Nuclear Power Demonstration Closure Project

ARCHAEOLOGY
TECHNICAL SUPPORTING DOCUMENT

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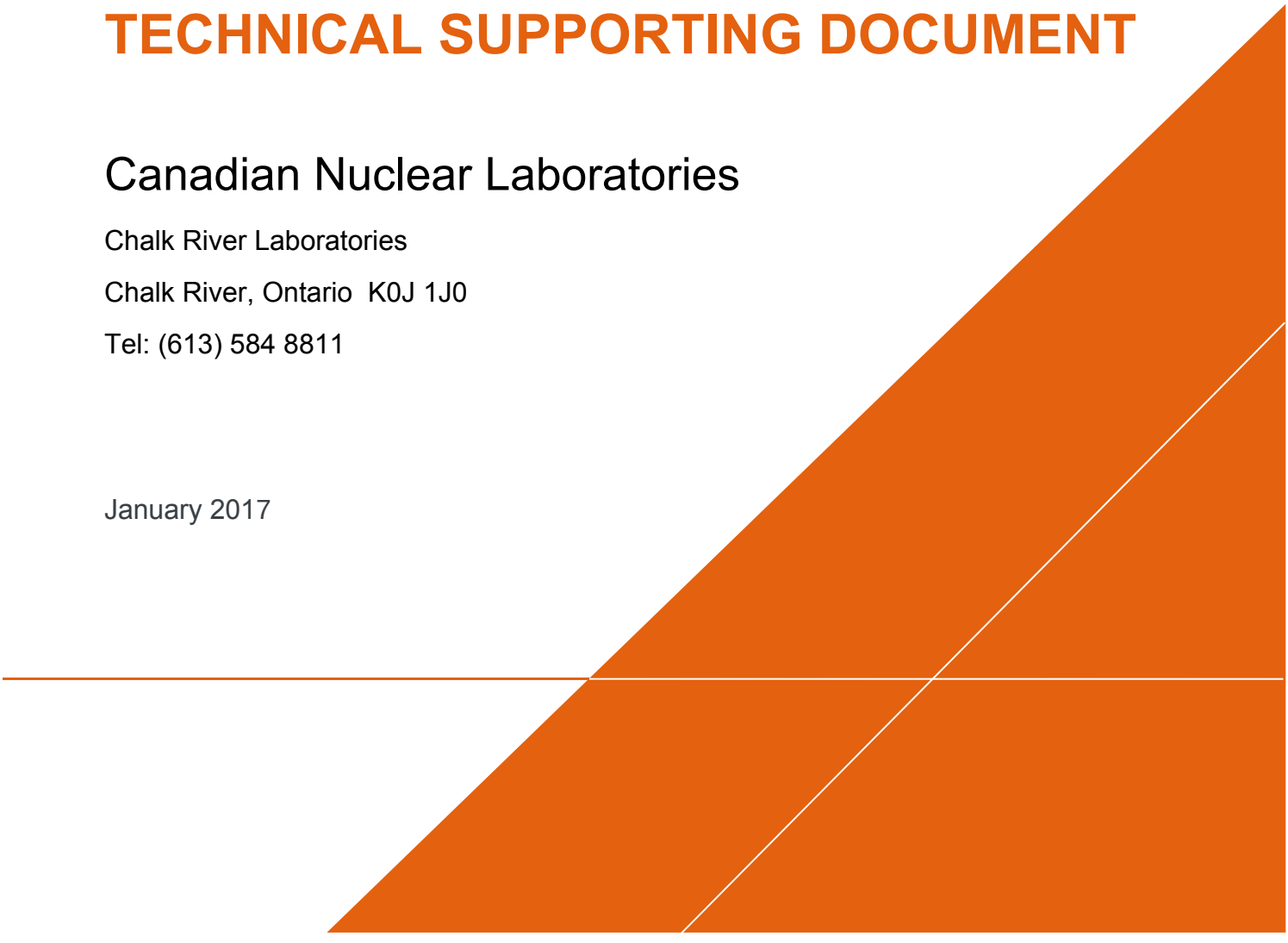

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ARCHAEOLOGICAL ASSESSMENT REPORT- NPD CLOSURE PROJECT

NPD DECOMMISSIONING

64-509200-ASD-003

Revision 0

	CNL	LNC
☐ ACCEPTED AS NOTED	☒ ACCEPTED	☐ NOT ACCEPTED

Signature	Representing	Date
Meggan Vichorel	gen	2017/01/24

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT OF THE NUCLEAR POWER DEMONSTRATION (NPD) PROPERTY PART OF LOTS 41-45, 48 & TOWN PLOT, RANGE A & B ROLPH TWP. (GEO), TOWNSHIP OF LAURENTIAN HILLS, RENFREW COUNTY

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PROJECT PERSONNEL

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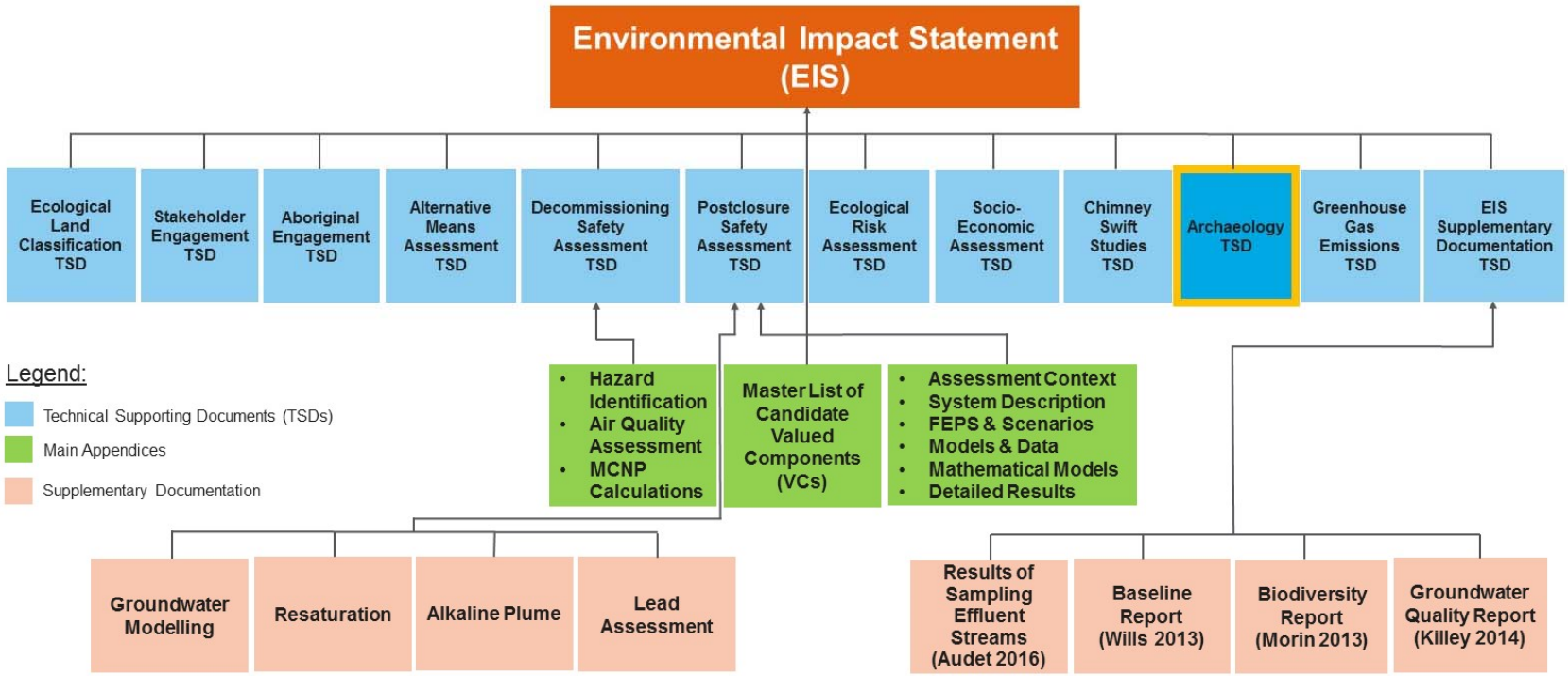
This Technical Supporting Document (TSD) has been prepared in support of the Nuclear Power Demonstration (NPD) Closure Project. The project qualifies as a Designated Project under the *Canadian Environmental Assessment Act (2012),* and therefore, an Environmental Impact Statement (EIS) has been prepared as part of the Environmental Assessment process.

The findings of this TSD have been summarized in the NPD Closure Project EIS (CNL Doc #64-509200-ENA-004). The following figure shows the various documents associated with the EIS, and their relationships.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT OF THE NUCLEAR POWER DEMONSTRATION (NPD) PROPERTY PART OF LOTS 41-45, 48 & TOWN PLOT, RANGE A & B ROLPH TWP. (GEO), TOWNSHIP OF LAURENTIAN HILLS, RENFREW COUNTY

In October 2016, Canadian Nuclear Laboratories contracted Kinickinick Heritage Consulting to prepare a Stage 1 archaeological assessment of the Nuclear Power Demonstration (NPD) property near Rolphton. The nuclear power plant itself is being decommissioned and there are no plans for construction in the surrounding 385 ha. As such, this Archaeological Assessment was not triggered by construction, but rather, to provide stakeholders with background information about the history and archaeological potential of the NPD property outside of the project footprint. Furthermore, there is potential for this land to change in land tenure in the future, strengthening the need for a thorough background study of the 358 ha of forested hillside that surround the former nuclear power plant. The objective of a Stage 1 archaeological assessment is to provide background information about the geography, history, land use, previous archaeological fieldwork and existing archaeological sites in the vicinity; and current condition of the property and setting. These data are used to evaluate Pre-Contact and Historical archaeological potential.

NPD is in the CbGj and CbGk Borden Blocks. There are no archaeological sites on the NPD property; however, there are several beyond the NPD property boundary, namely: the Meilleur Bay (CbGj-3) site excavated by Clyde Kennedy in 1957; Boom Creek (CbGj-1) and Fraser Bay (CbGj-2) recorded by Barry Mitchell in 1984; and Postes des Rapides-des-Joachim (CbGk-1), which has archaeological material spanning the 19th century that relates to the local Indigenous community.

The NPD property today consists of a shutdown nuclear power plant surrounded on the south and east by landscaped terraces where the former training centre buildings were located with associated and parking lots. Historical photographs of NPD under construction clearly show that disturbance throughout the nuclear power plant grounds was deep and extensive, including the river shore. The NPD property has 95 m relief and the slopes are steep, although there is an area of lower rock knobs and muskeg in the former Town Plot that drains into the Ottawa River near a small sandy point called “Hydro Beach”. The Town Plot wetland terrain would have been a complex kaleidoscope of islands and channels during the Middle Archaic period. The land on both sides of the entrance road, between the plant and the highway, were active shorelines during the Early Archaic and Late Palaeo-Indian periods. The high terrain south of the highway were shorelines during the Champlain Sea maximum, during the Palaeo-Indian period.

Given that Pre-Contact archaeological potential is predicted primarily by proximity to water, and given that every elevation of the NPD property was once an active river shoreline, the whole property between 200 m and the modern waterline is one big relic shoreline and therefore, it all has archaeological potential. Nevertheless, there were times of shoreline stasis—sometimes for millennia, sometimes a few centuries or generations—where human activity would have been concentrated and artifacts more likely to be deposited. The Pre-Contact archaeological predictive model for the NPD property takes these longer-lived shorelines into account and maps them in distinctive colours. Furthermore, in the NPD model, the full 150 m width is considered to have high archaeological potential and the areas in between have been given moderate archaeological potential, instead of low

potential as the standards allow. In these respects, the NPD model of Pre-Contact archaeological potential is more rigorous than the Ministry of Culture standards and guidelines require.
As the historical research clearly shows, there were generations of settlers on the NPD property, raising families and constructing buildings and docks. The map of historical archaeological potential presented in (Figure 12), is based on the proximity to historical roads. High historical archaeological potential is predicted in that area.

In conclusion, although the area to be impacted as a result of the proposed decommissioning of the nuclear power plant itself has nil archaeological potential, there is high archaeological potential on areas of the NPD property that will not be impacted by the decommissioning activities. The archaeological potential ranges from historic, (e.g., farmstead sites) to Pre-Contact sites of varying periods. Since this assessment was not triggered by any construction plans, there are no cultural resource management recommendations. Should any construction be planned in the future that may impact the area recognized as holding high archaeological potential, a further Stage 1&2 assessment would be in order.

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1.0 Assessment Context

In October 2016, Canadian Nuclear Laboratories contracted Ken Swayze, of Kinickinick Heritage Consulting, to prepare a Stage 1 archaeological assessment, according to the *Standards and Guidelines for Consultant Archaeologists* (OMCT&S 2011), of the Nuclear Power Demonstration (NPD) property near Rolphton (Figures 1, 2 and 3). It is the nuclear power plant itself that is being decommissioned; there are no plans for construction in the surrounding property (950 Acres, or 385 hectares). As such, this assessment was not triggered by construction but, rather, to provide stakeholders with background information concerning the history and archaeological potential of the NPD property.

There is a Historic Plaque (Figure 4) on the highway near Rolphton overlooking the dam that was erected by the Ontario Heritage Foundation, an agency of the Government of Ontario, to celebrate the NPD achievement. It states:

> *"On June 4 1962 the Nuclear Power Demonstration (NPD) Reactor 3 km east of Rolphton supplied the Ontario power grid with the first nuclear-generated electricity in Canada. A joint project of Atomic Energy of Canada Limited, Ontario Hydro and Canadian General Electric. NPD was the prototype and proving ground for research and development that led to commercial application of the CANDU system for generating electric power from a nuclear plant using natural uranium fuel, heavy water moderator and coolant in a pressure tube configuration with on-power refueling. As a science and engineering research centre, NPD produced internationally significant knowledge and techniques. It was also a training centre for nuclear plant operators. NPD closed in 1987 after exceeding its operational goals."*

The NPD facility is now being decommissioned, a process which affects only 2.5 ha, of the NPD site; the location of the former nuclear power plant and associated amenity corridors. That said, for the purpose of this Stage 1 Archaeological Assessment, the entire NPD site has been included in the scope to ensure appropriate context and a thorough collection on past land use, as; this forested hillside campus may see a change in land tenure.

The objective of a Stage 1 archaeological assessment is to provide background information about the geography, history, land use, previous archaeological fieldwork, existing archaeological sites and current condition of the property and setting. These data are used to evaluate archaeological potential.

2.0 Historical Context

The historical background information below includes: 1) traditional Algonquin oral history; 2) a history of the Algonquin people; 3) a history of the NPD property. As such, the discussion moves from the general to the particular.

2.1 Algonquin Oral History

The traditional history of the Algonquin includes a concept of the postglacial world. The Algonquin creation story refers to an ancient flood that destroyed an earlier world. Only Original Man survived. He found himself, with only a few animals and birds for company, floating in a water-world. With kindness, ingenuity, and selflessness, the animals provided a home called "Turtle Island", where he and his offspring lived after receiving the breath of life from him through the Mide shell. One of those descendants was the hero Nanaboozhoo (or Nanabush, or Wiskedjak) who survived a second flood in a similar fashion. The original world of the Algonquin was truly a water world that, like Turtle Island, grew larger and larger with time as the ice withdrew.

There are several traditional stories (from Morrison 2007:19) that resonate with the geological post-glacial landscape evolution described below. A story from the Temiskaming Reserve refers to a giant beaver, who used a mountain for a lodge and ponded a huge lake in the upper Dumoine River. *Wiskedjak* came hunting it and broke the giant beaver dam, which caused a flood to sluice through the Allumette Basin and the Calumet chutes of the Ottawa River. Similarly, the Nipissing and Amikwa people told Nicolas Perrot, in the 1600s, that a giant beaver had entered Lake Nipissing from the French River and built a series of dams as it traveled eastward through the Mattawa River and down the Ottawa River, which later became rapids and portages. Charlevoix, who traveled through Nipissing territory in 1721, reports a similar story and recounts that the beaver was buried in a mountain on the north shore of Lake Nipissing. Joseph Misabi told the surveyor Robert Bell in 1891 that in ancient times Kitchigami (Lake Superior) was the pond of the great beaver Manitou called *Amik* and his dam was at *Bawating* (Sault Ste Marie rapids). *Wiskedjak* and his wife came hunting him and they broke the dam, which caused the giant beaver to hurry along the north channel of Lake Huron, up the French River forming a series of dams and rapids along the way. The beaver continued down the Mattawa and Ottawa Rivers to the *Noddaway* (St.-Lawrence) River where he died and formed the mountain at Montreal Island.

