project. Therefore, no mitigation is recommended at this site.

### **6.3 REACH 3: WUSKWATIM FALLS TO TASKINIGUP FALLS**

The HRIA in this area determined that any heritage resources relating to Pre-European Contact Era land use along the river have been previously impacted by CRD. Heritage

resources were located along the eroded shoreline of the Burntwood River but testing on the embankment above the finds yielded no further cultural material. Therefore, construction of the Project is not expected to impact significant Pre-European Contact Era heritage resources.

Intact heritage resources were recorded at Wuskwatim Falls in the area of the channel excavation. The stone feature was found below the organic (Ah) soil layer and therefore concluded to be of some antiquity. Its shape and orientation ruled out the possibility of being a hearth from a campsite or stones over a burial. Therefore, it was concluded that the feature was a toppled stone marker along the Wuskwatim Falls portage. None of the NCN Elders knew of the function or antiquity of the marker when asked during cultural interviews. The feature was adequately documented and photographed during the HRIA and, therefore, no mitigation is recommended at this site.

The Taskinigup Cabin will be impacted by construction of the Project as it will be within the area flooded by the Project. A major portion of the site was excavated during the HRIA and a significant representation of the heritage resources contained in and adjacent to the structure were collected and analysed (Figure 6-1). Due to the potential for further features under the thick moss layer, this site will be studied further prior to construction.



Figure 6-1. Trapper's Cabin at Taskinigup Falls.

All heritage resources recovered during the pedestrian survey along the north and south banks of the Burntwood River between Wuskwatim Falls and Taskinigup Falls were shoreline recoveries that had eroded from their original context. The HRIA at Taskinigup Falls showed that post-1900 heritage resources, such as the cabin, are located well removed from the water's edge. Therefore, a post-construction survey of the riverbank of the Burntwood River between the falls will be conducted to recover any heritage resources that have eroded from the newly configured shoreline.

No heritage resources were found in the area of the water intake facility and the sewage lagoon. It was concluded that a paucity of heritage resources at these locations implied that other areas within the proposed construction camp would have a low potential for such resources as they were even further removed from both the river and the lake. Therefore, no mitigation is recommended for the construction camp development.

The legend of the water lynx, *Misipisew*, is an important cultural link between the NCN community and the landscape in general and Taskinigup Falls in particular. Several Elders recounted the legend when interviewed at Nelson House. Therefore, an acceptable form of mitigation through either traditional or conventional methods is recommended. One approach could be to rename the Mile 17 Access Road *Misipihsew* Access Road as a means of recognizing the link.

#### **6.4 REACH 4: TASKINIGUP FALLS TO JACKPINE RAPIDS**

There is the potential for further erosion of the riverbank along this reach as a result of the Project. However, erosion relating to CRD continues to impact heritage resources along the shoreline. As such, it is anticipated that salvage mitigation studies by Historic Resources Branch will address erosional impacts on heritage resources as a result of the Project.

#### **6.5 REACH 5: MILE 17 ACCESS ROAD**

No heritage resources were recorded at any of the locations examined along the Mile 17 Access Road. It was concluded that if land use occurred in the interior it was by small groups for a relatively short time. Therefore, any resulting archaeological sites would be small horizontally and vertically. No mitigation is recommended for the access road. However the study team archaeologist will be on call during the construction of the access road in the event that cultural material is inadvertently discovered.

## **6.6 REACH 6: BORROW AREAS**

No heritage resources were recorded at any of the locations examined at the proposed borrow locations (Areas J and H). Similar to the Mile 17 Access Road, it is possible that Precontact hunters and gatherers used this area for pedestrian corridors, hunting, plant collecting, and quarrying material that was not available along the Burntwood River or on Wuskwatim Lake. Resource users during the Post-European Contact Era could have used this area to travel to areas of good hunting and trapping. Archaeological sites relating to these activities would not be horizontally or vertically extensive. Therefore, there is a low potential that these sites would be impacted. Therefore, no mitigation for heritage resources is recommended for the borrow areas. However, the study team archaeologist will be on call during the construction of the access road in the event that cultural material is inadvertently discovered.

## **7.0 RESIDUAL EFFECTS**

Residual effects are the impacts remaining after mitigation. The major residual effect related to heritage resources as a result of the Project is accelerated erosion on previously unrecorded heritage resources. It is expected that this will be mitigated by the Historic Resources Branch and therefore, there will be no residual impacts.

## **8.0 CUMULATIVE EFFECTS**

The majority of heritage resources are present along the shoreline of the lakes and rivers in the Wuskwatim Lake area. With the exception of the potential for additional cabins to be constructed along Wuskwatim Lake and use of Treaty Land Entitlements, there does not appear to be any other projects or activities that will overlap with the Project. Cumulative effects from other projects and activities are, therefore, expected to be insignificant.

