

MORICE TIMBER SUPPLY AREA: ARCHAEOLOGICAL OVERVIEW ASSESSMENT



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MANAGEMENT SUMMARY

This report summarizes the results of an Archaeological Overview Assessment performed by Crossroads Cultural Resource Management and conducted on the Morice Timber Supply Area ("TSA"). It has been completed on behalf of Tweedsmuir Forest Products Ltd.

The Morice TSA includes the traditional territories of the following ten First Nations:

1. Burns Lake Band;
2. Cheslatta Carrier Nation;
3. Fort Babine Band (Wit'at);
4. Lake Babine Nation (Natoot'en)
5. Nee Tahi Buhn Band;
6. Office of the Nedo'ats Hereditary Chiefs;
7. Office of the Wet'suwet'en;
8. Skin Tyee Band;
9. Tachek Band; and
10. Wet'suwet'en First Nation.
11. Yekooche First Nation

Although six of the eleven First Nations listed above have signed Statements of Intent to negotiate with the B.C. Treaty Commission, all eleven have indicated their separate political existence or intention to be independent. For that reason, Crossroads Cultural Resource Management ("Crossroads") made efforts to contact the eleven above identified First Nations organizations.

The Archaeological Overview Assessment of the Morice Timber Supply Area (the "Project") was implemented in several phases. The Project involved research; consultation with First Nations and long-term residents of the Morice TSA who have extensive experience in the region; analysis and synthesis of the information collected; production of a series of maps; and finally the preparation of this report and extension materials.

This report provides background and contextual information regarding the Project and the study area. Additionally, the methodology, results, evaluations and management recommendations for this overview assessment are presented.

Additionally, an electronic submission containing GIS and database information related to this project accompanies this report.

INTRODUCTION

Objectives

The objectives of this Project were as follows:

- (a) Conduct background library and records search of ethnographic, archaeological and historic documents pertinent to the study area,
- (b) Conduct interviews and consultation with individuals having knowledge of archaeological resources in the study areas for the purpose of compiling information concerning the location, distribution and significance of reported archaeological resources;
- (c) Utilize available attribute information and local criteria used by licensees and the Ministry of Forest & Range to map the potential occurrence of archaeological resources;
- (d) Prepare an overview assessment report as described in the Appendix A of the British Columbia Archaeological Impact Assessment Guidelines; and
- (e) Prepare and deliver extension materials for practitioners.

Crossroads conducted extensive research into the ethnographic, historical and archaeological background of the Morice TSA. Crossroads has produced and submitted a database (and the related GIS data and information) containing the locations of known archaeological and traditional use information in the Morice TSA. Consultation and interviews occurred with First Nations and also with long time residents of the study area who have extensive field and life experience within the Morice TSA.

Available archaeological, ethnographic and traditional use information derived from this Project was analyzed and several maps were produced, including a preliminary archaeological potential map of the Morice TSA (see *Disclaimer* below). Finally, this report and extension materials were prepared. This project was also subject to a thorough ratification process and a peer review.

Disclaimer

An archaeological overview assessment ("AOA") is **not** an archaeological potential model. Rather, an AOA is a stage in the overall archaeological process, and may guide the development of an archaeological potential model. Therefore the archaeological potential map provided in this Project should not be solely relied upon to make cultural resource management decisions. The archaeological potential map in this project was created for the purposes of ***facilitating*** resource management decisions regarding cultural resource management. It also provides the foundation for the more substantial process of creating an overall predictive model.

Project Personnel

Rick Budhwa (Crossroads) was the project director. Dana Evaschuk (Pathfinder Endeavours Ltd.) provided project management support and databasing services; Jane Stevenson of the Bulkley Valley Museum was the Historical Consultant for this Project; Johanna Pfalz (Eclipse GIS) provided GIS support with William Elliott (Geo Borealis Spatial Data Management) providing GIS and mapping services. Russell Collier and Andrew George Jr. provided Aboriginal consultation and ratification services. In addition, Paul Harrison provided databasing and report drafting services. Lastly, Archer CRM Partnership Ltd provided a peer review.

External Review

This project was subjected to a quality assurance and technical review process. More specifically, this project was reviewed in detail by external, objective and reputable archaeological consulting **and** Aboriginal agencies. Feedback from these agencies has been carefully considered by Crossroads and incorporated into this report, where applicable.

TRADITIONAL USE GLOSSARY

An important component of this Project was consultation with First Nations, as well as non-First Nation long time residents of the study area who have extensive field and life experience within the Morice TSA. This consultation component of the Project produced significant traditional use information. As a result, several terms related to traditional use of the Morice TSA were encountered during these consultations, and subsequently used throughout this report. For the reader's convenience, a Traditional Use Glossary is provided here.

Areas - the terms "area" and "site" are used in reference to traditional use. "Area" refers to a larger geographic space than does "site" and refers to the entire space within which people pursued traditional activities; or the entire space considered sacred, regardless of the presence or absence of physical remains of such activities or beliefs.

Burial areas - sites and areas people selected to inter their deceased. Reasons for choosing such places are generally based on spiritual or religious influences and such reasons cannot be quantified, or even identified within the scope of this project.

Cabin sites - when used in the traditional use context, "cabin site" refers to First Nations-constructed cabins, often associated with trapping and hunting activities (e.g. trapline cabins). Cabins were a significant component of the seasonal round and used when traveling away from the village site to areas of the territories where resources are known to occur at certain times of the year.

Cache pit sites - sites or areas containing depressions in the ground created by First Nations for the purpose of preserving food. Cache pits are the physical remains that represent food gathering or processing activities in the surrounding area, and the act of preserving of such food.

Camping areas - places where people have established a camp, often (but not exclusively) in the same location and over long periods of time. Camping *areas* are distinct from camping *sites*; Camping *areas* refer to the whole space within which people would choose to set up individual camp sites.

Culturally Modified Tree - a tree altered by First Nations people ("CMT"). The most common type of CMT in the Morice TSA is the cambium stripped lodgepole pine. However, there are several different types of CMTs and different species of trees that were modified for cultural purposes. CMT *sites* represent any manner of different cultural activities carried out in the surrounding *area*.

Gathering Places - places where people would congregate at different times of the year according to their seasonal round or for reasons related to spirituality. Gathering places may be used consistently for extended periods of time.

Intensive Use Areas - places subject to repeated and consistent use for cultural purposes. Such areas were used over long periods of time, even though specific sites within the area may not be selected for repeated use. Areas of intensive use include berry picking areas and gathering places.

Sacred - term attributed to areas or activities where special spiritual attention and cultural importance is emphasized, above and beyond other areas where similar activities take place.

Sacred fishing and habitat areas - certain places that have come to have special meaning to First Nations, causing such areas to be preferred for fishing and hunting, sometimes at special times or for special purposes.

Sites - specific places where traditional activities were performed. Sites should only be interpreted in light of the entire area within which the site is located.

Smoke houses - structures for smoking meat for the purposes of preservation. Smoke houses are traditional use *sites* related to *areas* generally used for intensive hunting and fishing. Smoking and preserving meat was an integral activity within the overall seasonal round, since starvation during the winter months was a possibility if proper food preservation protocols were not followed.

Trails - *paths* or *corridors* used by First Nations for travel or migration. These paths often connect the entire landscape, building links between traditional use areas, and also between different Nations.

Village sites - where the extended family stays, usually based upon the Clan system (George Family 2007; William Family 2007). Village sites in the Morice TSA are often associated with numerous cultural depressions. Although village sites can properly be considered archaeological sites as well, a village site may also be considered as a place where people performed activities related to spirituality, religion, culture and also day-to-day survival (see discussion on page 43 regarding traditional use and archaeology sites). The actual physical remains that comprise the archaeological record are typically limited to waste related matter, which are often restricted to certain practices. Moreover, such practices are also limited in geographic scope as people certainly utilized areas beyond the strict confines defined by archaeological remains.

Statement on Traditional Knowledge in Resource Management

Traditional knowledge (TK) was sought and encountered throughout every stage of this project. TK is referred to by many different names – traditional ecological knowledge (TEK), traditional ecological knowledge and wisdom (TEKW), indigenous knowledge, indigenous ecological knowledge, Aboriginal traditional knowledge (ATK), etc. Berkes (1993) developed a commonly referenced definition of traditional ecological knowledge:

TEK is a cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment. Further, TEK is an attribute of societies with historical continuity in resource use practices; by and large, these are non-industrial or less technologically advanced societies, many of them indigenous or tribal.

For the purposes of this discussion, this field of knowledge will be referred to as traditional knowledge (TK). As an example, the Government of Northwest Territories (GNWT) (2005) defines traditional knowledge as:

knowledge and values, which have been acquired through experience, observation, from the land or from spiritual teachings, and handed down from one generation to another.

The term “traditional” used in describing this knowledge does not imply that this knowledge is old or non-technical in nature, but “tradition-based.” It is “traditional” because it is created in a manner that reflects the traditions of the communities, therefore not relating to the nature of the knowledge itself, but to the way in which that knowledge is created, preserved and disseminated. TK is collective in nature and is often considered the property of the entire community, and not belonging to any single individual within the community. It is transmitted through specific cultural and traditional information exchange mechanisms.

Given the variety of references for TK, researching, collecting, and documenting TK can also significantly vary. TK is present in written ethnographies, oral histories, interviews, land-use inventories, archived transcripts and recording, public hearings, media, scientific meetings, and in the 1980's and 1990's court cases of the Gitksan and Wet'suwet'en First Nations - where TK was well documented in the *Delgamuukw-Gisdaywa* court cases in the B.C. Supreme Court and in the Supreme Court of Canada.

In the last few decades, TK has been gathered in greater frequency to assist land-use decision-making and resource managers, as well as record and document invaluable information from Aboriginal elders who continue to practice traditional lifeways, such as language, oral histories, and seasonal rounds. In the last ten to fifteen years, TK has become an important component of many resource management processes, and even more so in recent years as landmark court cases (i.e. *Delgamuukw-Gisdaywa*, *Haida Nation v. Weyerhaeuser*, *Taku Tlingit v. Tulsequah Chief Mine*) have reinforced the importance of appropriate consultation and accommodation with First Nations people in resource-use practices that significantly impact First Nation traditional territories. Gathering,

respecting and incorporating TK is an important component of that process, as is integrating that TK with the western-scientific viewpoint predominant in resource management processes.

STUDY AREA

The Morice TSA covers approximately 1 500 000 hectares located in the central interior of British Columbia. The Morice TSA borders the Kalum and Bulkley TSAs (west); the Lakes TSA (south); and the Fort St. James TSA (north) (B.C. Ministry of Forests 2002:iv).



FIGURE 1: OVERVIEW MAP OF MORICE TSA

Environmental Setting

The patterns of living communities in British Columbia today are the product of interactions between geology, topography, climate, glaciation, colonization and competition among species for space (Cannings and Cannings 1996:87). Much of the Morice TSA, and its adjacent areas, is a complex arrangement of patterns as it lies in a diverse and environmentally transitional area.

Approximately 12 000 years ago, ice (from the last major glaciation, or 'ice age') in northcentral British Columbia began to melt and recede with substantial impacts on the landscape. By 10 000 to 7 000 years ago the landscape closely resembled present day features. By 4 500 years ago conditions were little different than present day. With the retreat of glaciers plant communities established and wildlife dispersed throughout the environment – in a state of fluctuating equilibrium (Rabnett 2000:8-9).

Various systems of ecosystem classification have been developed to distinguish different areas. The study area is unique as it lies in a transitional area of different zones and regions due to its proximity to the coast, and more interior zones, as well as a variety of elevations stretching from valley bottom to mountaintops. On a broad North American ecological and climatic scale, the study area lies in the Interior Zone; however, it borders the intersecting the Coastal Zone, and the nearby Northern Zone.

