APPENDIX H
MEKS STUDY

Maritime Launch Services MEKS

Membertou
GEOMATICS SOLUTIONS

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Executive Summary

This Mi'kmaq Ecological Knowledge Study, also commonly referred to as a MEKS or a Traditional Ecological Knowledge Study (TEKS), was developed by Membertou Geomatics Solutions (MGS) for Strum Consulting with regards to the proposed Missile Launch Project located near Canso, Guysborough Co., Nova Scotia.

This MEKS mandate is to consider land and water areas in which the proposed properties contained within the proposed disposal program are located and to identify what Mi'kmaq traditional use activities have occurred, or are currently occurring, and what Mi'kmaq ecological knowledge presently exists in regards to the area. In order to ensure accountability and ethic responsibility of this MEKS, the MEKS development has adhered to the "Mi'kmaq Ecological Knowledge Protocol, 2nd Edition". This protocol is a document that has been established by the Assembly of Nova Scotia Mi'kmaq Chiefs, which speaks to the process, procedures and results that are expected of a MEKS.

The Mi'kmaq Ecological Knowledge Study consisted of two major components:

- **Mi'kmaq Traditional Land and Resource Use Activities**, both past and present,
- A **Mi'kmaq Significance Species Analysis**, considering the resources that are important to Mi'kmaq use.

The Mi'kmaq Traditional Land and Resource Use Activities component utilized interviews as the key source of information regarding Mi'kmaq use within the Project Site and Study Area. The Project Site included the planned launch site, a vehicle processing and control area, and the infrastructure to support these facilities (roads, etc.).

Project Site (orange area) and Study Area (purple outline) are identified by the Project Team.

The Study Area will consist of areas within a 5 km radius of the Project Site boundaries.

Interviews were undertaken by the MEKS Team with Mi'kmaq knowledge holders from the community of Potlotek, Paqtnkek, Pictou Landing, and We'koqma'q. The interviews took place from November 2017 to January 2018.

Informants were shown topographical maps of the Project Site and Study Area and asked to identify where they undertake their activities as well as to identify where and what activities were undertaken by other Mi'kmaq, if known. Twenty nine (29) individuals provided information in regards to past and present traditional use activities. Permission was requested of the interviewee(s) to have their information incorporated into the GIS data. These interviews allowed the team to develop a collection of data that reflected the most recent Mi'kmaq traditional use in this area, as well as historic accounts.

All interviewee's names are kept confidential and will not be released by MGS as part of a consent agreement between MGS and the interviewee to ensure confidentiality.

The data gathered was also analyzed in regards to its significance to the Mi'kmaq people. Each species identified was analyzed by considering their use as food/sustenance resources, medicinal/ceremonial plant resources and art/tools resources. These resources were also considered for their availability or abundance in the areas listed above, and their availability in areas adjacent or in other areas outside of these areas, their use, and their importance, with regards to the Mi'kmaq.

Historic Review Summary

The Project Site was one of the last areas of the province to free of ice during the last Ice Age that left landscape of barren of exposed igneous and metamorphic bedrock, organic filled depressions and a small field of drumlins north of the site.

There is little archaeological evidence along the Eastern Shore of the Province to indicate the presence of early peoples which may be factor of too little investigation and current light population producing few accidental archaeological finds.

Archaeological finds along the St Marys River system have been white quartz tools rather than the preferred chalcedonies and cherts of other regions of the province. Exposed veins quartz would have been of importance to early peoples in the Study Area and Eastern Shore.

The shores and islands of Chedabucto Bay and particularly the Canso area were favorite landings for European fishermen to dry their catches and for the Mi'kmaq to trade with the Europeans since the mid 1500's. The Canso area was and important location within the Mi'kmaq Traditional Territory of *Eskikewa'kik* as it was far from traditional enemies and was a coastal connection point between other Mi'kmaq Territories and trade.

The English occupation and fortification of Canso triggered several Mi'kmaq attacks on the English at Canso during the early to mid-1700's with the encouragement and arms supplied by

the French. After the departure of the French from North America in the late 1700's, the Mi'kmaq were displaced by English settlers in the Canso area and the Province.

A review of historic maps of Guysborough County show very little evidence of Mi'kmaq settlements within the Study Area or the locations along Chedabucto Bay and Eastern Shore as reported in the sources.

Census of the early 1900's enumerated the Mi'kmaq of "Cooks Cove Micmac Reservation" of unknown location which indicated a population of approximately 40 persons identifying themselves as Mi'kmaq near the community of Guysborough.

A summary of the history of the Mi'kmaq Traditional Government provides insight into the events that led to the current system of Reserves as well as Band Chief and Council Governments while the Traditional Mi'kmaq Grand Council persevered from Pre-contact to Present-day.

A review of current Land Claims show no current active claims within the Project Site and Study Area.

Traditional Use - Project Site Summary

Based on the data documented and analyzed, it was concluded that some Mi'kmaq use has been reported on the Project Site, or in the immediate vicinity.

In the surrounding areas, trout fishing, deer, moose, rabbit, and partridge hunting were the predominant activities in the Project Site.

Traditional Use - Study Area Summary

Based on the data documentation and analysis, it was concluded that the Mi'kmaq have historically undertaken traditional use activities in the Study Area, and that this practice continues to occur today. These activities primarily involve harvesting of fish, but also include

harvesting of animal, plant, and tree species; all of which occurs in varying locations throughout the Study Area and at varying times of the year.

Mackerel, **trout**, and **lobster** were found to be the most fished species in the Study Area. **Deer**, **partridge**, and **rabbits** were found to be the most hunted species within the Study Area. With the small number of gathering areas identified, it is difficult to categorize the area as a particular gathering area type.

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1.0 INTRODUCTION

1.1 Membertou Geomatics Solutions

Membertou Geomatics Solutions (MGS) is a Membertou First Nation company that was developed as a result of the 2002 Supreme Court Marshall Decision. MGS was established as a commercially viable company that could provide expertise in the field of GIS Services, Database Development, Land Use Planning Services and Mi'kmaq Ecological Knowledge Studies (MEKS). MGS is one of many companies established by the Membertou First Nation – Membertou Corporate Division and these companies provide employment opportunities for aboriginal persons and contribute to Membertou's efforts of growth and development. As well, Membertou's excellent management and accountability of their operations is further enhanced by their ISO 9001:2008 certification.

For the development of this MEKS, MGS brings to the table a team whose expertise and skills with land documentation have developed a sound MEKS. The team skills include knowledge of historical Mi'kmaq research, GIS data analysis, Mi'kmaq ecological and cultural knowledge, and Mi'kmaq community connections.

1.2 Maritime Launch Services Project

Maritime Launch Services Ltd (MLS) was formed in Nova Scotia, Canada in 2016 with the intention of bringing together the necessary skills, assets, launch vehicle technology and infrastructure to serve the burgeoning commercial space needs for satellites. MLS will bring the latest model Cyclone 4M to North America and propose to launch it from a location located near Canso, Nova Scotia, this is known as the Proposed Missile Launch Site Project within this study.

The launch site location being considered is within the Guysborough County of Nova Scotia near the town of Canso and on a section of crown land designated by PID

35096320. The spaceport development area footprint is a narrow strip of land totaling approximately 40 acres out of the 2,400 acres within the crown land PID. The spaceport development area consists of a launch vehicle processing/control area and a launch pad that are connected by a transportation route. Access to the land is expected to coincide, in part, with the access road to the Sable Wind Farm Project.

2.0 MI'KMAQ ECOLOGOCAL KNOWLEDGE STUDY SCOPE & OBJECTIVES

2.1 Mi'kmaq Ecological Knowledge

The Mi'kmaq people have a long-existing, unique and special relationship with the land and its resources, which involves the harvesting of resources, the conservation of resources and spiritual ideologies. This relationship is intimate in its overall character, as it has involved collective and individual harvesting of the resources for various purposes, be it sustenance, medicinal, ceremonial and/or conservation. This relationship has allowed the Mi'kmaq to accumulate generations of ecological information and this knowledge is maintained by the Mi'kmaq people and has been passed on from generation to generation, youth to elder, ***kisaku kinutemuatel mijuijij***.

The assortment of Mi'kmaq Ecological Information which is held by various Mi'kmaq individuals is the focus of Mi'kmaq Ecological Knowledge Studies (MEKS), also commonly referred to as Traditional Ecological Knowledge Studies (TEKS). When conducting a MEKS, ecological information regarding Mi'kmaq/Aboriginal use of specific lands, waters, and their resources are identified and documented by the project team.

Characteristically, MEKS have some similar components to that of an Environmental Assessment; yet differ in many ways as well. Among its purpose, Environmental Assessments seek to measure the impact of developmental activity on the environment and its resources. This is often done by prioritizing significant effects of project activities in accordance with resource legislation, such as the Federal *Species at Risk* and the Nova Scotia Endangered Species Act.

Mi'kmaq Ecological Knowledge Studies are also concerned with the impacts of developmental activities on the land and its resources, but MEKS do so in context of the land and resource practices and knowledge of the Mi'kmaq people. This is extremely important to be identified when developing an environmental presentation of the Study Area as Mi'kmaq use of the land, waters and their resources differs from that of non-Mi'kmaq. Thus, the MEKS provides ecological data which is significant to Mi'kmaq society and adds to the ecological understandings of the Project Site and Study Area.

2.2 Mi'kmaq Ecological Knowledge Study Mandate

This project will require the documentation of key environmental information in regards to the project activities and its possible impacts on the water, land and the resources located here. The MEKS must be prepared as per the **Mi'kmaq Ecological Knowledge Study Protocol** ratified by the Assembly of Nova Scotia Mi'kmaq Chiefs on November 22, 2007, and the 2nd Edition released in 2014.

MGS has gathered the necessary data to develop this MEKS, which will identify Mi'kmaq traditional land use activity within the Project Site and in the surrounding areas within a 5 kilometer radius (Study Area).

This MEKS had gathered, identified, and documented the collective body of ecological knowledge which is held by individual Mi'kmaq people. The information gathered by the MEKS team is documented within this report and presents a thorough and accurate

understanding of the Mi'kmaq's use of the land and resources within the Project Site/Study Area.

MGS understands that this study could be included in an Environmental Assessment under the Nova Scotia Environmental Assessment Act that will be submitted to the Nova Scotia Department of Environment, and will be used as an indicator identifying Mi'kmaq traditional land and resource use within the Study Area.

It must be stated, however, that this MEKS preparation and/or acceptance of this report is not considered Consultation within itself, nor is it deemed to fulfill the Duty to Consult owed by the Crown to the Mi'kmaq. This report does not replace any Consultation process that may be required or established in regards to Aboriginal people. As well, this report cannot be used for the justification of the Infringement of S.35 Aboriginal Rights that may arise from the project.

2.3 Mi'kmaq Ecological Knowledge Study Scope & Objective

This MEKS will identify Mi'kmaq ecological information regarding Mi'kmaq traditional land, water and resource use within the Project Site/Study Area. The data that the study will gather and document will include traditional use from both the past and present time frames. The final MEKS report will also provide information that will identify where the proposed project activities may impact the traditional land and resource of the Mi'kmaq. If such possible impact occurrences are identified by the MEKS then the study will also provide recommendations that should be undertaken by the proponent. As well, if the MEKS identifies any possible infringements with respect to Mi'kmaq constitutional rights, the MEKS will provide recommendations on necessary steps to initiate formal consultation with the Mi'kmaq.

2.4 MEKS Project Site and Study Area

This MEKS will focus on the proposed Project Site. This site will be located south of Canso. The Study Area will consist of areas within a 5 km radius of the Project Site's boundaries.

Figure 1. Project Site (orange area) and Study Area (purple outline) are identified by the Project Team.

3.0 METHODOLOGY

3.1 Interviews

As a first step to gathering traditional use data, the MEKS team initiated dialogue and correspondence with Mi'kmaq communities in close proximity of the Project Site: Potlotek, Paq'tnkek, and Pictou Landing.

Discussions occurred to identify individuals who undertake traditional land use activities or those who are knowledgeable of the land and resources. An initial list of key people was then developed by the team. This list is based upon past informants and studies that are geographically close to the project site. Other informants were also contacted upon recommendation from existing contacts, as well as informants who become known as fishers, hunters, gatherers, and/or knowledge holders. These individuals were then contacted by the MEKS team members and interviews were scheduled from November 2017 until January 2018.

For this MEKS, twenty nine (29) individuals provided information in regards to past and present traditional use activities. Interviewees were from the communities of Potlotek, Paq'tnkek, Pictou Landing, and We'koqma'q. All of the interviews that were completed following the procedures identified within the Mi'kmaq Ecological Knowledge Protocol (MEKP) document. Prior to each interview, interviewees were provided information about the MEKS, including the purpose and use of the MEKS, an agreement of non-disclosure of their personal information in any reports, and the future use of the traditional use information they provided.