## **9.0 ENVIRONMENTAL MONITORING**

It is expected that most of the heritage resources in the central area of development, the section of river between Wuskwatim Falls and Taskinigup Falls, have been previously impacted by CRD. Archaeological sites not discovered during the various archaeological surveys, or by the archaeological study team HRIA field study may be present within the footprint of the generating station. These are likely to be small and

may be eradicated by development activities such as tree clearing, heavy equipment, traffic, and excavation. On-site monitoring is usually advised when pre-impact or impact assessments have located partially, or totally intact heritage resources, or when it is believed that intact heritage resources have a high potential to be impacted. The results of detailed field studies indicated that the generating station site is of low potential for archaeological sites. However, additional monitoring will be conducted in the area between Wuskwatim Falls and Taskinigup Falls (including the channel excavation area) prior to construction to assure that heritage resources are not impacted by the Project.

Monitoring of sites on Wuskwatim Lake and the Burntwood River between Early Morning Rapids and Cranberry Lakes and below Taskinigup Falls to Jackpine Rapids may be subsumed under the mitigation work being conducted by Historic Resources Branch.

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## **11.0 APPENDICES**

### **APPENDIX 1.0**

#### **1.1 EARLY PRE-EUROPEAN CONTACT ERA**

The earliest culture thus far identified in the study area is the Plano people based on diagnostic projectile points identified from heritage resources collected at the north end of Wuskwatim Lake (Larcombe 1997). These points, in conjunction with geological and climatic data, suggest that the study area was inhabited approximately 7000 years ago. The first inhabitants of the area were probably small groups of plains-adapted hunting bands who moved northward. The movement and development of a northern Plano culture may have been the result of the availability of the caribou herds and a decreasing predictability of the bison herds as a result of climatic fluctuations associated with a trend, known as the Altithermal (Wright 1995).

Potential kill and campsite locations would depend on settings where migrating caribou herds could be intercepted and would include stream crossings, eskers, and beach ridges. Other site types include quarry locations for lithic tools, areas where edible and medicinal plants were harvested when in season, and sacred areas. The resource users probably traveled in small nuclear family groups and only banded together during certain periods of the year. As such, the majority of Plano habitation sites would be relatively small.

#### **1.2 MIDDLE PRE-EUROPEAN CONTACT ERA**

From approximately 6500 to 5500 years ago the climate was more arid and warmer than today. This is commonly referred to as the Atlantic Climate episode. Similar to the Early Pre-European Contact Era, the projectile points of the Middle Precontact are stylistically similar to that used by bison hunters to the south. Therefore, groups either continued to move north or the technology was transplanted between groups.

The major cultural complex during the Middle Pre-European Contact Era is the Shield Archaic, which possibly developed from the Plano complex (Wright 1995). The stone tool technology of this culture is characterized by bifacially flaked stone knives, side-notched and lanceolate projectile points, and large scrapers. Preferred site locations are strategically located at caribou interception points and often adjacent to swift water for fish. Burials dating to the Middle Pre-European Contact Era have been found at the south end of Wuskwatim Lake (Historic Resources Branch 2001) and on the east side of Threepoint Lake (Riddle 1996).

Projectile points tentatively identified as Early Taltheilei have been recorded on Wuskwatim Lake (Smith and Brownlee 1999). The Taltheilei were initially forest-adapted groups who may have originated in northwest British Columbia and migrated easterly to northern Manitoba some 2500 years ago (Gordon 1996). These people were primarily hunters of barren ground caribou. Locations for sites of this culture in the extreme northern portions of Manitoba include islands, points of land, hilltops and sandy ridges (Pettipas 1984). The recovery of Taltheilei points in the study area is either the result of small groups venturing south from their more traditional areas or an indication of north-south trade networks.

### **1.3 LATE PRE-EUROPEAN CONTACT ERA**

The technology of pottery making about 2000 years ago divides the Middle and Late Pre-European Contact Eras. Between 2000 and 360 years ago there were various pottery types with variation based either on manufacturing technique, method of decoration, and/or complexity of decoration. Stone tools associated with these cultures include small triangular and side-notched projectile points, a variety of bone and stone scraping tools, stone knives, drills and smoking pipes. Bone awls, needles, harpoons, and spatulas are also found.

The earliest known pottery style is Laurel (Figure 1). Designs were etched onto the upper portions of the vessel when the clay was still wet. One technique was to press the edge of a notched stick or bone into the clay to leave an impression that resembled the edge of a scallop shell. Another decorating technique consisted of dragging a toothed implement across the wet clay often in a zigzag fashion. This is known as the dragged stamp or push-pull method. The vessels were then fired by placing them in a hearth. Laurel components have been radiocarbon dated from as early as 1920 years ago and to 795 years ago at sites northwest of the Wuskwatim Lake area (Tisdale and Jamieson 1982).

