

**The 2011 Stage 1-2 Archaeological Assessment  
of the Proposed  
Removal of Crooks' Hollow Dam,  
City of Hamilton,  
Regional Municipality of Hamilton,  
Ontario**

Submitted to

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### Acknowledgments

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- **Hazel Breton**, P.Eng., Manager, Water Resources Engineering, Watershed Planning & Engineering, Hamilton Conservation Authority;
- **Patrick Ragaz**, P.Eng., Water Resources Engineer, Water Resources Engineering, Watershed Planning & Engineering, Hamilton Conservation Authority;
- **Paul Holmes**, P.Eng., Environmental Coordinator, Hatch Ltd.;
- **Chris Andreae**, Associate, Senior Built Heritage Specialist, Golder Associates Ltd.;
- **Meaghan Nelligan-Rivard**, Associate, Senior Built Heritage Specialist, Golder Associates Ltd.;

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- **Robert von Bitter**, Archaeological Data Coordinator, Culture Services Unit, Ministry of Tourism and Culture; and
- **Katherine Cappella**, Archaeological Review Officer, Culture Programs Unit, Ministry of Tourism and Culture.
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## **Executive Summary**

Hatch Ltd. has been contracted by the Hamilton Conservation Authority to provide engineering services for the proposed removal of Crooks' Hollow Dam. The dam is located on Spencer Creek southwest of the village of Greensville, in the City of Hamilton. It is situated in the southern third of Lot 8, Concession 2, West Flamborough Geographic Township.

As detailed on pages 1-2 of this report, on March 22, 2011 Paul Holmes, Environmental Coordinator, Hatch Ltd., sent an e-mail to Katherine Cappella of the Ontario Ministry of Tourism and Culture. She is an Archaeological Review Officer of the Culture Programs Unit of the Ministry. On March 25, 2011 a telephone conversation was held between Paul Holmes and Katherine Cappella. She followed up on the conversation with a letter of March 28, 2011 to Mr. Holmes. In the letter, she stated that the lands involved in the proposed removal of Crooks' Hollow Dam had archaeological potential and warranted an archaeological assessment.

As stated on page 2 of this report, in the spring of 2011 the Hamilton Conservation Authority contracted D.R. Poulton & Associates Inc. to conduct a Stage 1 archaeological background study and Stage 2 survey of the proposed removal of Crooks' Hollow Dam. The assessment was conducted during the planning stages of the proposed removal of Crooks' Hollow Dam. The present report details the rationale, methods and results of the Stage 1-2 archaeological assessment. A separate heritage impact statement of built heritage and cultural heritage landscapes for the proposed removal of Crooks' Hollow Dam has been conducted by Golder Associates Ltd. (2011).

As detailed in Section 1.3 of this report (pages 10-12), the Stage 1 background study determined that no past archaeological investigations had been carried out within the lands that will be subject to impact from the proposed removal of Crooks' Hollow Dam and that no archaeological sites had been recorded within the subject lands or in close proximity to them. In consequence, possible archaeological planning concerns for the proposed undertaking were limited to the potential for as-yet undiscovered archaeological remains, including any remains that may relate to 19<sup>th</sup> century mills.

As detailed in Section 2.0 of the report (page 14), approximately 75% of the subject lands could not be test pitted due to the presence of the stream course, the presence of bedrock, poor drainage and past construction impacts. The remaining 25% was surveyed by judgemental test pitting down to the underlying bedrock, inundated level or the occasional subsoil deposit. The assessment did make note of the structural remains of the 19<sup>th</sup> century Morden Mill Dam and the 20<sup>th</sup> century Crooks' Hollow Dam. However, no archaeological remains were discovered during the course of the survey.

As previously stated, a separate heritage impact statement of built heritage and cultural heritage landscapes for the proposed removal of Crooks' Hollow Dam has been conducted by Golder Associates Ltd. (2011). It includes a series of recommendations. One is that prior to the demolition and re-naturalization of the valley a plan should be developed that identifies culturally significant features that should be avoided during the project. A related recommendation is that the demolition be monitored by a person qualified to document the construction details of the dam (Golder 2011: Section 6.1, page 38).