Interviewees were asked to sign a consent form, providing permission for MGS to utilize their interview information within this MEKS. During each interview, individuals were provided a map of the Project Site/Study Area and asked various questions regarding Mi'kmaq use activities, including where they undertook their activities or where they knew of activities by others, when such activities were undertaken, and how that type of

resource was utilized. Other information gathered could be species habitats, changes in species populations, and/or general information about the land related to its' use. When required or preferred, interviews were conducted in the Mi'kmaq language.

3.2 Literature and Archival Research

With regards to this MEKS, various archival documents, maps, oral histories and published works were reviewed in order to obtain accurate information regarding the past or present Mi'kmaq use or occupation relevant to the Project Site and Study Area.

As part of the historical review process, it should be noted there may be other sources of Historical and Archaeological data available, but may have restricted access or not uncovered within this project's Historical Review. A complete listing of the documents that were referenced is outlined within the *Sources* section.

3.3 Field Sampling

Methodology

Field sampling, or site visits, are conducted as another method to gather and document plants, trees, animal signs/tracks, fish and wildlife habitats, or any other land feature which would hold significance to the Mi'kmaq (food or sustenance, social, cultural, or ceremonial purposes).

Site visits consist of site reconnaissance (to evaluate the entrances to the site, terrain characteristics, and evaluation of any other information that would affect safety or logistics of the site visit), logistics planning, as well as capturing "observation points" with the assistance of a Mi'kmaq knowledge holder. Observation points are simply stops along the site visit where species or landmarks significant to the Mi'kmaq were observed to be occurring. These are taken at approximate set intervals, or whenever there were a species or feature deemed worthy to note by the knowledge holder.

MGS staff conducted a site visit over a period of two (2) days in November 2017. Staff was joined on site with a knowledge holder and a member from Strum.

Site Visit Observations

Throughout the site, one hundred and twenty eight (128) various species (and subspecies) of plants, trees, animal signs/tracks, or categories of other features were observed and recorded in 49 observation points.

The three most common observations recorded were spruce species (including black spruce), juniper, and Labrador tea. (see Table 1).

Observation Species	Number of observations	Observation Species	Number of observations
spruce (including black spruce)	19	juniper	14
Labrador tea	12	pitcher plant	9
bunchberry	8	fir tree	8
lichen	6	wire birch	6
fern	5	goldenthread	4
moss	4	sarsaparilla	4
mountain ash	3	tamarack	3
deer signs/tracks	3	blueberry	2
maple	2	old man's beard	2
paper birch	2	tea berry	2
rabbit signs/tracks	2	coyote sign	1
hazelnut	1	iron wood	1
"lion's paw"	1	mushroom	1
pine	1	porcupine	1
snowberry	1		

Table 1. Site Visit observations

Figure 2, Numerous black spruce trees found throughout the site visit

Figure 3, Plenty of pitcher plants were found in the boggy areas

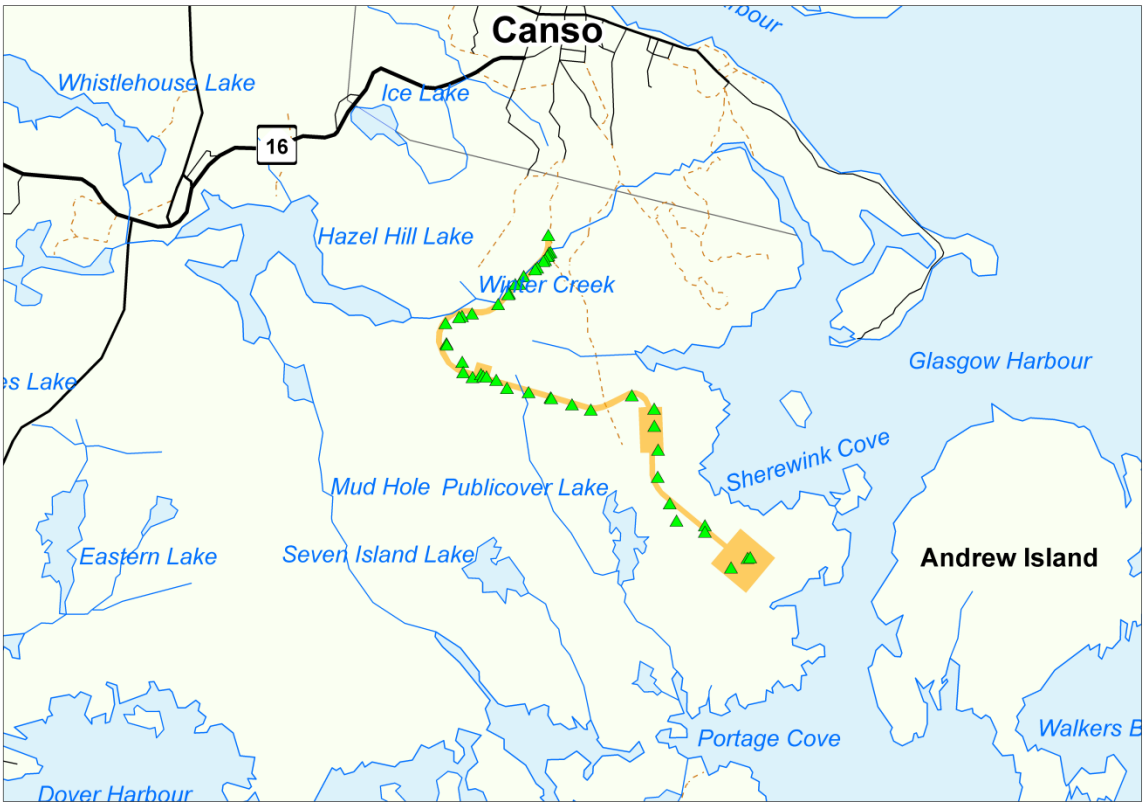

Figure 4, Observation points (green triangles) taken throughout the site visit.

4.0 MI'KMAQ LAND, WATER AND RESOURCE USE

4.1 Overview

The Mi'kmaq Land, Water and Resource Use Activities component of the MEKS provides relevant data and analysis in regards to Mi'kmaq traditional use activities that are occurring or have occurred within the Study Area. It identifies what type of traditional use activities are occurring, it provides the general areas where activities are taking place and it presents an analysis regarding the significance of the resource and the activity as well.

The Mi'kmaq traditional use activities information that is provided by interviewees is considered both in terms of "Time Periods" and in regards to the "Type of Use" that the resource is being utilized. The Time Periods that the MEKS team differentiates traditional use activities by are as follows:

"Current Use" – a time period within the last 10 years
"Recent Past" – a time period from the last 11 – 25 years ago
"Historic Past" – a time period previous to 25 years past

The "Type of Use" categories include spiritual use, and sustenance use, such as fishing, hunting or medicinal gathering activities.

Finally, the study analyzes the traditional use data in consideration of the type of land and resource use activities and the resource that is being accessed. This is the Mi'kmaq Significant Species Analysis, an analysis which ascertains whether a species may be extremely significant to Mi'kmaq use alone and if a loss of the resource was to occur through project activities, would the loss be unrecoverable and prevent Mi'kmaq use in the future. This component is significant to the study as it provides details as to Mi'kmaq use activities that must be considered within the environmental understanding of the Project Site and Study Area.

By analyzing the traditional use data with these variables, the MEKS thoroughly documents Mi'kmaq traditional use of the land and resources in a manner that allows a detailed understanding of potential effects of project activities on Mi'kmaq traditional use activities and resources.

4.2 Limitations

By undertaking a desktop background review and interviews with Mi'kmaq participants in traditional activities, this study has identified Mi'kmaq Traditional Use activities that have occurred or continue to occur in the Study Area and within the Project Site. This has allowed the study to identify traditional use activities in a manner that the MEKS team believes is complete and thorough, as required by the MEKP. Historical documents within public institutions were accessed and reviewed and individuals from nearby Mi'kmaq communities were interviewed. The interviews were undertaken with key Mi'kmaq community people, identified initially by the MEKS team, who are involved and are knowledgeable regarding traditional use activities. Through the historical documentation review and the interview process, the MEKS team is confident that this MEKS has identified an accurate and sufficient amount of data to properly reflect the traditional use activities that are occurring in the Study Area.

The MEKS process is highly dependent on the information that is provided to the team. Because only some of the Mi'kmaq traditional activity users and not all Mi'kmaq traditional activity users are interviewed, there is always the possibility that some traditional use activities may not have been identified by this MEKS.

4.3 Historical Review Findings

A review of the history of the Project Site and Study Area begins with the natural history of the area to provide context of the resources available to early peoples as well as the conditions in which early peoples existed.

The Land

The Project Site is located just south of the Town of Canso, Guysborough County, at the far eastern tip of an approximately 33 km peninsula of Northeastern Mainland Nova Scotia and is the most easterly point of mainland Nova Scotia. The peninsula forms the mostly straight southern shore of Chedabucto Bay with Isle Madame and Cape Breton forming the more irregular northeastern shore of the Bay. The straight characteristic of Chedabucto Bay southern shore is the result of a fault that cuts across the province east to west with the south portion slowly moving east and the north portion moving west. The southern shore of the peninsula on Dover Bay and Tor Bay is generally orientated northeast to southwest and is submerged into the Atlantic Ocean. This submergence forms a coastline indented with many bays and inlets that are typical of the Atlantic Coastline of the Eastern Shore Region of the Province. *(1)*

The project Site and Study Area are known as the Canso Barrens as identified in the Natural History of Nova Scotia. The Canso Barrens are characterized by a landscape of exposed granite knolls of up to 200m in elevation and barren islands. *(2)* The 375 Ma old granite and intrudes into 510-544 Ma Goldenville Formation slates and 510-462 Ma Halifax Formation slates. The Project Site is underlain with Goldenville and Halifax slates. Approximately half the landscape of the Canso Barrens is exposed granite with organic filled depressions and the remaining covered in thin granite and slate tills with a small drumlin field of carboniferous sediments south of the Town of Canso and north of the Project Site. *(3)*

Some archaeological artifacts found along the St. Marys River system 75 km south west of the Project Site were made of Quartz. *(33)* Exposed veins of Quartz in the bedrock were of importance to early peoples along the Eastern Shore.

The earliest known evidence of people on the land within the province is located at Debert, 190 km to the east. The Paleo-Indian people encampment site at Debert is dated approximately 10,500 B.P. and was a dry sandy patch among a tundra landscape at the time of occupation. The site was close to the caribou migration routes from the high lands in the north-northeast, to a southwest plain that is now Cobequid Bay.

At approximately 10,500 years B.P., the Project Site\Study Area was under one of the last ice sheets centered approximately in the middle of Chedabucto Bay. This ice sheet was an advancement of ice during a 200 year cold period known as the Younger Dryas Period. Prior to that, the Project Site\Study Area and the peninsula were under the ice margin that approximated the present-day Atlantic coastline.

Evidence from deep-ocean sediments indicate that there have been at least 16 glacial periods that lasted approximately 100 thousand years each. The last glacial period was the Wisconsin Glaciation which began 75 thousand years ago and ended between 12 and 10 thousand years ago. After extensive sampling in Nova Scotia, evidence indicates that successive glaciation had four distinct phases with different and shifting ice centers. *(4)*

The Phase 1 ice flows moved eastward across the region including Prince Edward Island and Cape Breton Island before shifting flow direction southeastward across the present day Bay of Fundy, Mainland Nova Scotia and Cape Breton Island. The Ice flowed across the Project Site in this phase in an eastward direction and then at some time shifted to a south flow direction. *(4)*

The Phase 2 ice center was located north of present day Prince Edward Island with flow direction south over mainland Nova Scotia and southeast over lower southeast portions of

Cape Breton Island. The Phase 2 ice flow direction was southeast over the Project Site and Study Area. *(4)*

The Phase 3 ice center was parallel to the present day Nova Scotia Atlantic Coast and extended on land from Cape Sable, through Cape Canso to offshore and approximately south of present day Louisbourg, Cape Breton Island. From this ice divide, ice flows moved northeast across eastern portions of Cape Breton Island, northwest across western portions of Cape Breton Island, northeast across northern portions of the mainland from Cape George to Minas Basin west to northwest across the present day Annapolis Valley. On the Atlantic side of the ice divide, all flow directions were in a southeast direction over the Scotia Shelf. The Ice sheet center was over the project site during this phase with the flow moving southeast and northwest from the Project Site and Study Area *(4)*

Phase 4 was a period when several remnant ice sheets were located throughout the province and advanced and receded in a radial direction from the ice centers. Cape Breton had two glaciers that were centered on the Highlands and another centered on the Bas d'Or Lakes. The Chedabucto Glacier filled the present day Chedabucto Bay and St. Georges Bay with a westward ice flow direction across the central portion the province into the Northumberland Strait, Minas Basin and the Atlantic. The Chignecto Glacier was centered near Baie Verte and Cape Tormentine and the South Mountain Ice Cap was centered between the Bay of Fundy and Atlantic Coast near present day Kejimkujik National Park. The direction of ice advance of the Chedabucto Bay Glacier was a west to southwest flow direction across the mainland