Sites yielding Laurel components range greatly in size and productivity. Most of the sites probably represent campsites used by several families for a short period of time during certain seasons of the year. All have been located on major waterways or lakes. The Laurel culture is also known for interment of the dead either in individual graves or large burial mounds. A Laurel burial has been recorded on Wuskwatim Lake.

There is some overlap between Laurel ceramics and the next pottery tradition, the Blackduck culture. Radiocarbon dates of 515 years ago and 540 years ago were obtained from samples associated with Blackduck ceramics found at GjLp-3 on Wuskwatim Lake near the northern shore of Wuskwatim Brook (Kroker 1990).

Blackduck vessels consisted of large globular vessels used for cooking and storage. The vessels were manufactured either by the paddle-and-anvil technique or formed inside twined textile containers. Decorations are highly variable consisting of several combinations of thick horizontal and/or oblique lines on the neck and rim, lip and inner rim. Large circular indentations or punctates were also used to decorate the vessels.

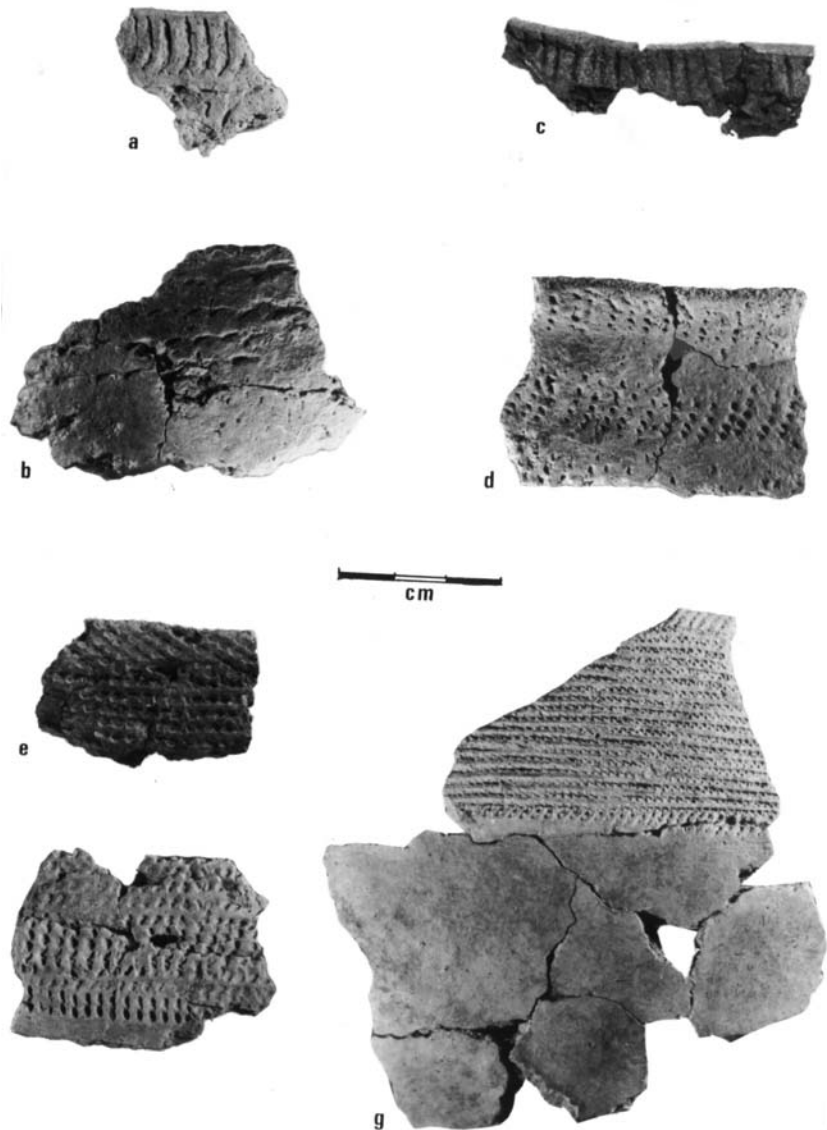


Figure 1. Example of Laurel ceramic vessels from the Wuskwatim Lake area. (From Tisdale 1977)

The Selkirk culture was roughly contemporaneous with, and post-dates the Blackduck culture. Based on sites in southern Manitoba, Selkirk dates from about 1150 to 300 years ago. The relationship between people who manufactured Selkirk pottery, the preceding Laurel and contemporaneous Blackduck is not known. Often Blackduck and Selkirk pottery are found at the same site and the stone and bone tools used by both cultures are exceedingly similar. Like Blackduck, Selkirk vessels were globular with slightly constricted necks and outflaring rims. Unlike the Blackduck vessels, Selkirk rims are undecorated, encircled by a single row of punctates or impressed with a cord-wrapped stick (Figure 2).

