

# L8006 Transmission Line Project Colchester & Cumberland Co., NS MEKS



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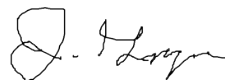
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## Executive Summary

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 Nova Scotia Power with regards to the proposed project.

This MEKS mandate is to consider land and water areas in which the proposed project is located and to identify what Mi'kmaq traditional use activities have occurred, or are currently occurring within, and what Mi'kmaq ecological knowledge presently exists regarding to the area. In order to ensure the accountability and ethical 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 includes a new transmission line between Onslow and the New Brunswick Border.



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

The Study Area will consist of an area within a 5 km radius around the Project Site.

Interviews were undertaken by the MEKS Team with Mi'kmaq knowledge holders from the First Nation communities of Pictou Landing, Millbrook, Sipekne'katik. The interviews took place between October 2022 to February 2023.

Interviewees 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. This MEKS processed information from twenty-six (26) interviewees, including interviewees from other recent studies, within the analysis portion. 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 considered in regard 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 Transmission line and Study Area cross the Traditional Political Districts *of Sipekni'katik* (Wild Potato Area) of the central area of Nova Scotia and *Siknikt* (Drainage Area) of Nova Scotia and New Brunswick and centered on the isthmus between the Provinces of today.

The known archaeological finds/sites found within the Study Area were mostly found close to rivers and also among present-day development, whether that be building and road construction including agricultural land use. Most are likely accidental finds and the site locations give indication of where to tread lightly at river and brook crossings and particularly through Debert/Belmont area.

There are potential natural resources within the Cobequid Hills in exposed bedrock containing Rhyolite stone of suitable properties for tools and weapons for early peoples. There are reported sources of Black Ash on the north slopes of the Cobequid Hills which are a valuable resource to early peoples and Mi'kmaq today, for tool handles and basket making.

Millbrook First Nation is the nearest Mi'kmaq community to the Study Area, located south of Truro and referenced as Millbrook No. 27. Franklin Manor No, 22 Reserve is located west of the River Herbert and south of Amherst, approximate half distance to Parrsboro.

A review of Specific Claims shows no current and active First Nation Claims within the Project Study Area. However, Millbrook First Nation has an active specific claim regarding loss of land for Highway R.O.W and routing of FiberOptic Cable through same R.O.W.. No specific location detail given.

### **Traditional Use - Project Site Summary**

Based on the data documented and analyzed, it was concluded that there is some Mi'kmaq activity reported on the Project Site.

Activities in the Project Site include Deer hunting, Salmon & Trout Fishing, and Sweetgrass & Berry harvesting.

All usage period-categorization breaks down as follows:

**Current Use** ~44%

**Recent Past** ~44%

**Historic Past** ~12%

### **Traditional Use - Study Area Summary**

Deer hunting, Salmon & Bass fishing, and Berry & Sweetgrass harvesting were the activities reported by interviewees in the highest frequency. There was other fishing, hunting, and gathering activities reported as well.

All usage period-categorization breaks down as follows:

**Current Use** ~50%

**Recent Past** ~23%

**Historic Past** ~27%

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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 9001:2015 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 NSP L8006 NSNB Transmission Line***

Nova Scotia Power Inc. (NSPI) is proposing to construct and operate a new 345kV reliability transmission tie-line in coordination with New Brunswick Power. This new tie-line will enhance the reliability of both utility's power systems while enabling the integration of a significant amount of renewable generation on to NSPI's system. The tie-line will also facilitate greater access to the North American electric grid. L8006 will traverse 96 km from Onslow Nova Scotia to the New Brunswick border. The route will parallel L8001, an existing 345 KV transmission line, and these two transmission lines will be strung on separate steel towers located in



parallel corridors. The new transmission line Right-of-Way corridor will be 96 km long and 38.1 meters wide.

## **2.0 MI'KMAQ ECOLOGICAL 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 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 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 Act* 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***

Membertou Geomatics Solutions was contacted by Nova Scotia to undertake a MEKS for the proposed project. This project will require the documentation of key environmental information in regard 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 (MEKSP)** ratified by the Assembly of Nova Scotia Mi'kmaq Chiefs on November 22, 2007, and the 2<sup>nd</sup> Edition released in 2014.

***Note: Due to the current Covid19 pandemic, this study was delayed due to Covid19 restrictions and safety concerns regarding conducting interviews within Mi'kmaq communities.***

MGS proposed to assist with the gathering of necessary data by developing a MEKS which will identify Mi'kmaq traditional land use activity within the Project Site and in the surrounding areas. 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.

***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 regard 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 Project Site. The Project Site is the footprint of the proposed L8006 transmission line between Onslow, NS and the New Brunswick Border.

The Study Area will consist of a larger area that falls within a 5km radius around the Project Site.



Figure 1. Project Site (orange areas) 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 had initiated dialogue with knowledge holders from the First Nation communities of Pictou Landing, Millbrook, and Sipekne’katik, given their close proximity with the Project Site. Interviews were also conducted through an online portal that was recently developed by Membertou Geomatics Solutions. This online portal allows Mi’kmaq individuals the ability to provide traditional knowledge and use with regards to the proposed project.

Knowledge holders were contacted by the MEKS team members and interviews were conducted between October 2022 and February 2023.

For this MEKS, twenty-six (26) informants provided information in regard to past and present traditional use activities. 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. Information gathered from other studies conducted in the area were utilized in this study as well.

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 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 a species or feature was deemed worthy to be noted by the knowledge holder. While every effort is made to ensure the Project Site receives a good coverage of observation points, weather, vegetation, available paths and trails, or difficult terrain can cause some data gaps.

Site visits took place in November 2021, conducted by MGS staff and accompanied by a Mi'kmaq knowledge holder from First Nation community Paqtnkek. Throughout the site visit various species (and subspecies) of plants, trees, and animal signs/tracks were observed.