The last of the glaciers gradually receded with the Bay of Fundy being ice free between 16 and 14 thousand years ago. Northern portions of the province experienced periodic advancement and stalls in movement of a remnant ice cap centered near the Antigonish Highlands approximately 15 thousand years ago. The flow direction was westward into lowlands and southwestward over the Project Site to offshore of present day Sheet Harbour. By 13 thousand years ago the ice sheets had receded to the approximate

coastline of today and then only residual ice caps remained in highland areas at approximately 12 thousand years ago. *(4)*

Between 11 and 10 thousand years ago, the Younger Dryas Period was an abrupt climate change with a cold period lasting approximately 200 years. During the Younger Dryas Period, previously colonized plants that followed the once receding glaciers were covered in permanent snowfields and some large mammals became extinct. *(5)* The cold period of the Younger Dryas may have pushed the Paleo-Indian people south with advancing ice sheets and permanent snowfields or they may have abandoned the region. *(10)*

As the last remnant glaciers receded and the climate warmed again. The landscape was gradually colonized by tundra vegetation of willow shrubs and herbaceous plants between 10 and 7.5 thousand years ago and were replaced by boreal vegetation such as fir, spruce and birch until 6 thousand years ago when pine and oak was prominent. *(6)* Temperatures were 2 degree Celsius warmer than today for period until 4 thousand years ago and forests of hemlock mixed with beech and maple was the dominant vegetation. Gradual cooling to present day temperatures and increased moisture favoured spruce forests. *(7)*

It is also theorized that a terrestrial refuge for plants and animals existed near the edge of the continental shelf where arctic and boreal species survived the last ice age and eventually repopulated the newly exposed mainland landscape as the ice sheets receded and before the sea level rise. However, since the end of the last ice age the Chignecto Isthmus provided the land corridor for plants and animals as well as people to migrate into Nova Scotia as well as assisted airborne species migrations. *(8)*

People on the Land

Archaeological finds provide evidence that early people at some time either stayed at or passed by the find locations.

Much of the archaeological record found to date is the decay resistant stone tools, cookware and ornamentation. The artifacts found have a consistency in style and manufacture over long periods with sudden shifts in old styles and manufacture techniques to new and different styles and manufacturing methods. The tools styles, assisted by carbon dating of any surviving organic matter, archeologists and researchers can create time periods and approximate distribution and movement of peoples or cultural groups. The changes in tool styles and tool manufacture techniques were thought to be brought about through an early network of trade where peoples quickly adopted technological changes, stylizations and ideas. *(9)*

Archaeological evidence is scarce for a period of 10 to 5 thousand years ago which is thought to be due to the rise in sea levels that submerged former coastal sites. *(10)* Sea level rise on the Atlantic Coast was a combination of land rebound after ice sheets receded, rising ocean temperatures and water released by melting glaciers. *(11)* As the thick and heavy ice sheet centers depressed the earth's mantle, the areas of mantel along the ice sheet margins were less weighted by ice and rose slightly through displacement. There was an ice sheet center located in the Gulf of St Lawrence. As the weight of the ice sheets diminished with melting the depressed center areas rebounded and rose in elevation while the mantel of the former ice margin areas lowered in elevation. *(12)*

The Archaic Period covers a time of 9 to 2.5 thousand years BP and is further sub divided into a periods of 5 to 3.5 thousand years BP referred to as the Maritime Archaic Period and 3.5 to 2.5 thousand years BP which was a period of Susquehanna cultural influence indicated by the artifacts found within archaeological sites. *(10)(8)* Tool manufacture techniques and materials indicate a connection between Archaic Period peoples within western Nova Scotia to the Susquehanna Tradition Culture (3500-2500 BP) which was centered in present day Mid-Atlantic States. *(10)*

The Period of 2.5 to 0.5 thousand years BP is referred to as the Ceramic Period or Maritime Woodland Period that saw the introduction of pottery and burial mounds in Nova Scotia. *(10)(13)* Coastal Maritime Woodland Period sites were not as impacted by

rising sea levels as earlier periods but are currently impacted by coastal erosion of the glacial tills by successive storms and constant wave action.

There are few archaeological finds along the Eastern Shore region compared to other regions of the province which may be explained more by the absence of archaeological work in the region rather than an absence of past peoples. The source example questions why evidence of eel weirs is absent in the Eastern Shore rivers compared to the rivers of Southwest Nova Scotia although the Eastern Shore habitat support eels. It was also suggested that archaeological evidence along the lightly populated and lightly developed Eastern Shore has yet to be discovered. *(14)*

Evidence of Mi'kmaq occupation within Guysborough County is scarce due to an absence of careful searches at the time of the 1950 source. The lightly populated county does not offer many opportunities for archaeological finds as material evidence usually occurs during a recent disturbance that unearths an artifact or burial. A Mi'kmaq burial was found at the mouth of the Salmon River several years prior to the 1950 source. The burial eroded from a clay knoll on the north shore of the estuary and revealed a copper pot, bones, furs, beads and wampum. *(31)*

A special effort was made to explore the St. Marys River System of Guysborough County in 1990. The St. Marys River empties into the Atlantic Ocean approximately 75 km southwest of the Project Site. St Marys River is one of the longest rivers in Nova Scotia that allowed travelers to reach deep inland to present day Antigonish and Pictou Counties from the Atlantic Coast. The West River St. Marys branch begins in Pictou County north of Trafalgar and follows the St. Marys Fault easterly and parallels the East River of Pictou within 15 km of close proximity to the north with a few brooks of potential cross over routes and portages. The East River St. Mary's also begins in Pictou County at Eden Lake and flows easterly then southeasterly until it meets the West River, St. Marys at Glenelg. The North River, St. Marys begins in Antigonish County at North Lochaber and flows south and meets the East River St. Mary's near Aspen. *(33)* Many of these river

routes and cross over points have paved and gravel roads that parallel and follow the river branches.

The 1990 reconnaissance did not discover any new sites to those already known. The study noted that common early tool making materials of Chalcedonies and Cherts are scarce in the region but there was an abundance of exposed quartz veins that supplied the raw material for tool making. Many of the artifacts recovered from the known Silver's Garden Site near Glenelg-Aspen were of white quartz. Other sources of raw material can be found in green Quartzite and banded Argillite found eroding from the banks near Eden Lake and among the river cobble. *(33)*

Local informants occasionally mention the presence of Mi'kmaq burials associated with the Silver's Garden Site being found on Sheep or Oak Island in Glenelg Lake. *(33)* The Sherbrooke area is known for artifacts and possible burial sites being found in the late 1800's. Evidence of midden piles was discovered in the Sherbrooke area along with a small Axe/Knife, Scrapers and Spearheads. *(33)*

Of the known artifacts found at Glenelg and St. Mary's River, two axes and a gouge were identified as being from the Archaic Period *(34)*

Contact

As early as 1481, fishing fleets from Bristol, England were sailing to the Atlantic Coast of North America. Most likely, fleets of French and of peoples from the Basque Provinces were also sailing to these Atlantic Coasts. One such Bristol fleet recorded finding an island they called the Isle of Brasil and no doubt found the fishing grounds of the Grand Banks. Due to competition, news of discoveries was kept quiet as to exploit the resources unhindered by competing fleets. *(15)*

Recent research has confirmed a Basque whale fishery had visited the Gulf of St. Lawrence and Labrador coast from the 1540's to the early 1600's. The Basque also

participated in the cod fishery while establishing ports such as Plaisance (Placentia) in Newfoundland and Cape Breton until the arrival of other nation's fleets. *(16)*

By 1534, there was a fishery of ports, watering places along the Atlantic Coast from Southeastern Labrador to Southern Nova Scotia. As a sideline to fishing, fishermen began trading with the Mi'kmaq, Beothuk and Montagnais-Naskapi, the peoples that they encountered while drying their catch along the shores. *(15)*

In the 1500's the shorelines of hunting and fishing territories were being spoiled by European fishermen hunting and frequently burning to clear land for fish processing and shelter. Newfoundland natives may have retaliated in some form as in 1565 it was recorded that *"between Cape Race and Cape Breton live a cruel and austere people with whom it is impossible to deal with…"(17)*

By 1502 the fishery off the coasts of the new found land had been established and countries and captains had their preferred fishing areas and fishing stations. Ocean crossing became more common place as captains established their routes and landmarks. French records alone have 70 vessels travelling to the New World between 1523 and 1556. *(17)*

The Contact Period is of 500 to 100 years BP although Norse people visited the region as early as 1000 years BP and colonized the northern tip of Newfoundland. Portuguese and Basque fishermen were the first Europeans to establish continuous contact with the Mi'kmaq and began arriving 500 years BP. *(10)* They arrived to find Mi'kmaq peoples inhabiting the thick forests of Nova Scotia as well as Western New Brunswick, Eastern Quebec, Prince Edward Island and Southern Newfoundland.

The Florentine Explorer Verrazano was the leader of a French expedition that sailed to the coast of North America in 1524. It is thought that Verrazano reached the Carolina Coast and briefly sailed south before changing course just north of the Florida Coast and

sailing north along the Atlantic Coast as far as the Strait of Belle Isle before returning to Europe. *(17)*

In the fall of 1604 and prior to the winter at St. Croix, French explorer Champlain had explored the Coast of Maine that was known to French fishermen as "Norembega" after a fabled country. Champlain sailed the Penobscot Bay, Mount Desert Island and to the mouth of the "Pemetigoet River" (Penobscot River). *(18)*

In the spring of 1605, Champlain continued his exploration of the Coast of "Norembega" or "Norumbega" and it was on this sail when he met or at least describes the Native inhabitants of the shores of what would be the known as the Gulf of Maine. Upon arrival at Saco Bay they encountered whom Champlain referred to as the "Armouchiquoise" or "Almouchiquoise". Champlain noted that the Armouchiquoise were different in language and culture than the Natives he encountered further north as the Armouchiquoise practiced agriculture in maintaining garden plots of corn maize, beans, pumpkins and tobacco. *(18)*

The language of the "Armouchiquoise" or "Almouchiquoise", as in most sources, was so distinct from Souriquois (Mi'kmaq) and Etchemin (Maliseet) that Champlain's Native guide could only interpret some words and communication was strained. *(19)*

This difficulty in communication with the peoples of this region was experienced 80 years earlier by Explorer Verrazano who was exasperated by all attempts to communicate with the natives he encountered near the Kennebec River. *(17)* The distinct language of the Almouchiquoise would be a historical ethnographical mystery of the Gulf of Maine as some researchers claim that the Almouchiquoise were neither of the Algonquian or Iroquois languages or at least a third Algonquian dialect to the Souriquois (Mi'kmaq) and Etchemin (Maliseet). The mystery has endured as the peoples of the Gulf of Maine Coast suffered a great pandemic in 1617-1619 with a death rate of 90 to 100%. The struggling survivors of the Almouchiquoise and at least two other cultures were eventually absorbed into a collective Abenaki Culture. *(19)*

Champlain may not have actually witnessed the garden plots of the Almouchiquoise as these gardens would have been further inland and upriver where Champlain did not venture, and may have been told about the Almouchiquoise agricultural practices. *(19)*

Continuing south to Plymouth Harbour where the Pilgrims were still 15 years away from first landing there. Champlain encountered the Massachusetts Natives who also maintained garden plots and similar to Verrazano's experience in the "Land of Bad People" in 1524, Champlain found these peoples less agreeable than the Natives further northeast along the coast. Champlain found that the further they sailed south along the coast the "more numerous, unfriendly and thievish" were the peoples they encountered. When a shore party landed at "Nausett Harbour" for fresh water a skirmish broke out between the French sailors and Massachusetts or Armouchiquoise Natives over the ownership of a kettle. One Frenchman was killed and the ships guns were used to chase the Natives into the woods. *(18)*

The experience of the French with the tribes in the Gulf of Maine convinced them that Port Royal was the better place for a colony and discontinued further south exploration of coasts of what would later be known as the New England. The French left the southwestern shores of the Gulf of Maine to the Natives and ultimately later to the English. The source author stated it best:
"*like so many minor events in history, the theft of a kettle was to have a great influence on the French-English configuration of North America*" *(18)*

People of Acadia and the Gulf of Maine

The French assigned names to the different linguistic groups they encountered in North America and the names were not necessarily how the people referred to themselves. However, the French sometimes detailed encounters with the peoples of the region and offers a glimpse at the cultures of the people at the time of European contact. There are four groups distinguished by the early French with the Souriquois being one group who occupied the lands east of the St. John River including Nova Scotia, and Newfoundland

and all the north coast from Cape Breton Island to the Gaspe'. The early English referred to these same peoples as Tarrentines and they would later be known as Micmac or Mi'kmaq. *(9)*