The Interior zone includes the Rocky Mountains and other mountain ranges along the Interior Plateau stretching from the southern Yukon to New Mexico. Climate is continental with warm summers, cold winters and variable precipitation. Vegetation is mixed between coniferous and deciduous forests with shrub grasslands in dry valleys and alpine tundra at higher elevations. Lodgepole pine, interior Douglas fir, aspen, interior spruce, and subalpine fir tend to dominate (Daly 2005:115).

The Coastal zone is a narrow band of temperate coniferous forest lying between the Coastal Mountains and the Pacific Ocean stretching from Alaska to northern California. Climate is mild and wet, with heavy snowfall at higher elevations. At lower elevations temperate rain forest dominates – hemlock, cedar, Sitka spruce, coastal Douglas fir, amabilis fir, red alder and big leaf maple (Daly 2005:115).

The Northern zone is comprised mainly of boreal forest stretching in a wide band across Canada and large parts of northern Europe and Asia. Climate is subarctic in nature with cold winters; short growing seasons and low precipitation. Vegetation is boreal conifer forest with white and black spruce dominating, subalpine balsam fir, aspen, willow and birch (Daly 2005:115).

On a smaller scale, the Morice TSA is comprised of many biogeoclimatic zones – a system of ecosystem classification based on climate and dominant tree species on average sites in an area (Cannings and Cannings 1996:89). These zones are

further divided into subzones and subzone variants. Daly (2005:118) notes that the major biogeoclimatic zones within the study area are highly varied in type due to elevation, moist river valley air, cooling boreal forests, and drying effects of the Interior Plateau. Many mountain ranges in the territories, open valleys (i.e. Skeena River valley) and mountain passes to the Pacific create numerous microclimatic variations.

The bulk of the study area is located within the Sub-Boreal Spruce (SBS) biogeoclimatic zone. The SBS zone dominates most of the Nechako and Quesnel Plateaus, and upper Fraser basin. The Interior Cedar Hemlock (ICH) biogeoclimatic zone occupies areas immediately west of the Morice TSA. The Engelmann Spruce – Sub-alpine Fir (ESSF) zone occupies the higher elevation slopes above the SBS zones, and is the highest in elevation of the forest zones in BC. Alpine Tundra (AT) occupies the mountaintops throughout most of the traditional territory. Areas of Mountain Hemlock (MH) and Coastal Western Hemlock (CWH) are located in the Telkwa River valley area (Gottesfeld 1994b:187).

Cultural Setting

Cultural characteristics of the study area display transitional elements, similar to the environmental characteristics. The study area lies predominantly within the traditional territories of the Wet'suwet'en and Lake Babine people (several other First Nations have traditional territorial claims within the Morice TSA, however these two First Nations appear to have the largest land claims within the study area boundaries).

Athapaskan speakers are considered one of the great linguistic families of Aboriginal North America, stretching across the entire sub-arctic from Hudson Bay to Alaska (McMillan and Yellowhorn 2004: 184). The Athapaskan, or Na-Dene language group consists of over forty closely related languages (Rabnett 2000:20). For example, Wet'suwet'en is considered one of six branches of the Carrier language, which was widely spoken across the British Columbia north central interior.

The Carrier: Historical Background

The Carrier people are a collection of the Athapaskan speakers widespread across the north central interior of British Columbia, including the entire Morice TSA Carrier traditional territories, include: areas along the Fraser River from north of Prince George to south of Quesnel, the Nechako River valley, areas around Ft. St. James including Stuart Lake, Trembleur Lake, Takla Lake, and west to Fraser Lake, Babine Lake and the Bulkley Valley, and the region around the Blackwater River, and west to the Coast Range including Kluskus Lake, Ootsa Lake, and Cheslatta Lake (Brown 2002).

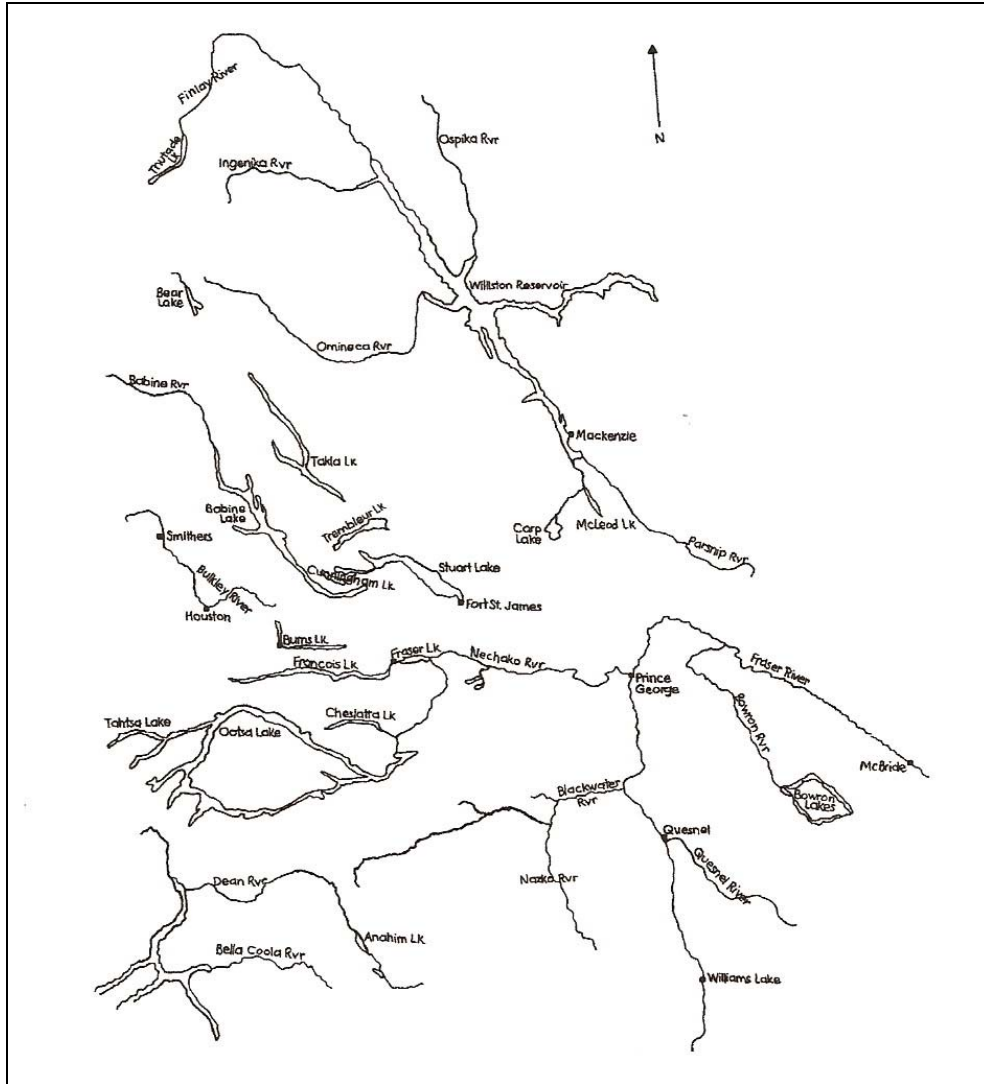


Figure 2. Carrier Sekani Region of British Columbia (adapted from Brown, 2002)

The term Carrier evolved from a Sekani translation adopted by Europeans as they traveled through Sekani territory into Carrier territory. Stories suggest the term Carrier was adopted from the tradition of widows packing charred bones of their deceased husbands. In some literature (Munro 1944), Carrier people are referred to by the French term *Porteurs*. Another term that has been used to refer to the Carrier is *Taculli*, along with variant spellings. This is an adaptation of the phonetic notation used by Father Adrien-Gabriel Morice. The first written reference of Carrier people is in the 1793 journal of Sir Alexander MacKenzie. Mackenzie uses the term *Negailer* (Hudson 1983:48).

The Athapaskan word for people is “dene”, sometimes pronounced as “ne”, “t'en”, or “jan” (Brown 2002:25). Carrier people refer to themselves as Dakelh-ne or Yinka Dene. In the book *The Carrier, My People* (Hall 1992) it is suggested that the name Carrier “*Aghelh Ne*” means “ones who pack”. This reference is historically based, as people often had no means of transporting goods except on

their backs or by canoes. Most Carrier people state that *Dakelh* translates to “on water travel” (Hall 1992).

The Carrier: Geographical Scope

The Carrier occupy the northern portion of the Interior Plateau with both the upper Skeena and upper Fraser headwaters draining through their territory, as well as portions of the upper Peace River drainage to the north. Geomorphology of the area has been dictated by volcanism, glaciation, fluvial erosion, and deposition of glacial and post-glacial periods (Brown 2002:22).

The Rocky Mountains to the east, Omineca Mountains to the north, and Coast Mountains to the west, naturally surrounded the Plateau region. Several large lakes and smaller lakes are located throughout the traditional territory – i.e. Babine Lake, Stuart Lake, Ootsa Lake. Sub-boreal Spruce (SBS) biogeoclimatic zone predominates with parts of the Mountain Hemlock (MH) and Englemann Spruce-Subalpine Fir (ESSF) zones at higher elevations (Cannings and Cannings 1996: 86,88).

The Carrier are an alliance of several small nations with each nation having its own distinct territory, usually corresponding to a lake system or watershed, as well as distinct cultural features and language (McMillan and Yellowhorn 2004:248). Within the Carrier territory, all features of the natural landscape are identified by Aboriginal names. The word for river, often written as “ko”, “quo”, or “ka”, is prominent in Carrier place names such as Endako and Nechako (Brown 2002:25). Each distinct village group was generally known in reference to a location in a watershed (Hudson 1983:49). People referred to themselves as *x^wot'en*, “people of” (Hudson 1983:49), or *h^wit'en* “people of this place” (Daly 2005:107).

Furniss (1995:516) identifies three branches of the Carrier:

- The Southern Carrier, whose traditional territory stretches from the Bowron Lakes in the east to the western Chilcotin Valley;
- The Central Carrier, traditionally occupying an area from the upper Fraser valley near Jasper in the east to Cheslatta Lake in the west; and
- The Northern Carrier, occupying the area from Burns Lake west to Moricetown and north to Babine Lake.

The Carrier: Lifeways

The Carrier way of life was based on a seasonal round consisting of small extended family groups harvesting specific animal, food plants, medicinal plants, and fish at different seasons throughout the year in locations coinciding with that families traditional territories (Brown 2002:23-24). Summer was the busiest period as berries were gathered and fish caught and preserved.

Abundance of fish in Carrier territories supported a relatively settled lifestyle and the highest population density in the Western Subarctic (McMillan and Yellowhorn 2004:248). The central component of the Carrier economy was fish,

especially anadromous salmon, which were air dried, smoked and stored for the winter in large numbers. Fish heads were boiled and rendered into oil and used as a base to be mixed with dried berries (Morice 1893:93). Sockeye salmon were the main resource, and the distribution of Carrier settlements coincided with strategic fishing locations (Hudson 1983).

Importance of fish is further reflected in the Carrier calendar, which followed the cycles of the moon. For example, the month roughly coinciding with August was known as *thall-uza* “the month of the red salmon” and September was known as *pit-uza* “the month of the bull trout” (Hudson 1983:62). Even in the winter months, fish were often captured utilizing a hot rock to melt a hole in the ice, a dried willow fork as a hook, and willow bark as line; willow nets were also used in certain areas (Hall 1992:12).