### Site Visit Observations

| Observation | # of observations | Observation   | # of observations |
|-------------|-------------------|---------------|-------------------|
| Spruce      | 30                | Blueberry     | 4                 |
| Birch       | 28                | Striped Maple | 4                 |
| Maple       | 26                | Snowberry     | 4                 |
| Balsam Fir  | 20                | Pin cherry    | 4                 |
| Ferns       | 18                | Witch Hazel   | 4                 |
| Golden Rod  | 10                | Mountain Ash  | 4                 |
| Goldthread  | 8                 | Plum          | 4                 |

|                |   |                  |   |
|----------------|---|------------------|---|
| Yellow Birch   | 8 | Life Everlasting | 4 |
| White Spruce   | 8 | Raspberry        | 4 |
| American Beech | 8 | Aspen            | 2 |
| Sarsaparilla   | 8 | Blackberry       | 2 |
| Wire Birch     | 8 | Cranberry        | 2 |
| Labrador Tea   | 6 | Elderberry       | 2 |
| Serviceberry   | 6 | Lichen           | 2 |
| Sage           | 6 | Bear sign        | 2 |
| Sweet Gale     | 6 | Coyote sign      | 2 |
| Alder          | 4 | Deer sign        | 2 |

*Table 1. Summary of observation points*



*Figure 3. A deep brook crossing the site.*





*Figure 4. A medicinal hotspot.*

## **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 regard 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 regard to the "Type of Use" for a given resource. 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 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 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. As 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.

*At the time of this report, it should be noted that due to the ongoing Covid19 pandemic, MGS noticed a decline in interview participation as well as a decline in traditional use activities occurring during the pandemic. The Covid19 pandemic is still a concern within Mi'kmaq communities.*

### **4.3 Historical Review Findings**

The Project Study Area

The traditional lands of the Mi'kmaq are collectively known as Mi'kma'ki. The sources reviewed provided very general boundaries of 7 Districts of Mi'kma'ki and have just enough detail to give an approximation of boundaries along the coast but not much detail for the interior boundaries. (1)(2)(3)(4)

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 Project Study Area begins within and passes through the *Sipekni'katik* District (Territory) from Onslow to the Wentworth Valley.

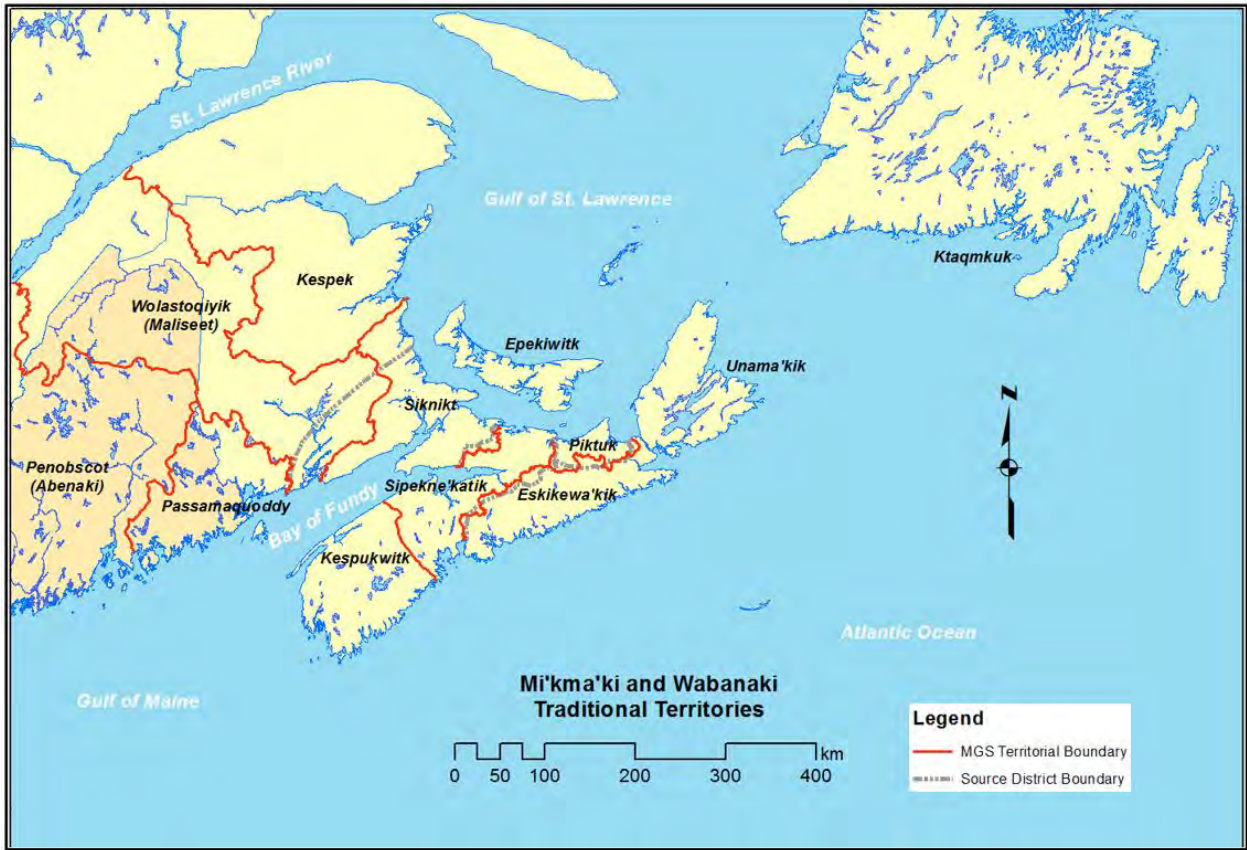
*Sipekni'katik* (Wild Potato Area) This District includes all lands and waters draining into the Northumberland Strait from MacFarlane Point, Wallace Harbour to and including the Middle River of Pictou watershed. Sipekni'katik also includes all the lands and waters draining into Cobequid Bay, Minas Basin 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.

From the Wentworth Valley and westward, the Study Area passes into the *Siknikt District* (Territory), a District that extends west to the St. John Harbour and northeast well into present-day New Brunswick.

*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 Mispic Point on the east side of St. John Harbour.



*Mi'kmaq Political Districts with Maliseet, Passamaquoddy and partial Penobscot Traditional Territories. (1)(2)(3)(4)*

The district boundaries may be adjusted after review by the Mi'kmaq and Maliseet Communities. Until that time, the other Districts of Mi'kma'ki outside the Study Area are proposed as follows (1)(2)(3)(4):

***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 Gaspé 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 Mispic Point on the east side of St. John Harbour.

***Epekwithk*** (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.

***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) This District combines all of Cape Breton Island  
***Aqq Ktaqmkuk*** (Land Across with the Southern Coast of Newfoundland.