West of the Souriquois lands and between the St. John River and the Kennebec River were peoples the French referred to as the Etchemin. Later the Etchemin would be later known as Maliseet and included peoples between the Kennebec River and the Penobscot River. *(9)*

The Maliseet refer to themselves as "Woolastukwiuk" of the Woolastukw (people of the St. John River). The Maliseet reference is derived from a Mi'kmaq word for "he speaks badly" or version of which resulted in the differences in their languages. *(20)*

West of the Kennebec River and as far south were the Almouchiquois as the Souriquois referred to them as, "Dog People" whom with the Souriquois had a history of war. Unlike European warfare, warfare among the different native peoples of Gulf of Maine watershed and the Maritime Peninsula at the time of European contact were usually single or series of skirmishes to avenge wrong doings and insults should the offences be real or perceived. *(9)*

The Almouchiquois peoples were distinct in language, clothing and dress from the peoples eastward. The Almouchiquois also practiced horticulture. It is also suggested by researchers that the "Dog People" reference may derive from the number of dogs the Almouchiquois possessed for keeping the wildlife out of their crop fields. *(19)* This group was somehow severely impacted by early European contact and through disease and warfare eventually faded from their lands and records. *(9)*

The Abenakis were the fourth Algonquin language group encountered by the early French and occupied an area centered inland on the Kennebec River. The Abenakis associated more with the French in Quebec and eventually the French referred to all the original four groups as Abenakis. The Abenakis also practiced horticulture. The English

referred to the peoples west of Abenakis lands as Pennacooks but the French grouped these separate peoples with the Abenakis. According to the French, the next group of peoples located west of the Abenakis is the Sokokis of the Connecticut Valley. *(9)*

It is theorized by some sources that all the cultures and dialects of the coastal river drainages along the northeastern Coast of North America were of the Algonquian language origin with the exception of the Mohawk-Iroquois cultures found in the Pennsylvania, New York State and along the St. Lawrence River. These Mohawk-Iroquois language cultures cut off the Eastern Algonquian cultures from their Algonquian relatives to the west and north. *(19)*

Traditional Mi'kmaq Territory

The Project Site and Study Area are within the Traditional Mi'kmaq Territory of Eskikewa'kik. The traditional territories are important reminders of the political and territorial system that most likely existed in the pre-contact period and continued into the Post-contact Period and later Historic Period. The Traditional Mi'kmaq Territories are referenced today in response to modern events and issues that potentially impact each territory

The traditional lands of the Mi'kmaq was comprised of 7 Districts collectively known as Mi'kma'ki. The sources reviewed provided very general District Boundaries that have just enough detail to give an approximation of boundaries along the coast but not much detail for the interior limits. *(21)(22)(23)(24)*

Using the general boundaries provided by the sources, MGS interpreted the source maps and recreated detailed District boundaries of the 7 districts of Mi'kma'ki using significant watersheds as the defining features on the ground. The district boundaries may be adjusted after review by the Mi'kmaq and Maliseet Communities. Until then, the 7 Districts of Mi'kma'ki are proposed as follows:

Eskikewa'kik (Skin Dressers)	Eskikewa'kik includes all lands and waters draining into the Atlantic from St. Margarets Bay including Big Indian Lake, Chebucto (Halifax), Eastern Shore, Strait of Canso to Cape Blue on St. Georges Bay. The District includes the entire Musquodoboit River watershed, a portion of the Shubenacadie River to and including the Stewiacke River watershed draining into Cobequid Bay. In addition, Eskikewa'kik includes the West St. Marys River watershed, East St. Marys River watershed, Country Harbour River watershed as well as the Salmon River and Milford Haven River watersheds draining into Chedabuctou Bay.
Kespek (Last Land)	All the land and waters draining into the Gulf of St. Lawrence north of Escuminac Point, N. B. including the Miramichi River watershed and north to include the Gaspe' Peninsula and south shore of the St Lawrence River. This was the last land to be added to Mi'kmaq territory after a war with the Iroquois.
Siknikt (Drainage Area)	All the lands and waters draining into the Gulf of St. Lawrence and Northumberland Strait south of Escuminac Point, N. B. to and including the Wallace River watershed and Wentworth Valley. All the lands and waters draining into Cobequid Bay, the Minas Basin, and Bay of Fundy west of Five Islands N. S. and including the Petitcodiac River watershed and all drainage along the Bay of

	Fundy coast to Mispec Point on the east side of St. John Harbour.
Epekwitk (Lying in the Water) aqq Piktuk (The Explosive Place)	This District combines the entire Island of Prince Edward Island with all the lands and waters draining into the Northumberland Strait and St. Georges Bay from Mainland N. S. east of Abercrombie Point to Cape Blue. The District includes the East River of Pictou watershed to and including the Tracadie River and Little Tracadie River watersheds.
Sipekni'katik (Wild Potato Area)	This District includes all lands and waters draining into the Northumberland Strait from Macfarlane Point, Wallace Harbour to and including the Middle River of Pictou watershed. Sipekni'katik also includes all the lands and waters draining into Cobequid Bay, Minas Basin and Bay of Fundy from Five Islands Carrs Brook and Economy River watersheds to and including North River and Salmon River, Avon River, Cornwallis River watersheds to MacNeily Brook near Margaretsville. In addition, Sipekni'katik includes all lands draining into St. Margarets Bay and Mahone Bay including the Ingram River watershed to and including eastern shore of the LaHave River.

Kespukwik (Last Flow, Land Ends)	This District includes all the lands and waters draining into the Bay of Fundy from approximately Margaretsville, the Gulf of Maine coast and the Atlantic to the western shore of the LaHave River. The LaHave River Watershed may have divided by east and west districts with the eastern watershed a portion of Sipekni'katik and the western watershed is a portion of Kespukwik. Champlain's early map of the LaHave River show two separate Mi'kmaq communities on either side of the River located near Upper Kingsburg and at Green Bay near Petite Riviere (LaHave Islands Marine Museum, 2016). This may indicate a community of each district sharing the LaHave River.
Unama'kik (Land of Fog)	
Aqq Ktaqmkuk (Land Across the Water)	This District combines all of Cape Breton Island with the Southern Coast of Newfoundland.

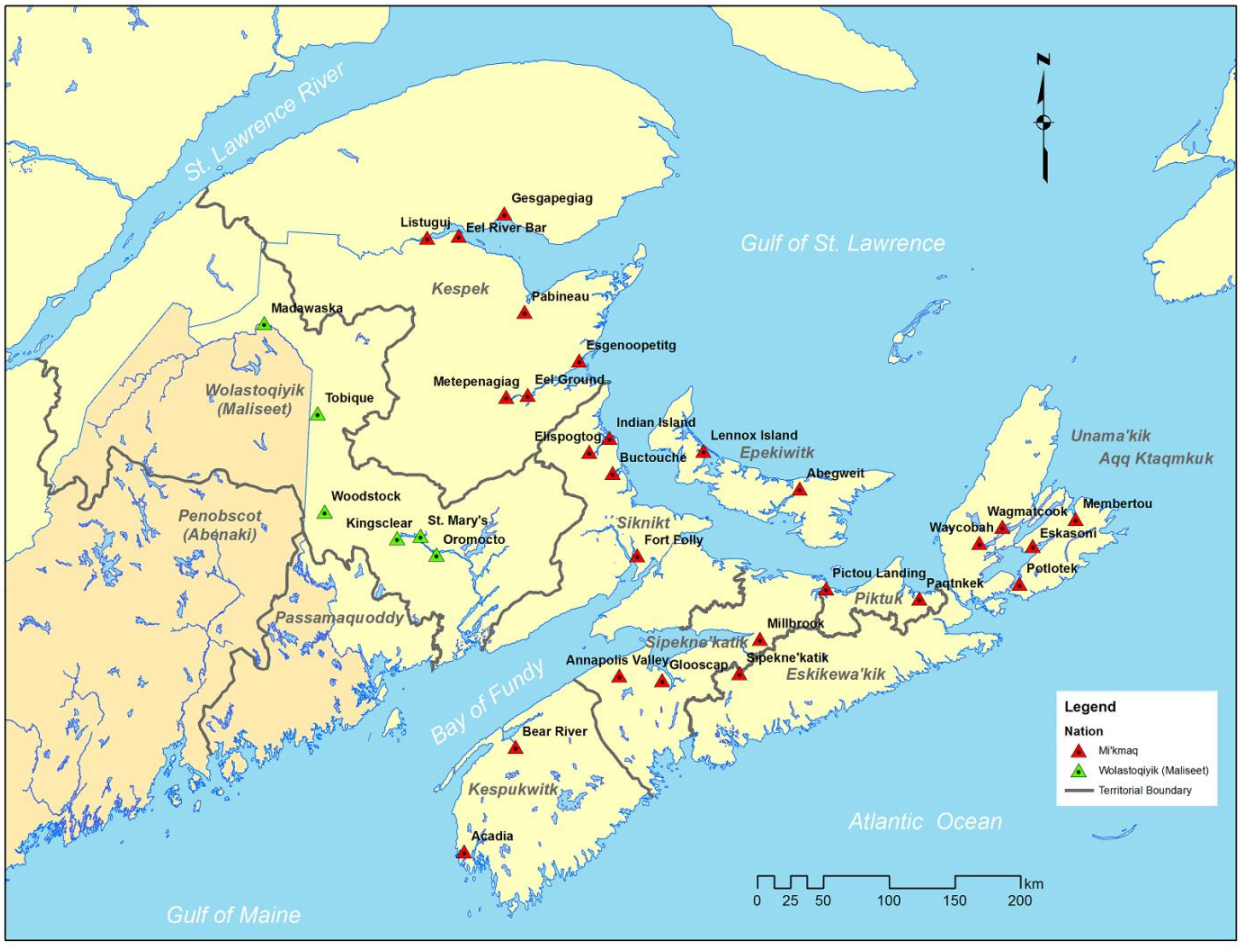

Figure 5. Traditional Mi'kmaq Political Districts with Wolastoqiyik, Passamaquoddy, partial Penobscot Traditional Territories and present-day Reserve Communities (21)(22)(23)(24)

Mi'kmaq had an intimate knowledge of the ecology of their territory and fit their lives to seasonal cycles of the vegetation and animals and fish. Due to climate conditions, agriculture for food was a risk for Mi'kmaq. *(25)* Highly mobile Bands consisting of several related families would assemble at favorite camp sites. In the fall and winter the camps would disperse into small groups of 10-15 people for winter hunting. *(25)*

It was the duty and responsibility of the chief of each political district to assign the hunting territories to families and any changes were made in the presence of the Council of Elders which met in the spring and fall of every year. *(26)* Hunting districts of approximately 200-300 square miles were assigned to families. *(25)*

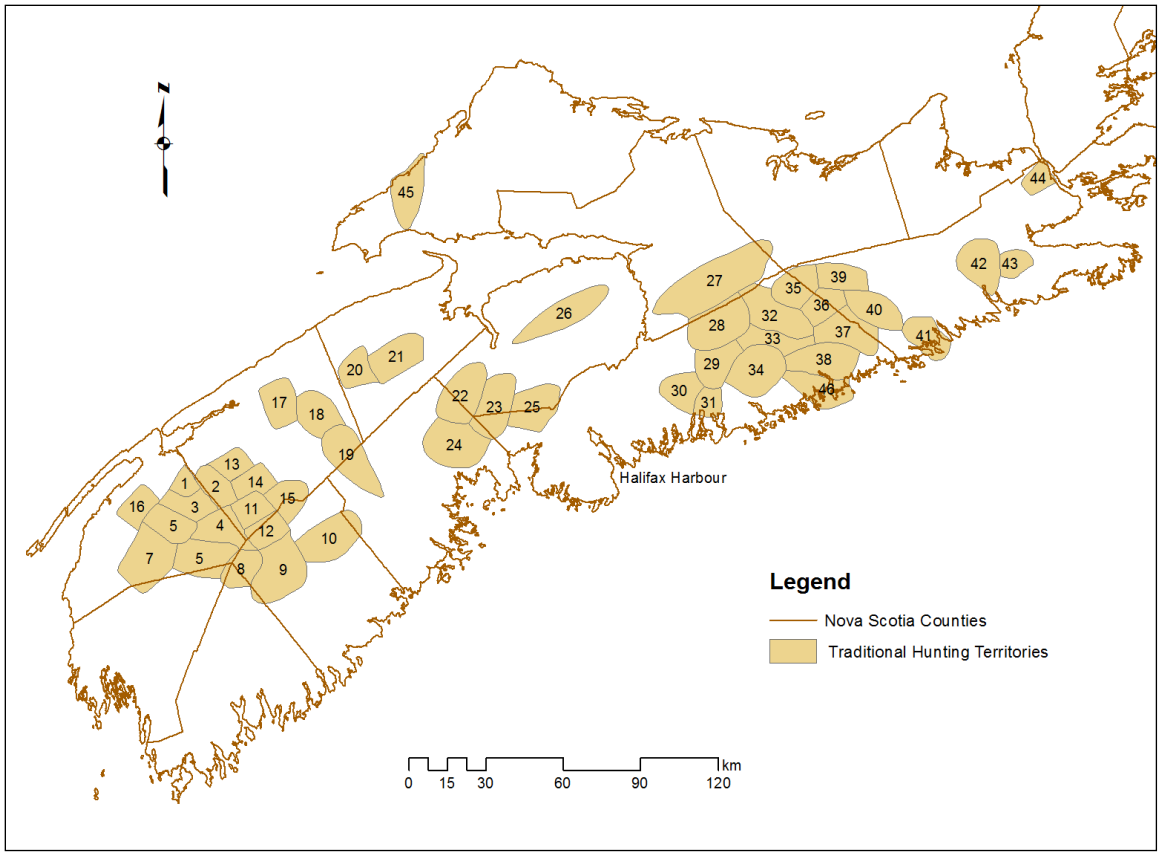

Figure 6. Mainland Nova Scotia Traditional Hunting Territories (27)