Further to the above, and as discussed on page 17 of this report, the Heritage Impact Statement that was prepared by Golder recommends that as much as possible of the waterworks dam should be

retained (Golder 2011: Section 6.2.2, page 38). In addition, it recommends that a Crooks Hollow Conservation Area Master Plan be developed that includes, among other things, a new pedestrian bridge and a Mills Ruins Conservation Plan (Golder 2011: Section 6.3, pages 39).

Under the *Ontario Heritage Act* (1990a), it is a requirement of archaeological consulting licences that consultants prepare and submit assessment reports to the Ontario Ministry of Tourism and Culture. Archaeological Review Officers of the Ministry then review each report to ensure that the assessment and the report satisfy consulting licence requirements under the Act and other pertinent legislation, and that they conform to current archaeological standards and guidelines. If the report and the assessment do so conform, the pertinent Archaeological Review Officer then issues a letter confirming that and accepting the report into the Provincial registry of archaeological reports.

Further to the above, it is the finding of the archaeological assessment that the implementation of the recommendations presented in the heritage impact statement by Golder would satisfy any potential concerns for heritage resources that might be raised by the proposed removal of Crooks' Hollow Dam (c.f. page 17 of this report). It is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Ontario Provincial Register of Archaeological Reports. It is also recommended that the Ministry's letter include a statement of concurrence with the findings of this report.

Furthermore, it is recommended that this report be reviewed as a companion piece to the Heritage Impact Statement that was prepared by Golder Associates Ltd., as the two reports address separate but equal aspects of the overall cultural heritage of Crooks' Hollow Dam and vicinity. Finally, it is requested that a copy of the letter be forwarded to Hazel Breton, Manager, Water Resources Engineering, Watershed Planning & Engineering, Hamilton Conservation Authority. Her e-mail address is [hbretton@conservationhamilton.ca](mailto:hbretton@conservationhamilton.ca).

## **1.0 PROJECT CONTEXT**

The 1993 technical guidelines for archaeological assessment formulated by the Ontario Ministry of Culture, Tourism and Recreation (now the Ministry of Tourism and Culture) (MCTR 1993) define four sequential stages in an archaeological assessment. The same applies to the new standards and guidelines formulated by the Ministry of Tourism and Culture (2011), which came into effect on January 1, 2011. Stage 1 consists of background research to identify any past archaeological investigations or known sites. The background study also identifies the potential for as-yet undiscovered sites. Stage 2 consists of a field survey to confirm the presence or absence of archaeological sites. Stage 3 consists of a more detailed assessment of any sites that are of demonstrable or potential significance as heritage resources and planning concerns. Finally, Stage 4 consists of the mitigation of significant sites by preservation and avoidance or by the implementation of salvage excavations.

Section 7.2.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 115) states the following standard with respect to the reporting requirements for archaeological assessments: "The final report must be filed in the form and manner as specified by the ministry in Section 7.5." Section 7.5.1 of the standards and guidelines (Ministry of Tourism and Culture (2011: 121) further states the following standard with respect to the reporting requirements for archaeological assessments: "All project reports must contain the sections listed in the first column of Table 7.1." The present report conforms in all respects to the reporting requirements of the 2011 standards and guidelines.

Section 7.5.5 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 124) requires that the Project Context section of each report includes the context for the archaeological investigations and that it cover three main areas: development context; historical context; and archaeological context. They are covered in the three subsections of this section of the report that are presented below.

### **1.1 Development Context**

The information contained in this section of the report is being presented to satisfy the standards that are set out in Section 7.5.6.1, 7.5.6.2 and 7.5.6.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 124-125).

Hatch Ltd. has been contracted by the Hamilton Conservation Authority to provide engineering services for the proposed removal of Crooks' Hollow Dam. The dam is located on Spencer Creek southwest of the village of Greensville, in the City of Hamilton. It is situated in the southern third of Lot 8, Concession 2, West Flamborough Geographic Township.