## Ice

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. During this period, early glaciers flowed across the Atlantic Region in a eastward direction shifting to the south in later ice flows. The last of the glaciers were formed locally within the region while being fed by the high amounts of



precipitation. 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. (5)

The present-day landscapes began to emerge from under ice some 12,000 years BP for Cobequid Bay which was ice free at that time. The ice continued to melt and reveal barren landscapes of deep till deposits being eroded and transported about as well as exposed and thinly covered hard rock at elevation. The sea level rose some +60m over the next 6000 years reach close to present day level and coastline. At 11,000 years BP, remnant ice caps topped the Cobequid Hills, Antigonish Highlands, South Mountain of the Annapolis Valley and Cape Breton Highlands. These ice caps and another ice block centered in Chedabuctou Bay, advanced a short distance each during the Younger-Dryas cold period of approximately 11,000-10,500 BP. (5)(6)

The Younger Dryas Period was a cold period that saw local ice centers such as the Cobequid Hills ice cap advance flows again in directions radiating from their center ridges. (6) Sources have the Younger Dryas Period a northern hemisphere cold event lasting 1000 years to 1500 years. (7)(8) The impacts of the Younger Dryas Period were not consistent across the northern hemisphere as there were varied regional impacts influenced by local conditions. (9) Nova Scotia sources have the cold period lasting approximately 200 years based on analysis of lake sediment and peat beds throughout the Province. (6)(10) During the Younger Dryas Period, previously colonized plants that followed the previously receding glaciers were then covered in permanent snowfields and some large mammals became extinct. (10)

It is during this fluctuating climate period that the Debert-Belmont encampment sites were utilized by early peoples of the Paleo-Indian Archaeological Period of 11,000 to 10,000 BP. The entire Study Area was ice-free by 10,000 BP and left a landscape of mostly glacial ground moraine of a silty till plain with waterlain deposits of deltas, outwash fans and esker systems within the north and south flow ancient drainage cuts.

The elevated Cobequid Hills were erosion resistant to the ice and were left with a thin till cover to exposed bedrock. The landscape of the Study Area north of Amherst, is a low flat topography of Marine Deposits of gravel, sand, silt and clay covered in peat/saltmarsh. (10)

There are various period delineations being used for Archaeology in the Province and Maritime publications which differ in the number of periods, names, and time spans. The Archaeological Periods Table below places the periods in context with each other. It is useful to provide these various periods for reference and context when reviewing archaeological reports and placing in time the artifacts and features found. (11)(12)

Artifacts are archaeological objects that can be recorded and removed from the site such as flakes (chips from tool or point manufacture), arrow/spear tips (points), tools, bones, preforms (unfinished tool or point blanks) and pottery sherds. Features are archaeological finds that cannot be removed from the site and can only be recorded such as charred or discoloured ground, a storage pit or Historic Period building foundations as some examples.

| Time           | Archaeological Periods    |                          | * (Dates are Approximate) |                             |
|----------------|---------------------------|--------------------------|---------------------------|-----------------------------|
|                | Natural History of N. S.  | * Periods                | * Northeastern Periods    | * Maritime Region Tradition |
| 11,000 B.P.    | < Paleo-Indians           |                          | < Paleo-Indian            | < Paleo-Indian              |
|                | 11,000 - 10,000 yrs. B.P. | < Early Period           | 11,000 - 10,000 yrs. B.P. | 11,000 - 10,000 yrs. B.P.   |
|                | ↓                         | 10,600 - 6,000 yrs. B.P. | ↓                         | ↓                           |
| 10,000 B. P.   | < Great Hiatus            |                          | < Early Archaic           | —                           |
|                | 10,000 - 5,000 yrs. B.P.  |                          | 10,000 - 8,000 yrs. B.P.  | ?                           |
|                | ?                         |                          | ↓                         | ?                           |
| 8,000 B.P.     | ?                         |                          | < Middle Archaic          | ?                           |
|                | ?                         |                          | 8,000 - 6,000 yrs. B.P.   | ?                           |
|                | ?                         | ↓                        | ↓                         | ?                           |
| 6,000 B.P.     | ?                         | < Middle Period          | < Late Archaic            | < Laurentian                |
|                | ?                         | 6,000 - 3,000 yrs. B.P.  | 6,000 - 2,500 yrs. B.P.   | +/- 5,000 yrs. B.P.         |
|                | < Archaic Period          |                          |                           | < Maritime Archaic          |
|                | 5,000 - 3,500 yrs. B.P.   |                          |                           | 5,000 - 3,700 yrs. B.P.     |
| 4,000 B.P.     | ↓                         |                          |                           | < Susquehanna Tradition     |
|                | < Susquehanna Tradition   |                          |                           | 4,000 - 3,500 yrs. B.P.     |
|                | 3,500 - 2,500 yrs. B.P.   |                          |                           | —                           |
|                |                           | ↓                        | ↓                         | ?                           |
| 3,000 B.P.     |                           | < Late Period            | < Ceramic (Woodland)      | < Maritime Woodland         |
|                |                           | 3,000 - 500 yrs. B.P.    | 3,000 - 500 yrs. B.P.     | +/- 3,000 yrs. B.P.         |
|                | ↓                         |                          |                           | - Present                   |
| 2,500 B.P.     | < Ceramic Period          |                          |                           |                             |
|                | 2,500 - 500 yrs. B.P.     |                          |                           | < Middlesex                 |
|                |                           |                          |                           | +/- 2400 yrs. B.P.          |
| 2,000 B.P.     |                           |                          |                           |                             |
|                | ↓                         | ↓                        | ↓                         | ↓                           |
| 500 B.P.       | < Contact Period          | < Historic Period        | < Historic                | < Mi'kmaq, Maliseet and     |
|                | 500 - 100 yrs B.P.        | 500 yrs B.P. - Present   | 500 yrs B.P. - Present    | European Traditions         |
|                | —                         | ↓                        | ↓                         | ↓                           |
| Present (1950) | —                         | —                        | —                         | —                           |

### Archaeological Periods (11)(12)

### N. S. Ecological land Classification

Moving east to west, the Study Area begins at Onslow within Minas Lowlands (620) of lowland shores surrounding Cobequid Bay and extend approximately 8km north inland to Onslow Mountain. The Minas Lowlands (620) extend further north to approximately the 75m contour along river and brook cuts in the upper elevated Cobequid Slopes (350), reaching 150m at the foothills of the Debert River and Folly River. The north extent of

the Minas Lowlands (620) cross the Study Area, westward from North River to just north of Belmont and northward to Staples Brook and west through Totem Brook and East Mines. (13)