Selkirk people subsisted primarily on fish as well as deer, moose, caribou, beaver, bear, waterfowl and clams. It has also been hypothesized that Selkirk groups lived in large fishing camps during the summer. Artifacts associated with Selkirk sites include a variety of small, triangular side-notched projectile points, scrapers and bifaces, hammer stones and smoking pipes. Also used were shell paint dishes, antler end-scraper handles, beaver tooth gouges, bone harpoons, scapula hoes, and bone awls and needles. It is generally believed that the Pre-European Contact Era Selkirk people were the ancestors of the modern-day Cree.

Researchers have expanded the Selkirk culture to include the Clearwater Punctate ceramic style. Clearwater Lake Punctate vessels are usually round-based with constricted necks and out flaring rims. Exterior surfaces are fabric-impressed and exterior decoration is generally restricted to a single row of punctates that produce interior bosses.

Clearwater Lake sites are typically small, suggesting one to three family units camping along major rivers or on lakeshores. Some sites, such as the type-site on Clearwater Lake near The Pas, indicate that seasonal gatherings of many family units often occurred. Based on faunal remains recovered from the few sites that have been scientifically excavated, it would appear that fishing and hunting were the main subsistence activities. The Clearwater Lake Phase has been dated from about 500 to 200 years ago (Hlady 1971).



Figure 2. Selkirk pottery (from Pettipas 1984).

#### **1.4 EARLY POST-EUROPEAN CONTACT ERA**

It is generally assumed that the makers of Selkirk and Clearwater Lake ceramics were ancestors of the present-day Cree. The nature and extent of their trade networks and migrations is not totally understood but it is possible that knowledge of European traders as well as a limited supply of trade goods were in the northwest shortly after New France was established and long before French traders and missionaries accessed the western side of Lake Superior. The Cree in the study area may have been in contact with or had heard of fur traders on the shores of Hudson Bay as early as 1682, when the Hudson Bay Company (HBC), the French and one American established posts on the Nelson and Hayes rivers. York Fort was constructed in 1684 and, thereafter, the Cree made annual trading expeditions to the mouth of the Hayes River.

The construction of coastal HBC posts marked a new phase in Cree economic pursuits. There was a shift from food gathering to fur trapping during certain times of the year. In addition, the English traders encouraged the Cree to penetrate into the western interior to collect furs from different First Nation groups and to trap in hitherto untouched areas. The annual trek to the coastal posts became part of the yearly round of activities.

Contact with French and English traders altered the type of goods that First Nation groups used and discarded. Initially, only small amounts of European goods are recovered in the archaeological record and are often metal items that were reworked for a secondary use. Eventually, clay pots were abandoned in favour of copper pots and, for some, the flintlock rifle replaced the bow and arrow, while metal knives succeeded stone scrapers. Personal adornment, which hitherto had consisted of material locally available

or exotic material acquired through trade, consisted of glass beads, copper rings, tinkling cones, and silver bands. Often these were given as gifts to secure trade relations.

In the late 1750s, as a consequence of the Seven Years War in eastern Canada, the French withdrew from the northwest. After the fall of New France in 1763, independent traders, mainly Montreal-based British entrepreneurs, began trading in the northwest. To offset this competition, the HBC altered its policy of remaining on the bay and began moving inland. This inland move was one of the factors that motivated the Canadians to unite into one trading firm. As a result, the North West Company (NWC) was formed in 1779 (Ray 1974). An intense and often volatile period of competition ensued for the next 42 years.

Most of the travel inland was via the Nelson River to Lake Winnipeg and up the Saskatchewan River into the interior. However, there was also an inland route from the bay to the Athabaska region that used the Nelson-Burntwood-Churchill River system. Therefore, portages around Wuskwatim Falls and Taskinigup Falls would have been critical to move goods. The first trade post in the area was the Rat River Post, constructed *ca.* 1789, on the southwest side of Threepoint Lake by the NWC (Historic Sites and Monuments Board 1968). It was used as a wintering post as late as *ca.* 1794. A Mr. Sinclair of the HBC constructed a wintering post on a point of land on Threepoint Lake in 1794. Archival records at the Hudson's Bay Company Archives do not contain any reference to a trade post being constructed on Wuskwatim Lake.