On March 22, 2011 Paul Holmes, Environmental Coordinator, Hatch Ltd., sent an e-mail to Katherine Cappella of the Ontario Ministry of Tourism and Culture. She is an Archaeological Review Officer of the Culture Programs Unit of the Ministry. On March 25, 2011 a telephone conversation was held between Paul Holmes and Katherine Cappella. She followed up on the conversation with a letter of March 28, 2011 to Mr. Holmes. In the letter, she stated that the lands



involved in the proposed removal of Crooks' Hollow Dam had archaeological potential and warranted an archaeological assessment.

In the spring of 2011 the Hamilton Conservation Authority contracted D.R. Poulton & Associates Inc. to conduct a Stage 1 archaeological background study and Stage 2 survey of the proposed removal of Crooks' Hollow Dam. The archaeological assessment was conducted to satisfy the requirement of Katherine Cappella's letter of March 28, 2011 to Paul Holmes. The assessment was conducted during the planning stages of the proposed removal of Crooks' Hollow Dam. The present report details the rationale, methods and results of the Stage 1-2 archaeological assessment. The information contained above is being presented to satisfy the standards that are set out in Section 7.5.6.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 124).

The Stage 2 survey of the proposed removal of Crooks' Hollow Dam was conducted on May 2, 2011. The standard concerning permission for access that is specified in the standards and guidelines is as follows: "Provide statements that the landowner or landowner's representative (e.g. planner, engineer, lawyer) gave permission for the licensee to access the property to conduct all required archaeological fieldwork activities, including the recovery of artifacts, and state any limits placed on access (e.g. time limits, refusal of access to portions of property)" (Ministry of Tourism and Culture 2011, Section 7.5.6.3, pages 125). In the present case, the lands that are involved in the survey of the proposed removal of Crooks' Hollow Dam are owned by the Hamilton Conservation Authority. Permission for access to the lands in question was granted by the Hamilton Conservation Authority.

Figure 1 illustrates the location of Crooks' Hollow Dam. The aerial photograph that is illustrated as Figure 2 shows the location of the dam and the reservoir during a high water level when the reservoir was full; this figure also shows the locations of two other dams that are located upstream on Spencer Creek. Figure 3 shows the water levels in the Spencer Creek Valley that were current at the time the May 2, 2011 archaeological survey of the proposed removal of Crooks' Hollow Dam was conducted.

The Ontario Ministry of Tourism and Culture designated the assessment as PIF #P316-118-2011. The assessment was conducted under Archaeological Consulting Licence #P316, issued by the Province of Ontario to Sherri Pearce of D.R. Poulton & Associates Inc. It was carried out in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario RSO 1990a), the *Environmental Assessment Act* (Government of Ontario 1990b), and with the technical standards and guidelines for archaeological assessment formulated by the Ontario Ministry of Tourism and Culture (2011). The assessment is also consistent with the requirements for archaeological resource assessment that are set out in the municipal archaeological master plan of the City of Hamilton.

Further to the above, the assessment was also conducted in accordance with the 2005 Provincial Policy Statement 2.6.2, which has provisions for the conservation of archaeological resources, a definition of the same, and provisions for archaeological assessments. Finally, it was conducted in accordance with the Ontario Ministry of Culture's 2006 Heritage Tool Kit, most particularly with respect to Infosheet #3 and Infosheet #6; they detail provisions for the conservation of archaeological resources and provisions for heritage impact statements, respectively.

The records pertaining to this project are currently housed in the corporate offices of D.R. Poulton & Associates Inc. If the opportunity permits, however, the project archive will be transferred to a suitable long term repository. Potential repositories include local or other museums and the storage facilities maintained by the Toronto office of the Ontario Ministry of Tourism and Culture.