The Minas Lowlands (620) are covered mostly in Black Spruce and Pine on poorly drained sites and Hemlock, Red Spruce, Yellow Birch, Beech and Sugar Maple on well drained sites and steep slopes. Coastline has abundant saltmarshes that support Deer and Moose during summers. (13)

There are archaeological finds/sites at the extreme SE extent of the Study Area at Onslow. One site is associated with a north shore brook far upstream from where it meets the Salmon River. The other Archaeology site within the Study Area is a short distance south of the river on raised ground within a large floodplain currently in agricultural use. Locally known as Savage Island, local history has the island-like landscape feature associated with the Catholic Church, the Mi'kmaq and the Acadians. Once considered Consecrated ground complete with burials and Pulpit Stone with Latin inscriptions, the Colchester Wastewater Facility occupies the top westward third of the raised landscape feature with the remaining top in agricultural use. Only the steep north facing slope appears to be undisturbed and is covered in forest. (14)

The nearest Mi'kmaq community to this portion of the Study Area is Millbrook First Nation located south of the Study Area. The Millbrook First Nation has a long history within the vicinity of extreme east end of the Project Study Area. As early as the late 1700's, the Mi'kmaq resided on the banks of the Salmon River where the present-day Dalhousie Agricultural Campus is located. (15)

When the land was sold to the college in 1855, the Millbrook ancestors were relocated to a property on King Street near the train tracks and where St Mary's Elementary School is located and known to the residents as Christmas Crossing. (15)

The land of Millbrook First Nation today was discovered by Peter Wilmot as full of game and ash trees. The residents of Christmas Crossing wanted to exchange their King Street location for the land Peter Wilmot found. Sometime around 1875 the Christmas Crossing residents relocated to 35 acres of land approximately 8km south of Truro. Additional 120 acres was purchased in the early 1900's and totals 747 acres (302.3 hectares) today. In addition to better access to natural resources, all future land transportation corridors between Halifax and the rest of North America would have to pass through or adjacent Millbrook No. 27. (15)

**Local Mi'kmaq Placenames (16)**

|                 |               |                                   |
|-----------------|---------------|-----------------------------------|
| Belmont         | Nisaqaniskik  | flowing downward                  |
| Chiganois River | Nisaqaniskik  | flowing downward                  |
| Onslow          | Nisaqaniskik  | flowing downward                  |
| Cobequid Basin  | We'kopekitk   | end of the flow                   |
| Debert River    | Wasoqsikek    | glistening signal in the distance |
| Millbrook       | Niktuipukwek  | flowing fork wise                 |
| Salmon River    | Plamui-sipu   | salmon river                      |
| Truro Area      | We'kwampekitk | the bay runs far up               |

Moving westward, It's within the transition from the Minas Lowlands (620) to the Cobequid Slopes (350) where the region's oldest archaeological sites of Debert and Belmont are located.

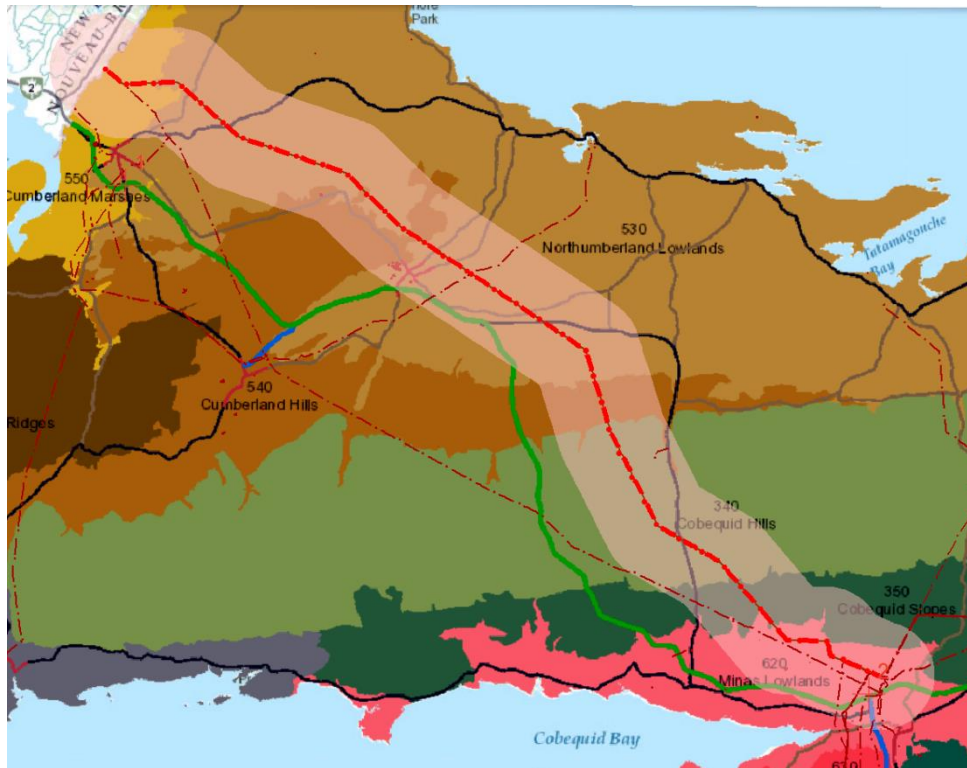
The Study Area and the Transmission line pass through the archaeological rich area of the Debert Paleo-Indian Site, a National Historic Site of Canada. The area of the former RCAF Station Debert has been explored over the last 60 some years since the first site discovery in 1948 and extensively explored from 1962-1964 with new discoveries added since that time near Belmont. (17)(18)

The existing known sites are scattered within a large area north of Plains Road atop prominent ground overlooking the Debert River Valley and Cobequid Basin. It is believed that these were strategic seasonal camps to hunt Caribou migrating from the Cobequid Hills (340) to the Minas Lowlands (620) of Cobequid Bay for calving. Some 5000 stone artifact of points, knives and hide scrapers of the Paleo-Indian Period have been retrieved from the area. (17)(18)