There is also a traditional story, based on a wampum belt that was held by Elder William Commanda, called the *Prophecy of the Seven Fires*, which refers to time-periods the history of the Algonquin. This story is relevant because it shows that the Algonquin know that their ancestors arrived a very long time ago, when the world was predominantly water and the landscape was emerging from it. It also provides an opportunity to associate geological and archaeological (cultural) periods to the time of each "fire period" in the story.

The prophet of the First Fire warned the inhabitants of the Atlantic Region that they would be destroyed if they stayed there and he called for a migration up a great river to large inland bodies of water (which sound like the Champlain Sea and the Ancestral Great Lakes). The First Fire and Second

Fire may be the times that archaeologists call the “Palaeo-Indian”; “Early Archaic” and “Middle Archaic” periods, which have a radiocarbon dates that span from about 11,500 to 6,000 BP. By the time the Third Fire prophecy occurred, the Anishinabe were adapted to life on lakes and rivers and their economy focused on littorial environments. The Third Fire spans many thousands of years and includes what archaeologists call the Archaic and Woodland Periods.

In terms of glacial and postglacial lake phases in the traditional territory of the Algonquin-Nipissing, the First, Second, and Third Fires happened, successively, during the Lake Algonquin and Champlain Sea maximum (First Fire) and during the recessional (Third Period) Champlain Sea and Mattawa Early Flood and Mattawa Base Flow periods (as per Lewis and Anderson 1989). Modern water levels began about 5,000 BP also in the Third Fire period, during the Late Archaic.

In the prophecy of the Fourth Fire the Anishinabe two prophets (indicated by a double diamond shape in the centre of the wampum belt) warned of the imminent arrival of a Light-Skinned Race, who would either show the face of brotherhood or bring death. The time of the Fourth Fire is called the proto-historic period and occurred during Late Woodland times. The prophecy of the Fifth Fire soon followed and warned of suffering and false promises. The Fifth Fire occurred during the “Historical Period” from the 17th to 19th centuries when missionaries, warfare, expropriation, and colonialism had great effect on traditional Algonquin culture. The prophecy of the Sixth Fire, or Colonial Period, occurred in the 20th century, when cultural assimilation caused a new sickness to afflict the Algonquin and it foretold that the sacred bundles and scrolls of the Midewiwin Way would be first hidden from danger, then revealed again to inspire the emergence of New People and inspire a reborn Algonquin. We are now, perhaps, in the time of the Seventh Fire when all the people have a choice to make between respect for life on Turtle Island or see its destruction.

This integration of geological and archaeological time scales with the seven “fires” of the prophecy belt is the consultant’s own interpretation, not necessarily that of others (e.g., Figure 11). The consultant thinks that the association between the First, Third, Fourth and subsequent fires with the Palaeo-Indian/Early Archaic, Archaic & Woodland, Proto-Historic, Historic and Modern, is straight-forward enough—it is the Second Fire which is most difficult to integrate. It was a time of social upheaval and it occurred a long time ago at the end of the First Fire journey and the beginning of the long, long, golden years of the Third Fire. Since it was a time of social upheaval, the consultant has associated it with the Marquette-Ottawa Low Stand simply because that was a time of great environmental stress and catastrophe.

2.2 Algonquin History

The objective of this historical outline is to present Algonquin history from the proto-historic to the early 20th century with commentary what can, or could, be corroborated by the archaeological record and to provide a discussion of nature of the archaeological deposits of each period. Such information, ultimately, will lead to an improved ability to predict where archaeological sites will most likely be found.

This Algonquin history identifies factors that must have affected technological and settlement pattern change that, theoretically, should be reflected in the archaeological record. These include: 1) technological change from "quartz time" to the "iron age" and resultant change in cold season settlement patterns from, fish and stored nuts and wild rice, to fur harvesting and reliance on deer, moose, and beaver; 2). Beginning in the mid-19th century there was a homesteading movement in the upper Madawaska Valley, which involved technological change and a more sedentary settlement pattern. While the first changes will be hard to test, because of the difficulty of finding and identifying the deposits, the archaeological remains and features of the Algonquin settlers should be "relatively easy" to identify.

2.2.1 Proto-Historic Period

European whalers and fishermen began to interact on a regular basis with the Algonquin's and the Haudonausonee, (Iroquoian-speaking "People of the Long House") and Inuit people in the St. Lawrence estuary as early as the late 1500s (Bailey 1969). They introduced iron knives, hatchets, and metal cooking vessels that must have had a great effect on Algonquin life style and economy: for tasks that could be completed in hours with hatchets and crooked knives had previously, taken days of "quartz time". On the other hand, numerous contagious diseases were introduced for the first time in the proto-historic period and tribal warfare became endemic, as successive people competed for advantage in the fur trade. Finally, as the luxuries and trophies of trade became necessities, the traditional economy of the Algonquin came to be based on the fur trade.

Champlain and various missionaries provide most of the written record of the early contact period. The French then believed that the Algonquin identified their own subgroups according to the river basin they occupied: thus the *Kitchisipirini, Keinouche, Ottagowtowuemin,* and *Onontchataronon* lived, respectively, at: Alumette/Morrisons Island, Muskrat River, Upper Allumette/Holden basin, and South Nation; while the *Matouweskarini* occupied the Madawaska River valley (Pendergast 1999). Kirby Whiteduck (1995) has reviewed the historical record of this period, from the Algonquin point of view, and he points out that historical interpretation should take into account the numerous factors that biased the authors of these histories.

The archaeological record of this transitional period is poorly known generally because it was a fleeting moment in time. A hallmark of sites of this period in the Ottawa Valley is so-called St. Lawrence Iroquois pottery, characterized by high collars with castellations and corncob motifs, which was found at the Highland Lake site (von Gernet 1991) in Griffith Township and near the Eardley escarpment in Low P. Q. In the 1970s, Dave Croft observed this distinctive pottery at Astrolabe Lake,

near Cobden, however, he was not able to sample the site and it has since been destroyed (Swayze 2000). It is worth noting that these sites, and others of the period, are strategically situated off the main waterways in locations that provide a view of any approach and offer a choice of "back door" exits. The archives of the Canadian Museum of Civilization (CMC) contain a report that describes Algonquin graves from this period that were found in the Westmeath area. The dead were buried in birch bark coffins, sprinkled with red ochre, with trade goods such as swords, rings, and crucifixes but also with native-made pottery (Swayze 2000).

From an archaeological perspective, the proto-historic period is marked by technological changes that saw stone and native pottery replaced by iron, brass, and ceramics. The new technology must have provided the Algonquin of the day with more time on their hands. Although some of this time must been spent acquiring a surplus of furs, other time may have been spent on regalia and ceremonial elaboration. There also must have been a shift in settlement patterns in this period. In the pre-contact and early proto-historic, sites must have been located so as to facilitate access to food resources; while, in the early historic period, access to fur-bearing animals would have been of increasing importance. In the Stone Age, First Nations only trapped enough furbearers to clothe their own family for the winter; but in the Iron Age they laboured all winter to accumulate bales of furs in order to purchase food and clothing. In order to take advantage of seasonal resource availability Algonquin groups moved frequently over the course of the year and, although population aggregation was possible at some locations, usually in the summer, in the winter people scattered widely in order to trap and hunt. The winter season settlement pattern of this period probably differed from pre-contact times. Whereas in the past a fishery near stores of rice or nuts may have been important, in the proto-historic a focus on ungulates, bear, and beaver may have been the case. Moose hunting in particular may have become less risky as access to firearms became common. However, since there are so few sites recorded from the proto-historic period, these predictions cannot be tested.

2.2.2 Iroquoian or Beaver Wars

Although the ancestors of the Algonquin have probably been on the Algonquin Dome since early postglacial period (Swayze 2009; Swayze and McGhee 2011), the ancestors of the Haudonosonee have interacted with them and shared some of the land base for thousands of years (Sioui 1999, Porter 2008).

In the early French regime, the hostility between Algonquin and Haudonausonee, which had originated in the proto-historic, escalated from violent raids and skirmishes into full-scale warfare, from 1640 to 1650, that resulted in the destruction of "Huronia". Although they were driven from "Huronia", the "Hurons,", or more properly the Wendat, (like the "St. Lawrence Iroquois" before them) were not extirpated (like the passenger pigeon), since large numbers of them were captured and adopted by the Seneca and Mohawk Nation. Others went to Quebec and became established as the Huron of Sillery, while others went to Montreal and lived with the Mohawk. Still others settled in the mid-west and became known as the Wyandot.

The period of the Beaver Wars, from 1650 to 1675, is often referred to as a 'period of dispersal' because Algonquin and Ojibway withdrew from shorelines of the major lakes and rivers and some families moved temporarily to the St. Lawrence settlements, or farther afield to Timiskaming or Lake Nipigon. With regards to the so-called "period of dispersal", the reader should remember that European observers (and potential historians) were, obviously, few in number at that time—and they did not frequently travel the back-country—and reports that the territory was completely abandoned were probably exaggerated. It seems unlikely that hunter-gatherers, who knew every tributary stream of their territory, would completely abandon the Lake Nipissing basin and the Ottawa Valley in order to avoid Iroquois war parties (Holmes 1993: ii). Nevertheless, until 1701, when the French in Montreal made peace with the Iroquois, the shores of the main travel routes must have been thinly occupied and avoided. Even though the Iroquois hunted widely over the Ontario peninsula and some established villages on the north shore of Lake Ontario, it should be noted that the Algonquins and Ojibway defended their territory and took offensive action.

Unfortunately, there are no known sites from this period in the upper Ottawa valley or elsewhere in traditional Algonquin and Nipissing territory. Ideal locations for sites of this period would be the Algonquin Dome where rivers such as the Madawaska, Bonnechere, Petawawa, Gull, and Muskoka have their source.

2.2.3 <u>The French Regime 1701 until 1759</u>

The histories of Champlain and the Jesuit Relations speak of the "Nipissing" as a people apart from the "Algonquins" as if the homeland of the former was the shores of Lake Nipissing. However, by the 18th century the historical records invariably state that the two groups considered the entire drainage from Lake Nipissing to the St. Lawrence River to be their ancestral homeland.
In the Ottawa River watershed in the historical period, the Nipissing and Algonquin both lived together and acted together in economic and political matters. They wrote joint petitions to successive Colonial Government officials that described their territory as a single undivided land—although they always signed the documents under the heading of "Algonquin" or "Nipissing". From the *etic* point of view of the outsider—like missionaries, British colonial officers, or this consultant—this close association between the Algonquin and the Nipissing, makes it seem that they were essentially the same people. Their language, material culture, and customs were apparently the same and they intermarried and resided together. The *emic,* or internalist, view was not revealed partly because Europeans largely wrote (or translated, or edited) the historical record and, partly, because the Nipissing and Algonquin of the time did not see that an explanation of the difference between the two terms was called for. Since the Algonquin and Nipissing kinship system must have been similar, perhaps this dichotomy of self-identity acted like a moiety, or division, of the community irrespective of clan structure.

> *"Our old Chiefs and principal warriors…[decided that]..the whole of our hunting grounds should be divided into two parts as equally as possible according to the different situations abounding in furs, and part to be enjoyed by the Algonquin tribe, and the other for the benefit of the Nipissings; the part or proportion allotted to each band or clan might have a certain extent in proportion to*

the number of the band…By this arrangement, the various chiefs or heads of bands had an opportunity of nursing their beavers and otters…by dividing the portion belonging to the band into two equal parts, which were still very extensive, and hunting and changing alternately every two or three years from one part to the other…" (Holmes 1993, Document 315 Note: although the intent is clear, this paragraph of the document is fragmentary)

In addition, the Europeans of the historical period were ignorant of the traditional clan system that both groups used and they superimposed their own system.

In the French Regime period, the Algonquin and Nipissing began to visit the Sulpician mission at Lake of Two Mountains for up to two months each year, usually in the summer. Although some spent the greater part of the year at the mission, most people continued to make seasonal rounds in their own territory. The church records of this period may underestimate the total population of Algonquin and Nipissing by assuming that all had become Christian. Although the fur trade economy required considerable labour during the winter months, by the 17th and 18th centuries the Algonquin and Nipissing had become successful merchants of a scarce luxury product and they generally received good prices for their furs (see *Indians in the Fur Trade* by Arthur Ray 1998).

Except for scattered trading posts, the Algonquin and Nipissing were the sole occupants of the Ottawa Valley in this period and, of course, they chose to live, as much as possible, at the most attractive locations in their territory. These included: the islands in the Ottawa River, the mouths of principal tributaries, the junctions of principal tributary streams, the foot of rapids and falls, at the ends of portage routes, and around wild rice lakes and reliable fisheries. Since these attractive locations were generally the first to be later chosen by settlers and industrialists, the archaeological deposits formed in French Regime period have been greatly impacted and probably most have been lost to posterity. Nevertheless, some deposits from this period must remain along the shores of the major waterways; however, as noted above, the archaeological record of the Ottawa valley is sparse because of the relative lack of field survey as compared to southern Ontario.

2.2.4 Pre-Confederation British Colonial Period 1760 to 1867

After the fall of New France, in 1759, the Algonquin and Nipissing came under the administration of the colonial government's Indian Affairs Department, represented initially by Sir William Johnson. Although the Proclamation of 1763 recognized the territorial rights of First Nations, including those of the Nipissing and Algonquin, by 1772 they found it necessary to deliver a formal claim to the land from Long Sault on St. Lawrence to Lake Nipissing. They also protested against the liquor trade in their hunting grounds. Twelve Nipissing and seven Algonquin signed the 1772 petition. In the next two generations, up to 1841, they resubmitted the same petition nine more times.

The Algonquin and Nipissing fought for the British during the American Revolution and the War of 1812. In 1841 Chief *Ka-on-di-no-kitch* reminded Superintendent Hughes of this:

"During the last two wars with the United States, our ancestors as well as ourselves, were called upon by our fathers the then Governors and told that we had lands to defend, as well as our white

bretheren. We obeyed; we knew it was our duty to defend our hunting grounds. We gave the war whoop, we fought, and bled, in defending the rights of our great father, and our soil, and we would assure our father, the Governor- General, that we are ready to do so again whenever called upon." (Holmes, 1993, Document 249).

The 1840s was a time of encroachment and alienation throughout peninsular Ontario as well as the Lake Huron basin and the Ottawa Valley. In petition after petition The Nipissing and the Algonquin pointed out that they were loyal allies and war veterans and they stressed that, when the invasion of loggers and settlers began, they had been patient and helpful towards the newcomers and had not, generally, resorted to violent resistance.

In 1840 the Algonquin and Nipissing addressed a comprehensive petition to Lord Sydenham, Governor of Lower Canada, including statements that clearly indicate that their economy and land use patterns were changing:

"That day is now arrived—which we never expected to see—your red Children the Nipissing and Algonquin, have never been in the habit of tilling the ground, from time immemorial our chief and only dependence for a livelihood sprang from the chase from which we procured abundance. Not so now—our hunting grounds are entirely ruined—our beaver & other fur have been destroyed by the constant fires made by the lumber men in our majestic forests; our deer have disappeared—our timber to the amount of hundreds of thousands of pounds, is annually taken from those very hunting grounds, which by our Great Father's orders were to be removed for us and us only…As we…can no longer depend on the chase for support, we must set ourselves to the hoe—or else starve—we demand your assistance" (Holmes, 1993, Document 241).

Similarly, Chief *Ka-on-di-no-kitch* (Nipissing) in council at Lake of Two Mountains with Superintendent Hughes:

"…we have already told you that our hunting grounds, which are vast and extensive and once abounded in the richest furs and swarmed with deer of every description, are now ruined. We own…that we are partly the cause of these present misfortunes: we were too good and generous: we permitted strangers to come and settle on our grounds and to cultivate the land; wood merchants to destroy our valuable timber, who have done us much injury, as by burning our rich forests, they have annihilated our beaver and our peltries and driven away our deer…but we had good hearts and took pity on our white brethren; we know that they must live as well as ourselves… we never thought of futurity and we were silent at these encroachments. But now we are pitiful ourselves and are obliged to crave assistance…" [in order to settle on farmsteads] (Holmes, 1993, Document 249).

Despite their reliance on country food until this period, there is historical evidence that the Algonquin had been gardening and raising maize since at least the 17th century, if not since the Middle Woodland period. Champlain reported in 1613 Chief Nibacis' village had gardens and cornfields and Chief Tessouat's village garden included peas—of which the knowledge and seed stock had only been recently acquired. According to Superintendent Hughes, the Algonquin and Nipissing

of Lake of Two Mountains used hoes and spades to raise "Indian corn, peas, beans, potatoes, pumpkins, oats, and hay" (Holmes, 1993, Document 297). Given that they only spent the summer months at the mission, and that they could not attain title to these lands or sell the produce on the open market, these gardening efforts were on a small scale.