## **1.2 Historical Context**

Under the current standards and guidelines, a required standard for the Historical Context section of a report is that it must include a statement concerning the rationale for fieldwork strategy (Ministry of Tourism and Culture 2011: Section 7.5.7.2, page 125). In the present case, the valley lands in question are non-arable. In consequence, the field-based assessment was conducted by systematic shovel test pitting and a visual examination. The purpose was to confirm the presence or absence of archaeological remains and, if archaeological remains were determined to be present, to determine if they showed heritage value as defined in Table 3.2 of the standards and guidelines (Ministry of Tourism and Culture 2011: 60-61).

This section of the report also provides the historic context for the Euro-Canadian settlement of the area of the proposed removal of Crooks' Hollow Dam, as required by Section 7.5.7.1 of the standards and guidelines (Ministry of Tourism and Culture 2011: 125). In the interest of context, brief summaries are included on the major environmental changes through time, and on the characteristics of settlement and subsistence patterns for the relevant time periods and cultures represented in the history of the area. For reference purposes, a cultural chronology of the region is presented in Table 1.

### **The Paleo-Indian Period (9500-7900 B.C.)**

The first known human occupation of the province took place ca. 9500 B.C., following the retreat of the Wisconsin glacier. During this period, the environment in southern Ontario was characterized by a cool climate. The vegetation, in transition from spruce to pine dominated forests, would have resembled the modern sub-arctic.

The initial occupation of southern Ontario by Paleo-Indian peoples took place toward the end of a period of high water levels in the Great Lakes, including Lake Algonquin in the Lake Huron Basin, early Lake Erie to the south and Lake Iroquois in the Lake Ontario Basin to the east. Based on radiocarbon dates, Lake Iroquois averages 12,000 years old. It drained south through the Mohawk and Hudson valleys to the Atlantic Ocean. Water levels in Lake Iroquois were higher than in the present Lake Ontario. Over time, the retreat of glaciers and isostatic rebound led to the opening of the North Bay outlet ca. 8500-8000 B.C., draining Lake Algonquin and the other great lakes eastward. The resulting low water levels created Lake Stanley in the Lake Huron Basin, Lake Hough in the Georgian Bay Basin, what were in effect a series of large ponds in the Lake Erie Basin and lower than current water levels in the Lake Ontario Basin.

Paleo-Indian sites in the Great Lakes region are presumed to relate to a focal adaptation based primarily upon the communal hunting of seasonally migrating herds of woodland caribou. In general, favourite Paleo-Indian site locations include areas adjacent to glacial spillways and

kettle lakes, often near present-day swamps on loam soils proximal to muck soils representing the margins of relic pro-glacial or post-glacial lakes. The most diagnostic Paleo-Indian artifacts consist of various types of Early Paleo-Indian fluted projectile points (ca. 9500 - 8500 B.C.) and of projectile points of the Late Paleo-Indian Hi-Lo type (ca. 8300 - 7900 B.C.).

**Table 1 Cultural Chronology for Southwestern Ontario**

PERIOD	GROUP	TIME RANGE	COMMENT
<b>PALEO-INDIAN</b>	Fluted Point Hi-Lo	9500 - 8500 B.C. 8300 - 7900 B.C.	Big game hunters; small nomadic groups
<b>ARCHAIC</b>			
Early	Side Notched	8050-7750 B.C.	Nomadic hunters and gatherers.
	Nettling	7900-6900 B.C.	
	Bifurcate Base	6800 - 6000 B.C.	
Middle	Laurentian	3500 - 2500 B.C.	Transition to territorial settlements.
Late	Lamoka	2500 - 1800 B.C.	Polished/ground stone tools
	Broad Point	1800 - 1400 B.C.	
	Crawford Knoll	1500 – 500 B.C.	
	Glacial Kame	ca. 1000 B.C.	Burial ceremonialism
<b>WOODLAND</b>			
Early	Meadowood	1000 - 400 B.C.	Introduction of pottery
	Red Ochre	1000 – 500 B.C.	
Middle	Saugeen	400 B.C. - 500 A.D.	Long distance trade networks. Incipient horticulture
	Princess Point	500 – 800 A.D.	
Late: Iroquoian	Glen Meyer	800 – 1280 A.D.	Transition to village life and agriculture
	Uren	1280 - 1330 A.D.	Large village sites
	Middleport	1330 - 1400 A.D.	Widespread stylistic horizon
	Neutral	1400 - 1650 A.D.	Tribal differentiation and warfare
<b>HISTORIC</b>			
Early	Odawa, Ojibwa, Potawatomi	1700 - 1800 A.D.	Social displacement
Late	Odawa, Ojibwa, Potawatomi, Delaware, Six Nations, Euro-Canadian	1800 A.D. - present	European settlement