Hunting and trapping were an important component of the Carrier seasonal round. Hudson (1983:63-64), in a review of early explorer and Hudson Bay Company records, points out that after fish, small game were most important. Beaver were an important food source captured in early summer and fall in traps and snares made of animal hide and willow. Lynx, muskrat, marten, rabbit and marmot were also trapped. Deadfalls and pits as well as bow and arrows were used for larger animals such as bears, caribou, elk and deer – moose did not move into the area until the early 1900s (Hall 1992:13-14). Other fur-bearing animals such as otter, wolf, marten, fisher, mink, ermine, and wolverine, were trapped to some extent. However, until the advent of the fur trade such trapping was a minor activity. Some birds (i.e. grebes) were captured utilizing fishing nets suspended in the air, swans were captured in snares, and often many body parts were useful in other purposes; for example the dried esophagus of a goose was used for storing its own fat (Hall 1992:14).

Plants played an important role in Carrier culture as food, medicine, and technology. Morice (1893: 125-132) inventoried a wide range of plants used by the Carrier including berries, roots and bulbs, plant stalks, various leaves, and various components of different tree species. Hall (1992:16) explains the importance of plant gathering in spring and early summer as edible roots from cow parsnip, wild rhubarb, and fireweed were gathered. Plant bulbs were eaten fresh, or roasted in the ground using hot rocks and various barks and left for several days. Inner cambium bark from pine trees was also harvested, and occasionally from poplar trees as well. Medicinal plant harvesting is generally not well documented.

Turner (1998) highlights many technological uses of various trees species utilized by the Carrier. Subalpine fir was utilized for roofing shingles, and rotten wood was used in smudging fires for tanning hides. Pitch was utilized in lining canoes and coating bow strings. Rocky Mountain Juniper was touted as the best material for making bows, as well as rough spoons. Engelmann, White, and Black Spruce were utilized for many purposes: encircling fish traps, as snowshoe

frames, drying poles, boughs were used as floor coverings and for stopping ice holes from freezing (Hall 1998:12), bark was used for making large cooking and storage pots, and the roots were used for sewing seams in many products. Lodgepole Pine was used for wood fuel, and fire making drills, as well as the bark cambium was harvested for food. Douglas fir was used for snowshoes and fish traps.

The Carrier: Social Structure and Governance

Morice (1893) identified four named matrilineal descent groups as the basis of Carrier social structure – Grouse, Beaver, Toad, and Grizzly Bear. Seven sub-nations have been identified in Carrier territory – the *Tlaz-‘tenne* (Trembleur Lake and northern Stuart Lake), the *Na’katzli-‘tenne* (southern Stuart Lake), the *Nautlo-‘tenne* (Fraser Lake area), the *Tan-‘tenne* (Prince George area), the *Nutsa-‘tenne* (Blackwater basin), the *Nazku-‘tenne* (near the mouth of the Blackwater and Quesnel Rivers), and the *Lthau-‘tenne* (near Alexandria). The Babine Carriers to the west were considered distinct from the central interior Carrier.

Brown (2002:25) explains the methods of Carrier governance prior to European contact:

Before the arrival of Europeans, the Carrier Sekani nations had established governments within geographic boundaries that were well known to themselves and their neighbours. Territorial boundaries were marked with reference to natural landmarks (e.g. mountains, rivers, creeks, lakes, rocks, etc.) and the knowledge of these boundaries was reinforced through oral histories passed down by Elders and Chiefs to the younger generations.

The basic Carrier social group was the extended family (*sadeku*) consisting of several brothers, their wives and children (McMillan and Yellowhorn 2004: 248; Brown 2002: 28). Typical among Athapaskan groups, each family held rights to a hunting and gathering territory and fishing sites. Size and composition of each group was variable as well as the size of territory. Descent in a family was determined matrilineally, and marriage was exogamous, or outside of one’s group (Hudson 1983:70; Brown 2002: 32).

With the northern and central Carrier, control of territory was not exclusive, however fishing sites were considered family property. The *detsa* (headman) and *duyunne* (shaman) held the most political influence, with the *detsa* responsible for coordinating hunting and fishing – more through persuasion and support rather than control or coercion (Brown 2002: 28). Access to other areas could be secured through marriage outside of the extended family, such as non-Carrier neighbours (Hudson 1983:76). These marriages resulted in a stable network of trade, mutual assistance, and shared access to hunting, gathering and fishing sites. Family relatives became very important in times of scarcity.

Brown (2002:28) summarizes the system of Carrier land management and tenure:

The traditional territories of the central and northern Carrier were based on the concept of “keyoh” which means the resource area... that belongs to a particular settlement or clan, and that serves the material, cultural, and spiritual basis for sustaining human life. The central institution through which the Carriers owned, managed, and protected the “keyoh” was the potlatch system, or “Bahlat”. Under the Bahlat system, Carrier society was divided into matrilineal clans, called “Di Do Ne”... Each clan owned and controlled its traditional territory, or keyoh, that sustained the families belonging to that clan and its sub-clans. The boundaries of the traditional “keyoh” are still known today by the Carrier Elders.

The ‘Bahlat’ is the central institution of Carrier society. These community feasts served to reinforce social structure, settle disputes, re-distribute wealth, and celebrate cultural values. The Bahlat system also served as a system of land tenure and resource management (Brown 2002: 28). The Bahlat system also fostered stable alliances and reciprocal assistance between clans in adjacent keyohs. Hereditary chiefs served as key landowners and resource managers on behalf of their clans and utilized the Bahlat system to settle disputes over trespass and use of resources.

The wealth of a clan depended on maintaining control of key resource sites (hunting, fishing, berry-picking, etc). Clan Elders and Hereditary Chiefs played important roles in the Bahlat system for maintaining and validating resource use boundaries within their keyoh. Oral histories, genealogy, regalia, crests, unique songs and dances were essentially property markers that defined and upheld the clan’s jurisdiction over its keyoh. During a Bahlat, when the host clan distributed gifts to members of other clans, acceptance of these gifts indicated recognition of the legitimate authority of the host clan within its keyoh. Collective decisions, negotiations, or acts of recognition done before witnesses at Bahlats strengthened the legitimacy of participating clans and bound them to respect each other’s jurisdiction. Inter-clan sharing of resources was arranged through the Bahlats Hereditary Chiefs (Brown 2002: 31-32).

Historical Overview of the Morice TSA

As forementioned, the First Nations of the Morice Timber Supply Area predominantly belong to the Carrier First Nation group. Historically, these people led a primarily nomadic life along rivers and lakes. Subsisting on fish, game and wild foods they lived off the land; trapping, hunting, gathering and preserving what was needed to survive.

Babine Lake, situated in the northern section of the Morice Timber Supply Area, was one of the major transportation routes for the Wet’suwet’en and made an ideal spot for the establishment of a Hudson Bay Company Post. Mr. William Brown and 13 men established a Hudson Bay Company Post on Babine Lake in 1822 (Smith 1971). The trading post was located at the northern ‘Y’ of the lake between the East and West arms. The trading post was named Fort Kilmaurs and typical to all Hudson Bay Company Posts had a role in trading goods and supplies to the local First Nations for their furs or seasonal foods (Bulkley Valley Museum 2006). A second Hudson Bay Company post was established near the

western outlet of the lake possibly as early as 1836, this was to take advantage of the First Nations harvest of the annual salmon run (Bulkley Valley Museum). By 1871 this new post was the more important of the two and Fort Kilmaurs fell to disuse (Smith 1971).

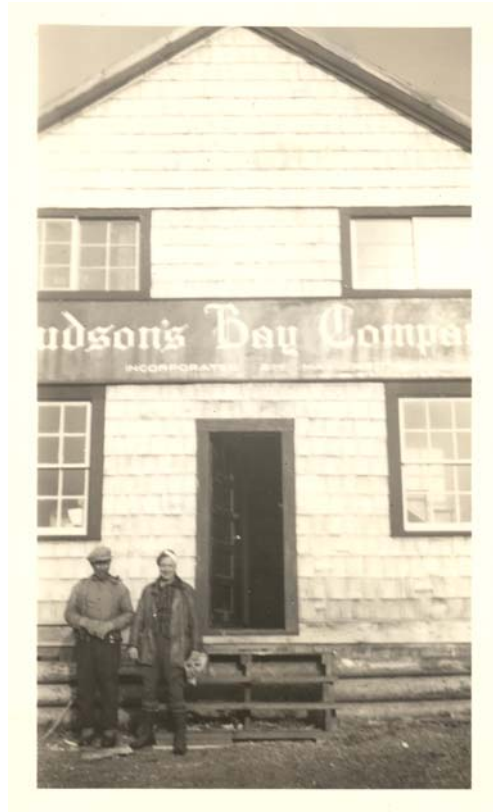


Figure 3: Photo taken in front of HBC office in Old Fort Babine. Linnea (Hanson) Thain and an unidentified man in front of Hudson's Bay Company office in Old Fort Babine (courtesy of the Bulkley Valley Museum, used with permission)

The Collins Overland Telegraph made some of the first historical records of the Morice TSA as the team surveyed and constructed the line through this area in 1866 (Shervill 1981). Perry Collins saw the first attempts at a transatlantic telegraph cable fail and ventured that an overland route via the Bering Strait would be a success. The telegraph trail went as far north as Quesnel and then turned west through the lakes district, crossing into the Morice Timber Supply Area south of the present day town of Topley (Hols 1999). The telegraph trail then bisected the Morice TSA roughly following the Bulkley River to the Bulkley Valley and on to Hazelton (Shervill 1981). Collins' dream of an overland telegraph was ruined when the transatlantic cable transmitted to Newfoundland in July of 1866. The telegraph project was stopped in October of 1866 leaving behind a trail that opened up a clear transportation route through the Morice TSA, those on foot, horseback and the pack trains could now move through the area via the telegraph trail (Smith 1971).

Father Adrian Gabriel Morice was the first catholic missionary on historical record to encounter the Morice TSA. His name continues to remain prevalent throughout both the Morice and Bulkley Forest Districts; for example, Moricetown, Morice Mountain, Morice River and Morice Lake are some of the townships and geographic features that reference his name. In 1885 Father Morice was stationed at Fort St. James on Stuart Lake, east of the Morice TSA, and with First Nations guides Morice explored territories from Babine Lake to Moricetown and south to Ootsa Lake (Hols 1999). He was a noted linguist and cartographer and published several volumes on the First Nations in the central Interior of British Columbia.

In 1892, the province of British Columbia sent a survey party, led by Mr. Poudrier, north to record their findings (Shervill 1981). At this time steam powered paddleboats ran the Skeena River between coastal Prince Rupert and the interior village of Hazelton. The large paddleboats could not safely venture further up the river due to the narrowing passage and frequent rocky canyons. From Hazelton, the Poudrier survey party went inland to the Bulkley Valley and on to the lakes district, through 'Pleasant Valley' now known as Houston (Bulkley Valley Museum). Poudrier noted the mineral, forestry and agricultural potential of what is now the Morice and Bulkley Timber Supply Areas (Hols 1999).

Gold was discovered in the Klondike in 1898 and having a means of communication between Atlin and Quesnel proved to be desirable (Hols 1999). In 1901, the northern telegraph project was completed and the lines of communication were restored (Hols 1999). The telegraph trail was the main route for goods and fur traders to travel through the Morice TSA. Telegraph cabins were built every 120 kilometers to maintain the line and pack trains delivered supplies to pioneer ranchers and telegraph linesman (Shervill 1981; Hols 1999). Most prospectors used the more convenient steamer from Prince Rupert to Hazelton but those that could not afford the passage had to pass through the Morice TSA on their long walk north.