In a petition dated 1849 some Algonquin and Nipissing described their decision to acquire land and farm as follows:

> *"When you see us traveling from one end of the rivers and lakes to the other in our frail canoes, you are surprised at our way of life and you find us very poor. We confess that this is certainly true. We are poverty stricken, because day by day we are being stripped of our possessions. Our lands are rapidly passing into the hands of the Whites. You have long advised us to cultivate the land; long too have we failed to listen to such salutary advice. Is this surprising? We were rich in bygone days. We lacked for nothing. The forests were inhabited by animals of every species and we sold the carcasses to eager merchants for a very good price. But now it is no longer thus…we are reduced to dire poverty. We want to imitate the Whites. This is why we are asking for land to farm…we want to farm near our hunting grounds… (Holmes, 1993, Document 330).*

In 1862 Nipissing and Algonquin again petitioned the Governor General of Canada, Viscount Monk, and claimed that the Ottawa Valley had been their home since time immemorial. They protested the incursion of white trappers who stripped the fur-bearing animals from their territory, while they always left enough animals to breed.

> *"We have no desire to interfere with the Lumbermen, whose legitimate object is the manufacture of timber, nor with the settler whose object is the cultivation of the soil, but what we consider a real grievance is the custom pursued by white trappers who infest our hunting grounds for the sole purpose of trapping. The Indian, whose hunting ground is secured to him according to ancient usages amongst his own people under the regulation of his Chief, pays every attention to the increase of (particularly the muskrat and beaver) which are purely local, whilst the white trappers invariably exterminate them." (Holmes, 1993, Document 398)*

Eight Chiefs and over 250 individual Algonquin and Nipissing, whose hunting grounds were in the Madawaska Valley, petitioned Monk in 1863 for a specific tract of land on the upper South Madawaska adjacent Canisbay Township (see Figure 2):

> *"That in times past [our] hunting grounds were in the country watered by the Madawaska and adjoining streams about 150 miles from…Two Mountains, but owing to that country having become during the last few years thickly settled it has rendered useless and destroyed [our] hunting grounds and has compelled [us] to travel still further westward until at present [our] hunting grounds are from 300 to 350 miles from (Two Mountains]".*
>
> *That [we] are desirous of having a tract of land near our present hunting grounds granted or reserved for them for the purpose of building up an Indian Village capable of supporting four hundred families, a desire we sincerely trust will be gratified,...[since] the whole country was once [ours] and the land of the departed braves, [our] fathers."*

"That such a tract of land, as would suit the purposes required, [we] have found in the Township of Lawrence, next adjoining the Township of Eyre, [which] would meet all the requirements [since it] is near their hunting grounds, is suitable for the village, and would be the greatest blessing that could be bestowed on [us]… (Holmes, 1993, Document 400]

The local Member of Parliament (Robert Bell) found supporters for the Lawrence Reserve and the Department of Indian Affairs recommended it to the Commissioner of Crown Lands, who heeded the appeal. In 1866 he notified the Indian Agent at Arnprior that he had:

"…reserved the south east quarter of the Township of Lawrence from sale during the pleasure of the Crown for the use of the Algonquin Indians for a settlement. The Indians are not to have any right to the merchantable timber on the land nor are they to interrupt those parties who hold timber licences for it from cutting and carrying off the timber." (Holmes, 1993, Document 407)

William Spragge, Deputy Superintendent of Indian Affairs, even went so far as to recommend that, "given the rugged character of the terrain", the northeast quarter of the Lawrence Township should be added to double the size of the reserve (Holmes, 1993, Document 408).

2.2.5 Post-Confederation Federal-Provincial Colonial Period

Two years later, however, after Confederation, when Upper Canada became the Province of Ontario, *Pon Sogmogneche*, High Chief of the Algonquin and Nipissing, was still waiting for official recognition of the reserve:

"Some time since I was given to understand that there was a tract of land granted to me for use of my tribe of Indians in the Township of Lawrence on the Madawaska River. I wish to know if the boundary lines will be run and the lots laid out so that each one of my tribe settling will know his portion and I wish for a document from you as soon as practible to shew that I have authority to settle without molestation on the said land and that it is laid apart for use of my Indians." (Holmes, 1993, Document 412).

In 1878, when Niven surveyed the Township of Nightingale, which is on the east side of Lawrence Township and also on the Madawaska, he noted two "Indian" clearings (Holmes, 1993, Document 445).

In 1886, Chief *Nogon-nak-suk-way* forwarded another request for land in Lawrence Township to L. Vankoughnet, the Deputy Superintendent General of Indian Affairs:

"I am requested by the Chief Non-non-she-gushig and his band to make enquiries on their behalf. The said Chief and his band…now desire, unitedly, to locate on some good land that they might see fit for farming purposes in the Township of Lawrence, or in some other. And such lands if found to be set apart for them as an Indian reserve." (Holmes, 1993, Document 477)

Vankoughnet replied to this request saying: "I beg in reply to state that the Algonquin band of Indians have a Reserve on the River Desert in the Township of Maniwaki on the upper Ottawa where there is plenty of land to accommodate them." (Holmes, 1993, Document 478).

Two years later, in 1888, an Algonquin or Nipissing, who said he was the Chief of 30 families or 150 people (his return address was a post office near Barrys Bay), wrote to Indian Affairs on behalf of the Lawrence Township band:

> *"It seems the South East quarter of the Township of Lawrence has been reserved for the Algonquin Indians, their Chief Non-no-che-ke-shick has requested me to write to [Indian Affairs] to have that reserve cancelled in exchange for some other nearer a market." (Holmes, 1993, Document 480).*

Indian Affairs replied that in order for this exchange to take place, *Non-no-che-ke-shick* and his band, "for whom part of Lawrence was set aside", must pass a resolution stating their intention and specify the land desired in exchange so that tract could be assessed for suitability and if the result was favourable, then "the Government of Ontario should be applied to for an exchange of the tract in Lawrence for land selected by the Indians." (Holmes, 1993, Document 481).

No further correspondence on the Madawaska reserve issue was found until 1894; when Chief Peter Sharbot revived the Lawrence Reserve request with Indian Affairs Canada, stating that his band had been in occupation since 1849 (Document 500). In 1896 Chief Sharbot provided a list of families, totaling 46 people (Document 514). The Crown forwarded the matter to Ontario Department of Crown Lands with a request that the claim be investigated (Documents 503 and 512). Although Superintendent Thomson of Algonquin Park did visit Lawrence Township, "The report of the inspection by Superintendent Thomson was not made as he died before he could write a report" (1993:174). Nevertheless, Crown Lands provided an account of the inspection (Document 522), which must have stemmed from comments Thompson made before he died. This document is quoted at length below, because it provides information about potential for archaeological material of 19th century Algonquin settlement.

> *"…Mr. Thomson visited the township in August last, that he did not find a single Indian settler in the township and the only attempt at clearing or settling which he found was a small improvement, if it could be called such, made by one Francois Antoine, which consisted of an attempt to clear up part of lots 3 and 4 in the 9th and 10th Cons. the nature of the work being roughly under brushing in the Indian style about 1½ acre. He [Thomson] states that the nature of the land in the township is such that it is well adapted for settlement, the greater part of the township being fine, arable, rolling land, dipping to the east and south. The soil is black loam and sand mixed, the timber beech, black and yellow birch, spruce and pine, the quantity of pine estimated to be some 45 million feet, which is scattered through the township."*
>
> *"The township of Lawrence is situated upon the confines of Algonquin National Park, which as you know was reserved as a home for game of all descriptions, the intention being to preserve the beauty of the Park and to afford a harbour for the different wild animals, birds, etc. which are natives of this Province. The formation of a settlement of Indians upon the borders of a territory of this kind would, in my opinion, be attended with great danger to the preservation of the game in the Park. You know the predatory habits of these people, how they roam about, and how difficult it is to keep watch of their movements in the forest or get them to recognize a law which*

applies to white people, with respect at the rate to the killing of game, should be made to apply to the Indian, who depends for his livelihood in a great measure upon what he can kill in the forest. There being such a large quantity of pine timber still growing in the township is another difficulty. The Department does not open to sale to white people lands upon which there is still a considerable quantity of pine timber growing, and where there is about 40 or 50 million feet of pine in a township, it would not be a proper thing to open it to indiscriminate settlement."
"It would appear from what Mr. Simpson says that there is a considerable number of Indians in the Township of Nightingale, some 32 individuals in all, many of whom have entered into possession of lots and made small clearings, and have been there for a considerable period. I think it would be well that these people should be given to understand by your Department that they have no rights there, and that they must not expect that these lands will, as a matter of course, be allowed to them."

Undaunted, in 1896, Chief Sharbot suggested to Indian Affairs (Document 527) an alternate site in Sabine Township: "You will see by the enclosed letter that the Indians at Long Lake in Lawrence Township have located a place to live on away from Lawrence or Nightingale…" (Holmes, 1993, Document 528). In 1897, in a letter to Agent Bennett, Chief Sharbot elaborated:

"In regard to the Reserve, which we are trying to get. I might say that the land we wish to secure lies at the head of Hay Lake in the township of Sabine to the south west end of the lake, there are four families living there now, all with more or less clearance and there would be probably ten families altogether living there should that part of the township to be set aside for the purpose of a reserve.

"Kindly let me know what further steps I should take in this matter. We are all Algonquin's. (Holmes, 1993, Document 534)

Three weeks later, Chief Sharbot, in response to Bennett's reply, sent another letter to Agent Bennett:

"Yours of January 20th to hand and in reply beg to enclose you letter received from Dept. Crown Lands through Mr. Simpson Park Superintendent. We also wish to say that we were not aware that the lands in question were not in the market and that there are at present four families of Indians living there all more or less clearance, while three more families are intending to locate there in the spring".

"The reasons we have for desiring this location are that it is in a country fifteen miles from the nearest railway and about seven or eight miles from the nearest white settlers who have been living in the same township for over eighteen years, the land is also well situated on the water ways being on Hay Lake which is emptied into Long Lake of the Madawaska River and also near the Mink Lakes tributary to the York Branch of the Madawaska."

"The pine is all cut off this part of the country and if you could induce the Indian Dpt. to grant us one fourth of this township for settlement we would be self-supporting and independent of government assistance in every way". (Holmes, 1993, Document 535)

Agent Bennett's superiors at Indian Affairs instructed him, in April 1897, to tell the "Indians of Sabine" to "go to Golden Lake Reserve" and in May, the exasperated agent had to inform head office that:

> *"…the Indians at Sabine do not belong to Golden Lake Reserve, also there is no room for them on the Reserve…So there is no use in asking them to come to live on the Reserve. …If it is possible it would be better to get the reserve for them in Sabine. I understand that there are two parties, and that they are not agreed on the place to locate. I think it would be advisable to send someone and call a meeting of all the Indians and find out the particulars and then report to govt." (Holmes, 1993, Document 542).*

Indian Affairs duly sent Agent Bennett to meet with the Sabine band and report (Holmes, 1993, Document 546), which he did promptly, for he filed a report dated July 15 1897. Because of its relevance to archaeological potential Bennett's letter report is cited, in full, below:

> *"I visited the Indians at Sabine (who are Algonquins) as authorized by Department, and found three families settled on land bordering on Hay Lake in the Township of Sabine, and others and others waiting to settle on the proposed Reserve. The names and ages of the Indians whom I found there are:*

Mat Whiteduck	Aged 37	years wife and family
Amab Lavally	28	"
Henry Macoose	35	"
Exavier Levally	24	unmarried
Denis "	29	"
Lemab Sharbot	20	"
Peter Sharbot	65	widower
Frank Sharbot	29	wife and family
William Levally	30	"
Louis "	50	widower
John "	32	wife and family

> *"Three families are living on land on Sabine with improvements made thereon the other Indians who are there but afraid to make any improvements until they are sure of the Reserve being set aside for them".*
>
> *"The area of the Reserve they want is ten lots in width and seven in length, there is about 1500 acres of a drownded [sic] marsh in the south east corner of the Township of Sabine, I think however, that 4000 acres would be sufficient for these Indians and would recommend that lots 1 to 10 inclusive in con. 4-5-6-7 of the Township of Sabine be acquired for them. This tract of land is not fit for settlement and I do not think it will be settled upon by white settlers." (Holmes, 1993, Document 547)*

In 1893, these townships were incorporated into Algonquin Park and, in 1894, Peter Sharbot and 32 Algonquin settlers were evicted (Allen 2007). Kidd (1948) recognized some of these Algonquin homestead remains at Rock Lake, during his excavations in 1939; however, Kidd's interest was

primarily deposits of the pre-contact period. Allen has carried out archaeological assessments at Franceways homestead at Rock Lake and elsewhere on the upper Madawaska.

2.3 History of the NPD Property

For most of the Historical Period, The Upper Ottawa Valley was uninhabited by Europeans, and visited only by traders, store keepers, and missionaries and, even less frequently, by military figures and explorers. During the French Regime, the few traders and factors had a limited, structured, relationship with the local people, although there was evidently a steady trickle of interaction and cultural defection of Coureurs du Bois and Voyageurs into the local Anishinabe communities. European habitation and settlement continued to be restricted after the British Conquest and the policy respecting the sovereign land of various Indigenous peoples was "spelled out" in the Declaration of 1763. Exceptions were made, however, for the migration of United Empire Loyalists and Six Nations into central and southwestern Ontario.

However, everything changed because of the Napoleonic Wars (called the War of 1812 here and in the USA); when Ottawa Valley potash and pine suddenly became indispensable to the British. After the Napoleonic Wars, despite the Declaration of 1763, many veterans were settled in Algonquin territory and many American immigrants and entrepreneurs followed. By the 1820s the square timber was being cut on the Ottawa River tributary and depot farms and stopping places became established along the riverbanks above Pembroke. Townships were surveyed everywhere and, although military veterans were a priority, there was a general increase in settler population in the first half of the century. At first the development was along the river bank and the Ottawa River was the main highway for streamers, log rafts, canoes, and sleighs but later roads became more important. In the 1850s, construction began on the Pembroke-Mattawan Road but it was impassable for wagons for months of the year. After Confederation the economy of the Upper Ottawa Valley shifted from square timber to saw logs and the settlement pattern moved inland along the surveyed roads.

NPD is surrounded by three areas of historical importance; the first is its situation at the foot of the Rapides-des-Joachim, an island between courses of whitewater—like Morrisons Island in Pembroke and the Chaudiere at Le Breton Flats in Ottawa. Historically, this island was (and still is) known as "Swisha" and it was first an Indigenous village and later became well known as a trading post. Secondly, NPD is located just upstream from Stewarts Point (Figure 3), a well-known sandy beach—like Pointe aux Bapteme in Deep River and Sandy Hook in the Chats Lake reach—where a famous stopping place once stood. The third important NPD historical feature is the Mattawan Road that originally ran through it. The old Mattawan roadway follows the modern road allowance to the east side of the plant and then it angled up the hill, along a route similar to the modern entrance road, and joined what is now Highway 17 (Figures 8 and 9).

There is an old river road from the west side of the plant that continues parallel to the river until it meets Highway 635 (the Swisha Road). This old river road also runs through a former clearing where it intersects a smaller trail that turns south and goes straight up the hillside to intersect modern

Highway 17 at a former hamlet known as “Five Oaks”. The old bush road, however, is historical for it may have been an early short cut route that avoided some of the tortuous Swisha Road.

NPD History

[Note: the following historical account was researched and prepared by Sandra Kingsmith and is presented below as received.]

This report concerns the following lands in Rolph Township, Renfrew County:

Lot 41 Range A	128 acres
“ 41 “ B	39 “
“ 42 “ A	135 “
“ 42 “ B	26 “
“ 43 “ A	118 “
“ 43 “ B	46 “
“ 44 “ A	72 “
“ 44 “ B	123 “
“ 45 “ B	159 “
Part of Town Plot Reserve	556 “
Total Acreage	1402 “

[Note: this is larger than actual NPD acreage of 952 A because it includes parts of lots 41, 42, and 45 that are not part of NPD. It also does not consider that part of lot 48 Range A].

It is arranged by decade with information mostly from Land Titles Abstracts, Census records, property assessment rolls, and the original Survey Map of Rolph Township. The following definitions will be helpful:

Location ticket: the affidavit sworn by a person (called the locatee) who wished to acquire a particular piece of land from the Crown as a Free Land Grant. He was to swear that he was over 18 years of age and wanted the land for cultivation, not its minerals or pine trees. He then had to meet the imposed settlement duties: clear and cultivate 12 acres, build a house 18’ x 24’, and live there for at least 4 years. Then he could apply for legal title. See the definition for “Patent”.

Patent: a “Letters Patent” which transfers full ownership of a property or of a property from part the government or Crown to an individual or private corporation or company.

Significant dates:
1854 – Mattawa Road surveyed, constructed soon after.
1855 – Rolph Township founded.