The Paleo-Indian period was characterized by gradually warming temperatures and by the northward migration of modern flora and fauna that were established throughout their current range by around 4000 B.C. Water levels continued to rise throughout this period, but in the earlier millennia vast areas in the Lake Erie, Lake Huron and Lake Ontario basins were dry and habitable. Indeed, research suggests that these lake plains would have represented the richest environment for prehistoric hunters and gatherers in the entire Lower Great Lakes region, and that they probably contained a wealth of early Camps and other archaeological resources that were later flooded. To date, a number of sites of the Paleo-Indian period have been discovered in the City of Hamilton. They include both Early Paleo-Indian and Late Paleo-Indian sites.

### **The Archaic Period (7700-1000 B.C.)**

Archaeologists divide the Archaic Period into three sequential sub-periods: the Early Archaic (ca. 7700 to 6000 B.C.), the Middle Archaic (ca. 3500 to 2500 B.C.) and the Late Archaic (ca. 2500 to 1000 B.C.). Sites of the Archaic period are common in the City of Hamilton.

In general, settlement and subsistence patterns of the Archaic Period are characterized by small camps and scattered findspots related to a seasonal round of hunting, fishing and the gathering of wild plant foods. A significant development in settlement at the very end of the Late Archaic was the use of communal cemeteries by peoples of the Glacial Kame Culture. These cemeteries date to ca. 1000 B.C. and typically feature rich mortuary ceremonialism.

### **The Woodland Period (1000 B.C. – 1650 A.D.)**

The Woodland Period that follows the Archaic in the lower Great Lakes region spans a series of important changes in culture and adaptation. This period is most commonly divided into three chronological sub-periods: Early, Middle and Late.

#### ***Early Woodland (ca. 900 to 500 B.C.)***

The Woodland Period is marked by the introduction into Ontario of pottery, the earliest of which dates to the Early Woodland sub-period. Beyond this there appear to have been no substantial changes in the hunting, fishing and gathering settlement and subsistence patterns followed during the Late Archaic. Burial ceremonialism, however, suggest an increased social or territorial identity with a particular resource area such as a drainage system. Mortuary ceremonialism is characteristic of the Early Woodland and, as expressed by the inclusion of elaborate grave goods in burials, represents the florescence of a pattern recorded for the slightly earlier Glacial Kame Culture of the Terminal Archaic. A number of Early Woodland sites have been documented within the City of Hamilton.

#### ***Middle Woodland (ca. 400 B.C. to 800 A.D.)***

This sub-period reflects, at least initially, a continuation of the settlement and subsistence patterns and mortuary ceremonialism previously described. As represented by the Point Peninsula Complex (300 B.C. - A.D. 500), large fishing stations located at major rapids to exploit spring-spawning fish are particularly in evidence. By about A.D. 500, Middle Woodland

populations centred on large drainages with extensive flood plains began experimenting with incipient corn agriculture. By A.D. 700 corn had begun to assume a significant role in settlement and subsistence, and major habitation sites were shifting away from larger rivers onto higher ground adjacent to minor tributaries. As with the preceding Early Woodland time period, a number of Middle Woodland sites have been documented within the City of Hamilton.