Miners and prospectors explored the Morice TSA in these early years but not to the extent of the neighboring Bulkley Valley. The properties or claims in this area were not often easy to access; the many lakes and rivers impeded the transportation of the miner and the minerals (Hols 1999). It is widely rumored that the Chinese were in the Houston area around 1860 and discovered gold at Bob Creek, 8 kilometres south of Houston along Buck Creek Road (Smith 1971; Hols 1999). There is no written historical record of Chinese miners but early settlers to the Morice TSA do claim to have seen remnants of their mining activity in the mountains (Hols 1999; Smith 1971).

The Hudson Bay Company men and the early missionaries in the study area kept changing; similar to the miners and prospectors, they rarely took up permanent residence. However, some men did permanently settle in the area. Three such

men stand out as early settlers in the Morice TSA, Mr. Barrett and the McInnis brothers.

Charles Barrett established one of the earliest ranches. Barrett operated the pack train that supplied the construction of the telegraph and upon completion of the line he decided to stay in the area. Barrett set up a ranch near Barrett Lake and operated his 300-animal pack train (Smith 1971). By 1907 Barrett had amassed several thousand acres and started ranching and farming while continuing his pack train operation (Hols 1999).



Figure 4: Photo of men haying on Barrett Ranch. (Courtesy of the Bulkley Valley Museum, used with permission)

The McInnis brothers were also prominent early settlers to the Morice TSA as they took up land in 1901 (Smith 1971). Their ranch, Pioneer Ranch and Meadowbrook Farm, was located at North Bulkley, east of the present day town of Houston (Hols 1999). Finding the land very fertile, the McInnis brothers grew large crops of vegetables and brought the first cattle into the area.

The history of the entire Northwest and of the Morice TSA was greatly influenced by the construction of the Grand Trunk Pacific Railway. The Grand Trunk Pacific Railroad first announced its intention to build a second transcontinental railway from Nova Scotia to Prince Rupert in 1902 (Shervill 1981). Being closer to the Asian market than the port of Vancouver, speculation was wild about the railways success. Construction on the line began in Prince Rupert in 1907. In 1910, the Grand Trunk Pacific bought a large area of land from a man named Poulton and laid out the town site (Hols 1999). The Grand Trunk Pacific named this town site Houston; the area would no longer be called "Pleasant Valley". At this time very

few people actually lived in Houston. Most early (and few) settlers lived in North Bulkley, 11 kilometers to the east in Barrett (Hols 1999; Smith 1971). The Grand Trunk Pacific Railway was completed in 1914, the last spike being driven where the tracklayers met in Fort Fraser (Shervill 1981).

The growth of the community of Houston was slow. Established in 1910 and by 1917 the community of Houston had only a small school, one store, a post office and a community hall (Hols 1999). Houston was not a 'booming' town and even by 1922 the population was not above 80 people (Smith 1971). Railway stations and settlements were established every 8 to 16 kilometers along the line. In the Morice TSA the rail stops of Topley, Perow, Knockholt, Houston, Barrett and Walcott were established (Hols 1999). The community of Houston became the source of supplies and mail for those families living in the western edge of the Lakes District. Lakes district pioneers came to Houston via the Parrott Lake/Buck Flats Trail (Hols 1999). The community of Houston grew slowly as more families attempted to carve a living in this land.



Figure 5: Photo near Francois Lake, approximately 1914. On the back of the picture in red ink is written: "Russell Smith's car. Brought from Pr. Rupert before the rly". (courtesy of the Bulkley Valley Museum, used with permission)

The Grand Trunk Pacific Railway required thousands of wooden railway ties to be hand cut by tie hackers. This was the beginning of the forest industry in the Houston area (Hols 1999). Small portable sawmills and timber companies started up, each were largely dependent on the demands and supply lines of the Grand Trunk Pacific Railway (Shervill 1981). Farming and ranching were also major contributors to the local economy. Those that farmed during the short growing season often worked in tie camps during the winter. But it was the forestry that would prove to be the economic center for the community of Houston, growing from tie camps to corporate industry.



Figure 6: Photo of tie hackers near Perow, BC. Tiny McLaughlin (tie inspector), Vera McInnes, Mabel Allen, Beatrice Williscroft, Neva McInnes, Emery Green, hauling ties at tie camp near Perow, B.C. (courtesy of the Bulkley Valley Museum, used with permission).

The population of the Morice TSA was greatly increased in the throughout the 1920's and 1930's by an influx of settlers from Holland. Encouraged by Jacob Prins, who settled in Canada from Holland in 1927, many Dutch settlers came to Barrett in the Morice TSA (Hols 1999). Between the years 1927 and 1939, twelve Dutch families settled into a mixed farming and forestry lifestyle in either in Barrett or in the community of Houston (Hols 1999). Family names such as Groot, Prins, Dieleman and Hagman live on in the descendants in the community of Houston.

The First Nations, missionaries and early pioneers in the area would have traversed a very different landscape than exists today. The historical maps of the natural lakes, rivers and waterways in the southern drainage have changed greatly due to the construction of a dam and large scale flooding by Alcan Aluminum Ltd. It was in the 1920's that Fredrick Knewstubb, chief hydrological engineer for the British Columbia water rights branch, first noticed the hydroelectric potential of the central interior lakes (Alcan 2004). Many years later in 1952, Alcan Aluminum began construction of a massive dam on the Nechako River Canyon, south of Fraser Lake (in the Lakes District TSA). Completed in just six months, this massive clay core and rock filled dam stood 95 meters high and 500 meters wide (Alcan 2004). The flooding of land and changes to the landscape in the lakes district and the Morice TSA was dramatic. The circle of lakes created by the Kenney Dam had a surface area of 1200 square kilometers (Alcan 2004). Its most westward point, Tahtsa Lake in the Morice TSA, stands 270 kilometers from the dam. It is also at Tahtsa Lake that the water from the reservoir begins its journey through a tunnel in Mount Dubose to the powerhouse

at Kemano (Alcan 2004). The physical landscape of the southwest portion of the Morice TSA was changed greatly as a result of the 1952 creation of a reservoir for the Alcan Aluminum Smelter in Kitimat.

In summary, missionaries, surveyors, telegraph linesman and prospectors ventured throughout the Morice TSA and a few brave pioneers established farms or ranches. But the area remained largely unsettled by pioneers until after the arrival of the Grand Trunk Pacific Railway. The railway created a convenient transportation route and officially set up the communities of Barrett, Houston, Knockholt, Perow and Topley. The community of Houston grew very slowly and eventually became the business center for the Morice Timber Supply Area with its economy centered upon the forest industry.

METHODOLOGY

Introduction

This Project was completed in several phases, detailed as follows:

- **Phase I:** Library and records search
- **Phase II:** Interviews and consultation
- **Phase III:** Synthesis and mapping
- **Phase IV:** Report preparation
- **Phase V:** Ratification and peer review

Phase I - Library and Records Search

This phase involved a comprehensive review of library and archival literature, as well as any other potential data sources including land-use planning processes, First Nation planning and research processes, other archaeological research, etc. As outlined in the BC Archaeological Impact Assessment Guidelines (Province of BC, 2000) research conducted for this Project included:

- a check of extant records including the B.C. Archaeological Site Inventory, Remote Access to Archaeological Data ("RAAD"), legal land survey records, and other relevant records and inventory files;
- a review of all previous archaeological and ethnographic investigations in the study area and adjacent areas;
- a review of relevant information from published and unpublished sources such as local and regional history, prehistory and ethnography;
- a review of relevant paleoecological studies to assess past environmental conditions that may have influenced cultural adaptations; and
- an examination and interpretation of air photographs and geomorphological and pedological information as an aid for assessing the potential for human habitation.

This check of background information included a synthesis of biogeophysical, ethnographic, and archaeological information, essential to:

- identifying the limits of available data and gaps in existing knowledge;
- evaluating the physical and cultural potential of the landscape;
- assessing temporal changes to the landscape and the resulting impacts on settlement and subsistence patterns;
- formulating cultural land-use patterns;
- evaluating previous archaeological studies;
- assessing the integrity of the study area; and
- framing research or resource management objectives through an appropriate survey and sampling strategy.

Phase II - Interviews and Consultation

Interviews and consultations were sought with local First Nation communities and individuals, as well as other individuals with local and traditional knowledge.

Several interviews were conducted with members of the George family from the Wet'suwet'en and the William family from the Lake Babine Nation. Both families have long histories within the study area region, and are renowned for their territorial experience. Moreover, both families are recognized and respected within resource management and native environments. Additionally, interviews were conducted with non-native local trappers, fishing and hunting guides, outfitters and those with intimate and extensive life experience within the Morice TSA. Local museums were also contacted and consulted for historical information regarding the study area.

First Nations and local knowledge holders were initially contacted via telephone and fax communications. Included in the initial contact was information regarding the Project, information regarding the types of data sought and resources that were available for First Nations participation, and a request for meetings or interviews to discuss and share traditional use information.

First Nations Engagement Strategy

All First Nations with traditional territorial claims within the Morice TSA were contacted to participate in this project. Attempts were made to contact each of the following First Nations:

1. Burns Lake Band;
2. Cheslatta Carrier Nation;
3. Fort Babine Band (Wit'at);
4. Lake Babine Nation (Natoot'en)
5. Nee Tahi Buhn Band;
6. Office of the Nedo'ats Hereditary Chiefs;
7. Office of the Wet'suwet'en;
8. Skin Tyee Band;
9. Tachek Band;
10. Wet'suwet'en First Nation; and
11. Yekooche First Nation.

As previously mentioned, six of the above Nations have filed a 'Statement of Intent' to negotiate with the B.C. Treaty Commission. However, because all eleven of the above Nations have indicated their separate political existence, or intention to be independent, Crossroads contacted all of the above eleven Nations.

Figure 7 presents the stated areas of interest of First Nations within the Morice TSA as understood by Crossroads at the date of this report (based on information from the Ministry of Forests and Range and the British Columbia Treaty Commission). Figure 7 is included for illustrative purposes only and is not

a statement on Aboriginal rights. Figure 7 has not been reviewed by any of the affected First Nations and should be used as a general reference only and should not be used for making determinative decisions.