1856 Survey by Robert Hamilton, Provincial Land Surveyor

- A clearing, approximately 15 acres, labelled “John Moore” straddles the boundary between Lots 40 and 41 Range A.
- The name “John Moore” is written on the Ottawa River at the boundary of Lots 40 and 41 Range B, near present day Stewart Point.

- A clearing, approximately 25 acres, labelled “E. Sullivan” straddles the boundary between the southwest end of Lot 43 Range A and several adjoining lots.
- On Lot 43 Range B, there is a road running from the Mattawa Road to the Ottawa River.
- A road passes through Lot 44 Range A, from the Mattawa Road to a clearing outside our area of interest.
- A clearing, approximately 20 acres straddles the Mattawa Road, between Lots 44 Range A and B.

1860

Lots 41, 42 Range A and B owned by the Crown, occupied by John Moore Sr.
Lots 43 “ “ “ the Crown, occupied by Florence Sullivan.
Lots 44 “ “ “ the Crown, occupied by John Moore Sr.
Lot 45 Range B owned by the Crown.
Part of Town Lot Reserve owned by the Crown.

1860—Lots 43 Range A and B, Florence Sullivan and wife sell both lots to Hector McKenzie for $750. (Note that the Sullivan’s don’t actually own this land. Presumably they are selling the “improvements” – land cleared and buildings.)
1861—Lot 43 Range A is patented by Hector McKenzie.
1862—Lot 43 Range B is patented by Hector McKenzie.

1861 Census

Probably on Lot 41 Range
John Moore Sr., lumberer, with wife, 10 children, and 1 servant are living in a one-storey log house.

1870

Lots 41, 42 Range A and B owned by the Crown, partly cleared and probably occupied by John Moore Sr.
Lots 43 Range A and B owned by Philemon Evans.
Lots 44 “ “ “ the Crown, partly cleared by John Moore Sr.
Lot 45 Range B “ the Crown.
Part of Town Plot Reserve owned by the Crown.

1871 Census of Canada

Probably on Lot 41 Range A (by 1891, the family has an 11 room log house on this land).
John Moore Sr., lumberer, and wife, with a household totaling 18 people: 13 children, 4 workers, and a school teacher. Two of his sons are also lumbermen.
His oldest son John Jr. is recorded with a wife and child in a separate census entry. (He patented Lots 39 Range A and B in 1880) Probably on Lot 43 Range A and B
Philemon Evans, farmer, with wife, no children.

Changes

1871 - Lot 45 Range B-- William Brock receives a Location Ticket.

1872 - Lots 41, 42, and 44 Range A and B are patented by John Moore Sr. These lands were bought and sold between family members, mortgaged, and the mortgages repaid, until 1889, when John Moore died.

1875 - Lots 43 Range A and B were sold by Philemon Evans and wife to the Canada Land Credit Company for $1000.

1876 - Lot 45 Range B - George Carr received a Location Ticket. Brock (see above) must have abandoned the land. Affidavits sworn by two of Carr's neighbors, supporting his application, stated that George Carr was head of a family, with a son and a daughter.

1880

Lots 41, 42 Range A and B owned by John Moore Sr.
Lots 43 " " " Philemon Evans.
Lots 44 " " " John Moore Sr.
Lot 45 Range B " the Crown, George Carr had "located" here in 1876.
Part of Town Plot Reserve " the Crown.

1881 Census of Canada

Probably on Lot 41, 42 Range A and B
John Moore, 64, lumberer, with wife, 3 children of his own, and 7 others (potentially grandchildren) (by 1891 they have an 11 room log house on this land).
Sons John Jr., Alexander, and Isaac live nearby but it is not possible to tell whether or not they are within the area of interest. John Jr. probably lives on Lot 39 Range B which he patented in 1880.
Lots 43 Range A and B—Philamon Evans 40, farmer, with wife, 2 children, his brother and sister-in-law.
Lots 44 Range A and B--possibly occupied by John Sr. offspring.
Lot 45 Range B—George Carr, 31, farmer, with wife and 5 children, possibly 1 servant.

Changes

1886 - Lot 45 Range B patented by George Carr.
1889 - " " sold by George Carr & wife to John Moore Sr. for $100.

1889 - Death of John Moore Sr.

1890

Lots 41, 42 Range A and B owned by John Moore Sr.
Lots 43 " " " Philemon Evans.
Lots 44 " " " John Moore Sr.
Lot 45 Range B " John Moore Sr.
Part of Town Plot Reserve " the Crown.
1891 Census of Canada
Lots 41, 42 Range A and B

Almira Moore, farmer, widow, with 4 granddaughters, and two grandsons whose occupations are shantyman and logger. In a 1 story, 11 room wooden house.
Five other grown sons and their families live nearby, but it is not possible to tell where.
Son John Jr. probably lives on Lots 39 A and B which he patented in 1880.

Lots 43 Range A and B
Philemon Evans farmer, with wife, a brother and sister-in-law, their 3 children, and 3 workers in a one and a half story, 6 room, wooden house.

Changes

1891-95 - Lots 41,42 Range A and B - These and other land totaling 450 acres are sold between the widow Almira Moore and family members, mortgaged, mortgages repaid, etc. until 1895 when Mary Moore (this could be either John Jr's sister or his wife) and John Moore Jr. sold to Mary S Dunlop, widow, and Cornelius Chapman.

1892 - Lot 45 Range B - Elmira Moore, widow, executrix of will of late John Moore, the elder, sells to Thomas Deacon for $1.

1898 - Lot 45 Range B - Thomas Deacon and wife sell to Robert Miller for $100.

1898 - Lots 44 Range A and B - Elmira Giroux, (formerly Elmira Moore) now wife of Joseph Giroux sold to Rebecca Moore, wife of Alexander Moore for $150.

1900
Lots 41, 42 Range A and B owned by Cornelius Chapman and Mary S. Dunlop (widow).
Lots 43, Range A and B owned by Philemon Evans.
Lots 44 " " Rebecca Moore, wife of Alexander Moore.
Lot 45 Range B " Robert Miller.
Part of Town Plot Reserve " the Crown.

1900 – Lot 45 Range B – Robert Miller sold to Andrew Gregoire "reserving 10 acres off the SW end".

1901 Census of Canada, sch. 1 and 2
Lots 41, 42 Range A and B - leased by John Moore Jr., lumberer, a widower with 4 children. They have an eleven room wooden house and 4 barns.
Lots 43 Range A and B – owned by Philemon Evans 57, farmer, with wife, his brother and sister-in-law, their 2 children, and 2 workers, in a one and a half story, 6 room wooden house.
Lots 44 Range A and B - occupied by Benjamin Moore, (probably son of late John Moore Sr. He has a wife, 7 children, and a boarder. They have a 5 room wooden house and 5 barns.
Lot 44 Range A also has a school, with 3 barns, on one acre, with one room, and 24 students.

1901 - Lots 41, 42 Range A and B - sold by Elmira Giroux (formerly wife of John Moore) to Rebecca Moore, wife of Alexander Moore.

1902 - Lots 43 Range A and B - It seems that Philemon Evans defaulted on a mortgage he had taken out with the Can. L & N Inv. Co. in 1875. They then sold the land to Thomas B. Marion for $100.

1903 - Lot 45 Range B - Gregoire gave up the land to Thomas Marion and Co. who held a mortgage on it.

1906 - Part of Town Plot Reserve patented by Finlay Watt.

1910

Lots 41, 42 Range A and B owned by Cornelius Chapman.
Lots 43 " " Thomas B. Marion.
Lots 44 " " Rebecca Moore, wife of Alexander Moore.
Lot 45 Range B " " Thomas B. Marion.
Part of Town Plot Reserve " Finlay Watt

Changes

1911 - Lots 41 Range A and B are sold by Cornelius Chapman and wife to Richard M Stewart.

1911 - Lots 42 Range A and B are sold to Richard Stewart.

1918 - part of Lot 45 Range B (10 acres on the SW end) Isaac Moore made a will, leaving it to his wife (This was separated from the rest of the lot in 1900).

1911 Census of Canada and 1911 Assessment Roll for Rolph Township
NOTE: the 1911 Assessment does not differentiate between buildings of no value and no buildings present.

Richard Stewart, lumberman, freeholder, resident:
Lot 41 Range A - total 128 acres, 28 cleared 100 wooded.
Lot 42 Range A " 138 " 8 " 138 wooded.
He had a wife, 8 children, and a boarder.
Total value of buildings $550.

Thomas Marion, merchant, freeholder, non-resident:
Lot 43 Range A - total 166 acres—100 wooded, 39 slash, 36 swamp.
Lot 43 Range B – total 30 " 30 "
Pt Lot 45 Range B – total 10 acres cleared.
Total value of buildings $0

Alexander Moore, farmer, freeholder, resident:
Lot 44 Range A – total 123 acres---12 cleared, 111 wooded.
Lot 44 Range B- total 59 acres---5 cleared, 45 wooded. Total value of buildings $550.
He had a wife and 6 children.

Frank Mireaux, labourer, resident:
Lot 45 Range B – total 50 acres—50 wooded, 50 slash, 50 swamp
Value of buildings $0 (The Carr's lived on this lot for a short time before they sold it to John Moore Sr. in 1889, so if there were buildings they would have probably been in bad shape.
9 residents, including 5 children.

Garfield John Moore, farmer's son, resident (possibly son of John Jr.):
Lot 45 Range B—no other information.
He is living alone, listed separately from the Mireaux family above.
Joseph Giroux, freeholder, farmer, resident:
Part of Township Plot Reserve – total 25 acres, all cleared.
Total value of buildings $0.
He had a wife, no children.

Finlay Watt, freeholder, non-resident:
Part of Township Plot Reserve – total 600 acres, all wooded.
Total value of buildings $0.

1920
Lots 41 Range A and B owned by Richard Stewart.
" 42 " " " " "
" 43 " " " Thomas B. Marion.
" 44 " " " Rebecca Moore, wife of Alexander Moore.
" 45 Range B " Thomas B. Marion.
Part of Town Plot Reserve " Finlay Watt.

From 1920 on.
1943-1960 – Hydro Electric Power Commission of Ontario purchased all of:
Lot 43 Range A and B
Lot 44 Range B
Lot45RangeB
Part of Township Reserve Plot
And part of: Lots 41 Range A and B
Lots 42 Range A and B
Lot 44

1945 - The dam was built at Rolphton.

1950 - Power was first produced.

1956 - Construction of NPD was commenced, a joint venture of Ontario Hydro, Canadian General Electric, A.E.C.L., and the Province of Ontario.

1960 – Rolf Township closed road allowances on the following lots and sold the land to Hydro:
Lot 43 Range B Lot 44 Range B
Lot 45 Range B
Part of Township Reserve Plot

1961 – Construction of NPD was completed

1962 -1987 – N.P.D.S. operated

1989 – Hydro transferred all its land to A.E.C.L. except for Part of Township Reserve Plot, where it transferred only 367 of 556 acres.

Summary

In 1854 when Robert Hamilton surveyed Rolph Township, there was already activity there. John Moore Sr. was the major land owner early on. By the time of his death in 1889 he owned half of the lots in NPD and others outside it, as well as a Timber Limit downstream of Stewart Point. His sons also owned land and some of their descendants still live in the general area. After his death these holdings were gradually sold off, some to family members. In the early twentieth century, Thomas Marion, merchant, and his wife, trading under the name Thomas Marion and Co., held mortgages in the area and owned four lots. They don't seem to have lived on any of them.

All the land was pretty rugged; there was not much farming. In 1875, the Timber Limits in the area belonged to J. Sneddon. According to the 1911 Assessment roll for Rolph Township it was still mostly wooded, with some "slashland" and swamp. Of a total of 1402 acres, only 88 were cleared in 1911. There seems to have been as much logging as farming. In 1915 the Stewarts sold timber from their land (potentially Lots 42 A & B and Lot 4).

In 1928, the 556 acres of Part of Town Plot Reserve, which was wooded in 1911, was sold to the Chapeau Lumber Co., part of a deal involving "other lands with plant machinery and chattels, etc. etc." but there is no indication there was ever a mill on the site. It shines a light on the economy of the 20's/30's when we see that the deal just mentioned in 1928 was for $44,777, then in 1937 the land was sold for unpaid taxes amounting to $151.38.

A local resident, Laura Sneddon, who grew up in the 1930's at Stewart Point, just downstream from Lot 41 B, remembers the area as "rocky, sandy, mostly wooded", no houses or old foundations, no docks, or remains of docks along the shore "between Stewart Point and Swisha". There *was* a big dock at Stewart Point, but that is outside the area of interest. There was better land on the "other" (i.e., East) side of present-day Highway 17. It's interesting to note, this is where all the clearings were on the 1856 map. The local Timber Limit belonged to Hurley. She also recalls the community of Five Oaks. During her childhood, it consisted of a store and a gas station. It disappeared in the 1960's, about the time Hydro took over land around there. It might have been on the 10 acres of Lot 45 B that is West of the present-day highway.

3.0 Archaeological Context

This section considers the known and recorded archaeological sites in the immediate vicinity of the study area as well as previous research and a discussion of the early postglacial period in the Ottawa Valley.

3.1 Known and Recorded Sites in the Upper Ottawa Valley

There are only a few areas in the Upper Ottawa Valley alley where Pre-Contact period archaeological sites are known to be concentrated. These are briefly mentioned below.

The Allumette Lake sites were discovered and documented primarily by Clyde Kennedy over 30 years ago (Kennedy 1962; 1965; 1966). They are located on the banks of Morrison and Allumette Islands and span the cultural time periods from Middle to Late (Laurentian) Archaic, through the Middle Woodland, to the Late Woodland—a span of over 5,000 years. Of particular interest and importance were the Archaic burials, with their elaborate grave goods of native copper, and other exotic materials. The till ridge that makes up part of Atwater Phase 3 is at similar elevation and height above the modern water as Allumette Island (Swayze 2007). Clyde Kennedy has observed that the archaic archaeological deposits are found 20 feet or so above modern water level (Kennedy 1976).

The Wilbur Lake catena, centring on the Kant site (BjGg-l), has attracted the attention of archaeologists for over 80 years beginning with Wintemberg (1917a, b) and later Emerson (1949) and Pendergast (1957). However, the most comprehensive research on the Kant-related sites was carried out by Barry Mitchell (1987; 1988; 1989; 1990; 1991). Although primarily of the Middle Woodland cultural period, the Wilbur Lake deposits span five millennia from Late Archaic to Late Woodland.

The suite of sites discovered and documented at Mud Lake, in the Muskrat River Basin, are a result of the research of Robertson and Croft (1971; 1973; 1974; 1975) and Croft (1986). Once again, these sites span the last 5,000 years, although a Middle Woodland manifestation predominates.

The 'small sites' reported by Mitchell (*et al.* 1970) consist of 13 small deposits found along the upper Petawawa River (including Travers Lake and Montgomery Lake), date from Archaic to Historic. At the same time that Mitchell was conducting the Petawawa River small sites survey, Hurley and Kenyon (1970) were locating and testing sites on Grand Lake, at the headwaters of the Indian River. Kennedy also conducted survey on Grand Lake. Later, Mitchell excavated at the Montgomery Lake site—as did Kennedy, independently—which is in CFB Petawawa (Kennett 1999).

J-Andersen (1995) provides a review of the studies from Round Lake (Ballantine 1982), the upper Madawaska River (Wright 1977), Basin Lake (Ross 1975), and Highland Lake (von Gernet 1991). Some other 'inland' sites include: an isolated find reported by Swayze (n.d.) near the Snake River Marsh, and a small campsite near a first order stream in Bromley Twp. (*ibid.*), and three similar finds reported by Croft (1986; 1987a,b). Kennedy (1965) also reports small sites on the Bonnechere River, near the Fourth Chute, below Eganville.

The Cotnam Island site BkGg-1 is a small, heavily impacted, Middle Woodland site on the shore of Lost Channel (Swayze 1996a,b). A local history of Cotnam Island (Sexsmith 1990:3) reports that arrowheads and a ground stone adze were discovered in a garden on lower Allumette Lake in the 1960's and although Clyde Kennedy, a local avocational archaeologist, wished to investigate, permission to excavate was not extended. Sexsmith (*ibid*.) and David Croft, a local avocational archaeologist, both report Upper Canada coins from the Becketts Rapids area and Croft also reports that ground stone tools were found on the shore of Hazley Bay. Wintemberg (1917a,b) mentions artifacts from Peter White's farm, now part of City of Pembroke.

Kennedy (1976) has noted that, in the upper valley, Late Archaic sites on the Ottawa River shoreline, such as Morrisons Island, are located about 5 m (25 feet) above the modern water level and Middle Archaic sites, such as Allumettes Island, are on still higher relic shorelines.