### ***Late Woodland (ca. A.D. 800-1650)***

The Late Woodland sub-period spans one of the most dynamic series of changes in the entire 11,000 year history of Ontario. This sub-period covers the immediate origins and subsequent development of the various Iroquoian-speaking historic tribal confederacies in southern Ontario, the Neutral (also known as the Attawandaron) and the Huron-Petun, down to the time of the first direct contact with Europeans in the early 17<sup>th</sup> century.

Although the Late Woodland subsumes many changes in settlement and subsistence patterns, it is broadly characterized by an increasing sedentarism. This was both necessitated and made possible by an increasing reliance on the cultivation of corn, beans and squash. In consequence, Late Woodland sites tend to be at once larger and more densely distributed than those of earlier time periods.

Just as the introduction of ceramics marks the beginning of the Woodland Period, so the Late Woodland is marked by the appearance of semi-permanent villages. These Iroquoian villages were often surrounded by a defensive palisade and were occupied year-round for some 12-20 years whereupon the settlement would move. Villages may cover from one to several acres in size and included numerous dwellings known as longhouses. In addition to villages, smaller, more temporary habitations such as agricultural cabin sites and fishing and hunting camps may occur. The typical burial pattern consists of individual graves within a village.

As originally formulated by J.V. Wright (1966), the full sequence of the Ontario Iroquoian Tradition involves three main stages, termed Early, Middle, and Late Ontario Iroquoian. The Iroquoian peoples of southwestern Ontario consisted of the Neutral tribal confederacy and their prehistoric ancestors.

The Early Iroquoian stage in this region spans the period ca. 800-1280 A.D. and comprises the evolution of various communities. They were typically oriented to drainage systems on sand plains in the area of the Thames River drainage, along streams courses that flowed into the north shore of Lake Erie, and stream courses in the Niagara Peninsula and around the west end of Lake Ontario.

The succeeding Middle Iroquoian stage subsumes the Uren sub-stage (ca. 1280-1330 A.D.) and the Middleport sub-stage (ca. 1330-1400 A.D.). This period was characterized by an increase in village size and, around the beginning of the Middleport substage, by the abandonment of sand plains and a shift into areas with heavier, more drought-resistant soils.

Archaeologists typically divide the Late Iroquoian stage in southwestern Ontario into three successive periods: the prehistoric (or pre-contact) Neutral (ca. 1400-1550 A.D.); the proto-historic Neutral (ca. 1550-1580 A.D.); and the historic Neutral (ca. 1580-1651 A.D.). Of these,

the proto-historic Neutral marks the period of indirect contact with European fur traders and missionaries, while the historic Neutral marks the period of direct contact with Europeans.

The prehistoric Neutral were widely distributed throughout the southern part of southwestern Ontario, from Lake Ontario and the Niagara Peninsula westward to west of London. In the mid 16<sup>th</sup> century, however, the communities in the western part of the region moved east of the Grand River. The Neutral and the other Ontario Iroquoian tribal confederacies all met the same fate in the mid 17<sup>th</sup> century: first devastated by a series of plagues accidentally introduced by the Europeans; and finally dispersed and driven from their homelands by raids from the Iroquois of New York State in 1649-1651 A.D.

Iroquoian sites of the Late Woodland period are well represented in the Regional Municipality of Hamilton and the City of Hamilton. They include a range of site types, among them villages and burial sites.

### **The Historic Period (A.D. 1700 to Present)**

The history of the First Nations peoples during the second half of the 17<sup>th</sup> century and the succeeding 18<sup>th</sup> century was one of wide-scale cultural displacement. The displacement of the Iroquoians from southern Ontario in 1649-51 and the Algonquin people from adjacent Michigan and Ohio resulted in a re-organization of the cultural landscape of southern Ontario in the second half of the 17<sup>th</sup> century.

In the late 1660s and early 1670s the Seneca, the most powerful of the Five Nations Iroquois Confederacy in Upper New York State, established separate villages on Lower Humber and Lower Rouge Rivers to control the Fur Trade within the Upper Great Lakes. A third Seneca village straddled the trail that led from Burlington Bay to the Grand River. These villages were occupied until ca. 1700 A.D. when the Mississauga, an Ojibwa tribe from the north shore of Lake Huron, established itself in the region. The Mississauga subsistence was based on a mixture of hunting, fishing, agriculture and foraging for plant foods. Maple sugar was also an important product during this period.