The full extent of the fur trade on the economic pursuits of the Cree in the study area during the Early Post-European Contact Era is not fully known. Whether all the Cree throughout northern Manitoba were actively engaged in being middlemen in the trade prior to inland expansion is doubtful. Therefore, the majority of the Cree groups continued to follow a subsistence that was similar to that of their ancestors before contact. Those who lived in close proximity to a trade post were often employed as guides or provisioners.

Increased contact with European traders caused several outbreaks of disease, particularly small pox, during the 1780s. Death rates were generally high because often all the people of a hunting group would contract the disease at the same time. It has been estimated that between 33 to 50% of the Cree population died during the small pox epidemics of 1778 to 1784 (Grainger 1979).



## **1.5 MIDDLE POST-EUROPEAN CONTACT ERA**

Depletion of the fur bearing animals in general and beaver in particular was cause for serious concern by 1821. The dwindling return forced the closure of a number of posts and departmental reorganizations by both the HBC and NWC. Cause of this decline was a combination of a number of factors, not the least of which was intensive trapping. Also leading to destruction of the fur resource base was drought, disease among the animal population, and incidence of fires (Ray 1974). As a result, there was a greater dependence on furs of lesser quality and an increase in the harvesting of muskrat.

With dwindling returns throughout much of the northwest it was obvious that two trading companies could not be supported and the HBC and NWC merged in 1821. In 1822, the HBC established a wintering post at Threepoint Lake. This post eventually became the district headquarters for the Nelson River district in 1827. By 1837, most of the posts were closed in the present-day Nelson House area and trade for that region was based at “Three Points” at a post known as Fort Seaborn (Linklater 1997).

## **1.6 LATE POST-EUROPEAN CONTACT ERA**

The Nelson House Reserve was established after the signing of an adhesion to Treaty 5 in 1908 (Linklater 1997). Throughout Canada, First Nation requests were for fairly large reserves that corresponded to their historic hunting territories. The Canadian government provided much smaller reserves, most of them in the magnitude of about 160 ac of land for each family of five (Ball *et al.* 1992). The federal government also agreed that the signing First Nations were to retain hunting and fishing rights throughout the whole surrendered territory subject to whatever regulations the government might make.

Details of lifeways during the post-1870 period are not known. A major settlement was located along the northwest shore of Wuskwatim Lake near the Burntwood River outlet. By the 1930s, this settlement contained about 200 people (NCN Elder, pers. comm.). A smaller settlement was situated at the south end of the lake near the mouth of Wuskwatim Brook. Other camps, consisting of about two or three dwellings, were present on the east side of the lake north and south of Wuskwatim Falls. These families maintained a seasonal round of activities involving hunting, fishing, and trapping. Several heads of livestock were kept, as were small gardens. Many of these settlements were abandoned during the post-1940 period as residents either decided to move or were relocated to the Nelson House community.