Although disturbed by the former base development, these sites appear to be undisturbed by the ice advance of the Younger-Dryas period and there may have been ice-free corridor between ice sheets from the Minas Basin through to the Northumberland Strait through present-day Pictou Harbour at that time. With the lower sea levels at that time, Prince Edward Island and the Magdellan Islands were one landmass with the Northumberland Lowlands (530). Debert-Belmont area would be an Ideal location to find migrating herds of the wildlife of the time. (17)(18)

North of the Minas Lowlands and climbing in elevation are the Cobequid Slopes (350) that represent an approximate 5km narrow, east-west band of sloped topography between 75m and 125m elevation. North River and Totem Brook form the south limits of the Cobequid Slopes (350) and MaCallum Settlement and Londonderry form the approximate north limits. (13)

The Cobequid Slopes (350) proximity to the Bay of Fundy and south exposure have a moderate climate that supports a habitat of Acadian mixed forest that attracts white tail deer. Red Spruce forest covers the middle to lower slopes and Sugar Maple, Yellow Birch and Beech cover upper slopes and hill crests. There are very few wetlands on the well drained tills and sloped topography of the Cobequid Slopes (350). (13)



Nova Scotia Ecological Districts

Further northwest along the Study Area and steeply climbing from approximate 125m to 300m elevation are the Cobequid Hills (340) with high points of over 350m elevation. the Cobequid Hills (340). The elevated plateau topography has ancient drainage cuts with existing flows south to Cobequid Bay and north cuts with present-day flows to the Northumberland Strait. Folly Lake is a 30m deep lake created by glacial deposits blocking an ancient drainage cut. (13)

The Study Area passes through the Cobequid Hills (340) centered at East Folly Mountain, through Folly Mountain, Cobequid Mountain and Higgins Mountain.

A band of Volcanic Bedrock running east-west, the Fountain Lake Formation forms the Wentworth Valley east wall at the north end of notch between Higgins Brook and Wentworth Valley at approximately Miller Court Road. In addition to the Colluvial



Deposits along step valley walls, the bedrock has thin till cover on the hill tops and exposes potential sources of Rhyolite for stone tools and weapon points for use by early peoples. (19)

Forest cover consists of Acadian hardwood Sugar Maple, Yellow Birch, Beech from crests to lower slopes and White Ash and Ironwood on more humus rich soils. Softwood stands are found on level terrain, mixed forest within the ravines. The upper elevation forests are subject to ice and wind damage. There are few wetlands within the Cobequid Hills (340) due to rapid surface drainage with larger wetland supporting habitat for Mainland Moose. (13)

Local anecdotal history places a seasonal Mi'kmaq resident and occasional Mi'kmaq gathering encampment along Whetstone Brook below Station Road. The brook was used to soak split Ash tree for crafting into tool handles and splints for shaving thin Ash strips (20)

Black Ash is a natural resource prized by the Mi'kmaq to craft into products for own use and sale. The source referenced *i*-Naturalist for nearby geo-locations of Black-Ash which was confirmed by this study review and shows an abundance of identified locations along the north slope of the Cobequid Hills (340) and Cumberland Hills (540). The south facing Cobequid Slopes (350) had no observed Black Ash locations with only a single location found at Debert. (20)(21)

The East Wentworth mountains above the Annandale Waterfall on East Branch Swan Brook is where Mi'kmaq would take refuge from “Settler Authorities” but no further detail was given. (20)

The same source also recounts what local history believes, to be a Mi'kmaq burial ground on the west side of the Wallace River in the area of Wentworth, just north outside the Study Area. Described as an *intervale*, the small field had several low mounds in a row formation that included two small mounds. Believed to be Mi'kmaq burials, haying was

only done by hand and the landowner never ploughed nor operated machinery over the site. The general area described appears to be covered in forest today but LiDAR - Hillshade imagery does show a row of three prominent mounds. (20)

Similar mounds were observed by the source adjacent Higgins Brook on the valley floor. However, being close proximity to highway, the mounds may be a result of previous highway construction activities. (20)

As elevations drop along the north edge of the Cobequid Hills (340) the Cumberland Hills (540) form a hilly topography sloping north from approximate 125m to 75m elevation near Greenville Station. There is also a patch of Cumberland Hills (540) within the Study Area just north of Oxford. (13)

The Cumberland Hills (540) is mostly covered in Acadian mixed forest with hardwoods on upper slopes and softwoods on level and lower slopes. Upper elevations are subject to ice and wind damage. There is habitat for Mainland Moose which are common within the Cumberland Hills (540) ecodistrict. (13)

The Study Area turns northeast through the Northumberland Lowlands (530) from Greenville Station and through Oxford to just north of Amherst. The lowlands are an approximate 25km wide topography sloping north from the 75m contour to the Northumberland Strait. The coastline resembles a drowned landscape of low sandstone cliffs and fine tills slipping below the Strait waters and leaving flooded river estuaries and extensive salt marshes. (13)

There are a number of Archaeological sites scattered on both shores of River Phillip and located along a stretch of river within the Town of Oxford.

A possible Late Ceramic period site is located west of Oxford on an oxbow of the River Philip. Numerous flakes and a projectile point were found at this site. (22)

Prehistoric tools were unearthed at the Little River Site during bridge construction at the Little River Bridge at Oxford. The site located where the Little River and River Philip meet may be a Late Prehistoric site. (22)

Another site in area of where the Little River and River Philip meet is the Thompson Site located on the southeastern bank of the River Philip and opposite bank of the mouth of the Little River. 30 years of cultivation produced many unrecorded artifacts but the identifiable artifacts are dated Late Ceramic Period. (22)

A possible Late Archaic Period Site is located the eastern bank of River Philip and opposite Kobec, where a large biface and an adze blade were found eroding from the river bank. (22)

As the Study Area approaches the border with New Brunswick, the Cumberland Marshes (550) are encountered at MacLellens Brook with flat topography of dykes, floodplains and agriculture land no more than 25m in elevation. Known as the Tantramar Marshes on the New Brunswick side, the extensive saltmarshes and freshwater lakes are drained by the Missaguash River and La Planche River into the Cumberland basin. The extensive salt marshes, freshwater lakes and tidal flats supports habitat for year-round and migrating waterfowl and has a climate of cooler temperatures and strong winds. (13)