The districts were usually surrounded lakes and rivers and were passed on to sons unless there were no sons where the district was then assigned to another family. *(27)* The Mi'kmaq respected the boundaries of the assigned territories and only took from the land what they needed for the family to survive thereby preserving game and fish for the family's future survival. *(26)*

The hunting territories of the mainland Nova Scotia were numerous compact interior territories that encompassed the watersheds of interior lakes and rivers as Mi'kmaq did most their game hunting during colder months of the year when they moved inland from the summer coastal camps. *(27)(26)* Cape Breton Island Mi'kmaq hunting territories are larger and more regional encompassing shorelines and interior river systems indicating a more sparse population. *(27)*

Map Reference	Name of Family	Geographic Territory
42	Newell Denis	Country Harbor, Isaacs Harbor, and North
43	Steve Malone	Loon Lake
44	Peter Anthony (half-breed)	Mill Village River, near Port Mulgrave

Table 2. Mainland Nova Scotia Traditional Hunting Territories Recorded Circa 1919 (27)

The nearest known Traditional Hunting Territory to the Canso area is Territory No. 43 assigned to Steve Malone and covers the area of Loon Lake, 45km east of Canso and near the community of Lundy. Adjacent to Malone's territory is hunting territory No. 42 assigned to Newell Denis and covers the area of Country Harbor, Isaacs Harbor, and north inland to span the area between the communities of Goshen and Salmon River Lake. A third known Tradition Hunting Territory, No. 44 is along the Strait of Canso and assigned to Peter Anthony. No. 44 covers the area of Mill Village River, near Port Mulgrave. *(27)* The territorial reference numbers pertain to the source's original reference system and it is unknown if territorial numbers were assigned by Chiefs.

The warmer months were times of abundance with surrounding areas of coastal camps providing fish, shellfish, fowl and eggs. Offerings were made to spirits but the Mi'kmaq rarely stockpiled enough food for the entire winter. They brought with them from the coast smoked and sun-dried seafood, dried and powdered hard boiled eggs. Berries were boiled and formed into cakes and were sun-dried. Grease and oils from boiled marrow and fat were stored and transported in animal bladders. Root vegetables such as *segubun* (wild potato) which was similar to today's sweet potatoes and wild nuts were also part of the winter food supply. *(26)*

Month	Seasonal Locations	Seasonal Groupings	Food Resource
Jan.	Sea Coast	Bands	Smelt, Tomcod, Seals & Walrus Beaver, Moose, Bear, Caribou
Feb. (Period of Winter Famine Begins)	Inland	Bands & Family Units	Smelt, Tomcod (ending) Seals & Walrus, Beaver, Moose, Bear, Caribou
Mar. (Period of Winter Famine)	Inland	Bands & Family Units	Smelt, Seals & Walrus (ending) Scallops, Crab, Urchins, Winter Flounder, Beaver, Moose, Bear, Caribou

April (Period of Winter Famine ends)	Sea Coast	Villages	Smelt, Winter Flounder, Scallops, Crab, Urchins, Sturgeon, Brook Trout, Alewife, Herring, Spring Bird Migrations, Beaver, Moose, Bear, Caribou
May	Sea Coast	Villages	Smelt, Scallops, Crab, Urchins, Sturgeon, Salmon, Brook Trout Alewife, Codfish, Capelin, Shad, Mackerel, Skates, Herring, Spring Bird Migrations, Beaver, Moose, Bear, Caribou
Jun.	Sea Coast	Villages	Scallops, Crab, Urchins, Sturgeon, Salmon, Brook Trout Alewife, Codfish, Capelin, Shad, Mackerel, Skates Lobsters, Spring Bird Migrations, Beaver, Moose, Bear, Caribou
Jul.	Sea Coast	Villages	Scallops, Crab, Urchins, Codfish, Capelin, Shad, Mackerel, Skates Lobsters, Spring Bird Migrations, Beaver, Moose, Bear, Caribou, Strawberries, Raspberries
Aug.	Sea Coast	Villages	Scallops, Crab, Urchins, Codfish, Skates Lobsters, Beaver, Moose, Bear, Caribou, Strawberries, Raspberries, Blueberries, Ground Nuts
Sept.	Sea Coast	Villages	Scallops, Crab, Urchins, Codfish, Skates, Salmon, Herring, Eels, Fall Bird Migrations, Beaver, Moose, Bear, Raspberries, Blueberries, Ground Nuts, Cranberries
Oct.	Small Rivers	Villages	Scallops, Crab, Urchins, Smelt Codfish, Skates, Salmon, Herring, Eels, Brook Trout, Fall Bird Migrations, Beaver, Moose, Bear, Blueberries, Ground Nuts, Cranberries
Nov.	Inland	Bands	Smelt, Tomcod, Turtles, Seals, Beaver, Moose, Bear, Ground Nuts, Cranberries
Dec.	Rivers	Bands	Smelt, Tomcod, Turtles, Seals, Beaver, Moose, Bear, Ground Nuts

Table 3. Mi'kmaq Annual Subsistence (30)

When fish, game and plants within the proximity of an encampment became scarce, the Mi'kmaq moved the encampment miles away to a new location with the women being responsible for breaking camp, transporting and setting up the next camp. *(29)(26)*

Mi’kmaq Traditional Government

The traditional Government of the Mi’kmaq since a time prior to European contact to present-day, has been the through the Mi’kmaq Grand Council. One particular source provided an extensive and insightful history of the Grand Council and in doing so, also touched on the events throughout the last 400-500 years of history that have not only impacted the traditional government but also the Mi’kmaq Nation. It is important to provide project proponents as well Mi’kmaq with a summary of source information on the history of Mi’kmaq traditional government, to provide context to the circumstances that have shaped the Mi’kmaq Nation of today.

The Pre-contact Mi’kmaq population is estimated to between 35,000-75,000. Due to abundant resources and skills to exploit those resources, Mi'kmaq had high population densities that required social and political organization. Ease of mobility contributed to communications and political organization. *(28)*

Extended family groups formed a Band that was usually patriotic with the head of the families being a Sagamore or Chief who headed the council of elders made up of heads of, or representatives of the families within the extended group. The Seven Districts was made up of Bands grouped together within a geographical district based on rivers and bays. Each district had a head Sagamore. Each District Sagamore (Chief) was a member of the national organization of Mi'kmawey Mawio'mi (the Mi'kmaq Grand Council). There was a Grand Chief, Grand Captain (War Chief) and a Putus (messenger, keeper of the Wampum and story teller). District Chiefs were chosen from among local chiefs. District Chiefs would use their superior hunting/fishing knowledge and sometime shamanistic powers to base decisions on division of hunting territories. Once a hunting territory was assigned to an individual, they were not to overstep their bounds assigned to them by the Council of Elders which was held in the Spring and Fall. *(28)*

The Grand Council was formed in response to a need to interact with other nations in matters of war and trade as well as internal needs for social, ecological, economic and ceremonial structure. The Grand Council would meet twice a year to decide assignment

of hunting-fishing territories, seasonal movements, matters of ecology, treaties, alliances, trade, births, deaths, marriages, and general welfare of the Mi'kmaq. There existed a three level political system of local, district and national under the authority of the Grand Council. *(28)*

European influence on the political structure of the Grand Council was minimal at first contact as colonization was not priority at that time. Introduction of European goods changed hunting, fishing and resource extraction patterns. The development of the fur trade took priority over traditional seasonal rounds and technologies as the Mi'kmaq became dependent on European goods. Competition for furs undermined the ecological role of assigning hunting territories as areas were over hunted and the hunting pressures moved from territory to territory and district to district. *(28)*

The introduction of guns contributed to the depletion of stocks and altered the political structure as the status of superior traditional hunting skills and supernatural powers of leaders was diminished. Individual trading further eroded the Chief's authority over matters of trade. *(28)*

Mi'kmaq political and spiritual leaders based their decisions on concern for prosperity of future generations. The seven political districts were related to each other through political alliance, language, common values, spirituality and beliefs. There is no known history or legends of Mi'kmaq waring among themselves. *(28)*
Grand Chief Membertou's conversion to Christianity in 1610 and subsequent Mi'kmaq conversions marked a turning point in the Grand Council structure. With sustained contact, the Mi'kmaq political, social, economic and spiritual structures experience a great upheaval and effects of European colonization. As intensity of colonization increased, Mi'kmaq institutions were overridden by European institutions. *(28)*

As French colonization continued, a 1627 charter provided Mi'kmaq Christians with proprietary inheritance rights as French Subjects. Any property acquired was by of the

French Crown and not by aboriginal title. This was an indication of the discrediting of aboriginal rights and the validity of Mi'kmaq socio-political structures. *(28)*

Mi'kmaq were pushed out of traditional hunting and fishing areas by an increase of settlers. Mi'kmaq dependence on European goods eventually led to debt to traders for the goods required for survival. The European foodstuffs were of poor quality and nutrition which contributed to poor health and population decline of the Mi'kmaq in the early 17th century. *(28)*

Trading posts were located with missions which changed traditional settlement patterns where Mi'kmaq abandoned traditional locations to settle closer to missions and trading posts. This eroded the local band and the council structures. *(28)*

Conversion to Christianity altered Mi'kmaq culture with the banning of polygyny, thus eliminating an important means for chief to increase the number of his followers and system to create alliances with other Bands. Missionaries also undermined Mi'kmaq traditional beliefs and fears of the supernatural. They often exposed the shamans as frauds to the Mi'kmaq. *(28)*

The Mi'kmaq Grand Council was active in war efforts against the British and Mohawk during the eighteenth century. The Mi'kmaq were in conflict with the British from 1613 to 1763 and was carried out through collaboration of the strategies developed by local, district and national war chiefs. The Mi'kmaq skills in guerrilla warfare allowed them to dictate their own terms as allies which was a reprieve from European dominance. These skills were perceived as a continuing threat to the British after the defeat of the French and they entered into treaties with the Mi'kmaq. *(28)*

Although spread over a large geographical territory the Grand Council policy of consensus had not changed nor did they surrender their status as an independent nation. Treaties are legally binding and the British having entered into treaties with the Mi'kmaq

later affirmed recognition of Mi'kmaq status an independent nation. The Grand Council played an important role in protecting the articles of the treaties. *(28)*

The Treaty of 1725 promised to protect Mi'kmaq hunting and fishing grounds as well as recognizing Mi'kmaq hunting, fishing and fowling rights in exchange for peace. Future disputes were to be settled according to British law where Mi'kmaq were to have the same privileges as British people. *(28)*

Treaty No. 239-Mascarene's 1728 was for the purpose of the Mi'kmaq accept the Treaty of Utrecht and recognize the British Crown as the rightful possessor of the Province of Nov Scotia. However, there were translation difficulties and the Mi'kmaq did not fully understand the implications and received no protections under the treaty. *(28)*

Isle Royale Cape Breton was French territory until the capture of Louisbourg in 1745 and the French discouraged peace between the British and Mi'kmaq with fostered alliances between the French and the Mi'kmaq. Isle Royale was returned to the French with the Treaty of Aix-la-Chapelle between the British and French. *(28)*

The Grand Council was in disorder during the mid-eighteenth century where there was perceived to be two Grand Chiefs with Jean Baptist Cope thought to be the Mainland Grand Chief and Grand Chief Tomah Denys who moved Isle Royale in 1749 from Amherst to due to increasing hostilities in that district. The Mi'kmaq declared war on the British in 1749 which was a renewal of a 1744 declaration. *(28)*

The Treaty of 1752 had provisions for establishing the Aboriginal rights title and rights of the Mi'kmaq as well as commitment to peaceful coexistence between the British and Mi'kmaq nations. There were communication breakdowns within the Mi'kmaq Nation where the Treaty of 1752 was negotiated with and signed by Jean Baptist Cope and some other Mi'kmaq Chiefs. However, the Mi'kmaq of Cape Breton were upset with Cope for signing the treaty and the lack of unity was problematic. Regardless of differences within

the Mi'kmaq nation, the Grand Council achieved unity among all seven Districts to eventually ratify the Treaty of 1752. *(28)*