3.2 Historic Plaques and Archaeological Sites in the NPD Area

3.2.1 Historical Plaques

There is a Historic Plaque on the highway near Rolphton overlooking the dam that was erected by the Ontario Heritage Foundation, an agency of the Government of Ontario, to celebrate the NPD achievement. It has been quoted in full in the introduction.

3.2.2 Archaeological Sites in the NPD Vicinity

Charles Borden (1952) designed a site registration system that is used throughout Canada. A "Borden Block" is a co-ordinate system that uses upper and lower case letters and is ten degrees latitude (long) by ten degrees longitude (wide). Canadian archaeologists refer to "Borden Blocks" and "Borden Numbers" and "Bordenize" sites when they register them. Sites within a Borden Block are numbered sequentially. NPD is in the CbGj and CbGk Borden Blocks.

The Meilleur Bay site is the only known site on the Ontario side of the CbGj block. The Meilleur Bay (CbGj-3) site was excavated by Clyde Kennedy in 1957 but not reported until 1964:

The main archaeological work during the 1964 season was to have been devoted to excavation of the Meilleur Bay site, a possible Palaeo-Indian site. Two projectile points, flint flakes, broken quartz, and bits of calcined bone were found at the MB1 site when several squares were excavated in 1957. Material from the site was examined by T. E. Lee, then of the National Museum of Canada.

Just as first work got underway at MB, The Ontario Department of Highways established a picnic area adjacent to the site. As excavations could be carried out only in the evenings and on weekends, there was no way of protecting an open site from the numerous tourists who stopped to picnic. The Dept. of Highways indicated it intended to abandon this picnic area and to establish a new one across the bay. Therefore, it was decided to postpone further excavations until this change has been made.

Squares excavated at MB1 in 1964 yielded only a few flint flakes. (Kennedy 1964:1-2)

The 1964 report has only ink outline drawings of two projectile points; the first is a lanceolate, 95 mm long, 25 mm wide, and 8 mm thick. It is slightly asymmetric (left lateral is nearly straight, the right is convex) and has a lenticular cross section, and a straight base with a slightly stemmed. A note states the base is "thinned". The second point is also 95 mm long but it has straight laterals that converge at the tip. This piece has a bulbous cross section and it is noted that the base is "thick". Another notes, the flaking is distinctive.

The consultant notes that the Meilleur Bay site is on a modern river shore, only 5 m (25 feet) above the modern water line. As such, it could be no older than early late Archaic in age, a fact that Clyde acknowledged in later reports. The radiocarbon date of 4365 +/- 85 (S-900), which is provided in the

Borden Form, seems appropriate. Although it is not stated on the Borden form, the collection is curated at the Museum of History in Gatineau QC.

According to the Ministry of Culture site database, Borden numbers (CbGj-4 through CbGj-8) have been "taken out by M. Kevill for data correction".

There are two registered archaeological sites on the Quebec side of the Borden block: Boom Creek (CbGj-1) and Fraser Bay (CbGj-2). Boom Creek, both recorded by Barry Mitchell (1984) is located on the Ottawa River shore opposite NPD and is said to contain Late Archaic, Middle Woodland, and Euro-Canadian archaeological material from a 1963 collection and a 1983 collection. The Fraser Bay site, also recorded by Mitchell (1984), is a Middle Woodland and Euro-Canadian site. Mitchell's artifact collections are held at the Museum of History in Gatineau (Old System VIII-E accession 1323).

There are no sites registered in CbGk on the Ontario side and only one, called Postes des Rapides-des-Joachim, on the Quebec side. This trading post, registered by Linda Lorrain in 1978 in a report titled "Les fortes de l'Outaouais", is said to have archaeological material spanning the 19th century. It should be pointed out that, as a fur trade post deposit, the artifact collections from this site would relate to the local Indigenous community, despite the European origin of the material. The location and disposition of this collection is unknown.

3.3 Surficial Geology and Soils

The following account references the dates of geological episodes to cultural time periods in order to underline the effect these processes had upon the relative attractiveness of the property for human use, either for habitation or specific resource exploitation activities. The cultural periods referred to, and their approximate dates before present (BP) are: Palaeo-Indian 11,500-10,000 BP; Early Archaic 10,000-6,000 BP; Middle Archaic 6,000-4,500 BP; Late Archaic 4,500-2,500 BP; Woodland 2,500 BP-1,600 AD and Historic 1600-1900 AD. The consultant refers to a chronological framework established by Chapman 1975; and Lewis and Anderson 1989. Dates are expressed here as either 'years ago', or 'BP', which means Before Present (the 'present' being 1950 AD.)

The most significant and dramatic effect of deglaciation, in eastern Ontario, was the creation of the Champlain Sea, which existed for almost two millennia and its recession, through a series of fluvial lakes, for another millennium (Figure 10). Beginning about 12,700 BP the entire St. Lawrence Lowlands was submerged under the Champlain Sea (Gilbert 1994:6). The maximum extent of the Champlain Sea has been radiocarbon dated (from shells) to 11,400 BP, at 170 m a.s.l. near Shawville, and to 11,000, at 160 m near Martindale in the Gatineau Valley—dates are approximate—and at Almonte and Rigaud, the high water level has been dated, to 11,200 BP, at 154 m, and 160 m a.s.l., respectively (Fulton and Richard (1987: Table 7). Thus, the period of maximum extent of the Champlain Sea corresponded with the Palaeo-Indian period. Over the next millennium the delta of an enormous river prograded down the Ottawa Valley from Petawawa to Hawksbury. But then, as the sea level rose, the land rebounded from the weight of the ice-sheet until, by 10,000 BP—Late Palaeo-Indian/Early Archaic—the Ancestral Ottawa River flowed into a riverine/lacustrine body of water called Lake Lampsilis. This post-glacial lake was still much higher than the Ottawa River today.

According to Fulton and Richard (1987:25) the level of this body of water was still as high as 94 m a.s.l. at Deschênes in 10,100 BP. It has been dated from three locations in the Ottawa vicinity to between 7,870 BP and 8,830 BP at 60 to 70 m a.s.l. (Fulton and Richard 1987:26, Table 7).

During the Palaeo-Indian and Early Archaic periods, the entire Upper Great Lakes, and northern Ontario and northern Québec, drained through the Ottawa Valley, first debouching solely through the Barron and Petawawa Rivers, and later also via the North Bay/Mattawa route. The volume of water through the Ottawa system was enormous—almost inconceivable—relative to today. This gargantuan flow was compounded at intervals, between 10,800-10,000 BP and again between 9,500-8,000 BP, by 'slugs' of floodwater from post-glacial Lake Agassiz, which then occupied much of the prairie provinces (Teller 1988). These 'slugs', with additional volumes of 500 km^3 to 4,000 km^3, would obviously have been of catastrophic in nature, and would have affected the habitability of the shorelines of the recessional stages of the Champlain Sea and the Ancestral Ottawa River. Lewis and Anderson (1989) have estimated that the flow of the Ancestral Ottawa River during one of these slugs was 200,000 m^3/s, or 200 times the average flow today. The floodwaters almost certainly had an effect upon the archaeological record of low lying areas, scouring some away, and deeply burying others.

After about 8,000 BP (in Middle Archaic times) post-glacial Lakes Agassiz and Barlow-Ojibway ceased to support recessional Lake Lampsilis in the Ottawa drainage basin but the upper Great Lakes still contributed to the flow of the Ancestral Ottawa, until about 5,500, when two other outlets also began to drain them to the south. After the flow over the Nipissing-Mattawa threshold ceased, about 4,700 BP, the modern continental drainages—and environment—became established (Fulton and Richard 1987:28).

Given that NPD is a short distance and only a few metres higher than Chalk River Laboratories (CRL), the graph of former river levels is appropriate. In Figure 11 the river level graph (Catto et al 1982) shows time in radiocarbon years on the x axis and metres above sea level on the y axis. Here, the graph has been annotated in red type to indicate the consultant's interpretation of the time periods from the Prophecy of the Seven Fires wampum belt. Cultural Periods have been added, in black type along the x axis.

Seven of the successive river levels have been highlighted by colour to match the scheme used in Figure 12, the archaeological predictive model based on this graph. In Figures 11 and 12 the Champlain Sea maximum, from 180 to over 200 m elevation, is shown in red, orange and vertical red and orange lines. This period, between 10,800 and 10,000 B.P., is usually referred to as the "Palaeo-Indian" cultural period but in the Ottawa-Nipissing basin the consultant has found that the *Gulf of Maine Archaic tradition* is the cultural affiliation that best suits the expedient country stone technology that characterizes every early postglacial relic shoreline. This is the time of the First and Second Fires, when people first inhabited the fossil islands that make up "Turtle Island". These early postglacial people inhabited a maritime-littoral environment, like an extension of the Labrador coast, and they relied on sea mammals, pelagic fish, rafts of water fowl, and herds of caribou, calving in the tundra-parkland between the river and the ice front. Like other northern maritime cultures, their

weapons included composite-bladed tools and a variety of points made from (perishable) bone, antler, and ivory. This mode of life contrasts with the prevailing view (more characteristic of southeastern North America and the Plains) of highly mobile Palaeo-Indian big-game hunters who relied on exotic chert obtained in long distance trade to make special diagnostic projectile points.

The Early Archaic cultural period was heralded by a sudden plunge in water level during the five-century long (10,100-9,600 B.P.). This Ottawa Marquette Low stand, at 150 m elevation, is shown in brown and brown and red vertical lines. The rebounding high stand at 170 m, due to the Early Mattawa Flood event, is shown in yellow and light green vertical stripes. The Early Mattawa Base Flow, at 159 m, which lasted a thousand years, is shown in light green and light green and brown vertical stripes. These Early Archaic manifestations graded into Mattawa Base Flow levels, during the Middle Archaic cultural period, which persisted between 140 m and 130 m elevation for several millennia, are shown in dark blue and blue vertical stripes. Like the older shores, the Middle Archaic in the Upper Valley is an expression of the *Gulf of Maine Archaic* tradition. The modern shoreline, which has been habitable since the Late Archaic and through the Woodland and Historical Periods (five thousand to 200 years ago) is shown in light blue. The modern shoreline includes the drainage basin of a small stream and wetland system in the Town Plot and the periphery of several small ponds, at various elevations.

The bedrock of the NPD site and the Rolphton-Swisha vicinity consists of migmatetic rocks and gneisses of undetermined protolith; including layered biotite gneiss and, locally, quartzofeldspathic varieties of pegmatite occur. (OGS Map 2544 No. 38). Migmatite is a mixture of metamorphic rock and igneous rock created when gneiss partially remelts and recrystallizes as igneous rock. It is characteristically folded, layered, and occurs in dykes and veins. Quartzofeldspathic rock is an igneous rock composed of large grains of quartz and feldspar. Because these minerals are very hard, quartzofeldspathic material was often selected by ancient hunter-gatherers for use as tools.

4.0 Analysis and Conclusion

According to the *Standards and Guidelines for Consultant Archaeologists* (OMTCS 2011), there are a number of factors that can contribute to the archaeological discovery potential of a study area. These include proximity to known, or recorded, archaeological sites; proximity to major or minor water sources; proximity to former water bodies; presence of sandy soils suitable for indigenous methods of agriculture; presence of high ground suitable for lookouts; and existence of historical records indicating past habitation or land use.

Given that there are no planned impacts to the NPD property, the consultant did not carry out an official “property inspection” but, on November 9 2016, he was taken on a tour of the property by the NPD Operations Manager (Meggan Vickerd), of CNL, to become acquainted with the general nature of the terrain and to view evidence of deep and extensive previous disturbance caused by construction and operation of the nuclear power plant.

The NPD property today consists of a shutdown nuclear power plant surrounded on the south and east by landscaped terraces where the training centre buildings and parking lots once stood (Figures

14 and 18b). Figure 15a is an oblique aerial view of the plant about 1960 soon after construction was completed, which shows the training centre buildings, the administration building, and considerable soil surface disturbance on the south side of the plant. Historical photographs of NPD under construction (Figures 15b, 15c and 16) clearly show that disturbance throughout the power plant grounds, including the river shore, was deep and extensive. Although most of the disturbed area occurs around the former power plant, there is a small mound of construction fill (from the excavation of the nuclear power plant) about 300 m west along the river road (Figure 5 and 18a). This small dump is on the north side of river road at its junction with the bush road up to the highway. It lies adjacent a former clearing that predates NPD construction (see Figures 9 and 7).

With a total area of approximately 385 ha, NPD property is situated 3 km east of Rolphton and lies mostly on the lower north side of Highway 17, although parts of lots 42 and 43 are on the south side of the highway at the property's height of land (Figures 2 and 5). The terrain has 95 m relief, from about 115 m at the modern waterline, to over 205 m south of the highway (Figure 6). The slopes are steep in most places, although there is an extensive area of lower terrain, consisting of rock knobs and muskeg, in the former Town Plot in the northwest part of NPD. This drainage system rises on the north side of the highway, west of the plant and empties into the Ottawa River near a small sandy point called "Hydro Beach" by local people (Figure 7) because it was frequented by employees of that department. According to local resident Pat Stewart, there are rock stairs down to the shore in this area. There are several small isolated ponds across the property (Figure 20d), including one between the river and the historical clearing along River Road. Although the waterway itself is not part of NPD property, there is an interesting spring-fed pond in the northeast corner of NPD about 150 m inland from the river (Figures 19c and 19d). Some time ago the spring outflow was dredged into a canal that leads to the base of Stewarts Point. In the consultant's experience, sources of year-round potable water beside the main river shore were attractive places to camp in the past. Some 400 m above the springs is another isolated pond, which may have been a similar feature in the Middle Archaic. The wetland terrain in the Town Plot would have been a complex kaleidoscope of islands and channels during the Middle Archaic period. The land on both sides of the entrance road, between the plant and the highway, were active shorelines during the Early Archaic and Late Palaeo-Indian periods. The high terrain south of the highway were shorelines during the Champlain Sea maximum, during the Palaeo-Indian period.

Given the location of NPD on Precambrian bedrock, the Ministry has made special conditions that apply to Pre-Contact archaeological potential evaluations. In most of Ontario, for instance, the terrain within 300 m of *any* feature of archaeological interest, such as a relic shoreline, is considered to have high archaeological potential and would require Stage 2 assessment if there were plans for construction. Assessment normally is carried out at 5 m intervals for the first 300 m and at 10 m intervals thereafter. The special conditions for northern and eastern Ontario recognizes only 150 m of archaeological potential from any area of archaeological interest—and only the first 50 m is considered to have high potential, requiring 5 m interval assessment, while the remainder of 99 m is considered of moderate archaeological potential and can be tested at 10 m intervals.

Given that Pre-Contact archaeological potential is predicted primarily by proximity to water (in particular to major shorelines that provide transportation corridors as well as biodiversity) and, given that every elevation of the NPD property was once an active river shoreline, it is now all one relic shoreline between 200 m and the modern waterline and, therefore, it all has archaeological potential. Nevertheless, there are specific episodes, associated with specific elevations, and times of relative shoreline stasis—sometimes for millennia, sometimes a few centuries or generations—where human activity would have been concentrated and artifacts more likely to be deposited. The Pre-Contact archaeological predictive model for NPD, in (Figure 12), takes these longer-lived shorelines into account and maps them by highlighting the relative contour lines (200, 180, 170, 159, 150, 140, and 130 m above sea level) in distinctive colours (respectively: red, orange, yellow, light green, brown, dark green, dark blue, and light blue). Furthermore, in the NPD model the full 150 m width is considered to have high archaeological potential. In addition, the areas in between each 150 m wide relic shoreline buffer have been given moderate archaeological potential, instead of low potential as the standards allow. According to the NPD model then, there is Pre-Contact archaeological potential everywhere—except where there has been deep and extensive disturbance during construction and operation of the plant. In these respects, the NPD model is more rigorous than the Ministry of Culture standards and guidelines require.

The red and orange shorelines represent the Pleistocene shorelines associated with the maximum extent of Champlain Sea. These Palaeo-Indian age shorelines are on the southern side of Highway 17, on the higher ground. The Ottawa Marquette Low Stand, which occurred at the end of the Palaeo-Indian period, can be found in an apron below the northern, lower, side of Highway 17. The Early Archaic flood event occurred on the south side of Highway 17; while the Early Archaic shoreline at 159 m is a wide band halfway down the hillside. The Middle Archaic shorelines consist of a patchwork of fossil islands on the lower terrain.

As the historical research presented above clearly shows, there were generations of settlers on the NPD property, raising families and constructing buildings. Some of these cultural features may have been eradicated or disturbed by plant construction and operation but undoubtedly many features remain unrecognized. Two historical maps (Figures 8 and 9) have been included which show cultural features and land tenure. Historical archaeological potential is often predicted by a historical atlas that shows the location of buildings within a lot, or by considering the terrain for 100 m on either side of a historical road to have high historical archaeological potential. The map of historical archaeological potential presented here (Figure 13) is based on the proximity to historical roads and it classifies all roads as historical—even parts of modern Highway 17 and Highway 635, for they may have followed the routes of earlier roads.