Much of the source history of the Mi'kmaq in the Chignecto area after contact with Europeans revolves around the former Acadian Settlement at Beaubassin and the English and French hostilities over control of the Chignecto Isthmus. Settlement of the Chignecto Isthmus began in the mid 1660's and after the Treaty of Breda returned Acadia to France. Some prominent Acadians while under British rule enjoyed some autonomy as the British had a disinterest in the Acadians at Port Royal. Anticipating an influx of French Officials into Port Royal these Prominent Acadians wished to maintain their independence and decided to begin again far away from the anticipated French Officials. The location they chose was the middle ridge of five elongated SW to NE ridges that rose out of the tidal

marshes and where the Missaguash and La Planche rivers meet the Cumberland Basin and named it Beaubassin. (23)

Mi'kmaq had an encampment on a slightly elevated ground on the Tantramar Marsh between the Aulac and Tantramar rivers that the Acadians called *ile de Indiens*. The raised ground is barely noticeable on the landscape today but was featured prominently in early maps of the area. Indian Island is known today as Coles Island and was the location of the former radio towers. (23)

The French had moved 600 French soldiers to the Chignecto area in 1749-50 to protect Quebec's access to the Bay of Fundy through the Chignecto Isthmus. The British were determined to remove the French from the Chignecto area but a failed first attempt was aborted to the presence of Mi'kmaq warriors and lack of British resources at hand. The French watched helplessly as the second attempt saw British forces systematically unload troops and supplies from vessel after vessel on the Missaguash River. The British built a small fort on the same ridge as the ruins of the former Acadian Village of Beaubassin and was named Fort Lawrence. The French were busy building fortifications on an opposing ridge 2.8km to the northwest of Fort Lawrence that was named Fort Beausejour. The two forts were separated by the Missaguash River which was the perceived division between British and French territories. (24)

It was during the British failed first attempt in April of 1750, to land on the eastern bank of the Missaguash River, when the Mi'kmaq took a historic action against the Acadian village of Beaubassin on the British side of the Missaguash River. (25)(26) The Mi'kmaq did not recognize British authority and were not part of the terms of the Treaty of Utrecht. Based on French recognition of the Mi'kmaq right to self-government, the French military had friendly relations with the Mi'kmaq. (24)

The source gives a vivid picture of the British vessel(s) stranded in the mud at low tide and within visual range of Beaubassin. The British could only watch as the Acadians were evacuated and the Mi'kmaq burned every building within the Acadian village, 121 in total including the church. (25)

The sources provide a number of interpretations of the strategy behind the burning of Beaubassin such as the French and their allies were following a scorched earth strategy and left nothing for the British. Another possible strategy was to force the Acadians of Beaubassin to cross to the French side of the Missaguash River and to resettle as committed refugees. The displaced Acadians would also bolster the labour required to build fortifications. What the sources do agree on is that the burning of Beaubassin was done on the orders of Father Abbe' Jean-Louis LeLoutre. (24)(25)

Father Abbe' LeLoutre provided spiritual services to the Mi'kmaq between 1738 and 1749 at the French Mission Sainte Anne located deep within Mi'kmaq territory on the west bank of Shubenacadie River. (27) In 1749, LeLoutre moved the Mission to the Isthmus of Chignecto where he and French soldiers, officers and displaced Acadian settlers established a new settlement. His announcement divided the Shubenacadie Mi'kmaq as some wanted to be close to their religious services and some did not want to abandon their traditional territory.

The Mi'kmaq were occupied in helping to build French fortifications at Beausejour and other locations in the Spring of 1754. The French had 3 Mi'kmaq tribes assisting them in their fortifications and committed to side with the French against the British. (28)

The French commander LaCorne had hoped to recruit displaced Acadians to work on Fort Beausejour fortifications but the influential Abbe' LeLoutre had a large scale aboiteau project that drew most Acadian labour away from the fortifications. There was a 5 year stalemate on the Chignecto Isthmus between the French and British while the negotiations continued in Europe. However, the opposing forces in such close proximity developed trading relations with each other and particularly between the British and Acadians. (24)

While the Chignectou Acadians tried to remain neutral between the two military powers, the colonists in New England pressed for military action to remove the French. Eventually, it was pressure from the New Englanders that broke the stalemate in

Chignecto when 2000 militiamen from New England joined 500 British regulars at Fort Lawrence in June of 1755. At this time the French fort under the command of the Marquis Louis Du Pont de Vergor, had 160 regular troops along with some reluctant Acadians. (24)(25)

The source explains the military situation in Chignecto as unique where opposing forces fortifications are within sight of each other. The French watched the British train and parade in full view while the British watched the progression of the French fortifications. The British had 5 years to study the French position and recognized a weakness in the downslope location of the French fort at the southwest end of the ridge. Higher ground existed on the ridge northeast of the fort that was being occupied by an Acadian settlement. (25)



*Approximate view of Fort Beausejour from Fort Lawrence. The French fort is on the left of the ridge in the image and the British mortar trench lines are on the high ground to the right of Fort Beausejour.*



*View of Fort Lawrence from Fort Beausejour. The British Fort is located in a present-day farmers field adjacent and right of the Nova Scotia Welcome Centre in the image.*

The Mi'kmaq warriors were deployed in patrols to do what they did best which was guerrilla warfare. In the spring of 1755, a patrol of Mi'kmaq and Acadians ambushed British soldiers gathering firewood, killing 5 soldiers. Another British soldier was killed soon after and a New Englander was taken prisoner. (28)

On June 04, 1755, the British Troops marched along the eastern face of the ridge behind Fort Lawrence and hidden from view of the French. The British marched northeast at the base of the ridge for about 6 km before crossing the ridge and heading across the lowland for another 5 km toward an existing bridge across the Missaguash River at Point au Buot. (25)

The source describes how the next 12 days of the siege did not go well for the French with meager troops, missed opportunities, fleeing Acadians and no hope for reinforcements. Located approximately 3km south of Project Transmission Line, the bridge at Point au Bout was an obvious strategic position. The French lightly defended the position and only partially destroyed the bridge. After a light arms skirmish with mostly Acadians and Natives, the British took the crossing and repaired the bridge to continue across the Missaguash River. The source describes the collection of Mi'kmaq and Abenaki at the fort as Natives. The British then fortified the bridge position against



possible French reinforcements that never arrived. Continuing southwest, the British established another bridge across the Missaguash River at the base of their camp at present-day Mount Whatley. (25)

Out of the base camp at Mount Whatley, the British started to advance to the high ground spotted from Fort Lawrence. Not yet within mortar range, the British had to dig zig-zag trenches towards Fort Beausejour with only light resistance from the French. Inside the fort the moral was very low and Abbe' LaLoutre had lost his commanding influence over the Acadians. When the mortar shells began to landing inside the fort walls, all was lost and Vergor surrendered the fort. (25)

The British renamed the captured French fort, Fort Cumberland. The following day the commander of the small French fort, Fort Gaspereau, located near Port Elgin on the shores of Baie Verte, surrendered the fort to the British. (23) This was the first British victory in a campaign to win the battle for North America.