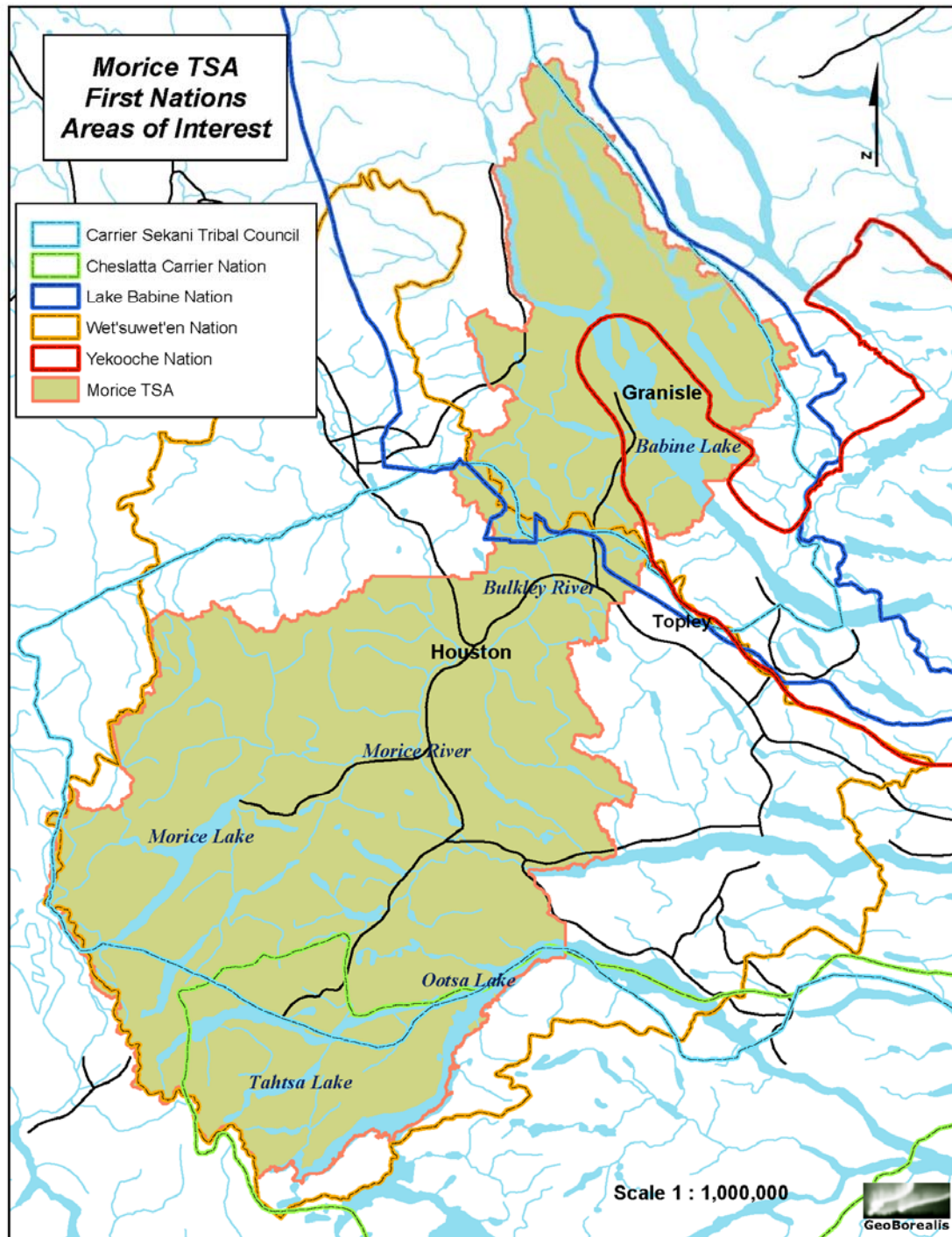


FIGURE 7: MORICE TSA FIRST NATIONS AREAS OF INTEREST

Attempts to contact the above First Nations were first made by fax, followed by two 'cycles' of phone calls. Subsequently, a final fax and follow-up letter was sent to each First Nation. In most cases, we were able to communicate with an individual directly.

None of the First Nation political organizations contacted were available to formally engage in this project. One common reason for lack of participation in this project was the result of an early and heavy snowfall – during which the research and data collection phases of this project. Many First Nations administrations were focused on the well being of their community members in remote locations, and did not have the capacity or resources to dedicate towards this project. Issues such as the loss of electricity and water access were of paramount importance for these Nations.

As an alternative to contacting formal First Nation political organizations, areas of the Morice TSA were researched for First Nation family histories. More specifically, Crossroads identified individual families who have had an extensive and continuous occupation to their territories within the Morice TSA. Several such First Nations families were contacted, resulting in the participation of the George family of the Nadina Mountain and Owen Lake area (Wet'suwet'en) and the William family of Babine and Morrison Lake (Lake Babine Nation). Each family was extensively interviewed, and asked to share information regarding areas of their territories that they consider to be of 'cultural interest and importance'.

The non-First Nations participants that were interviewed have a minimum of 35 years in the Morice TSA, with interests ranging from fishing, guiding, hunting, trapping and camping.

Extensive consultation also occurred with the Office of the Wet'suwet'en (the "OW"), who have the most significant claim of territory within the Morice TSA. During this process, several meetings were held in which details of the project were discussed and negotiated. After much discussion, the OW chose not to participate in this project at this time.

Detailed discussions also occurred with non-Aboriginal residents of the study area, yielding valuable insight into the cultural heritage and traditional use of the Morice TSA. Information collected during the consultation and interview process is presented within the traditional use and oral information GIS coverage (Appendix C) and within the cultural heritage database, submitted with this report.

Non-First Nations people who were chosen to consult with were determined through extensive networking and research within resource management and First Nations groups. Several people were consulted before an appropriate person was invited to participate in this project. These individuals all have extensive experience living and working within the Morice TSA. These individuals also form a representative presentation of the different activities that are practiced on the territories, such as hunting, fishing, camping, trapping, prospecting and guiding.

Phase III - Synthesis and Mapping

Geographic and Environmental Features

As forementioned, the following features (or 'variables') were initially to be considered regarding archaeological potential:

1. Watersheds - lakes, rivers, streams, swamps, and marshes
2. Structural geology
3. Forest cover (species, tree age class and height class)
4. Terrain/ecosystems
5. Elevation
6. Slope
7. Aspect
8. Fish distribution
9. Mammal distribution
10. Raised landforms
11. Proximity to known archaeological and/or cultural heritage resources.

However, after the research, databasing, and consultation phases of this Project, the above features were appropriately re-evaluated. The result was a refinement and ratification of the above listed features. Some of these features were rejected for reasons described below.

Rejected Variables

Through research and consultation with a representative group of resource managers, First Nations groups and cultural scientists, the following geographic and environmental features were rejected as variables for predicting the potential of archaeological sites:

1. Forest Cover
2. Fish and Mammal Distribution
3. Proximity to Known Archaeological Sites
4. Structural Geology
5. Terrain/ecosystems
6. Raised Landforms

(collectively, the "Rejected Features")

Rejected Features are individually discussed in the *Evaluation and Discussion* section of this report.

Accepted Variables

The following geographic and environmental features were determined to be relevant to the identified archaeological sites:

1. Proximity to Water
2. Elevation
3. Slope
4. Aspect

(collectively, the "Variables")

Accepted Variables are discussed in the *Evaluation and Discussion* section of this report.

Again, the creation of an encompassing archaeological potential model is beyond the scope of this Project.

Weighting of Variables

For GIS purposes, each Variable was weighted as either positive or negative, with the value one (1) assigned to a positive weight and zero (0) assigned to a negative weight. For example, if a known archaeological site is located within 500 metres of the present shoreline of a water feature (such as Babine Lake), then the water feature variable for that known archaeological site would be assigned a value of one (1).

The "one or zero" approach to the GIS portion of this Project was chosen instead of a more detailed ranking (i.e. 1 through 10) because a detailed breakdown is based on two key assumptions: (1) that human behaviour is exclusively linked to physical geography and environment; and (2) that physical geography and environment are constant. Neither of these assumptions hold entirely correct and for that reason, a high degree of generality must be built into any model. This is particularly true for the Morice TSA, where only a small percentage of the overall land base has been subject to archaeological survey (Budhwa 2006a:27; Budhwa 2006b:16-17; Nicholas 2006). Providing either a "one or zero" approach provides the generality necessary to take such unknowns into account.

Detailed discussion regarding the reasons for selecting the Variables is provided in the *Evaluation and Discussion* section of this report.

Values were assigned to each of the Variables as follows:

Water Features

A value of one was assigned to places situated within 500 metres of a named river or lake and a value of zero (0) was assigned to places greater than 500 metres in distance to that water feature.

Elevation

Elevations below the tree line are assigned a value of one; elevations above the tree line are assigned a value of zero.

Slope

Slopes up to 25% are assigned a value of one. Slopes greater than 25% are assigned a value of zero.

Aspect

South-facing areas, including southeast and southwest facing, are assigned a value of one. Northern aspects are assigned a value of zero.

The First Nations groups and cultural scientists consulted within this project have all participated in the determination of the variable assignments.

Database and GIS Methodology

A significant component of this Project was the production of the Morice TSA Cultural Heritage Resource Database (the "Database"). The Database contains every known archaeological site in the Morice TSA (including descriptive information), and also contains significant traditional use data.

A key component of the database was to link it with Geographic Information Systems (GIS) that will permit spatial representation of known archaeological sites, traditional use information as well as cultural heritage resources.

Traditional use information was collected from interviews with First Nations as well as other land users in the Morice TSA who have intimate knowledge of the land base.

Other sources of information include archaeological assessments (AOA, AIA, CMT surveys etc), registered archaeological sites, historic documents and other information sources in regards to archaeological sites and cultural heritage resources. During this phase of the project, the information was compiled and consolidated into a searchable database (using Microsoft Access). The focus of the information extraction is to identify areas where archaeological sites may exist but have not yet been located.

One unique feature of this project is - for the first time in the Morice TSA - a centralized and searchable cultural heritage database has been compiled utilizing cultural heritage resource information from a variety of sources, including traditional knowledge. The database also enables the spatial representation of known archaeological sites and cultural heritage resources into a system that can be continually updated and built upon over time as new information becomes available.

The database fields are as follow:

Unique ID: This is a computer-generated number that links a specific archaeological site or cultural heritage resource in the database to the GIS based map.

Borden Number: A letter/number assigned to a registered archaeological site by the Ministry of Sports, Arts and Tourism, Archaeology Branch.

Temporary Number: A temporary number may have been assigned to a particular archaeological site or cultural heritage feature by the archaeologist who discovered the site. A Borden number replaces this number if the site predates AD 1846 – thereby becoming automatically protected by the Heritage Conservation Act.

Permit Number: If a site was discovered while conducting an archaeological impact assessment, the permit number refers to the Heritage Inspection Permit Number assigned to the assessment by the Ministry of Sports, Arts and Tourism.

Site Class: Each site is classified according to its site class, either Precontact (pre AD 1846), Postcontact (post AD 1846), Traditional Use (information obtained through oral interviews/traditional use information)

Site Type: Each site is classified according to site type as outlined by the Ministry of Sports, Arts and Tourism

Sub Type: Each site is classified according to sub type as outlined by the Ministry of Sports, Arts and Tourism

Description: A general description of the archaeological site/cultural heritage resource as detailed in the Archaeological site form or source of information.

Source of Information: The title of the original report in which the site information was obtained

Main Geographical Features: The main geographical features associated to the site/cultural heritage resource.

NTS Mapsheet: National Topographic System mapsheet number.

BCGS Mapsheet: BC Geographic System mapsheet number.

Latitude: Spatial Representation

Longitude: Spatial Representation

UTM Zone: Spatial Representation

Easting: Spatial Representation

Northing: Spatial Representation

Elevation: Elevation meters above sea level

Trail: "Yes" or "No" field indicating whether site is part of a trail

Trail Name: Name of trail if known

Archaeological Consulting Firm: Name of Archaeological Consulting Firm that recorded the site

Report Author(s): Author(s) of report

Additionally, archaeological, traditional use, oral and geographic information collected during this Project was used to create the following maps of the Morice TSA (using Arcview):

1. Archaeological Potential Variables (Appendix A);
2. Archaeological Potential Variables, with Archaeology Sites and Trails (Appendix B);
3. Traditional Use and Oral Information (Appendix C); and
4. Archaeological Sites and Trails (Figure 8).

Phase IV - Report Preparation

Following Phase III, this final report was prepared. This final report was prepared in accordance with Appendix A of the BC Archaeological Impact Assessment guidelines.

Phase V - Ratification and Peer Review

This Project was subjected to a quality assurance and technical review process. More specifically, this Project was reviewed in detail by external, objective and reputable archaeological consulting **and** Aboriginal agencies. Feedback from these agencies has been carefully considered by Crossroads and incorporated into this report, where applicable.