In conclusion, although the plant itself has nil archaeological potential, there is high archaeological potential widely across the NPD property, for both historical farmstead sites, as well as Pre-Contact sites of every age.

5.0 Recommendations

This assessment was not triggered by any construction plans, so there are no cultural resource management recommendations for the NPD Closure Project. Should any construction be planned in the future, a further Stage 1&2 assessment would be in order.

6.0 Advice on Compliance with Legislation

Standards

1. Advice on compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the standard statements:

    a) This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

    b) It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological reports referred to in Section 65.1 of the *Ontario Heritage Act*.

    c) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.

    d) The *Cemeteries Act,* R.S.O. 1990 c.C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002,c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Small Business and Consumer Services.

2. Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following standard statement: “Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section

48(1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence."

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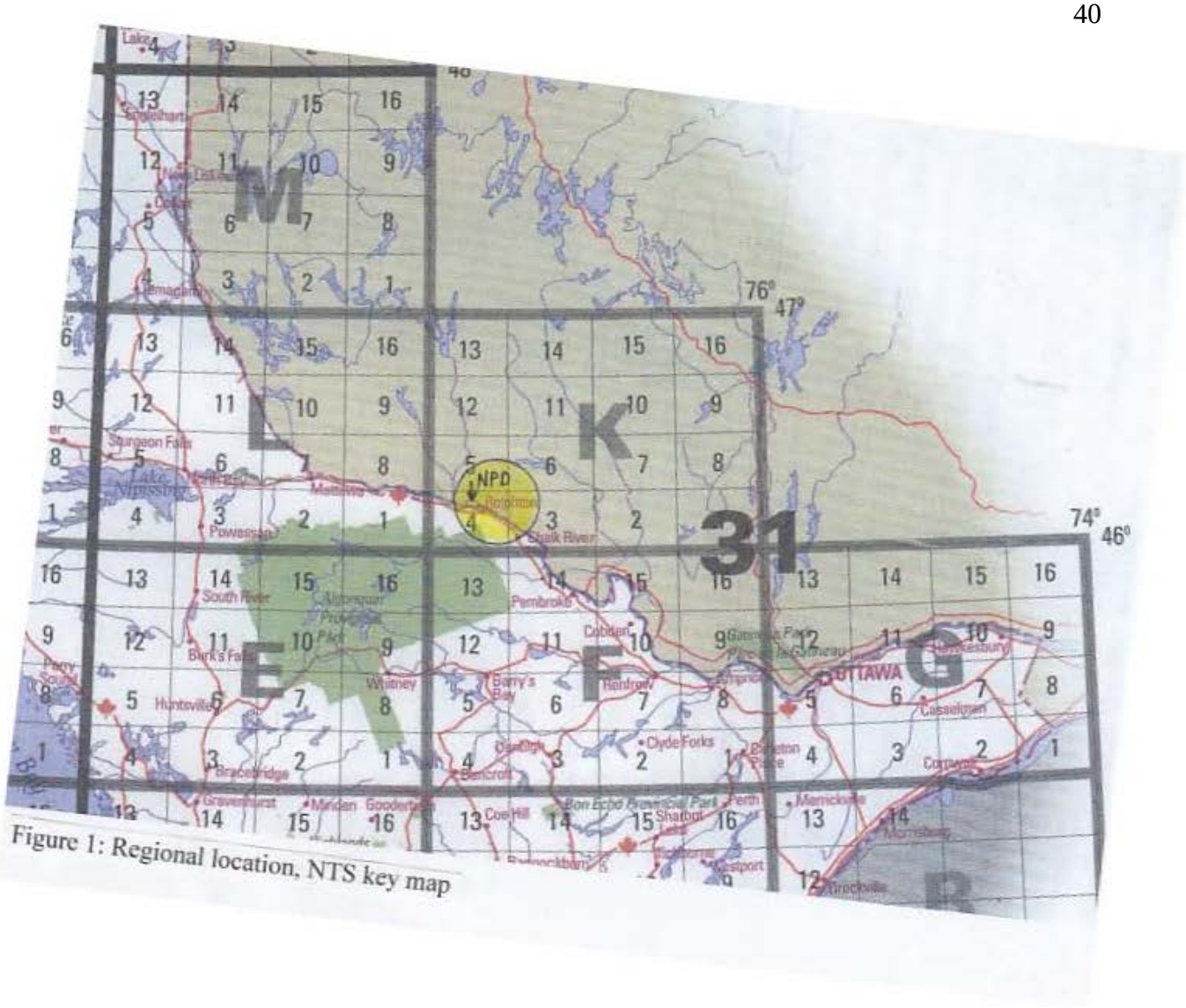


Figure 1: Regional location, NTS key map

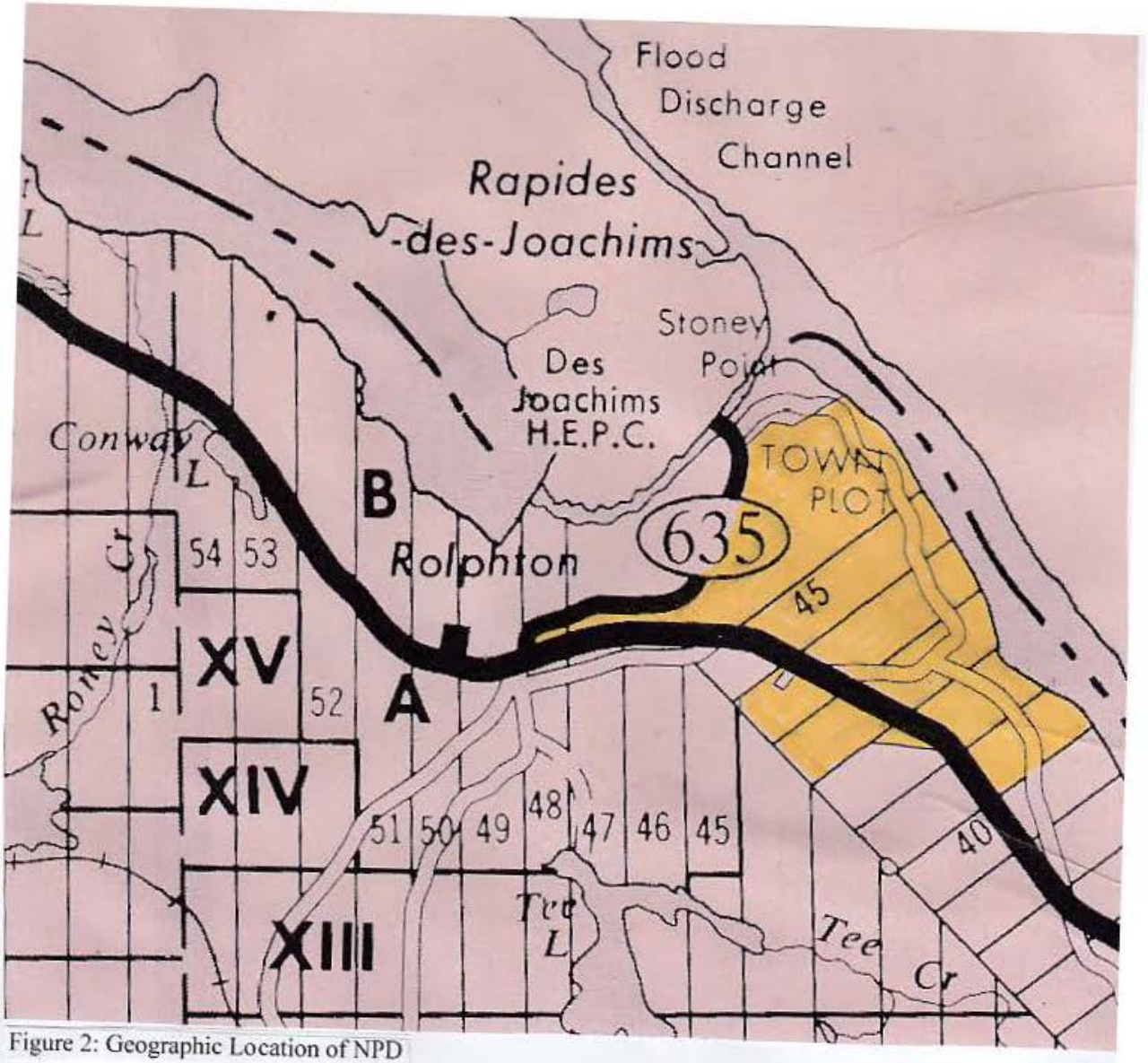


Figure 2: Geographic Location of NPD

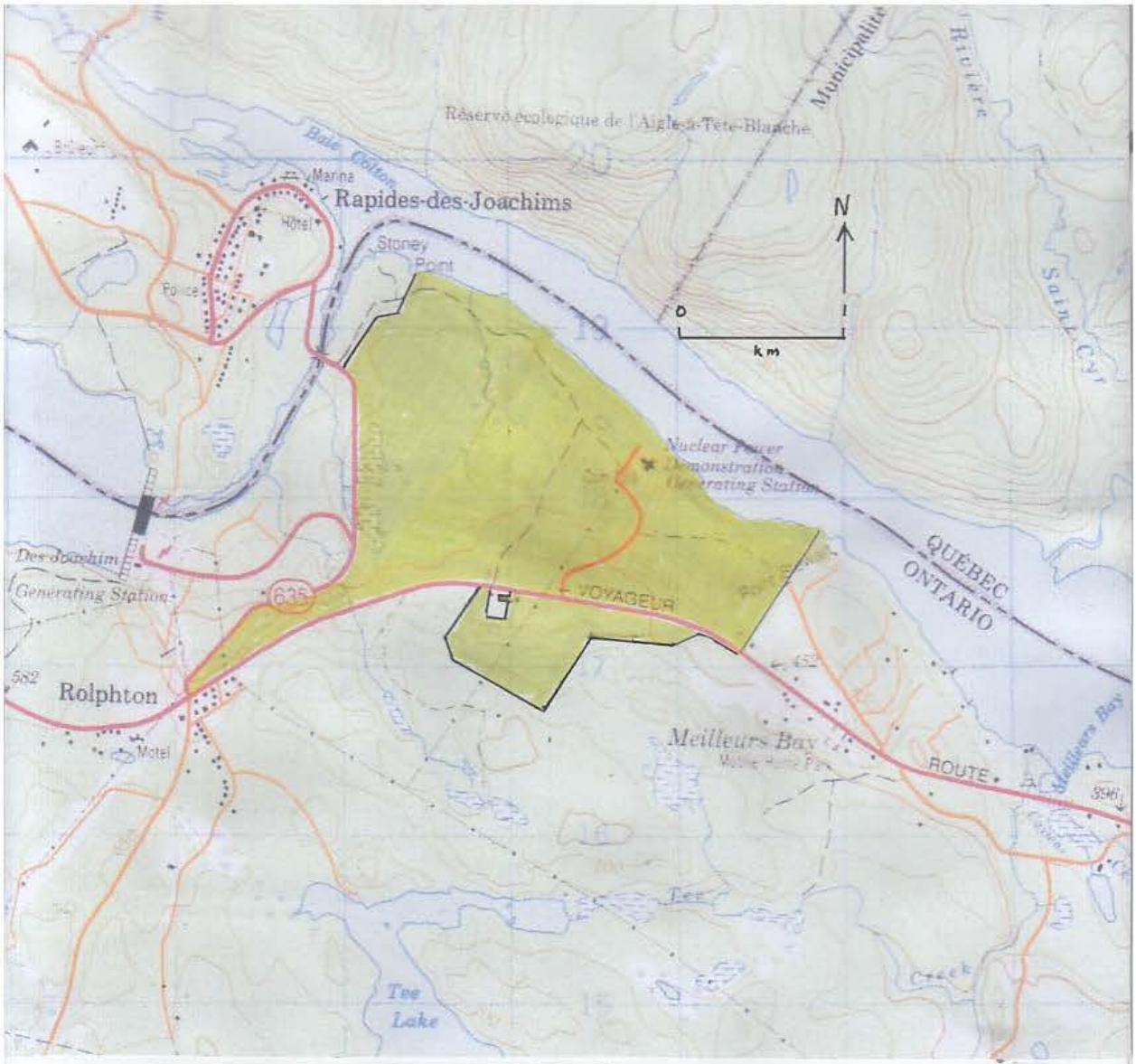


Figure 3: Topographic map of NPD and vicinity

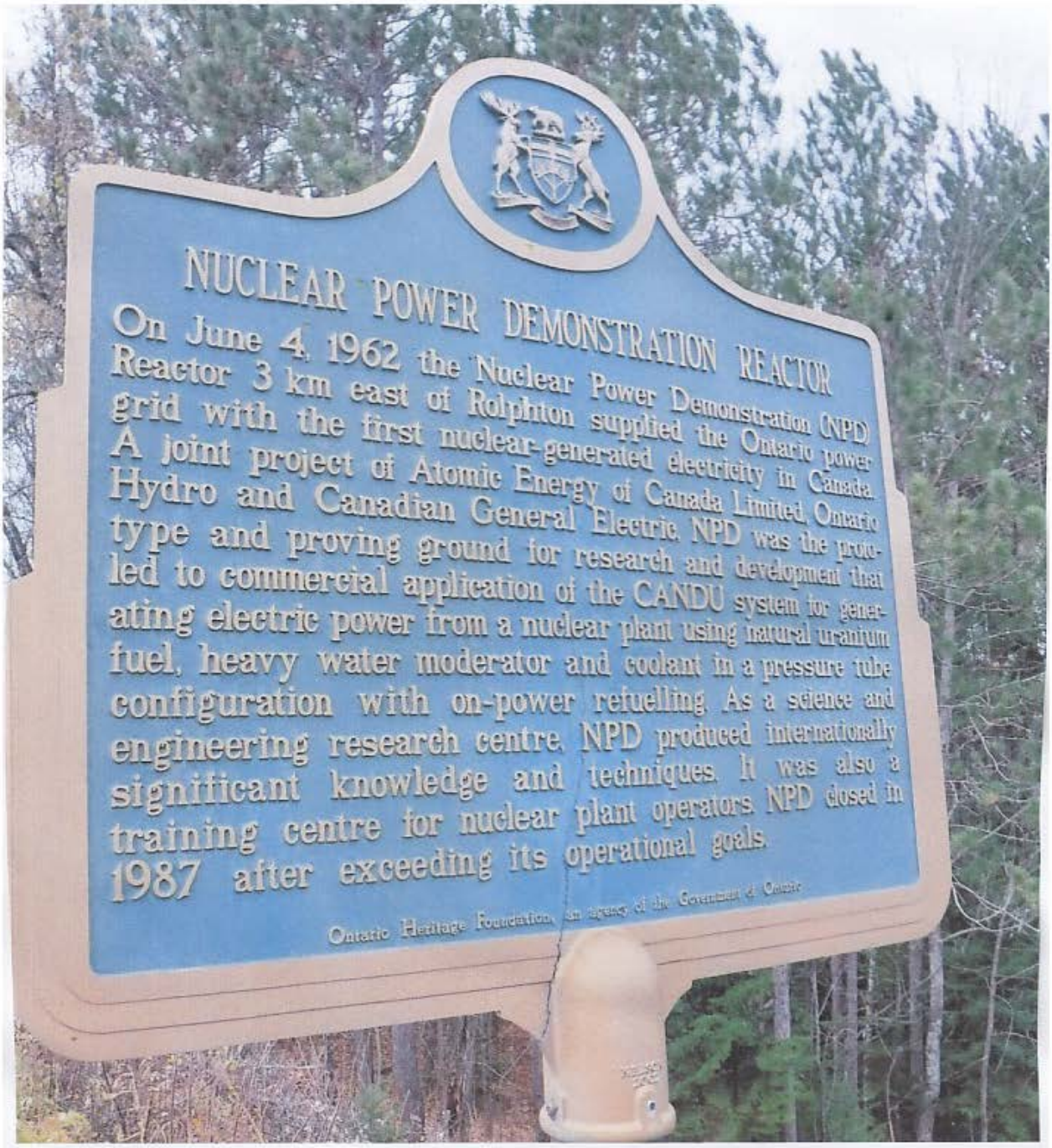
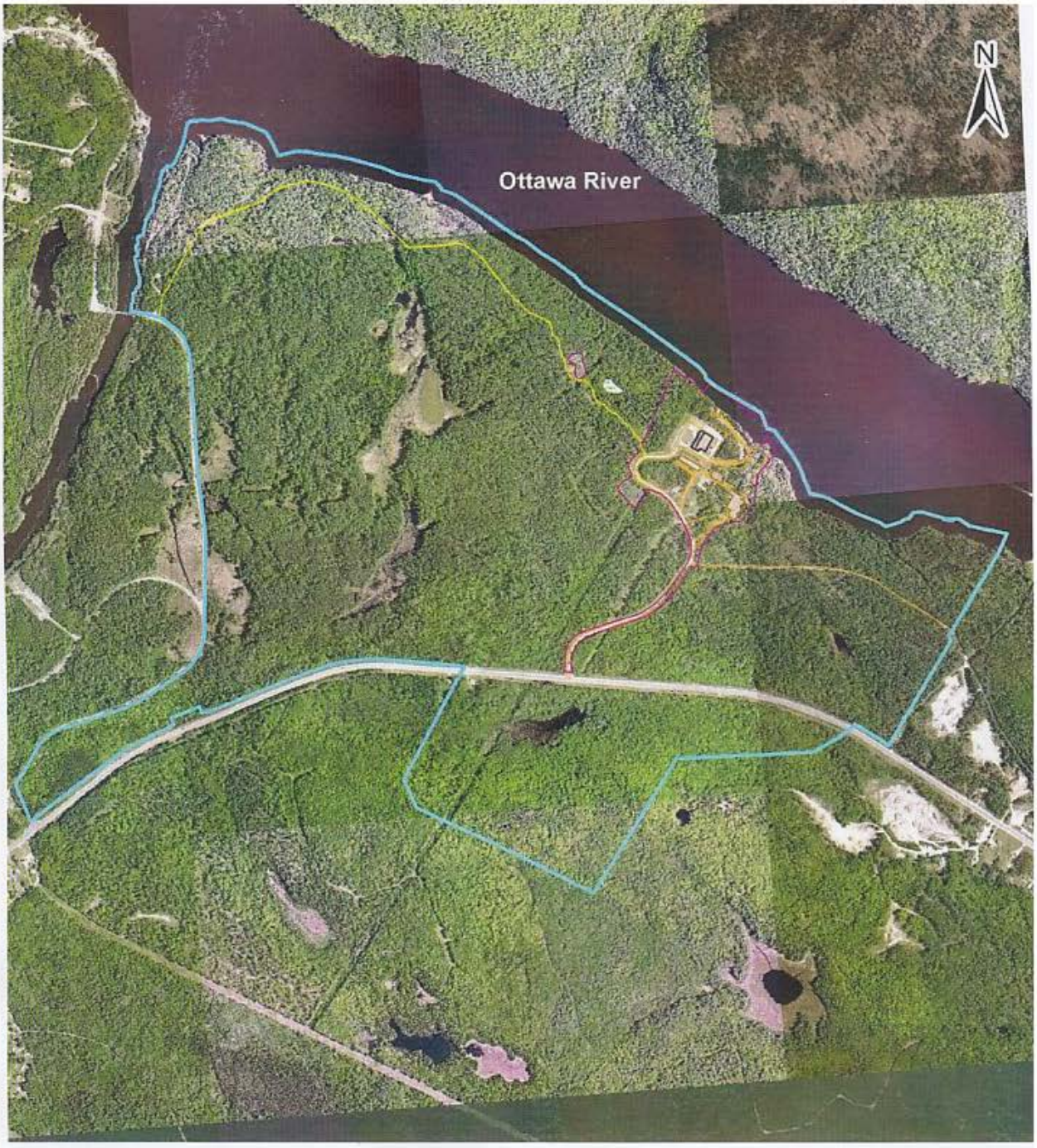