The Royal proclamation of 1763 by King George III of Britain recognized and affirmed the rights of aboriginal peoples. These rights included collective occupation of land, hunting, fishing and trapping. The crown policy outlined the process to purchase aboriginal lands and lands not ceded or purchased were to be reserved for hunting grounds. The provisions of the Royal Proclamation of 1763 were ignored in Nova Scotia and major settlements were established within Mi'kmaq territory as the Mi'kmaq became more marginalized. *(28)*

During the treaty period, missions and missionaries became more influential in the politics and spirituality of the Mi'kmaq. Missionary Father Pierre Maillard spent 25 years among the Mi'kmaq and acted as interpreter during treaty negotiations between the Mi'kmaq and British. after his death in 1762, the Mi'kmaq were without a priest and local chiefs and captains of the Grand Council performed marriages, baptisms and led prayers. *(28)*

Around 1766, Chapel Island became a safe meeting place for the Grand Council to discuss military and religious matters. The general condition of the Mi'kmaq was in decline but continued to hold their annual gatherings and council meetings. The Grand Council political role declined while the Council's spiritual role gained significance. Grand Council meetings became associated with celebrations of the Mi'kmaq's patron Saint of St. Ann. *(28)*

Around 1780, the influx of Loyalists put further pressure on the Mi’kmaq as more of their land was being settle and impeding their access to hunting and fishing. The fur trade and hunting declined leaving the Mi'kmaq with no food or trade goods. The Mi'kmaq population declined during this time and the British Government took full control of the province of Nova Scotia. The British no longer recognized the Grand Council as the legitimate political body of the Mi'kmaq and the British assumed that responsibility. *(28)*

By the early 1800's the reserve system was established and traditional base of Chief's and Grand Council authority was undermined by loss of lands and livelihood. Mi'kmaq chiefs and the Grand Council were no longer a threat to the British. *(28)*

The Grand Council remained active during the trying times of the early nineteenth century. In 1841, the Grand Chief Paussamigh Pemmeenauweet (Louis Paul) wrote a letter to Queen Victoria to inform her of the Mi'kmaq's plight and the neglected treaty obligations by her government representatives in the Province of Nova Scotia. The letter was also signed by the Second Chief (Grand Captain) and First Captain of the Mi'kmaq Warriors. *(28)*

During the mid-nineteenth century there may have been a mainland Grand Chief and a Cape Breton Grand Chief that would have suited the British to have a divided Mi'kmaq Nation. When Grand Chief Louis Paul of Shubenacadie died in 1844, there was dispute that had to be resolved by the Catholic Bishop in Halifax. After deliberations within the church among Mi'kmaq representatives, the brother of the former Grand Chief was appointed Grand Chief. A procession of Mi'kmaq moved to Government House and presented Grand Chief Francis Paul to the Governor, Lord Falkland. *(28)*

Grand Chief Francis Paul petitioned the Provincial Legislature for aid for the Mi'kmaq and was partly responsible for Joseph Howe being appointed first commissioner of Indian Affairs of Nova Scotia. *(28)*

Grand Chief Francis Paul had to resign his Grand Chief position in 1856 due to his own failing health. The Grand Chief Position was traditionally for life and this resignation was another change the Grand Council had to adapt. *(28)*

Another unnamed Grand Chief in Cape Breton wrote a petition to Queen Victoria in 1860 concerning the poor conditions the Cape Breton Mi'kmaq found themselves in. *(28)*

The British North America Act was established in 1867 and the Indian Act was implemented in 1876. The Federal Government assumed responsibility of appointing chiefs through elections and viewed the Mi'kmaq grand Council as a spiritual organization rather than a political form of Government. Indian Agents usurped the authority of Chiefs and the Grand Council. *(28)*

Chiefs and members of the Grand Council performed religious duties of absent priests during the mid 1800's. The system of Chiefs and Grand Council was broken by implementation of the Indian Act. A new system was established by the Grand Council where Keptins were selected by each Mi'kmaq community to fulfill the religious roles of absent priests. The role of the Grand Chief was a mainly ceremonial position of supervision of religious affairs. *(28)*

After Confederation in 1867, the traditional 7 districts of Mi'kmaq territory were ignored by the Government of Canada. Under the new system of reserves, elected Chiefs and Band Councils, the Mi'kmaq Grand Council had to adapt and evolve over a long period of time to continue to best serve the Mi'kmaq. *(28)*

The Grand Council structure consisted of an Executive of a Grand Chief (Kji Sagamaw), a Grand Captain (Kji Keptin) and a Putus. Under the Executive were the Captains from each reserve of the Mi'kmaq Nation including Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Eastern Quebec. The captains were of equal rank and each entitled to one vote on Grand Council matters with an emphasis on consensus in decision making. The Grand Council meeting agenda included socio-economic, politics, education, ecology and spirituality. *(28)*

Gradually the Bands under the Indian Act became the primary focus of political activity for the Mi'kmaq rather than Grand Council meetings. The Grand Council expressed some political power but their focus was more spiritual and centered around the annual St. Ann gatherings. *(28)*

The Grand Council Members all wear coloured sashes with the Kji Sagamaw has a dark blue sash, Kji Keptin wears yellow, the Putus wears brown and all the Keptins wear light blue sashes. In addition to the sashes, the Kji Sagamaw wears a special medallion and some Keptins wear crescent shaped medallions. Traditionally, the Putus was the story teller of the record that was woven into the wampum belt which has since disappeared. The Putus role evolved to more record keeping and administration functions. *(28)*

The official flag of the Mi'kmaq Grand Council consists of a red cross, a red five pointed star and a red crescent, all on a solid white background. The cross represents the 1610 Mi'kmaq alliance with the Holy See. The crescent represents the geographical shape of all the seven districts from Kespek (Gaspe Peninsula) to Unama'kik (Cape Breton-Southern Newfoundland). The star represents the spiritual light of the universe that guides and protects the Mi'kmaq Nation. The flag made its first appearance in Restigouche in 1900. *(28)*

In 1928, Grand Chief Gabriel Sylliboy challenged in court his charge of illegal hunting based on the Treaty of 1752. He was eventually convicted but later cleared but brought the validity of the 1752 Treaty before the courts. *(28)*

The Mi'kmaq Grand Council was politically involved in issues of Residential Schools, Assimilation, Centralization and exemption from Compulsory Military Training for Mi'kmaq. *(28)*

In response to the White Paper Policy which aimed to transfer federal responsibility to the Provinces, lobby groups of the Union of Nova Scotia Indians, The Confederacy of Mainland Mi'kmaq and the Native Council were formed in the late 1960's and early 1970's. *(28)*

The Mi'kmaq Grand Council was not recognized within these political organizations and once again was considered a spiritual entity. Within the spiritual role, Grand Chief

Donald Marshall met with Pope John Paul II in 1984. The Meeting was in recognition of the 1610 Concordant signed between Grand Chief Membertou and the Holy See. *(28)*

The mid 1980's saw the Mi'kmaq Grand Council seek international recognition of Treaties and Mi'kmaq self-determination. These activities were successes for the Grand Council which reinstated some political authority for the Grand Council. *(28)*

The Grand Council exercised this authority with the successful challenge in the Supreme Court of Canada of the conviction of a Mi'kmaq hunter. The Court upheld the 1752 Treaty and acquitted the hunter in 1985. *(28)*

In celebration and recognition of the Treaty of 1752, The Grand Chief Donald Marshall invited all Mi'kmaq as well as the Federal and Provincial Governments to observe October 1st, 1986 of every year afterward, as Treaty Day. Treaty day was to commemorate the bond between the Mi'kmaq and the Crown through treaties. The Provincial Government did not accept the invitation to participate until 1992. *(28)*

In addition to establishing Treaty Day, the Grand Council worked with the Province of Nova Scotia to establish October of every year as Mi'kmaq History Month. Mi'kmaq History Month is a month of promotion of Mi'kmaq history, traditional government, language and culture. *(28)*

The Treaty of 1752 was tested again in 1988 when several Mi'kmaq hunters including members of the Grand Council and the Grand Chief were arrested for hunting moose in the Cape Breton Highlands. All charges were eventually dropped and the rights under the Treaty of 1752 were reaffirmed. *(28)*

The present-day Grand Council (Mid 1990's) and Council Members serve the Mi'kmaq in times of need and as advisors, mediators and grief councillors. If someone wants to meet with the Grand Council, they contact their local Keptin with a letter of intent that details

the matter to be discussed. Other options included providing a letter to be read or verbal message to be passed on to council by the local Keptin. *(28)*

The Mi'kmaq Grand Council is again experiencing resurgence of importance among the Mi'kmaq in areas of politics, spirituality, culture and nationhood. *(28)*

Local History

The Town of Canso and the surrounding area including the coastal inlets and islands as well as the inland forests and lakes of Guysborough County today are within the Mi'kmaq Traditional Territory of *Eskikewa'kik. (22)* The Territory was an important region for the Mi'kmaq. *Unama'kik (22)* (Cape Breton Island) was the traditional residence of the Grand Chief and political center of Mi'kmaq Territory due to being far removed from Iroquois and Inuit enemies. *Eskikewa'kik* was also far removed from enemies and also a crossing point between *Unama'kik* and the mainland Atlantic Coast and other mainland territories. *(31)*

Being the most easterly point of the Mainland Province combined with the barren shores and islands made the Canso area an attractive and important landing early in the 17th century for early European fishermen to dry their catch before returning to their home ports with their holds filled with dried fish. Fishermen would set up temporary seasonal fish drying camps on the level beaches and were trading with the Mi'kmaq during their stay. *(35)*

In 1606, after 8 weeks at sea the French ship *Jonas* arrived at Canso with lawyer turned adventurer Marc Lescarbot onboard. Lescarbot authored records of his experiences and of the early days of Champlain's Port Royal. When they arrived at Canso they were approached by 2 Basque long-boats under sail with one boat crewed by fishermen out the French port of St. Marlo and the other was captained and crewed by Mi'kmaq who painted a large moose on their sail. *(35)* During their long association with the Basque the Mi'kmaq became excellent sailors which would be later exploited by the French to harass the English fishing fleets. The Mi'kmaq also developed a trading language that Lescarbot

described as half Basque but was functional enough to enable communication with the new arrivals on the *Jonas*. *(35)*

The French had also had a long association with fishing the Eastern Shore of the Province and trading with the Mi'kmaq beginning as early as 1504. *(36)* In 1518, Baron de Lery of France attempted to establish a settlement in Acadia but found the climate disagreeable and left cattle at Canso and Sable Island before returning to France and did not return. *(36)*

In 1603, King Henry IV appointed De Monts as Lieutenant-General of Acadia and De Monts set out with two ships for fur trade with the Mi'kmaq and in search of minerals. The ships were to meet at Canso but De Monts ship was not able to immediately find Canso and spent a month anchored on the South Shore near Port Mouton before sending a search party of Mi'kmaq and one of his men to search for the other ship which they found waiting at Canso. The other ship had occupied their time capturing fellow French ships near Canso who were in violation of De Monts' exclusive patent by trading with the Mi'kmaq as they and other nation have been doing for approximately two centuries prior to De Monts' Patent. *(36)*

Canso was a favorite port of fishermen and traders as indicated in 1609 by an old Mariner named Scavalet who claimed to have made 40 previous voyages to Canso. *(36)*

Old records of Canso refer to Mi'kmaq burials being defiled by European sailors in search of the fine furs that were used to wrap the bodies within the burial. The records also refer to a death sentence delivered by the Mi'kmaq concerning one of their own for revealing the locations of the burials. *(31)*

During France's early rule of Acadia in 1688, Canso's prominence was significant enough that a survey of Acadia's defenses for the King by Sieur de Pasquine recommended that the seat of Government be move to either La have or Canso where Canso was more central to aid Newfoundland and Cape Breton in time of war. In 1700,

Canso was thought to be of more commercial and military importance than Port Royal and although the date of first fortifications at Canso is uncertain it is believed the French had a military post on Grassy Island. *(36)*

The Treaty of Utrecht in 1713 relinquished France's rule of Mainland Acadia to England while Cape Breton remained under French rule. At this time, Port Royal, Minas and Canso were the only prominent settlements in Acadia that France relinquished to England. Canso's close proximity to French ruled Cape Breton and the ever presence of Mi'kmaq French allies made it necessary for the English to continually maintain fortifications at Canso. *(36)*