Documented Mississauga sites are rare in this region. A more extensive data search would be required to determine whether any such sites have been documented to date within the City of Hamilton but no Mississauga sites are included in the archaeological inventory for the one kilometre study area that surrounds the corridor for the proposed removal of Crooks' Hollow Dam.

France formally ceded New France to the British Crown in 1763. That year King George III issued a royal proclamation recognizing the title of the Great Lakes Indians to their lands. The loss of the Thirteen Colonies in the American Revolution in 1782 provided the British Crown with an impetus to expand settlement into what became Upper Canada in 1791. To that end, the Crown negotiated a series of treaties with the resident First Nations peoples.

The Historic Atlas records that East and West Flamborough Townships were surveyed by John Stegman in 1797 and at a later date by August Jones and another individual whose surname was Aikman (Page & Smith 1875: XI). The first pioneer, John Green, arrived in 1797. Other early

settlers were the Markle family and the Mordens. The latter were United Empire Loyalists; they settled along Crooks' Hollow and in the vicinity of Dundas.

Crooks' Hollow Dam relates directly to the history of Crooks' Hollow itself. The Historic Atlas records the following with respect to this area:

Crooks' Hollow at a very early date was a place of importance. It was intended at one time to have the county town near the present site of the paper mill there. It was intended to dig a canal from Burlington Bay straight through to Crooks' Hollow; boats to be brought up the "mountain" by means of locks. The creek running through the hollow was expected to be sufficient to fill the upper end of the canal. The idea of having the county town at Crooks' Hollow gave an impetus to trade and immigration and the country in that neighbourhood opened out rapidly. Greenville [aka Greenville], called after John Green, the first settler, sprang into existence, and a number of valuable mills were erected in the hollow. In 1850 a grist mill, saw mill, distillery, paper-mill, woollen factory and a tannery were in full operation, and have continued so to this day. (Page & Smith 1875: XI-XII)

Figure 5 is a facsimile of a segment of the 1875 Historic Atlas map of the portion of West Flamborough Geographic Township within which Crooks' Hollow is located. As illustrated in Figure 5 and as discussed in the above quote from the Historic Atlas, several mills were located on upper Spencer Creek in the Crooks' Hollow area. They are denoted as stars on the 1875 map. The red oval that has been added to this figure encompasses the lands that are involved in the proposed removal of Crooks' Hollow Dam; the star that is located on the right-hand edge of the red oval in Figure 5 corresponds to the location of Cockburn Mill, which is located downstream from Crooks' Hollow Dam. The owner of the portion of this lot that straddles Spencer Creek and included Cockburn Mill is identified on the 1875 map as "T.W. Hor". The farmstead of this individual is denoted by a structure with an associated orchard; it was situated on the north side of Crooks' Hollow Road.

A considerable amount of information on the industrial history of Crooks' Hollow is available through the research that was conducted by the Hamilton Conservation Authority and is displayed in the historic plaques at intervals along Crooks' Hollow Trail. Pertinent data are summarized below, with other sources noted, where applicable.

The first industry that was established at the future site of Crooks' Hollow was Morden's Saw Mill. It was established by Jonathon Morden in 1801. Morden's Saw Mill had earthen dykes and a stone dam with a mill race and was powered by an undershot waterwheel. In the late 1850s, Jonathon's son James added a grist mill to the operation. Both mills were destroyed by fire in 1905.

The community and industrial complex of Crooks' Hollow was named for two other prominent landowners: the Scottish emigrant James Crook and his brother Francis. In 1797 they bought several parcels of land along Spencer Creek in West Flamborough. Their plans to develop the properties were interrupted by the outbreak of the War of 1812 but in 1813 James completed the construction of a new dam with a sluice gate upstream from Morden's Mill. It was the Darnley Grist Mill. The mill was sold to James Stutt and Robert Sanderson in 1860. They converted it to a paper mill. Stutt bought out Sanderson in 1880 and installed a boiler. The paper mill was in use

until 1885, when the boiler exploded, destroying the mill. It was rebuilt and continued in use until 1934, when it was destroyed by fire.