RESULTS

The database of known archaeological sites located within the Morice TSA AOA have been provided to Tweedsmuir Forest Products Ltd. (the client). During Phase III of this project, the data collected during Phase I was used to create a series of maps. Consultations regarding appropriate GIS methodologies and concepts were also conducted with several GIS consultants involved with this project. Appendix A is a map presenting the archaeological potential as discussed in the *Methodology* section. Appendix B is a map presenting the archaeological information, cultural trails and archaeological potential. Traditional use and oral information collected during Phase II of this Project is presented in Appendix C. Traditional use and oral information was also incorporated into the Cultural Heritage Resource Database, to the extent that such information could be incorporated.

The majority of known archaeological sites in the Morice TSA are located along the Morice River and the shoreline of Babine Lake. Many of the sites located in those areas were recorded during general surveys commissioned by the Province of British Columbia throughout the 1970s and early 1980s in preparation for the proposed Kemano Completion Project, and prior to intensive industrial activities commencing in the region. Subsequent archaeological investigation has mainly been the result of archaeological impact assessments conducted on behalf of industry (Canuel 2002:26-28). To date, a total of 558 archaeological sites have been recorded within the Morice TSA. Site types include burial sites, cache pits, house pits, cabins and other historic buildings, trails, culturally modified trees, lithics and rock art.

Figure 8 presents the recorded archaeological sites and cultural trails within the Morice TSA.

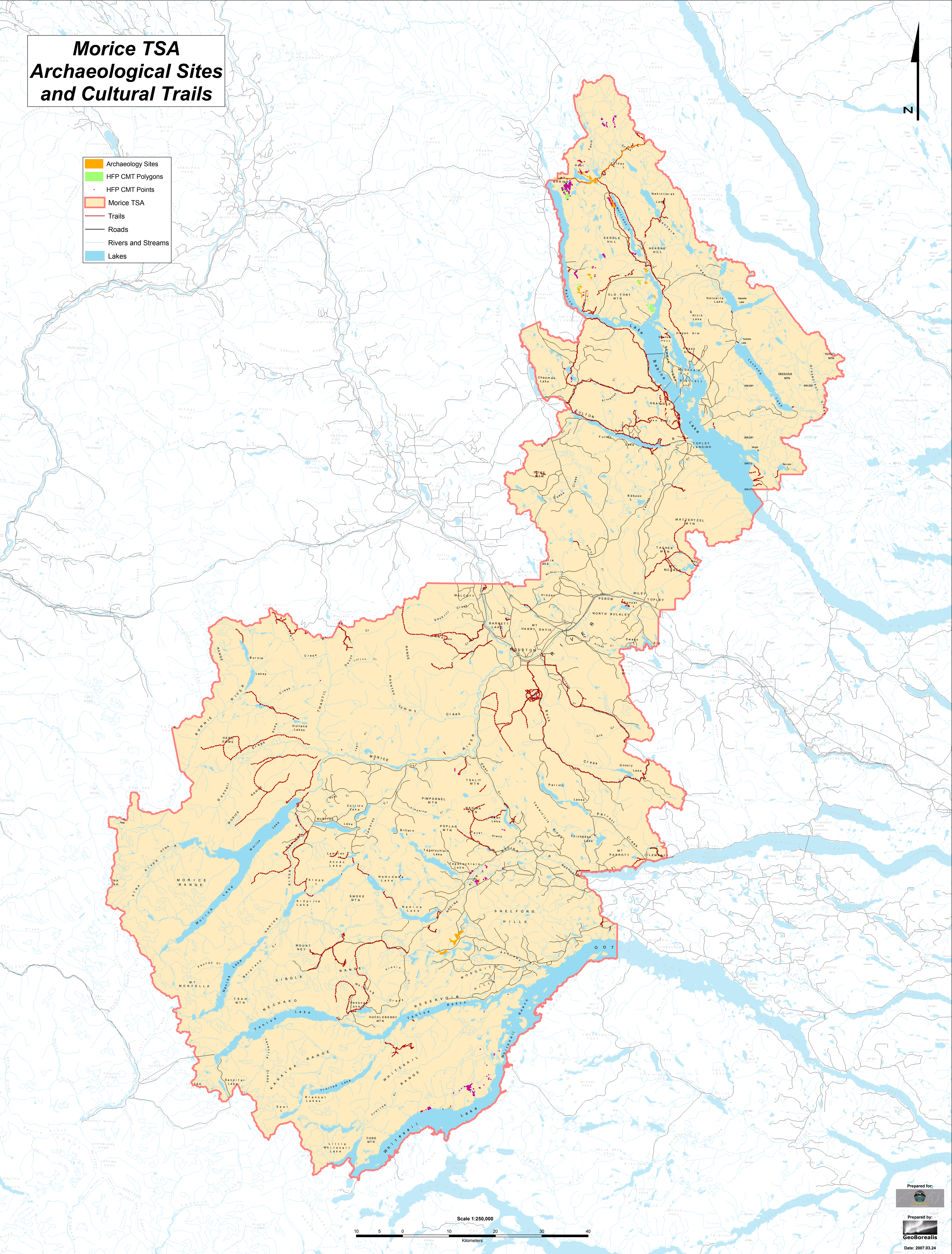


Figure 8 - Morice TSA Archaeological Sites and Cultural Trails

Traditional Use Information

Consultations conducted with First Nations produced a rich collection of traditional use and oral information within the Morice TSA that is often not obtained in similar projects. This was further supported and complimented with oral and historical information from non-native long-term residents of the study area (i.e. guides, hunters, trappers, fisherman, and prospectors).

Collecting traditional use and oral information involves difficult and time-consuming processes. Because this Project succeeded in obtaining such information, this Project provides a uniquely comprehensive perspective of the overall cultural complexity of the region rather than emphasizing the archaeological record.

The traditional use and oral information obtained during informant consultations is presented in map attached as Appendix C. When examined in light of the available archaeological record, the magnitude of the deficiencies inherent in emphasizing archaeological resources over traditional use and oral information is evident. Such traditional use and oral information indicates that Aboriginal use within the Morice TSA involves a far more extensive geographic scope than does the known archaeological record. Achieving the goal of obtaining such traditional use and oral information is as significant as the Cultural Heritage Resource Database.

EVALUATION AND DISCUSSION

The Archaeological Overview Assessment portion of the Project resulted in the successful compilation of data for known archaeological sites located within the Morice TSA. In addition, a significant amount of traditional use information was collected through consultation with various First Nations whose territory lies within the Morice TSA.

Inherent Biases

The most prolific and pervasive bias encountered in this project is that archaeological sites are recorded using non-native conceptions of what influences peoples' behaviour; and the non-native supposition that such influences may be reduced to a quantitative value. To the extent such bias has been identified, archaeologists have attempted to compensate by seeking out "objective" factors on which to base conclusions as to what influenced peoples who lived in different times and different cultures. However, such "objective" factors overlook the unknown and intangible factors that influence peoples' behaviours. This bias has the effect of focusing archaeological investigation to certain areas on a micro scale (during in-field archaeological assessments), and also on a macro scale, for example through the design of an archaeological potential model. (Nicholas 2006:350-355; 360)

The above-noted bias is evidenced in the Morice TSA by looking at where the majority of archaeological sites are found - along the shores of Babine Lake. This is not necessarily a reflection of where and how people actually lived but instead, it may be a reflection of where archaeologists have either chosen, or been directed to focus their attention, by academic and industry interests. Babine Lake was selected for intensive survey during the 1970's based on the non-native supposition that First Nations would have utilized major lakes and rivers more intensively than other places. Subsequent archaeological research has been the result of archaeological impact assessments conducted on behalf of industry, resulting in similar groupings of sites based on where logging or mining was occurring. The overall result is the false conception that traditional use within the Morice TSA was limited to specific areas.

Cultural Heritage Resource Database

As previously stated, a significant component of this Project was the creation of the Morice TSA Cultural Heritage Resource Database. The Database provides a comprehensive summary of all known archaeological sites within the Morice TSA and contains a significant amount of traditional use information.

Some of the available geographic information relating to archaeological sites in the Morice TSA was incorrect or inaccurate, which is the combined result of a lack of consistency in archaeological recording methodology and also in changes in geographic technology over time. For instance, archaeological sites in the Morice TSA that were recorded during the 1970s were without the benefit of GPS technology. In addition, since 1983 sites have been recorded by archaeologists both in NAD 27 and NAD 83 and the transferring of that information has not

always been clearly communicated to data compilers such as the Provincial Government during preparation of the RAAD database. For example, numerous archaeological sites recorded along Babine Lake during the 1970s appear on the RAAD map in the water of Babine Lake rather than on land. As well, there have not been any field verifications for old sites that were recorded on old National Topographic Series (NTS) maps by hand. To remedy *some* of these inconsistencies, we have made efforts to geo-correct these errors in the maps prepared for this Project.

Archaeological Potential Modeling

Archaeological potential modeling has in recent years become a popular tool for industry. However, archaeological potential modeling must be viewed as one component of an overall system of combined tools for decision-making, consultation and accommodation. The determination of archaeological potential should be viewed as a starting point from which to direct the focus of direct consultation with affected First Nations.

In addition, most archaeological potential models are based on Western scientific (non-native) conceptions of what influences human behaviour, in particular the human behaviour of indigenous societies. In so doing, the Western scientific approach is to attempt to place a quantifiable value upon such perceived influences. This approach is unable to account for intangible factors such as religious or spiritual beliefs and often ignores variability of geographic features used in a model. This approach also assumes that all people place the same importance on the same basic necessities of survival (Nicholas 2006:353-354; 359-360).

In order to control for the deficiencies in archaeological potential modeling, a broader approach must be taken that includes traditional use information and ongoing, direct consultation with First Nations (Nicholas 2006; Budhwa 2005).

Analysis of Variables and Rejected Variables

Applying the information gathered and analyzed during the research and consultation phases of this Project as described in this report, the following features have been rejected as acceptable variables for any future archaeological potential model for the Morice TSA:

1. Forest Cover
2. Fish and Mammal Distribution
3. Proximity to Known Archaeological Sites
7. Structural Geology
8. Terrain/ecosystems
9. Raised Landforms

Four geographical features were identified as acceptable variables for any future archaeological predictive or potential model for the Morice TSA:

1. Proximity to Water
2. Elevation

3. Slope
4. Aspect

(collectively, the "Variables")

Each of the above variables is discussed individually in the following sections.

Rejected Variables - Discussion

Archaeological sites reflect aspects of certain cultural practices of peoples, and may be specific to the time when the site was created. The cultural practices an archaeological site represents may have changed over time reflecting cultural changes, changes in the biophysical environment, or other factors (Rabnett 2000:5-6; Canuel 2002:30-31). An archaeological predictive model is premised on the belief that assumptions can be made about what people did and why they did such things. However, while it is a fact that people need to eat or have shelter, there is little else that may be assumed (Rabnett 2000:7; Canuel 2002:30-31; Nicholas 2006:353-354).

In addition, intangible factors affecting human behaviour, such as religious or spiritual beliefs (Rabnett 2000:7; Nicholas 2006:360), cannot be quantified and as such cannot be addressed by an archaeological potential model. Canuel (2002:40) similarly identifies spiritual or religious beliefs as an important influence on human decision-making processes.

Including features as variables that are themselves variable, such as fish and mammal distribution or forest cover, compounds the inaccuracies and results in an unreliable model. Additionally, this level of potential variability is not conducive for archaeological resource management, which is often site specific.

Furthermore, by incorporating the proximity to known archaeological sites as a variable is similarly problematic because most archaeological sites are only identified as a result of selective development practices rather than as a result of independent survey or through consultation with First Nations.

An archaeological potential model should focus upon proven constant, geophysical variables. As well, selecting too many variables for an archaeological potential model reduces the effectiveness of the model because it makes assumptions about past cultural practices that simply cannot be supported. Again, the analysis of too many variables increases the margin for error and decreases accuracy – thereby potentially creating an ‘unmanageable’ analysis situation.