The late 1700's was a critical time in Mi'kmaq history when the Mi'kmaq population was decimated by disease and Mi'kmaq way of life was disappearing. It was at this time that England encouraged settlement on Acadian lands that had been abandoned after the Acadian Deportation in 1755. The New England Planters arrived between 1760 and 1766 and began to occupy former Acadian farms. Mi'kmaq and Acadian place names were replaced with English names. (29)

Not many of the Mi'kmaq place names survived through the Cobequid Hills and Wentworth area.

#### **Local Mi'kmaq Placenames (16)**

|                     |                   |  |
|---------------------|-------------------|--|
| Amherst             | Nemaluskite'kn    | meaning uncertain                        |
| Big Lake            | Wpnk              | his/her lungs                            |
| Fort Lawrence       | Kweso'malikek     | a point of land where there is hard wood |
| Franklin Manor I,R, | Kospemk (Qospemk) | at the lake                              |

|              |               |                                  |
|--------------|---------------|----------------------------------|
| Little River | Ksikaqnji'jk  | at the fast flowing little river |
| River Philip | Ksu'skipukwek | flowing through hemlock          |

A second wave of approximately 1000 English settlers known as the Yorkshire Migration arrived in Nova Scotia between 1771 and 1776. The Yorkshire Emigrants were recruited from northern England to occupy Acadian farms and increase British presence among the planters and republican sentiments. The Yorkshire Emigrants landed at Fort Cumberland in 1772. (30)

American Revolution was fought and won by the Americans. Loyalists (citizens loyal to England) and British soldiers and officers were looking for land and British protection. These Loyalists arrived in large numbers between 1783 and 1784 and founded numerous new Cumberland settlements. (31)

The land grants to the Loyalist and the Scottish-Irish emigrants that followed was wide spread throughout Nova Scotia and most all remaining lands in Nova Scotia were granted to emigrants who left their home countries. (32)

The Mi'kmaq traditional territories were granted away to successive waves of by then immigrants looking to work land granted them. During these times of immigrant settlers Mi'kmaq were not granted title to land but rather were granted "Licenses of occupation during pleasure". The land was owned by the Crown and reserved for particular Mi'kmaq Bands. The first of these licenses in Nova Scotia was granted in the 1780's and locations were typically coastal and ravine sites long frequented by Mi'kmaq. In 1820 the reserve system was started and each county was instructed to set aside lands near sites frequented by Mi'kmaq. A number of reserves of approximately 1000 acres each was planned for each county of Nova Scotia totaling 22,050 acres for exclusive use by the Mi'kmaq. This produced little action and it was the Mi'kmaq themselves that pushed for reserve lands. However, what the Mi'kmaq received was not always of their choosing and if their reserve was good land, it was subject to encroachment by settlers. (33)

Cumberland County was particularly problematic for Mi'kmaq concerning land set aside for their exclusive use. Cumberland County had surveyed and set aside 500 acres on the western shore of Pugwash Harbour. However, these lands were subject to title dispute due to a questionable transaction concerning two Loyalist brothers buying the 500 acres from 3 Mi'kmaq which had no authority to sell the land. After prospering for a while, the title dispute continued to plague the brothers until their eventual financial ruin. The title dispute was put to rest when the crown auctioned off the Pugwash Indian Lands. (34)

The Mi'kmaq eventually had 1000 Acres surveyed at Shinimicas Bridge which is approximately 20 km west of Pugwash and 23 km east of Amherst. The parcel straddled the West Branch of the Shinimicas River and the plan lists the parcel as *reserved for Indians 1000 acres* and is shown adjacent the boundary for the Township of Amherst. East of the 1000 acre parcel are adjacent parcels of J. Smith and to the southeast is the parcel of N. Merrit. (35)



Indian Lands 1842 (35)

However, Crown Land Grant maps show the same 1000 acre parcel with 580 acres subdivided into 4 parcels distributed among four title holders with the last name of Smith and two other of the last name Fahey. The remaining acreage of the former 1000 acre Reserve parcel was still listed as reserve on the Land Grant Index Map but is also subdivided with no title owners listed. The circumstances as to how this Reserve Parcel became subdivided are unknown to this study at this time. (36)



*Land Grant Map 68 (36)*

Inland, the Crown Land Maps shows a large acreage reserve west of the Herbert River and northwest of Halfway River (Newville Lake). (32) A.F. Church's 1873 Map indicates an "Indian Grant" in the same approximate location as the Reserve shown on the Crown Land Map. However, Church's map also shows an "Indian Village" on the western shore of Halfway River Lake (Newville Lake). The person's name scribed within the Indian village on the map is that of P. Toney. (37) The "Indian Village" location today is approximately the same location as Newville Lake Park.

It is possible that the above "Indian Village" is the subject of a Specific Claim by Paq'tnkek First Nation regarding unlawful granting of 250 acres without surrender in 1827. The status on that claim is "Concluded". (38) The Crown Land Index Sheet 50,

shows a date icon of 1827 for a small shaded parcel and a note “leased To The Crown” on the western shore of Newville Lake. (39)

There was a period beginning in the early 1800’s when Mi’kmaq were encouraged to remain in a single location. Attempts were made to introduce Mi’kmaq to farming and centralizing Mik’maq on large reserves such as Indian Brook I. R. 14 located at Shubenacadie, East Hants Co. (33) However, Franklin Manor I. R. 22 located 35km south of Amherst on Indian Brook, maintains a Mi’kmaq presence in this portion of Cumberland County. Consisting of 212.5 hectares (525 acres). Franklin Manor reserve today, is shared between Pictou Landing First Nation, Pictou County and Paqtnkek Mi’kmaw Nation, Antigonish County. (40)

#### ***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 interviewees 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.