## APPENDIX 2.0

| Summary of Wuskwatim GS Shovel Tests             |          |                 |                 |          |                                |                  |                                     |
|--|----------|-----------------|-----------------|----------|--------------------------------|------------------|-------------------------------------|
| Location   | Test #   | NAD 83<br>UTM-Y | NAD 83<br>UTM-X | Result   | Length x Width<br>Of Test (cm) | Depth<br>of Test | Comments                            |
| <b>Area of Generating Station and Facilities</b> |          |                 |                 |          |                                |                  |                                     |
| Channel Improvement                              | N10/0    | 14-530632       | 6155260         | Negative | 40 x 40                        | 30 cm            | Reddish Silty Clay With Ash Pocket  |
| Channel Improvement                              | N20/0    | 14-530462       | 6155270         | Positive | 120 x 130                      | 40 cm            | Stone Alignment Uncovered           |
| Channel Improvement                              | N30/0    | 14-530646       | 6155279         | Negative | 50 x 30                        | 24 cm            | Nil                                 |
| Channel Improvement                              | N40/0    | 14-530654       | 6155286         | Negative | 40 x 60                        | 20 cm            | Nil                                 |
| Channel Improvement                              | N49/0    | 14-530653       | 6155305         | Negative | 60 x 65                        | 20 cm            | Nil                                 |
| Channel Improvement                              | N16.5/5W | 14-530626       | 6155277         | Positive | 30 x 30                        | 25 cm            | Chert Flake                         |
| Channel Improvement                              | N21/12W  | 14-530450       | 6155272         | Negative | 30 x 30                        | 20 cm            | Nil                                 |
| Channel Improvement                              | NLHS 5-1 | 14-530785       | 6154900         | Negative | 50 x 50                        | 26 cm            | Black Burn at 16-18cm               |
| Channel Improvement                              | NLHS 5-2 | 14-530766       | 6154894         | Negative | 50 x 30                        | 30 cm            | Nil                                 |
| Channel Improvement                              | NLHS 5-3 | 14-530760       | 6154852         | Negative | 40 x 50                        | 20 cm            | Nil                                 |
| Channel Improvement                              | NLHS 5-4 | 14-530760       | 6154850         | Negative | 50 x 50                        | 18 cm            | Heated Orange Sand 9-12cm           |
| Channel Improvement                              | NLHS 5-5 | 14-530751       | 6154848         | Negative | 50 x 50                        | 36 cm            | Black Organic Burn Lens 8-10cm      |
| Channel Improvement                              | NLHS 5-6 | 14-530753       | 6154884         | Negative | 60 x 50                        | 32 cm            | Black Organic Burn Lens 22-23cm     |
| Channel Improvement                              | NLHS 5-7 | 14-530757       | 6154889         | Negative | 60 x 50                        | 32 cm            | Red/Orange Loose Silty Sand 12-25cm |
| Taskinigup Falls Portage                         | 0/0      | 14-531824       | 6154994         | Negative | 50 x 40                        | 22 cm            | Charred Wood and Roots 4-7cm        |
| Taskinigup Falls Portage                         | 0/10E    | 14-531824       | 6155004         | Negative | 45 x 35                        | 26 cm            | West Wall Has Organic Stain         |
| Taskinigup Falls Portage                         | 0/20E    | 14-531824       | 6155024         | Negative | 50 x 50                        | 25 cm            | Nil                                 |
| Taskinigup Falls Portage                         | 0/30E    | 14-531824       | 6155034         | Negative | 25 x 40                        | 22 cm            | Charred Lens 4-7cm                  |
| Taskinigup Falls Portage                         | 5N/0E    | 14-531829       | 6154994         | Negative | 30 x 30                        | 22 cm            | Nil                                 |
| Taskinigup Falls Portage                         | 5S/0E    | 14-531829       | 6154994         | Negative | 30 x 30                        | 25 cm            | Nil                                 |
| Taskinigup Falls Cabin                           | N6/E7    | 14-531827       | 6154821         | Positive | 100 x 100                      | 27 cm            | Wood Canoe Remains, Metal Fuel Can  |
| Taskinigup Falls Cabin                           | N5/E7    | 14-531827       | 6154820         | Positive | 100 x 100                      | 21 cm            | Large Metal Fuel Can                |
| Taskinigup Falls Cabin                           | N5/E5    | 14-531825       | 6154820         | Positive | 100 x 100                      | 21 cm            | Edge of Doorway of Cabin            |
| Taskinigup Falls Cabin Point                     | NLHS 1-1 | 14-531713       | 6154886         | Negative | 50 x 50                        | 30 cm            | Nil                                 |
| Taskinigup Falls Cabin Point                     | NLHS 1-2 | 14-531745       | 6154820         | Negative | 40 x 40                        | 30 cm            | Nil                                 |
| Taskinigup Falls Cabin Point                     | NLHS 1-3 | 14-531745       | 6154824         | Negative | 40 x 40                        | 30 cm            | Nil                                 |