It should be noted that the Rejected Variables are considered somewhat significant, from a holistic interpretive perspective. However, for the purposes of this study, they have been considered outside the scale, scope and parameters that have been defined. The Rejected Variables may be reconsidered in a project of greater scope (perhaps inclusive of a ground truthing component), such as within an ecosystem mapping project that considers human elements.

Forest Cover, Fish and Mammal Distribution

As discussed, forest cover, fish and mammal distribution were rejected as Variables. The primary reason for rejecting these features is because they are themselves variable (Rabnett 2000:8). The present mountain pine beetle epidemic in the central interior is illustrative of how forest cover can fluctuate dramatically over time. That variation in forest cover itself affects fish and mammal distribution; and fish and mammal distribution is also affected by other factors. Employing forest cover or fish and mammal distribution as Variables would skew the data by providing what amounts to a 'snap-shot' in time of those Variables. Applying that 'snap-shot' together with other more constant variables (such as water features or elevation) would only serve to compound the inaccuracies.

Consultation with First Nations and long-time residents of the region (as noted within this project) support the rejection of forest cover and fish and mammal distribution as Variables, for identical reasons as stated above.

However, some consider forest cover and landforms to be site indicators with some degree of value, and they are used commonly – particularly in northeastern British Columbia.

Structural Geology

Structural geology was determined to be irrelevant and as such has been rejected.

Terrain/Ecosystems

This feature was rejected for reasons similar to those set out in *Forest Cover* and *Fish and Mammal Distribution* discussions above.

Raised Landforms

This feature was rejected because of the difficulty to identify raised landforms that are sufficiently defined and raised above the surrounding terrain on a micro-level. While landforms have the potential to be identified and initially interpreted without being in the field through the use of *current* orthographic photographs, such features are best identified on the ground. Therefore, if such features are applied as Variables, then many suitable such features would be missed and, as stated in the discussion on *Proximity to Known Archaeological Sites* below, could lead to false negative results that impact the effectiveness of an archaeological potential model.

Proximity to Known Archaeological Sites

Archaeological potential models commonly include proximity to known archaeological sites as variables (for example, see Canuel 2002; or Carlson 1996). Although the potential for previously unidentified archaeological sites to be located near the location of known archaeological sites is undeniably high (Carlson 1996: 68), it was determined during this Project that the inclusion of that feature as a Variable is not appropriate since a significantly low percentage of archaeological investigation has occurred within the Morice TSA. Including

proximity to known archaeological sites as a Variable therefore creates a negative weight in areas where no archaeological sites are presently identified, that may result in archaeological impact assessments not being conducted in areas that would otherwise be deserving of an assessment.

Including proximity to known archaeological sites would also bias an archaeological potential model partly because of the methodology employed by archaeologists, particularly when operating under a management paradigm (Canuel 2002:27). Such methodology is commonly conducted based on non-native assumptions of where traditional use and archaeological sites are located (Canuel 2002:40).

Finally, including proximity to known archaeological sites as a Variable would de-emphasize the importance of traditional use information (Nicholas 2006).

In addition, archaeological sites represent one aspect of the overall cultural heritage of a people and cannot be considered 'all-encompassing'. For First Nations, fish, wildlife, the forest, vegetation, the landscape and cultural heritage are all connected. Therefore, consultation with First Nations must be conducted on a correspondingly broad plane (Budhwa 2005; Rabnett 2000:5-7; Nicholas 2006).

Consultations with First Nations regarding this phase of the Project supports rejecting known archaeological sites as a Variable for the reasons discussed above. In addition, many activities classified as "traditional use" would result in no physical remains and thus are not identified by archaeological survey and placing too much emphasis upon known *archaeological* sites therefore presents an incomplete picture of cultural activity in a region.

Traditional use activity *may result in* an archaeological site. Therefore, the presence of a known archaeological site indicates that the area was subject to some form of traditional use and the analysis of archaeological remains is extremely important to understanding certain aspects of traditional use activities. However, because only certain activities result in lasting physical remains, the absence of known archaeological sites in an area does not suggest that such area is not a traditional use area (e.g. an area of cultural importance). One example is seen with Culturally Modified Trees (CMTs), which represent areas in which traditional use activities were conducted. However, the recording of CMT sites by archaeologists is typically limited to the immediate area of the CMTs themselves. In addition, CMTs, which are considered to be both archaeological and traditional use sites, only last as long as the tree is alive, making CMTs a unique type of cultural heritage resource (Nicholas 2006:357-359). For further definitions of related terms, please refer to the *Traditional Use Glossary* section of this report.

Statement on Traditional Use and Archaeology

Metaphorically speaking, the study of archaeological sites alone tells one short chapter in a long story, which cannot be properly understood without completing the book. Traditional use and oral information place archaeological sites in their

physical and cultural context (Nicholas 2006): The study of the physical attributes of an artifact alone is incapable of providing such context.

The term "traditional use" is often used in archaeological contexts in a manner that suggests archaeology and traditional use are synonymous, the implication being that archaeological potential models are capable of locating traditional use areas as effectively as archaeological sites. However, the term "traditional use" encompasses a much broader range of human activity than does "archaeological site". Archaeological sites are traditional use sites; but a traditional use site is not necessarily an archaeological site. For First Nations, there is no difference in "importance" between an archaeological site and a traditional use site or area (Budhwa 2006b, Rabnett 2000:5-7; Nicholas 2006). For example, sacred grizzly habitat is as important to First Nations as a village site. Moreover, while there are traditional use "sites" and "areas", traditional use can only be understood in a larger context. The study of traditional use involves the study of geographic space and place and how cultures interact with such places and with the environment (Nicholas 2006).

The importance of obtaining traditional use and oral information cannot be over-emphasized. An archaeological site is the physical remains of an event of human activity. Many such remains are often limited in scope, reflecting either a single event - such as the creation of a stone tool, or limited in the representation of overall cultural activity, such as a cache pit site, which represents only certain aspects of cultural activity, such as food gathering, processing and preservation (Rabnett 2000:5-7).

Traditional use sites and areas, on the other hand, are places of *cultural importance* (Budhwa 2005, 2006b), where people generally performed all manner of activity.

Undoubtedly, the study of traditional use must involve an examination of the entire landscape, rather than isolated places and specific artifacts. In other words, context is paramount for achieving appropriate interpretations of the past. The concept of 'context' is the very basis of sound archaeological practice. It is only through such an integrated and holistic investigation that a proper understanding of an 'archaeological site' may be achieved. (Nicholas 2006:350-355; 362-364) First Nations people view the physical world as being "alive" and interconnected (Budhwa 2002, 2005; Deloria 1995: 55; Wilson 1997; Nicholas 2006:350-355) and perceive a spiritual activity that supports or underlies them. There are thus two schools of thought, or avenues of inquiry, to consider in reviewing and including Indigenous perspectives in resource management. In the same way that different theories or explanations are used in science to better understand an event or concept, a complete interpretation of the past should involve multiple lines of inquiry. In other words, the different perspectives of modern archaeology and First Nations interpretations should be critically integrated as much as possible when interpreting prehistory and history (Budhwa 2002, 2005; Woos et al. 2006:8-9; Nicholas 2006).

As forementioned, traditional use sites are as important to First Nations people as archaeological sites. Archaeological sites are traditional use sites whereas traditional use sites are not necessarily archaeological sites. It is for that reason this Project was designed to incorporate a large consultative aspect to it, thereby identifying such traditional use areas as opposed to only identifying archaeological sites. Furthermore, proximity to known archaeological sites was rejected as an indicator for archaeological site potential within this study.

Archaeological potential models therefore must not be relied upon as a final decision-making tool. These models must only be used in cooperation with First Nations participation and consultation. The identification of areas with high potential may also be subject to concerns over traditional use of the area. Areas determined to be of low archaeological potential, regardless of the method of making that determination, may not absolve government or industry from engaging in meaningful consultation with affected First Nations. Ideally, First Nations should be integrally involved in the archaeological process (Budhwa 2005; Nicholas 2006; Rabnett 2000:67-68).

Accepted Variables - Discussion

Water Features

Water features, defined for this Project as named rivers and lakes, were selected as a variable, with the high potential zone extending 500 metres from the present shoreline. This approach is supported by the First Nations groups that were consulted in this project. For GIS purposes, a value of one was assigned to places situated within 500 metres of a named river or lake and a value of zero (0) was assigned to places not so situated. The 500 metre buffer was selected for two reasons: (1) to attempt to mitigate the fact that water courses are not constant (Canuel 2002:1); and (2) to take into account the fact that land use near water bodies would not be restricted to the near shoreline (*George family 2006 and 2007. Personal Communication*).

In the Morice TSA, the Kenney Dam (as discussed in the *Study Area* section of this report) poses a challenge with regard to applying water features as a Variable to bodies of water affected by that dam. The use of original watershed levels prior to the establishment of the Kenney Dam could have been used. However, given the scope of this project, and in recognition of the fact that water levels following deglaciation were significantly higher, all present shorelines are treated equally with the 500 metre buffer uniformly applied.

Water features were selected as a Variable because such features possess the best potential to support fish, as well as being an important method of transportation and also because large water bodies are the most reliable sources of clean, potable water. In many cases, unnamed water features consist of nothing more than standing water and generally associating simply any water body with archaeological potential produces false positive results.

Swampy areas *are* important from a traditional use perspective. First Nations harvested innumerable plant species that grow in and around such swampy

areas. (Woos *et. al.* 2006:20) However, as discussed such use often does not result in an archaeological site.

Elevation

Elevation was selected as a Variable because it is assumed that the majority of human activity occurs in the valley bottoms, where food and resources such as timber are readily available and transportation routes are easily located.

Although First Nations utilized high elevation zones (meaning above the tree line) (Chief Woos *et al* 2006), also referred to as 'alpine sites', it is generally accepted that human activity was not as intensive above the tree line as it was in lower elevation zones, such as closer to major rivers where an abundance of salmon is readily available (Budhwa 2006a:27-29).

However, the assumption that human activity was concentrated in lower elevation areas must be qualified by the general lack of archaeological research conducted in the Morice TSA and in the northwestern portion of British Columbia in general (Budhwa 2006a: 27; Budhwa 2006b:16-17).

Slope

Slope was selected as a variable because the more flat a particular area is, the greater the probability that such area could have been used for human activity. Conversely, the greater the slope, the less the probability that such an area could have been used for human activity.

Aspect

This Variable was selected based on the premise that southern exposures enjoy increased exposure to sunshine and as such are generally warmer, drier and more pleasant as a result (Canuel 2002:49).

Presentation of Results

The Variables were applied to the Morice TSA as a whole, the results of which are presented in two maps, attached as Appendices A and B to this report. Although Appendices A and B indicate archaeological potential rating for the Morice TSA, it must be repeated that neither those Appendices nor the data provided with this Project should solely be used to predict archaeological potential.

Conclusion

Overall, the goals of this Project were achieved. A significant amount of new data was gathered and previous information verified. In particular, consultation with First Nations and with long-time residents of the study area yielded vast amounts of traditional use and oral information, which is a critical component in understanding the cultural context of a region. This information allows archaeological sites to be understood in a manner that is otherwise not possible. The results of this project will undoubtedly aid in cultural resource management decisions within the Morice TSA.