Figure 4: Photograph of the NPD historical plaque near Rolphton



Legend

Guardhouse
Pumphouse
Parking
Wetland
Road
Trail
Site Study Area
Landfill
Local Study Area
NPD

0 150 300 600 Meters

Local Study Area

ARCADIS

August, 2016

351240-000

Figure 5: Modern aerial view of NPD

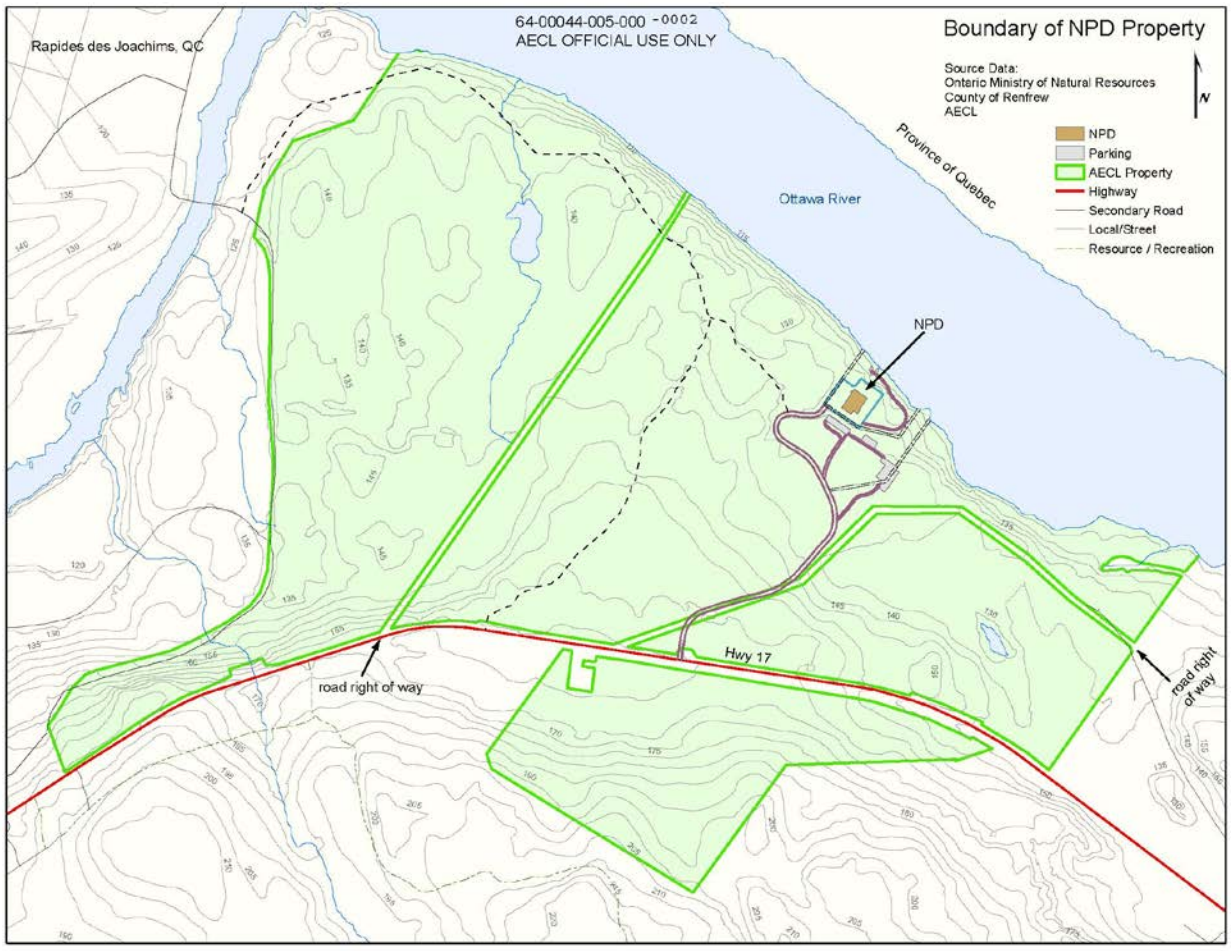


Figure 6: Topographic map of NPD 5 m contour interval

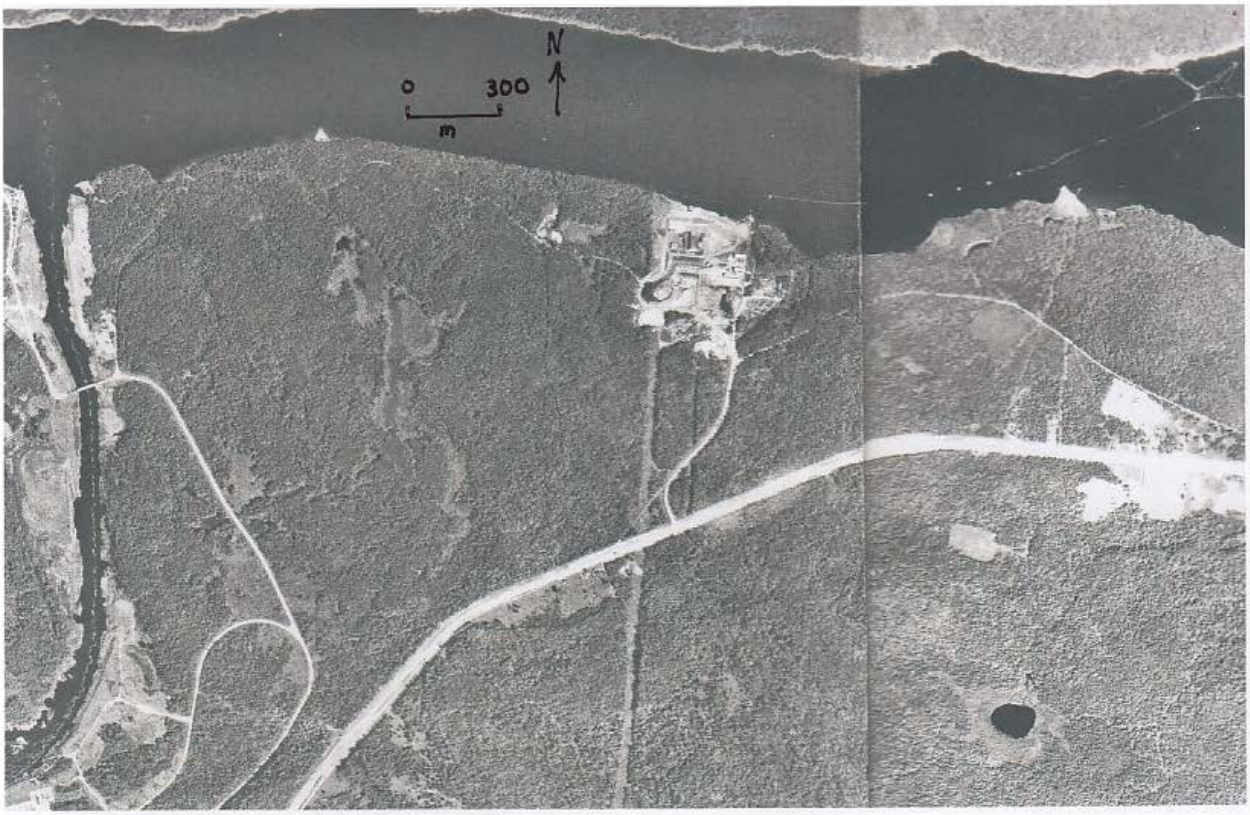


Figure 7: Aerial photograph A18235-91 to 93 August 15 1946

Figure 8: Historical map showing land tenure about 1952

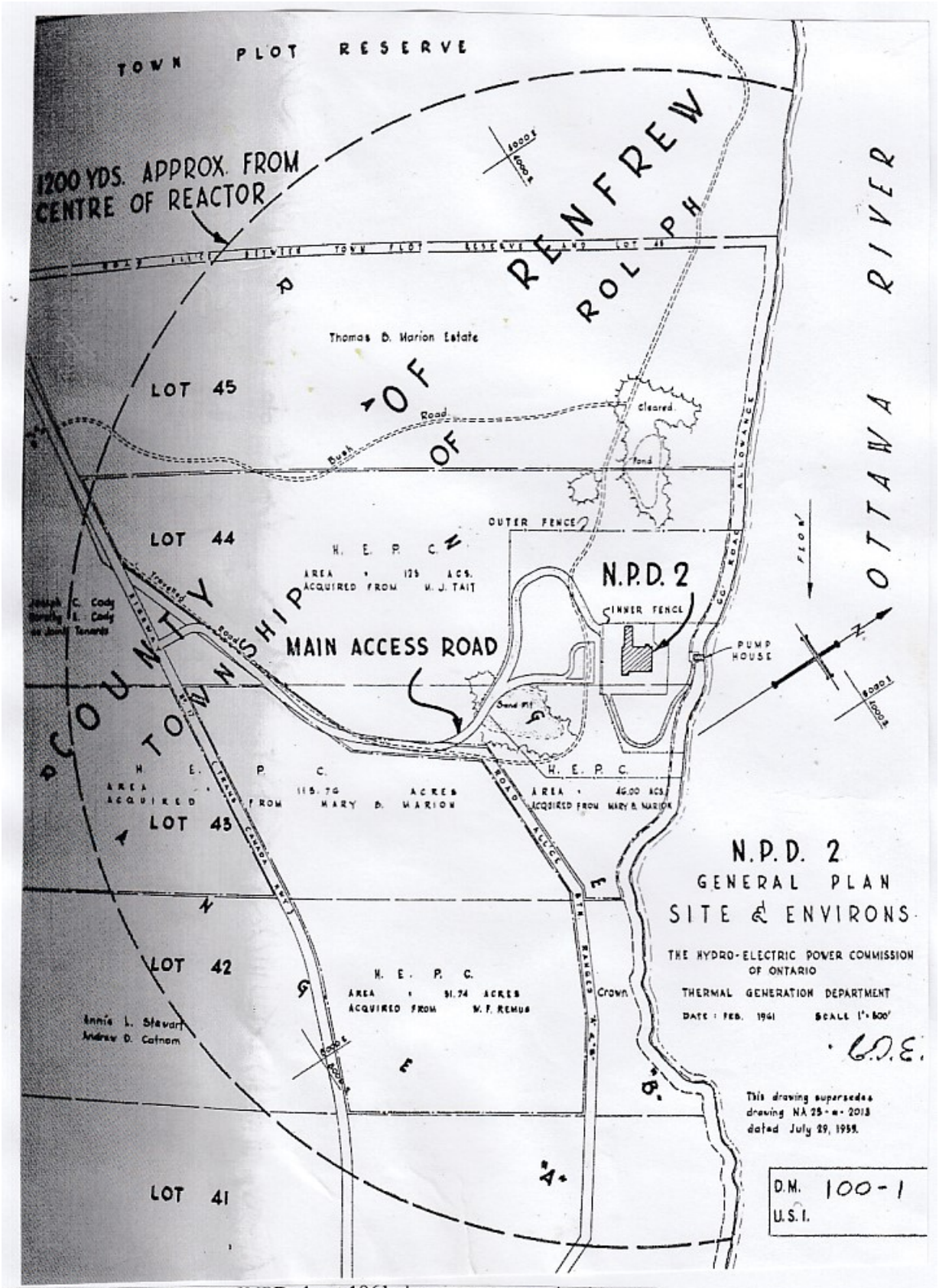


Figure 9: Historical map of NPD about 1961 showing previous land tenure

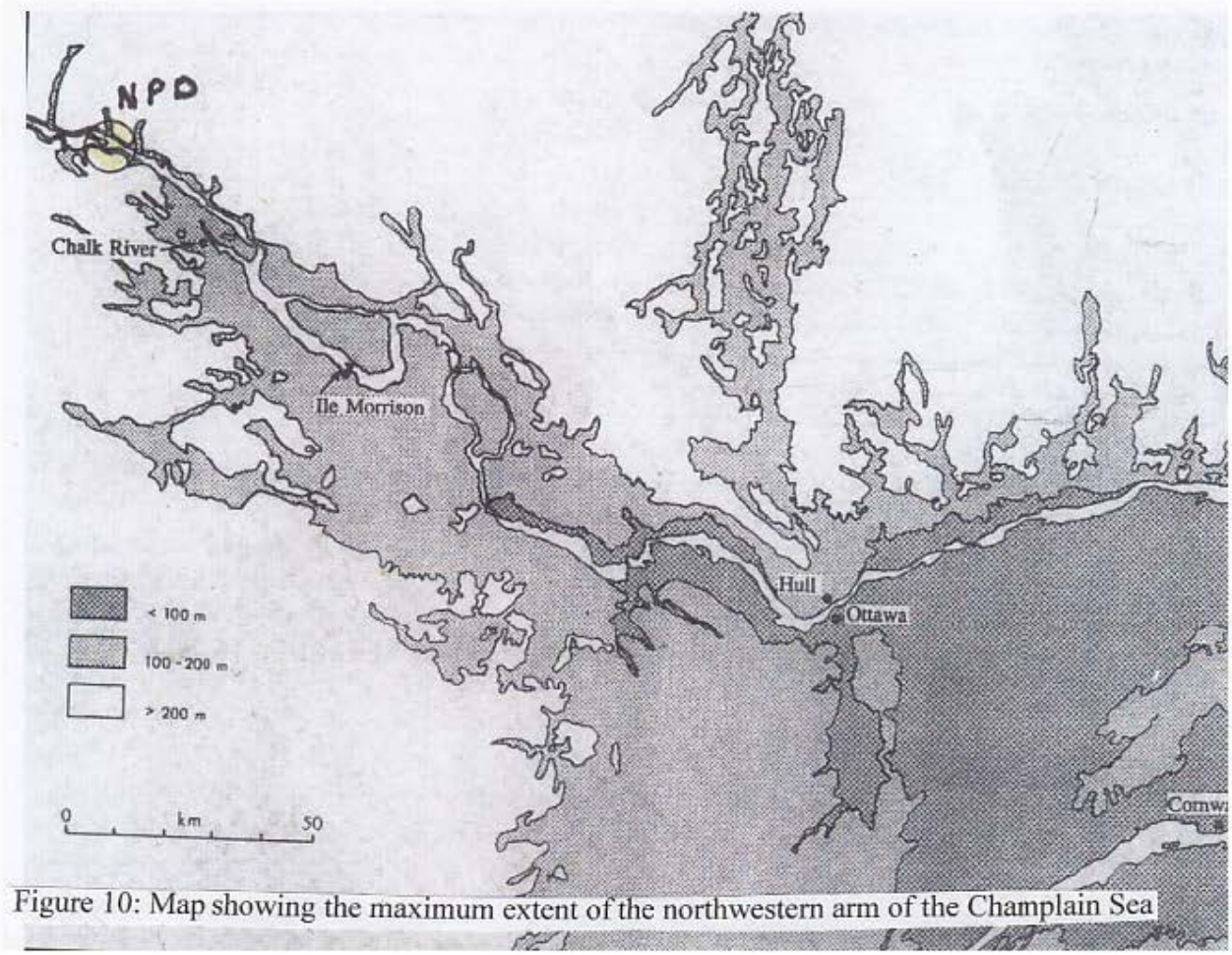


Figure 10: Map showing the maximum extent of the northwestern arm of the Champlain Sea