| Summary of Wuskwatim GS Shovel Tests      |           |           |         |          |                |         |                                  |
|---|-----------|-----------|---------|----------|----------------|---------|----------------------------------|
|   |           |           | NAD 83  |          | Length x Width | Depth   | Comments                         |
| Location                                  | Test #    |           | UTM-X   | Result   | Of Test (cm)   | of Test |                                  |
| Area of Generating Station and Facilities |           |           |         |          |                |         |                                  |
| Taskinigup Falls Cabin Point              | NLHS 1-4  | 14-531745 | 6154817 | Negative | 40 x 40        | 30 cm   | Nil                              |
| Taskinigup Falls                          | NLHS 2-1  | 14-532190 | 6154577 | Negative | 45 x 45        | 21 cm   | Nil                              |
| Sewage Lagoon                             | NLHS 3-1  | 14-533467 | 6155499 | Negative | 40 x 40        | 27 cm   | Area Cleared Recently            |
| Sewage Lagoon                             | NLHS 3-2  | 14-533472 | 6155504 | Negative | 40 x 40        | 20 cm   | Area Cleared Recently            |
| Sewage Lagoon                             | NLHS 3-3  | 14-533306 | 6155591 | Negative | 40 x 40        | 18 cm   | Area Cleared Recently            |
| Water Intake Facility                     | NLHS 4-1  | 14-531897 | 6155506 | Negative | 40 x 40        | 27 cm   | Charred Wood at 16-17cm          |
| Water Intake Facility                     | NLHS 4-2  | 14-531876 | 6156128 | Negative | 40 x 40        | 27 cm   | Charred Wood at 37-38cm          |
| Burntwood South Bank                      | TP 1-1    | 14-531160 | 6154895 | Negative | 30 x 30        | 30 cm   | Nil                              |
| Burntwood South Bank                      | TP 1-2    | 14-531169 | 6154856 | Negative | 40 x 45        | 30 cm   | Nil                              |
| Burntwood South Bank                      | TP 2-1    | 14-531184 | 6154911 | Negative | 30 x 30        | 26 cm   | Nil                              |
| Burntwood South Bank                      | TP 2-2    | 14-531180 | 6154913 | Negative | 30 x 30        | 20 cm   | Nil                              |
| Burntwood South Bank                      | TP 3-1    | 14-531142 | 6154960 | Negative | 40 x 40        | 20 cm   | Nil                              |
| Burntwood South Bank                      | TP 3-2    | 14-531145 | 6154958 | Negative | 40 x 40        | 30 cm   | Nil                              |
| Taskinigup Falls Cabin                    | TP 1      | 14-531184 | 6154815 | Positive | 100 x 100      | 20 cm   | Bird/Mammal Bone                 |
| Taskinigup Falls Cabin                    | TP 4      | 14-531179 | 6154815 | Negative | 30 x 30        | 32 cm   | Behind Structure                 |
| Taskinigup Falls Cabin                    | 6.7N/E7.7 | 14-531827 | 6154821 | Negative | 30 x 30        | 20 cm   | Charcoal Lens at 13-17 cm        |
| Borrow Areas                              |           |           |         |          |                |         |                                  |
| Borrow Area "H"                           | TP 7.2-1  | 14-552929 | 6172978 | Negative | 40 x 30        | 10 cm   | Nil                              |
| Borrow Area "H"                           | TP 7.2-2  | 14-552922 | 6172955 | Negative | 30 x 30        | 4 cm    | Nil                              |
| Borrow Area "H"                           | TP 7.2-3  | 14-552913 | 6172926 | Negative | 40 x 30        | 20 cm   | Nil                              |
| Borrow Area "H"                           | TP 7.2-4  | 14-552917 | 6172896 | Negative | 30 x 30        | 18 cm   | Nil                              |
| Borrow Area "H"                           | TP 7.2-5  | 14-552920 | 6172881 | Negative | 30 x 30        | 4 cm    | Nil                              |
| Borrow Area "H"                           | Surface   | 14-550763 | 6172512 | Negative | N/A            | N/A     | Survey Ended 14-6172512N/550763E |
| Borrow Area "J"                           | Surface   | 14-540103 | 6170010 | Negative | N/A            | N/A     | Survey Ended 14-6169987N/540505E |
| Mile 17 Access Road                       |           |           |         |          |                |         |                                  |
| SC 9-2                                    | TP 1-1    | 14-534581 | 6157137 | Negative | 40 x 40        | 30 cm   | Cleared Area For Access Road     |
| SC 9-2                                    | TP 1-2    | 14-534569 | 6157129 | Negative | 30 x 30        | 25 cm   | Cleared Area For Access Road     |
| SC 8-2                                    | TP 2-1    | 14-534504 | 6158728 | Negative | 30 x 30        | 25 cm   | Cleared Area For Access Road     |