The Mi'kmaq in the Canso area were not pleased with the English takeover of Acadia and particularly Canso. For centuries the Mi'kmaq welcomed most all traders and fishermen to their coasts because there was no real effort by the newcomers to establish permanent settlements in the area. However, The English evicted all French fishermen from the area and established fortifications as they had done in New England which was usually followed by increasing numbers of English settlers. The Mi'kmaq expressed these sentiments in a letter to the Governor's Council of Nova Scotia concluding that the Mi'kmaq "were the Masters and dependents of no one", "we wish to have our Country free". The Abenaki sent a letter of similar sentiments but concluded the English withdraw from Maine or they would be burned out as they had been at Canso. *(35)*

New Englanders began to frequent Canso under English rule and established seasonal dwellings and large warehouse. In 1720 Canso was attacked by a large group Mi'kmaq killing four Englishmen and forcing the fishermen and traders to flee to their ships leaving all their possessions and merchandise to the Mi'kmaq. The Mi'kmaq held Canso until the arrival of French vessels to take onboard the spoils of the attack. The English were quick to arrive with three sloops and captured several French vessels with the English goods in their holds. *(36)*

The merchants of Canso sailed to Louisbourg to protest the Mi'kmaq attack but the French Governor told them that the Mi'kmaq were not French subjects and declined to interfere in their affairs. Another Mi'kmaq attack occurred in the summer of 1721 killing two Englishmen, a women and a child. *(36)*

The Mi'kmaq sailing skills were employed by the French in 1722 when the Mi'kmaq captured several trading ships in the Bay of Fundy and eighteen vessels anchored in coastal harbours. Using the captured vessels and some of their crews the Mi'kmaq sailed the fishing banks looking for other English ships and intended to attack Canso. The English had formally declared war against the Mi'kmaq and through the use of soldiers onboard two sloops and a series of naval battles the English were able to defeat and kill the Mi'kmaq and retrieve the vessels and many of the prisoners. *(36)*

Between 1715 and 1722 the Mi'kmaq harassed the New England fishing fleet of some 200 vessels that seasonally fished the Coast of Acadia. Armed by the French, the Mi'kmaq were formed into a unit of about 60 Marines that sailed the coast in shallops or paddled their canoes in the harbours looking for English vessels. Surprise was their greatest advantage and rather than kill the crews, the Mi'kmaq preferred to take prisoners for ransom and sell the spoils to the French. *(37)*

The Mi'kmaq accompanied by Abenaki again attacked Canso in the summer of 1725 with a force of 60 warriors killing six Englishmen and burning down two fisheries buildings. *(37)*

France declared war on England in 1744 and the Governor at Louisbourg was quick to launch an attack against Canso with a large force of 70 soldiers, 300 militia and 300 warriors comprised of Mi'kmaq, Maliseet and Abenaki. *(36)(37)* The small English force at Canso was seriously outnumbered and quickly surrendered and were taken to Louisbourg as prisoners. All the fortifications and dwellings at Canso were burned to the ground. While in Louisbourg, the English prisoners made good use of their time as

captives by studying the Louisbourg defenses which was crucial to the planning of a later attack on Louisbourg after their release and transport to Boston. *(36)*

In 1744, the Governor of Massachusetts, William Shirley also declared war on all Abenaki, Maliseet and Mi'kmaq and set a bounty of 100 pounds for a male scalp, and 50 pounds for scalps of women and children. *(35)* In 1749 Governor Cornwallis had extended the 1744 Scalp Bounty to include all Mi'kmaq of Acadia in response to a series of attacks on Halifax and Canso. Dissatisfied with the number of Scalps being brought in, Corwallis renewed the Scalp Bounty in 1750 increasing the bounty from 10 Guineas to 50 Pounds. *(32)*

Louisbourg was attacked in 1745 and after a seven week siege the fortress was taken by the New Englanders only to be returned to France three years later under the Treaty of Aix-la-Chapelle. Canso continued to be under threat of Louisbourg just 100 km northeast along the coast. The French did encourage and support Mi'kmaq attacks on Canso in 1749 and the capturing of a vessel at Canso in 1752. *(36)*

Cape Breton was relinquished to the English in 1763 under the Treaty of Paris and the removal of the French threat to Canso allowed for more permanent plans for a Canso settlement and a town named Wilmot was laid out in 1764. *(36)*

New permanent settlers began to arrive in the area in 1784 and anticipated Mi'kmaq hostilities similar to those occurring in Carolina and Southern States which the existing settlers had not experienced but rather found the Mi'kmaq to be very helpful in assisting shipwreck victims in 1780 and 1781. *(31)*

After the French departed from Cape Breton, the Mi'kmaq struggled to find their place in their own land. The source stated the due in part to previous hostilities and mostly to the Mi'kmaq customs and ways in communal sharing, they were never welcome in the new town established at Canso. The source suggests that the Mi'kmaq may have congregated

near Indian Harbour which was 70 km to the southwest along the coast of the Eastern Shore and a Mi'kmaq settlement upriver at Country Harbour. *(31)*

Other sources place the Mi'kmaq along the Strait of Canso at McNairs Cove and Melford Point in 1856 petitions by concerned citizens for relief supplies from the Government for starving Mi'kmaq. *(38)* Another reference to Mi'kmaq in the Canso area is made in the biography of Hannah Norris, a school teacher in Canso sometime after 1861. In addition to teaching the children at Canso, she also taught the Mi'kmaq children of the nearby islands. *(39)*

A 1911 Census enumerated 41 residents of the Cooks Cove Micmac Indian Reserve of which only 2 were not Mi'kmaq. All others were listed as "Mic Mac" for Nationality and "Indian" as Language Commonly Spoken. Of the Non-Mi'kmaq enumerated, 1 was an adopted family member and the other was a lodger. *(44)* An earlier 1901 census of the Guysborough area has the 40 persons whose family names of similar to the 1911 census although some were listed as "English" for Nationality, others as "MickMack" and "English" listed as Language Commonly Spoken others listed "MickMack" was the entry for language spoken even though the some of the same persons were listed as "English" in Nationality. *(45)* The 1901 enumeration areas of Canso East had a family of the name of Johnson with the mother listed as English nationality and Roman Catholic. However, the daughters and sons are listed as Irish and Methodist, so it is difficult to determine if they were correctly identified. *(47)* Enumeration Area of Canso West has 2 families named Johnson but they were identified as "African" and were listed as "Baptist" under Religion and were not likely Mi'kmaq. *(46)*

A review of the 1876 A. F. Church County Map, Guysborough County, shows no indication of Mi'kmaq settlements ("Indian Camp") within the vicinity of McNairs Cove, Melford Point or Indian Harbour. There is no indication of a Mi'kmaq settlement at Cooks Cove but there are 2 houses on the interior south shore the mouth of the Salmon River, 3km west of Dorts Cove and marked as T. Johnson and J. Johnson as being the occupants. A review of the entire 1876 map shows no indication of Mi'kmaq settlements

or encampments although the Mi'kmaq Burial Ground at Glenelg and the "Colored Settlement" at Birchtown, north of Guysborough are shown on the map. *(40)*

A review of the Nova Scotia Land Grant Index Sheets for the Cooks Cove area show that the location of 2 houses of the Johnson's as marked on Church's map were at once a 700 acre parcel granted to James Stewart. Land on a point on the eastern shore of St. Marys River near the Community of Sonora was set aside for "Indian Burials" *(48)*

Mi'kmaq Place Names

While there may be little archaeological evidence found of the existence of early peoples along the Eastern Shore of Nova Scotia some of the known Mi'kmaq traditional place names for the Canso area and Eastern Shore that have survived include:

Canso	*Kamsok*	"opposite the lofty cliffs"	*(41)*
	Cansoke	"facing the frowning cliff"	*(42)*
Whitehead	*Kamsokootc*	"the little place opposite the lofty cliffs"	*(41)*
Chedabucto Bay	*Sedabooktook*	"running far back",	*(41)*
		"a deep extending harbour"	*(41)*
Country Harbour	*Mocoudom*		*(41)*
	Moukodome		*(41)*
	Moolaboogwek	"gullied and deep"	*(41)*
Fox Island	*Sebelogwokum*	"where skins are stretched",	*(41)*
		"the drying place"	*(41)*
Marie Joseph	*Megwasagunk*	"red shells"	*(41)*
Pirate Harbour	*Tesogwode*	"the place where goods are sorted",	*(41)*
		"place of flakes"	*(41)*
Port Felix	*Wolunkak*	"the scooped out place"	*(41)*
Mulgrave	*Wolumkwagunuchk*	"the lobster ground"	*(41)*
	Wolumkwagaunutk	"the lobster ground"	*(43)*

Smith Cove	*Segegueegunk*		*(41)*
St. Marys	*Naboosakun*	"a bead string"	*(41)*
Tor Bay	*Tabooesimkek*	"two in company picking berries"	*(41)*
	Taboosimkak	"having two branches"	*(43)*
Wine Harbour	*Pulamkeegunucht*	"the fish spawning place"	*(41)*
	Pelumke egunech	"the fish spawning place"	*(43)*
Cooks Cove	*Anesaak*	"a solitary rock"	*(43)*
Ecum Secum	*Arwasaagunk or Megwasaagunk*	"a red house" or "a red bank"	*(43)*
Glenelg	*Mimnogun*	"a black birch tree"	*(43)*
Liscomb	*Megadawik*	"where the big eels are taken"	*(43)*
New Harbour	*Ansaakw*	"a lonely rock"	*(43)*
	Okoboogwek	"foaming with discoloured foam"	*(43)*
Port Shoreham	*Assugadich*	"clam ground"	*(43)*
Queensport	*Wedonik*	"having a mouth"	*(43)*
Sand Point	*Amalttunik*	"the sandy point"	*(43)*
Stillwater	*Petawagumegek*	"running through barrens"	*(43)*

Local Mi'kmaq Family Names

There were many variations in the spelling of some of the Mi'kmaq family names but the spellings are very close to the spelling of the names of today as listed below:

1911 Census, District 44, Guysborough, Subdistrict 30, Cooks Cove I. R. Population 41: *(44)*

Marshall
Prosper
Gabriel
Johnson

1901 Census, Guysborough, G, Selected Population 40: *(45)*

Marshall

Prosper

Gabriel

Johnson

Laboe

A review of current Land Claims show no current active claims within the Project Site and Study Area. *(49)*

Historical Summary

The Project Site was one of the last areas of the province to free of ice during the last Ice Age that left landscape of barren of exposed igneous and metamorphic bedrock, organic filled depressions and a small field of drumlins north of the site.

There is little archaeological evidence along the Eastern Shore of the Province to indicate the presence of early peoples which may be factor of too little investigation and current light population producing few accidental archaeological finds.

Archaeological finds along the St Marys River system have been white quartz tools rather than the preferred chalcedonies and cherts of other regions of the province. Exposed veins quartz would have been of importance to early peoples in the Study Area and Eastern Shore.

The shores and islands of Chedabucto Bay and particularly the Canso area were favorite landings for European fishermen to dry their catches and for the Mi'kmaq to trade with the Europeans since the mid 1500's. The Canso area was and important location within the Mi'kmaq Traditional Territory of *Eskikewa'kik* as it was far from traditional enemies and was a coastal connection point between other Mi'kmaq Territories and trade.

The English occupation and fortification of Canso triggered several Mi'kmaq attacks on the English at Canso during the early to mid-1700's with the encouragement and arms supplied by the French. After the departure of the French from North America in the late 1700's, the Mi'kmaq were displaced by English settlers in the Canso area and the Province.

A review of historic maps of Guysborough County show very little evidence of Mi'kmaq settlements within the Study Area or the locations along Chedabucto Bay and Eastern Shore as reported in the sources.

Census of the early 1900's enumerated the Mi'kmaq of "Cooks Cove Micmac Reservation" of unknown location which indicated a population of approximately 40 persons identifying themselves as Mi'kmaq near the community of Guysborough.

A summary of the history of the Mi'kmaq Traditional Government provides insight into the events that led to the current system of Reserves as well as Band Chief and Council Governments while the Traditional Mi'kmaq Grand Council persevered from Pre-contact to Present-day.

A review of current Land Claims show no current active claims within the Project Site and Study Area.

4.4 Mi'kmaq Traditional Use Findings

The traditional use data gathered for this MEKS was drawn from one primary source: interviews with Mi'kmaq individuals who reside in the surrounding Mi'kmaq communities and those who are familiar with or undertake these types of activities. This data was acquired through interviews with informants that allowed the study team to identify the various traditional use activities, resources and areas that are currently or have been used by the Mi'kmaq, and any information that was gathered in previous MEKS in the area. Interviewees were asked to identify areas within the Study Area and Project Site where they knew of traditional use that had taken place, or currently in use. These interviews took place from November 2017 to January 2018. Information collected during previous studies was also incorporated into the information gathered.

To easily identify the traditional use data findings of this study, the analysis has been broken down into geographic locations. The first is the Project Site area, and the second is the Study Area, which includes areas that fall within a 5 km radius of the Project Site.

Project Site

The Project Site, as well as locations in the *immediate* vicinity (within 50 meters) of the Project Site, will be considered when analyzing traditional use activities.