RECOMMENDATIONS

- *The information contained within this Project is to be considered with other supporting forms of information when making cultural heritage resource management decisions.* Crossroads has applied a 'minimalist' strategy, which was determined to be most appropriate for a project of this type and scope. **It is not recommended that the archaeological potential presentations contained within this AOA be used as sole determinators for cultural resource management decisions.**
- *In order to properly and completely assess the Variables, and to determine whether any additional constant physical variables should be included in any future archaeological predictive modeling exercise for the Morice TSA, ground truthing of identified traditional use areas should be undertaken. Ground truthing should also occur in areas where little or no archaeological information exists.*
- *Ongoing consultation with First Nations, local guides and long time residents of the Morice TSA is recommended in order to ensure that the archaeological and traditional use record is as complete and updated as possible for the Morice TSA, thereby ensuring the integrity of the Morice TSA AOA database.* Consultation should always be undertaken with First Nations. AOAs and archaeological potential models should be viewed as supporting tools in the consultative and decision-making process, rather than as determinative tools.
- *Provide for resources and mechanisms to engage First Nations if and when they are prepared to participate in this AOA.* A major component of best management practices is adaptive management. We must recognize that First Nations organizations lack technical, administrative and financial capacity and are under tremendous stresses, and cannot always operate under the same timelines as projects such as this one. However, at a later date, one of the relevant First Nations may wish to share information that should be included in this AOA. Therefore, the First Nation and their information should be welcomed.

Disclaimer

Recognize that several First Nations did not participate within this project. Regardless of whether or not a First Nation participated within this project, no aspect of this project constitutes any form of meaningful consultation with First Nations groups.

Furthermore, Crossroads has made efforts to research and include as much archaeological and cultural heritage information as possible, within the parameters and scope of this project. However, due to the nature of such information, there is the possibility that additional information relevant to this AOA exists. This further emphasizes the recommendation that ongoing research and consultation must occur external to the use of this AOA when making cultural resource management decisions.

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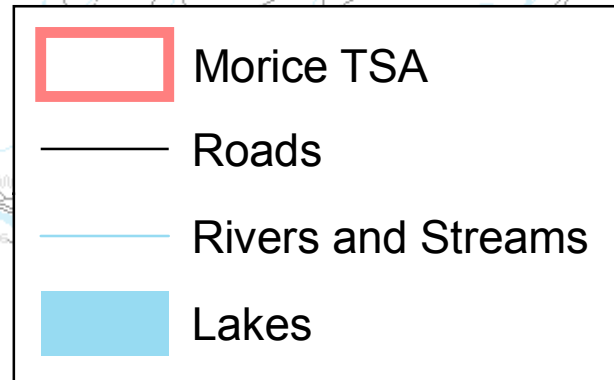
APPENDIX A:
MAP OF ARCHAEOLOGICAL POTENTIAL

Morice TSA

Archaeological Potential Variables

Archaeological Potential Variables

Number of Overlapping Variables



N

Scale 1:250,000



Prepared for:



Prepared by:



GeoBorealis

Date: 2007.03.24

APPENDIX B:

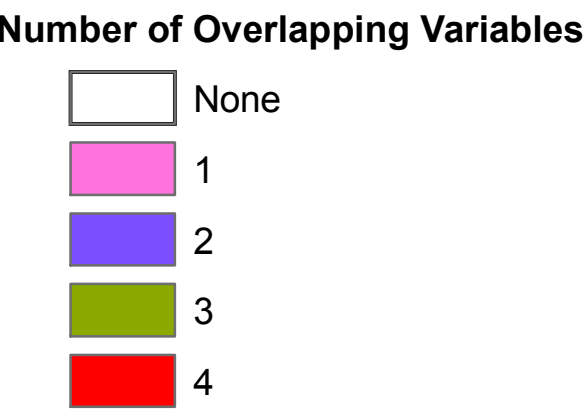
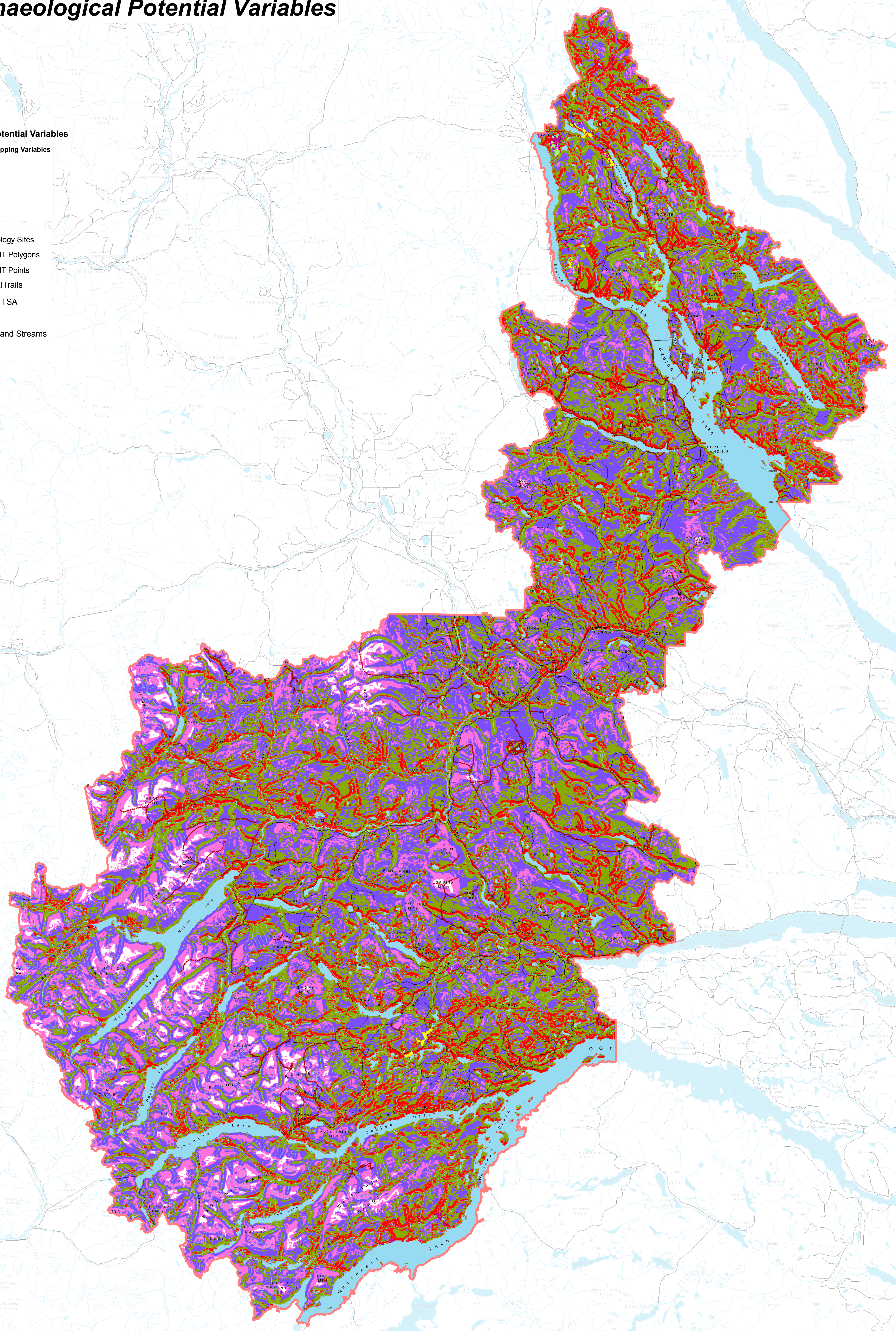
**MAP OF ARCHAEOLOGICAL POTENTIAL WITH
ARCHAEOLOGICAL SITES AND TRAILS**

Morice TSA

Archaeological Sites, Cultural Trails and Archaeological Potential Variables



Archaeological Potential Variables



Scale 1:250,000



Prepared by:



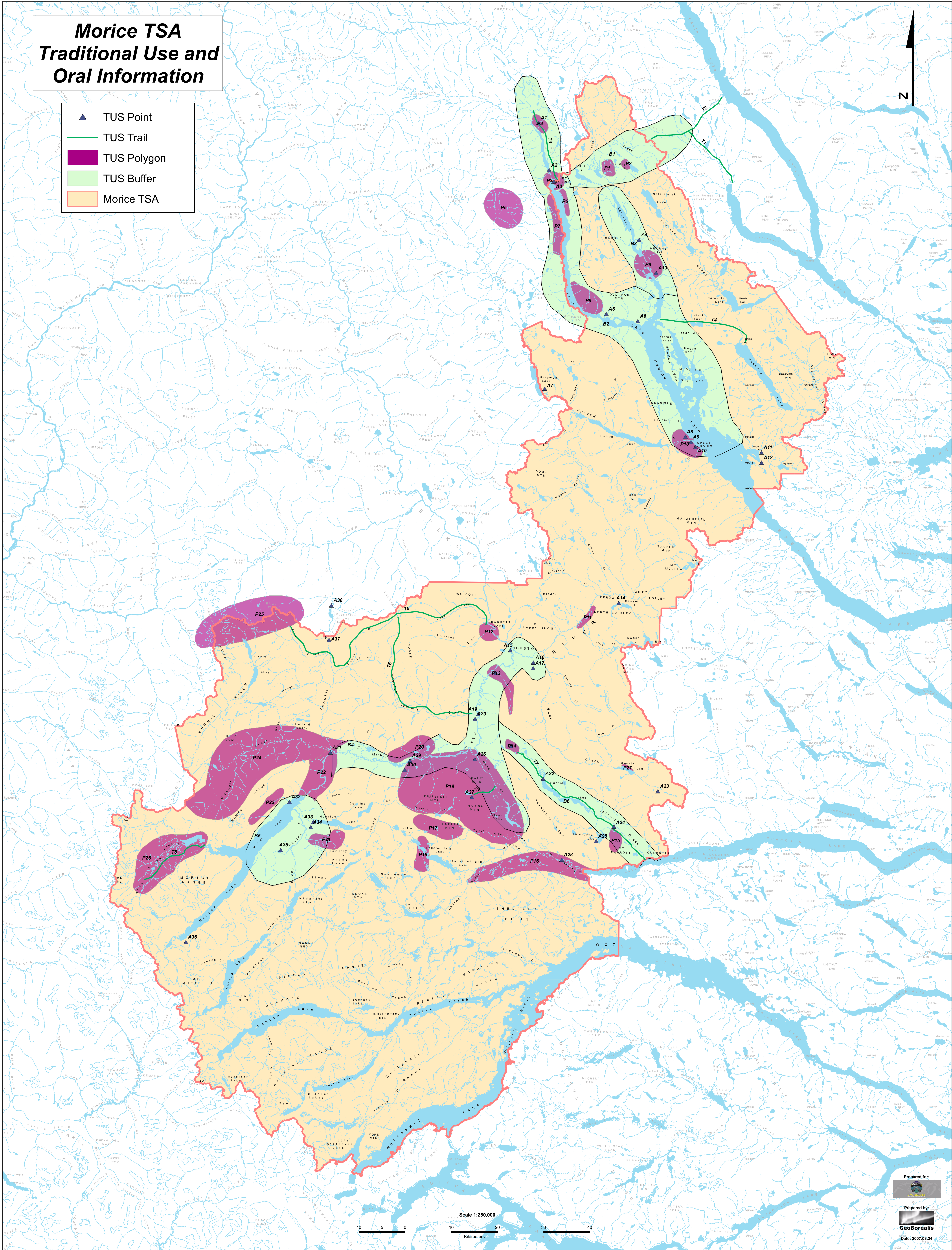
Date: 2007.03.24

APPENDIX C:

**MAP PRESENTING TRADITIONAL USE AND ORAL
INFORMATION**

Morice TSA Traditional Use and Oral Information

- ▲ TUS Point
- TUS Trail
- TUS Polygon
- TUS Buffer
- Morice TSA



Scale 1:250,000



Prepared by:
GeoBorealis
Date: 2007.03.24