| Summary of Wuskwatim GS Shovel Tests |         |           |         |          |                |         |                                   |
|--------------------------------------|---------|-----------|---------|----------|----------------|---------|-----------------------------------|
|                                      |         |           | NAD 83  |          | Length x Width | Depth   | Comments                          |
| Location                             | Test #  |           | UTM-X   | Result   | Of Test (cm)   | of Test |                                   |
| <b>Mile 17 Access Road</b>           |         |           |         |          |                |         |                                   |
| SC 8-2                               | TP 2-2  | 14-536485 | 6158693 | Negative | 40 x 40        | 48 cm   | On Edge of Creek                  |
| SC 8-2                               | TP 2-3  | 14-536486 | 6158686 | Negative | 30 x 30        | 30 cm   | Cleared Area For Access Road      |
| SC 8-2                               | TP 2-4  | 14-536487 | 6158680 | Negative | 30 x 30        | 25 cm   | Cleared Area For Access Road      |
| SC 8-2                               | TP 2-5  | 14-536511 | 6158817 | Negative | 40 x 30        | 25 cm   | On Top of Contour, North of Creek |
| SC 8-2                               | TP 2-6  | 14-536472 | 6158647 | Negative | 30 x 30        | 25 cm   | On Edge of Creek                  |
| SC 8-2                               | TP 2-7  | 14-536456 | 6158631 | Negative | 30 x 30        | 20 cm   | On Top of Slope                   |
| SC 6-2                               | TP 4-1  | 14-541196 | 6167979 | Negative | 40 x 40        | 30 cm   | Birch Tree Brook                  |
| SC 6-2                               | TP 4-2  | 14-541203 | 6167992 | Negative | 30 x 30        | 14 cm   | On Edge of Birch Tree Brook       |
| SC 6-2                               | TP 4-3  | 14-541248 | 6167824 | Negative | 30 x 30        | 20 cm   | Birch Tree Brook                  |
| SC 5-2                               | TP 5-1  | 14-542119 | 6169686 | Negative | 30 x 30        | 32 cm   | Cleared Area For Access Road      |
| SC 5-2                               | TP 5-2  | 14-542128 | 6169694 | Negative | 40 x 30        | 35 cm   | Cleared Area For Access Road      |
| A-1                                  | TP 7-1  | 14-548924 | 6192752 | Negative | 45 x 45        | 30 cm   | Cleared Area For Access Road      |
| A-1                                  | TP 7-2  | 14-548932 | 6192740 | Negative | 30 x 30        | 30 cm   | Cleared Area For Access Road      |
| A-1                                  | TP 7-3  | 14-548929 | 6192752 | Negative | 40 x 40        | 30 cm   | Cleared Area For Access Road      |
| A-1                                  | TP 7-4  | 14-548923 | 6192740 | Negative | 30 x 30        | 40 cm   | Cleared Area For Access Road      |
| A-1                                  | TP 7-5  | 14-549199 | 6193046 | Negative | 30 x 30        | 41 cm   | On Edge of Ridge, Near Small Lake |
| A-1                                  | TP 7-6  | 14-549189 | 6190340 | Negative | 50 x 40        | 30 cm   | Cleared Area For Access Road      |
| SC 1-3                               | TP 8-1  | 14-548210 | 6188284 | Negative | 30 x 30        | 35 cm   | Cleared Area For Access Road      |
| SC 1-3                               | TP 8-2  | 14-548211 | 6188288 | Negative | 30 x 30        | 19 cm   | Charcoal at 5-15cm                |
| SC 2-2                               | TP 10-1 | 14-548880 | 6180021 | Negative | 30 x 30        | 20 cm   | On Top of Slope                   |
| SC 2-2                               | TP 10-2 | 14-548877 | 6180014 | Negative | 50 x 40        | 20 cm   | Nil                               |
| <b>Wuskwatim Lake</b>                |         |           |         |          |                |         |                                   |
| Chimney Point Site                   | TP 1    | 14-529208 | 6154366 | Positive | 100 x 100      | 20 cm   | Fish/Mammal Bone, Tin Cans, Glass |
| Chimney Point Site                   | TP 2    | 14-529211 | 6154360 | Positive | 30 x 30        | 25 cm   | Fish/Mammal Bone, Rope            |
| Chimney Point Site                   | TP 3    | 14-529237 | 6154364 | Negative | 45 x 45        | 20 cm   | Burn Lens at 18-20cm              |
| Chimney Point Site                   | TP 4    | 14-529223 | 6154361 | Negative | 30 x 30        | 20 cm   | Northeast of Cabin                |
| Chimney Point Site                   | TP 5    | 14-529246 | 6154364 | Negative | 50 x 50        | 30 cm   | Burn Lens at 10-11cm              |
| Chimney Point Site                   | TP 6    | 14-529216 | 6154361 | Negative | 30 x 30        | 30 cm   | North of Cabin                    |

| Summary of Wuskwatim GS Shovel Tests |        |           |         |          |                |         |                               |
|--------------------------------------|--------|-----------|---------|----------|----------------|---------|-------------------------------|
|                                      |        |           | NAD 83  |          | Length x Width | Depth   | Comments                      |
| Location                             | Test # |           | UTM-X   | Result   | Of Test (cm)   | of Test |                               |
| <b>Wuskwatim Lake</b>                |        |           |         |          |                |         |                               |
| Chimney Point Site                   | TP 7   | 14-529211 | 6154366 | Negative | 30 x 30        | 22 cm   | Southeast of Cabin            |
| Chimney Point Site                   | TP 8   | 14-529262 | 6154372 | Negative | 40 x 45        | 30 cm   | Nil                           |
| Chimney Point Site                   | TP 9   | 14-529196 | 6154325 | Negative | 40 x 60        | 16 cm   | Nil                           |
| Chimney Point Site                   | TP 10  | 14-529217 | 6154359 | Negative | 30 x 30        | 22 cm   | Southeast of Cabin            |
| Chimney Point Site                   | TP 11  | 14-529224 | 6154354 | Negative | 30 x 30        | 39 cm   | Inside of Collapsed Structure |
| Chimney Point Site                   | TP 12  | 14-529223 | 6154370 | Negative | 30 x 30        | 20 cm   | North of Cabin                |
| Chimney Point Site                   | TP 13  | 14-529170 | 6154358 | Positive | 30 x 30        | 18 cm   | Fish Bone, Fork               |