Fishing

(see Appendix B, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Fishing Areas")

One trout fishing area was identified around the Publicover Lake.

Hunting

(see Appendix C, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Hunting Areas")

One hunting area was recorded in an area surrounding Publicover Lake to Portage Cove. This area was noted to be used for deer, moose, partridge, and rabbit hunting.

Gathering

(see Appendix D, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Gathering Areas")

No gathering areas were identified by informants on the Project Site.

Study Area

As mentioned previously, the MEKS data is also drawn from the Study Area which encompasses areas within a five (5) kilometer radius from the Project Site boundaries. The purpose of this portion of the study is to give the land characteristics and portray other land use activities that may have been missed in the Project Site data analysis.

Fishing

(see Appendix B, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Fishing Areas")

From the data gathered, the study found that mackerel, trout, and lobster fishing were, by far, the most common fishing activity in the Study Area.

Mackerel was identified by informants in twenty seven (27) areas in the Study Area. These areas were found to be located:

- from Chapel Gully to Spinney Gully to Sherewink Cove through Andrew Straight to Portage Cove

- Negrowac Cove to The Madeline to Black Island
- from False Cove and Black Ledger to Dover Basin
- in Hazel Hill Lake, Blowdown Lake, and Charles Lake
- waters on the south side of Durells Island in The Tickle
- Irish Cove to Grave Island in the Canso Harbour, to Glasgow Head
- the north side of George Island and Piscatiqui Island
- the north side of Durells Island
- into the Atlantic Ocean, east of Canso

Twenty eight (28) trout fishing areas were identified:

- from Chapel Gully to Spinney Gully to Sherewink Cove through Andrew Straight to Portage Cove
- Publicover Lake
- Mahons Lake and Gun Cove
- Gaspereaux Brook to Hazel Hill Lake to Blowdown Lake and Ice Lake
- Southwest Lake
- waters between Durells Island and Piscatiqui Island
- waters on the south side of Durells Island in The Tickle, past Canso in the Canso Harbour, to Glasgow Head
- Chapel Gully

Twenty eight (28) lobster fishing areas were identified by informants:

- waters north west of Durells Island surrounding Tickle Island
- waters on the south side of Durells Island in The Tickle, into Canso Harbour, to Glasgow Head
- waters between Durells Island, Piscatiqui Island, George Island, Hog Island, and Big Gooseberry Island
- waters sound of Crow Island
- Chapel Gully to Spinney Gully, Sherewink Cove, Glasgow Harbour, Andrew Passage, and Portage Cove

- from Walkers Bay and Gull Island to Black Island to The Madeline
- from Dover Basin to Dover Harbour, through to Black Ledge and False Cove

Other species mentioned by informants, but to a lesser degree than those mentioned above are cod, eel, bass, gaspereau, herring (including their eggs), salmon, clam, oyster, smelt, mussel, snow crab, perch, flounder, capelin, halibut, squid and tuna.

When broken into timeline categories, Recent Use data represented a slight majority of the information gathered with forty one percent (41%) of the fishing data collected. Current Past use was reflected in approximately forty one percent (41%) of the data, and Historic Past use areas were categorized in approximately twenty seven percent (27%) of the information.

Hunting

(see Appendix C, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Hunting Areas")

Four (4) deer hunting areas were found to be located in the areas

- around Canso
- areas around Publicover Lake
- an area bounded by Hazel Hill Lake, Blowdown Lake, Swaines Lake, and Eastern Lake
- an area surrounding Lumsdens Lake, bounded by Whistlehouse Lake and Fogartys Little Lake

Four (4) areas were identified by informants as rabbit hunting areas. These include

- around Canso
- areas around Publicover Lake
- an area bounded by Hazel Hill Lake, Blowdown Lake, Swaines Lake, and Eastern Lake

- an area surrounding Lumsdens Lake, bounded by Whistlehouse Lake and Fogartys Little Lake

Partridge hunting was identified in four (4) areas in the Study Area. This include

- around Canso
- areas around Publicover Lake
- an area bounded by Hazel Hill Lake, Blowdown Lake, Swaines Lake, and Eastern Lake
- an area surrounding Lumsdens Lake, bounded by Whistlehouse Lake and Fogartys Little Lake

Other species reported hunted by the informants, but to a relatively lesser degree than those described above are moose, pheasant, duck, geese, and squirrel.

In this Study Area, Historic Past use information was slightly more prevalent than Current Use and Recent Past use. Historic Past use accounted for thirty six percent (36%) of the data gathered, while Current Use and Recent Past use accounted for thirty two percent (32%) each.

Gathering

(see Appendix D, map "Maritime Launch Services MEKS – Mi'kmaq Traditional and Current Gathering Areas")

Four (4) blueberry gathering areas were identified

- in an area surrounding Hazel Hill
- from Ice Lake, through Canso, to Winter Creek

Other gathering activities and species mentioned by informants, but to a relatively lesser degree are apple, cranberry, strawberry, "hardwood", hazelnut, maple tree , raspberry, "wood", crabapple, evergreens, spruce tree, sweetgrass, fiddleheads, and princess pine.

From the analysis, a large percentage of the gathering activities in the area were Historic Past use. Approximately eighty percent (80%) took place greater than 25 years ago. Recent Use activities were identified in approximately twenty percent (20%) of the information gathered.

4.5 Mi'kmaq Significant Species Process

In order to identify possible project activities which may be of significance to the Mi'kmaq with regards to traditional use of the Study Area, the project team undertakes a number of steps in order to properly consider the MEK data. This involves three main components: Type of Use, Availability, and Importance.

Type of Use

The first component of analysis is the "Type of Use" of the resource which involves the categorization of the resource. All resources are placed into various general categories regarding the Type of Use**.** The category headings are Medicinal/Ceremonial, Food/Sustenance, and Tool/Art. These general headings are used so as to ensure further confidentiality with respect to the resources and the area where they are harvested. As well, the total number of instances where a resource harvest has been documented by the study is quantified here as well.

Availability

After the data is considered by the Type of Use, it is considered in accordance with its availability: this involves considering whether the resource is abundant in the Study Area or whether it is rare or scarce. Based on the information that is provided to the team from the ecological knowledge holders and/or written literature sources, the availability of the resource is then measured in regards to other water or land areas that are outside of the Study Area. This measuring is primarily done in the context of the areas adjacent to the Study Area, and if required, other areas throughout the province. By proceeding in this manner, the study can provide an opinion on whether that resource may be **Rare, Scarce** or **Abundant**.

The data is classified in accordance with following:

Rare – only known to be found in a minimum of areas, may also be on the species at risk or endangered plants list;

Common – known to be available in a number of areas; and

Abundant – easily found throughout the Study Area or in other areas in the vicinity.

This allows the study team to identify the potential impact of a resource being destroyed, by the proposed project activities, will affect the traditional use activity being undertaken.

Importance

The final factor the MEKS team considers when attempting to identify the significance of a resource to Mi'kmaq use is whether the resource is of major importance to Mi'kmaq traditional use activities. This can be a somewhat subjective process, as any traditional resource use will be of importance to the individual who is acquiring it, regardless of whether its use is for food or art, and regardless if the resource is scarce or abundant. However, to further identify the importance, the MEKS team also considers the frequency of its use by the Mi'kmaq; whether the resource is commonly used by more than one individual, the perceived importance to the Mi'kmaq in the area, and finally the actual use itself. These factors support the broad analysis of many issues in formulating an opinion on significance and supports identifying whether the loss of a resource will be a significant issue to future Mi'kmaq traditional use, if it is impacted by the project activities.

4.6 Mi'kmaq Significance Species Findings

This MEKS identified resource and land/water use areas within the Project Site and Study Area that continue to be utilized by the Mi'kmaq people, to varying degrees.

Type of Use

The study identified the following in the Study Area:

TYPE OF USE	NUMBER OF AREAS	NUMBER OF SPECIES
Food/Sustenance	251	47
Medicinal/Ceremonial	26	8
Tools/Art	9	6

Table 4: Resource Use within all Study Area

Availability

During the information gathering for the Study Area, informants had mentioned the hunting of moose, and fishing for salmon. The Eastern Moose population is considered endangered in Nova Scotia; and considered endangered in Canada is the Atlantic Salmon. (50)

No other rare or endangered species were identified by informants.

Importance

While stated above, it is worth noting again that assigning an importance designation for any activity done by Mi'kmaq can be a subjective process, and that all activities are considered ways of preserving the Mi'kmaq way of life, in some shape or form.
As noted previously, Atlantic Salmon is considered an endangered species in Canada and the Mi'kmaq still rely on this species for sustenance and cultural ceremonies and disturbances to their habitats could have an impact on Mi'kmaq use.

Moose hunting was an important part of early Aboriginal life as a moose provided food, clothing, materials for tools, shelter, and ceremonial purposes, to which are still valued and regard highly by Mi'kmaq today.

While common throughout Nova Scotia, trout and mackerel fishing was an activity that was repeatedly noted during the interview process as occurring historically, through to present use. Based on the number of areas reported by informants, that trout and mackerel fishing are important activities undertaken by the Mi'kmaq within the area that could be impacted by any effects to trout habitats.

Also based on the high number of activity areas, lobster fishing is another species that can be determined to be important to the Mi'kmaq in this Study Area. Lobster proved a way of life as well as a source of food.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This Mi'kmaq Ecological Knowledge Study has gathered, documented and analyzed the traditional use activities that have been occurring in the Project Site and the Study Area by undertaking interviews with individuals who practice traditional use, or know of traditional use activities within these areas and reside in the nearby Mi'kmaq communities.

The information gathered was then considered in regards to species, location, use, availability and frequency of use to further understand the traditional use relationship that the Mi'kmaq maintain within the Project Site and Study Area.

Mi'kmaq traditional and current use of the land was found in the Project Site and Study Area (see Section 4.4, Mi'kmaq Traditional Use Findings). This use of the land could be interpreted as occupation.

Traditional Use - Project Site Summary

Based on the data documented and analyzed, it was concluded that some Mi'kmaq use has been reported on the Project Site, or in the immediate vicinity.

In the surrounding areas, trout fishing, deer, moose, rabbit, and partridge hunting were the predominant activities in the Project Site.

Traditional Use - Study Area Summary

Based on the data documentation and analysis, it was concluded that the Mi'kmaq have historically undertaken traditional use activities in the Study Area, and that this practice continues to occur today. These activities primarily involve harvesting of fish, but also include harvesting of animal, plant, and tree species; all of which occurs in varying locations throughout the Study Area and at varying times of the year.

Mackerel, **trout**, and **lobster** were found to be the most fished species in the Study Area. **Deer**, **partridge**, and **rabbits** were found to be the most hunted species within the Study

Area. With the small number of gathering areas identified, it is difficult to categorize the area as a particular gathering area type.

RECOMMENDATION

The Maritime Launch MEKS has identified some Mi'kmaq Traditional Use Activities occurring in the Pro*ject *Site, as well as activities that have occurred in the past and present in the Study Area. Based on the information gathered and presented in this report, there is potential that the development of the tidal project may affect some Mi'kmaq traditional use, specifically some fishing activities identified in the Project Site and Study Area.

It is recommended that the proponent continue its communications with the Assembly of Nova Scotia Mi'kmaq Chiefs, through KMKNO, to discuss future steps, if required, with regards to Mi'kmaq use in the area.

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APPENDICES

Map A

Mi’kmaq Traditional and Current Use Areas

Maritime Launch Services MEKS

Canso, NS

Mi'kmaq Traditional and Current Use Areas

Legend

- MEKS_Study_Area
- MEKS_Project_Site

Disclaimer

This map is a graphical representation of Mi'kmaq ecological knowledge gathered throughout the study, and should not be used for navigation purposes. Features presented may not accurately representaactual topographical or proposed features.

The Mi'kmaq ecological knowledge data presented is a sampling of knowledge held by those interviewed and should not be interpreted as an absolute measure of Mi'kmaq ecological knowledge and land use.

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Scale: 1:50,000

Version: Draft
22 January 2018

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Map B

Mi’kmaq Traditional and Current Fishing Areas

Maritime Launch Services MEKS

Canso, NS

Mi'kmaq Traditional and Current Fishing Areas

Legend

- MEKS_Study_Area
- MEKS_Project_Site

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Datum: UTM NAD83 Zone 20
Scale: 1:50,000

Version: Draft
22 January 2018

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GEOMATICS SOLUTIONS

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Kilometers

Map C

Mi’kmaq Traditional and Current Hunting Areas

Maritime Launch Services MEKS

Canso, NS

Mi'kmaq Traditional and Current Hunting Areas

Legend

- MEKS_Study_Area
- MEKS_Project_Site

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Version: Draft
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Map D
Mi’kmaq Traditional and Current Gathering Areas

Maritime Launch Services MEKS

Canso, NS

Mi'kmaq Traditional and Current Gathering Areas

Legend

- MEKS_Study_Area
- MEKS_Project_Site

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