To easily identify the traditional use data findings of this study, the analysis has been broken down into two groups. The first is the Project Site analysis, and the second is the Study Area.

Unless otherwise stated, areas identified by interviewees are considered to be utilized by the Mi’kmaq currently, in the recent past, and/or the historic past.

## **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**

Salmon (2 areas) and Trout (1 area) fishing activity was identified in Carter Lake and Slack Lake. This usage is categorized as Current Use (50%) and Recent Past (50%) activity.

### **Hunting**

Deer was the only hunting activity identified in the Project Site. This activity was identified in the East Hansford area. This usage is categorized as Recent Past activity.

### **Gathering**

Sweetgrass (4 areas) and Berry (3 areas) gathering activity has been identified in the Belmont and Cumberland areas. This usage is categorized as Current Use (50%) and Recent Past (50%) activity.

## **Study Area**

As mentioned previously, the MEKS data is also drawn from the Study Area. The purpose of this portion of the study is to portray other land characteristics and land use activities that may have been missed in a narrow Project Site data analysis.

### **Fishing**

Salmon (7 areas), Bass (6 areas), and Trout (3 areas) fishing activity was identified in the Study Area. These species were fished in the following general areas:

- Bear Brook
- Big Lake
- Dead Lake

- Higgins Brook
- Totten Lakes
- Belmont
- Crowes Brook

These Activities took place primarily in the Recent Past (~42%), with ~33% Current Use, followed by ~21% Historic Past usage.

See Appendix B, map “NSP NS-NB Transmission Line MEKS – Mi’kmaq Traditional and Current Use Areas: Fishing”

### **Hunting**

Deer hunting (10 areas) was reported in the highest frequency. These areas include:

- East Leicester
- East Hansford
- Mahoneys Corner
- East Folly Mountain
- Upper Onslow

Other species reported include Porcupine (2 areas), Minx (1 area), Beaver (1 area), Fox (1 area), Raccoon (1 area), and Wild Cat (1 area).

These activities took place primarily in the Historic Past category (~64%), with 24% of activity taking place in the Recent Past, and 12% being Current Use.

See Appendix C, map “NSP NS-NB Transmission Line MEKS – Mi’kmaq Traditional and Current Use Areas: Hunting”.

### **Gathering**

Berry harvesting was reported in the highest frequency with 11 instances. Sweetgrass was identified in 6 areas, and Ash reported to be harvested in 4 areas. These are included:



- Hansford
- Roslin
- Stevens Mountain
- Hart Lake
- Folly Mountain
- Totten Lakes
- Belmont
- Upper Onslow

Activity took place primarily in the Historic Past category (~65%), followed by ~19% Current Use, and ~15% Recent Past.

See Appendix D, map “NSP NS-NB Transmission Line MEKS – Mi’kmaq Traditional and Current Use Areas: Gathering”.

#### ***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 MEKS 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 regard 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:

| <b>TYPE OF USE</b>          | <b>NUMBER OF AREAS</b> | <b>NUMBER OF SPECIES</b> |
|-----------------------------|------------------------|--------------------------|
| <b>Food/Sustenance</b>      | 55                     | 18                       |
| <b>Medicinal/Ceremonial</b> | 7                      | 3                        |
| <b>Tools/Art</b>            | 1                      | 1                        |

*Table 5. Resource Use within Study Area*

##### **Availability**

During the information gathering for the Study Area, interviewees had mentioned the fishing for salmon. The Atlantic Salmon is considered an endangered species in Canada.

(42)

Striped bass has no status with the Nova Scotia species registry, the federal species at risk registry consider the Gulf of St. Lawrence population of Striped Bass to be of special concern.

(43)

##### **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. Scarcity and abundance of a species in an area can both increase the importance of a species.

As noted previously, Atlantic Salmon are considered an endangered, threatened, or species of special concern in Canada and the Mi'kmaq still rely on these species for sustenance and for cultural ceremonies and activities. Any disturbances to their habitats could have an impact on Mi'kmaq use.

Based upon frequency of activities reported by the interviewees, Deer hunting, Salmon and Bass fishing, along with harvesting Berries can be considered to be the favored activities for Mi'kmaq in this particular area.

## **5.0 CONCLUSIONS**

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 regard 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.

## Historic Review Summary

The Project Site Transmission line and Study Area cross the Traditional Political Districts *of Sipekni'katik* (Wild Potato Area) of the central area of Nova Scotia and *Siknikt* (Drainage Area) of Nova Scotia and New Brunswick and centered on the isthmus between the Provinces of today.

The known archaeological finds/sites found within the Study Area were mostly found close to rivers and also among present-day development, whether that be building and road construction including agricultural land use. Most are likely accidental finds and the site locations give indication of where to tread lightly at river and brook crossings and particularly through Debert/Belmont area.

There are potential natural resources within the Cobequid Hills in exposed bedrock containing Rhyolite stone of suitable properties for tools and weapons for early peoples. There are reported sources of Black Ash on the north slopes of the Cobequid Hills which are a valuable resource to early peoples and Mi'kmaq today, for tool handles and basket making.

Millbrook First Nation is the nearest Mi'kmaq community to the Study Area, located south of Truro and referenced as Millbrook No. 27. Franklin Manor No, 22 Reserve is located west of the River Herbert and south of Amherst, approximate half distance to Parrsboro.

A review of Specific Claims shows no current and active First Nation Claims within the Project Study Area. However, Millbrook First Nation has an active specific claim regarding loss of land for Highway R.O.W and routing of FiberOptic Cable through same R.O.W.. No specific location detail given

### **Traditional Use - Project Site Summary**

Based on the data documented and analyzed, it was concluded that there is some Mi'kmaq activity reported on the Project Site.

Activities in the Project Site include Deer hunting, Salmon & Trout Fishing, and Sweetgrass & Berry harvesting.

All usage period-categorization breaks down as follows:

**Current Use** ~44%

**Recent Past** ~44%

**Historic Past** ~12%

### **Traditional Use - Study Area Summary**

Deer hunting, Salmon & Bass fishing, and Berry & Sweetgrass harvesting were the activities reported by interviewees in the highest frequency. There was other fishing, hunting, and gathering activities reported as well.

All usage period-categorization breaks down as follows:

**Current Use** ~50%

**Recent Past** ~23%

**Historic Past** ~27%

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