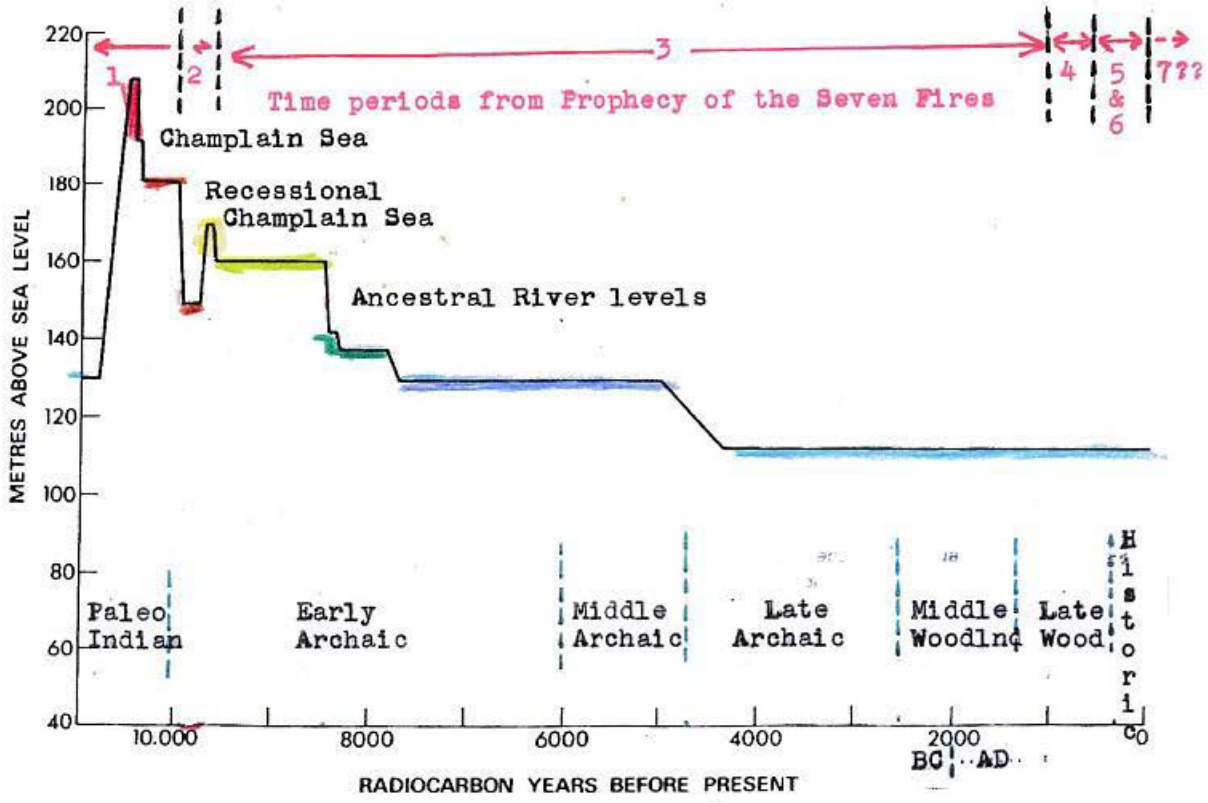


Figure 11: Graph of former river levels over time

LEGEND

- Red, 200 m+, high archaeological potential; Champlain Sea Maximum, Palaeo-Indian; 10,800 B.P., First Fire,
- Red & Orange Stripes, moderate archaeological potential, Champlain Sea maximum, Palaeo-Indian, First Fire
- Orange, 180 m+ high archaeological potential, Champlain Sea maximum, Palae-Indian, 10, 10,500 B.P., First Fire
- Orange & Yellow Stripes, moderate archaeological potential. Palaeo-Indian, 10,000 B.P., Champlain Sea Maximum
- Yellow, 170 m+ high archaeological potential, Early Mattawa Flood, 9,600 B.P Early Archaic, Second Fire
- Yellow & Light Green Strines, moderate archaeological potential, Early Mattawa Flood, Second Fire
- Light Green, 159 m+, high archaeological potential, Early, Mattawa Base Flow, Early Archaic, 9,500 B.P., Third Fire
- Light Green & Brown Stripes, moderate archaeological potential, Mattawa Base Flow, Early Archaic, Third Fire

LEGEND

- Brown, 150 m+, Ottawa-Marquette Low Stand, high archaeological potential, Palaeo-Indian, 10,100 B.P., Second Fire
- Brown & Dark Green Stripes, moderate archaeological potential, Mattawa Base Flow, Early Archaic
- Dark Green 140 m+, high archaeological potential, Middle Archaic, 8,500 B.P., Third Fire
- Dark Green & Dark Blue Stripes, moderate archaeological potential, Mattawa Base Flow, Third Fire
- Dark Blue, 130 m+, high archaeological potential, Middle Archaic, 8,000-4,700 B.P., Third Fire
- Dark Blue & Light Blue Stripes, moderate archaeological potential, Middle Archaic, Mattawa Base Flow, Third Fire
- Light Blue, high archaeological potential, Late Archaic, Woodland, Historical, 4,700 B.P to 1960, Fourth, Fifth & Sixth Fires
- Black, nil archaeological potential due to previous, extensive, disturbance.

Figure 12: Map of Pre-Contact archaeological potential at NPD

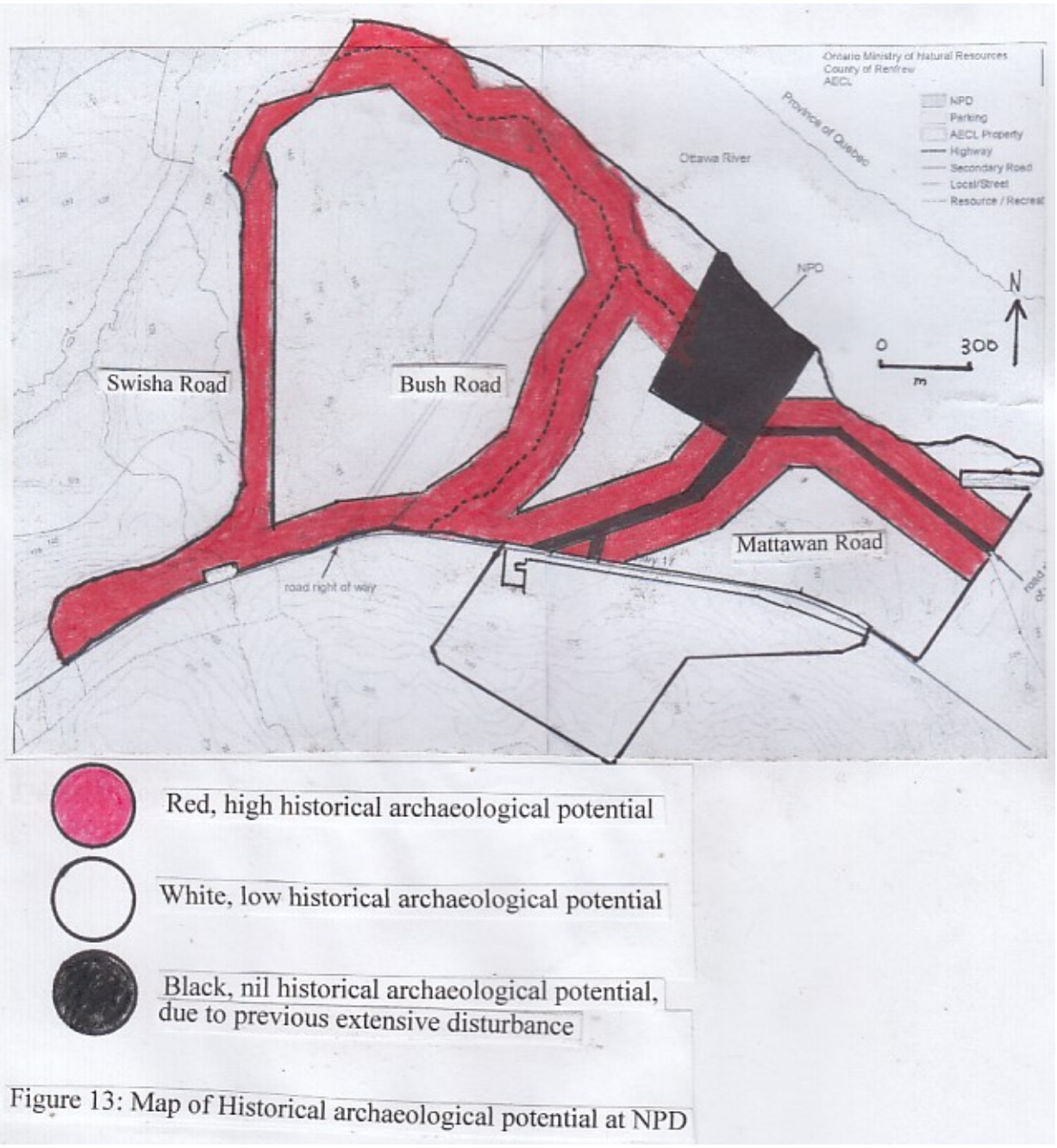


Figure 13: Map of Historical archaeological potential at NPD

Figure 14a: Looking east down river to Point Stewart and Boom Camp

Figure 14b: Looking west over NPD

Figure 14: Modern low oblique aerial photographs of NPD

Figure 15a: Looking southeast over NPD shortly after construction

igure 15b: Looking northeast at the excavation

Figure 15c: Looking north at the excavation

igure 15: Historical Photographs of NPD

Figure 16a: Looking east over the construction

Figure 16b: Looking west over NPD under construction

Figure 16: Historical aerial oblique views of NPD under construction

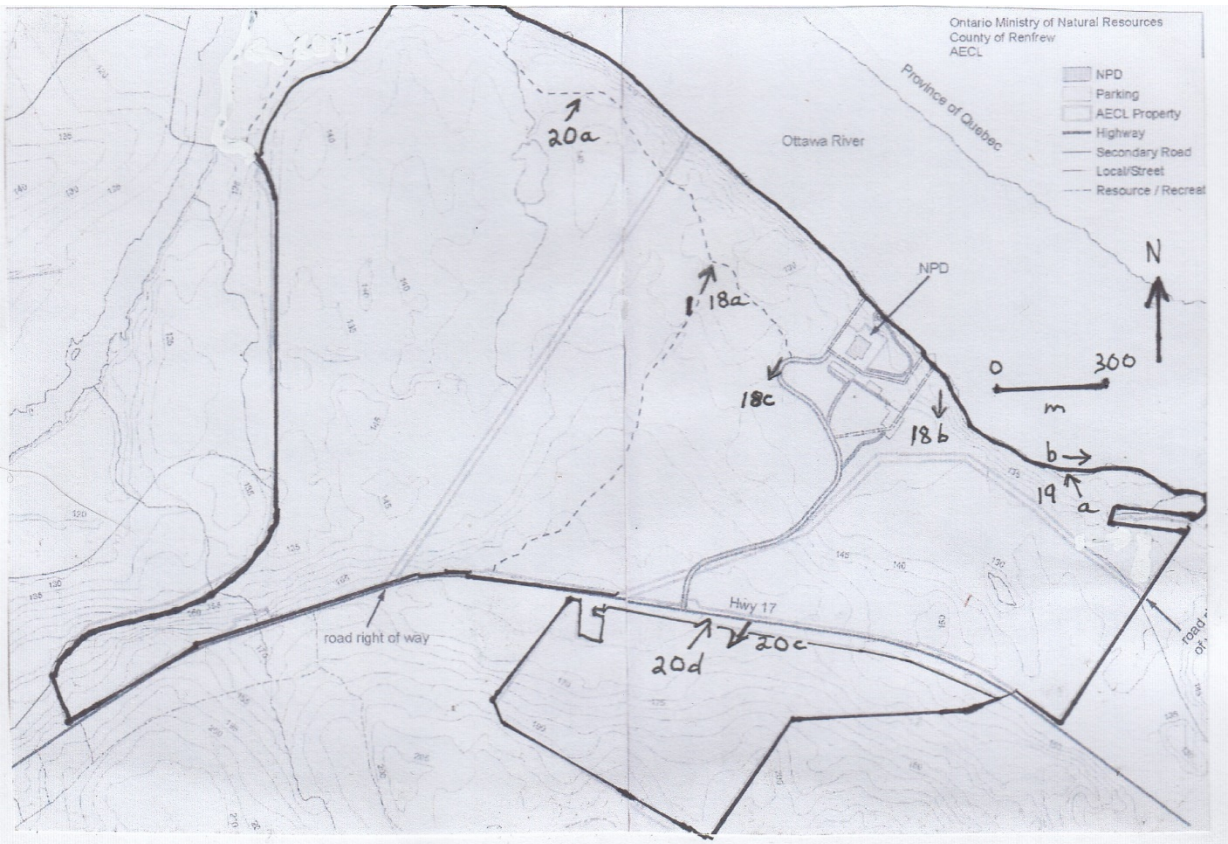


Figure 17: Map showing photograph locations and directions

Figure 18a: Looking north at isolated contaminated area, with nil archaeological potential

Figure 18b: Looking southeast over area of former training facilities

Figure 18c: View of a reforested landfill on the southwest edge of the plant

Figure 18: Photographs of NPD, November 9 2016

Figure 19a: Looking west up the river from a historical landing on lot 41

Figure 19b: Looking east down river at Point Stewart

Figure 19: Photographs of NPD, November 9 2016

Figure 20a: An active eagle nest overlooking the river, lot 44

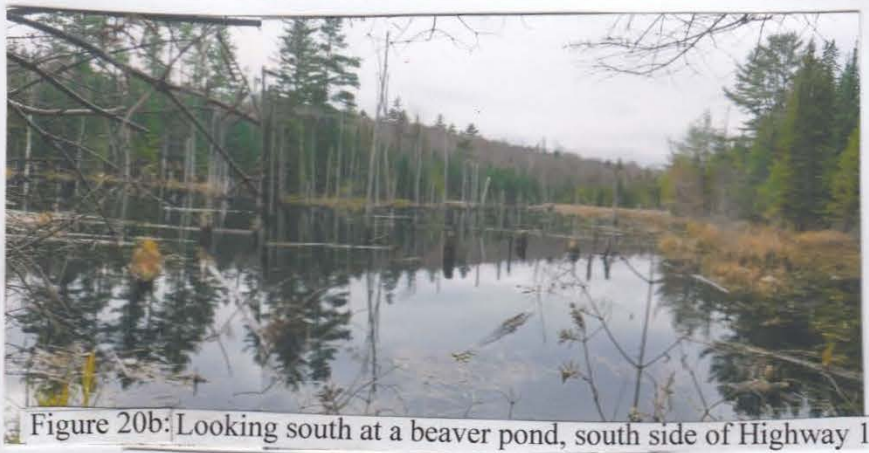


Figure 20b: Looking south at a beaver pond, south side of Highway 17

Figure 20e: Looking north down low voltage transmission line corridor

Figure 20: Photographs of NPD, November 9 2016