By 1829 James Crook's enterprises had grown to include not only several of the industries that are mentioned in the above quote from the Historic Atlas but also a linseed oil mill, a foundry, a hoe and scythe factory, a cooperage, a blacksmith shop, a general store, an inn and log cabins for 100 workers. The Village of Crooks' Hollow plaque on the Crooks' Hollow Trail notes that by 1850 this community was one of the largest communities in Upper Canada. More properly, that statement should read "in Canada West", as Upper Canada ceased to exist as a political entity on February 10, 1841, when Canada West came into existence.

Following James Crooks' death in 1860 his enterprises declined. Some were abandoned or demolished and others were destroyed by fire. Most of the workers moved away and by the end of the 19<sup>th</sup> century Crooks' Hollow could be fairly characterized as a ghost town (see Crooks' Hollow History in [www.ghosttownpix.com](http://www.ghosttownpix.com)). The archaeological potential of Crooks' Hollow is totally untapped but it must be stated that it is immense. This comment applies to the wide variety of industrial archaeological resources that will be represented within the community. It also applies to the potential for the study of socio-economic differences between the various members of the community, most notably between James Cook as an early to mid 19<sup>th</sup> century industrial baron and the scores of workers who laboured in his industries.

The history of the current Crooks' Hollow Dam is linked to that of a much older dam that was situated downstream; it was Cockburn Dam. A history of these and other dams is presented in the report by Golder Associates Ltd. (2011). Excerpts from that report are presented below.

The Cockburn mill site was the best location [on upper Spencer Creek]. The mill had originally been built by Jas. Kerby in 1830 to supply power for a sawmill. In 1862 the property had been sold to Francis Hore. The old sawmill was demolished and a two-storey stone mill was constructed also as a saw mill. The mill was destroyed by fire in 1879. In 1886 Cockburn purchased the property and built a framed structure on top of the old stone foundations. The family operated a lumber and chopping business.

...The mill operated until about 1914 when the water rights and the property were sold to the Town of Dundas...Ultimately, the size and location of the Cockburn Dam was considered inadequate and a new dam – the existing "Crooks' Hollow Dam" – was completed in 1916. (Golder 2011: 9)

### **1.3 Archaeological Context**

For purposes of context, the Stage 1 background study conducted for this assessment examined data for a study area that encompassed a one kilometre buffer surrounding the proposed removal of Crooks' Hollow Dam. Three collective sources were examined in the course of the basic background research.

One source was the Archaeological Sites Database of the Ministry of Tourism and Culture; it houses site record forms for registered sites as well as published and unpublished reports on past



surveys, assessments and excavations. Data on registered sites within the study area were provided by Robert von Bitter, Archaeological Data Coordinator of the Ministry on June 9, 2011. As such, the registered sites data presented in this report satisfy the standard required by the first bullet of Section 1.1.1 of the standards and guidelines for archaeological resource assessment formulated by the Ministry of Tourism and Culture (2011: 14).

The second collective source for the assessment was the library/archives of D.R. Poulton & Associates Inc. It includes an extensive inventory of published and unpublished reports on past archaeological assessments in the one kilometre study area, as well as inventories of registered and unregistered archaeological sites in the area.

In addition to the above, the assessment included consultation with Joseph Muller, Cultural Heritage Planner, Heritage Planning, Planning and Economic Development Department, City of Hamilton. His office oversees archaeological and heritage planning matters for the City and maintains the municipal archaeological master plan of the City of Hamilton. In an e-mail he sent Dana Poulton of D.R. Poulton & Associates Inc. on June 23, 2011 he included the archaeological site potential mapping for the area within which Crooks' Hollow Dam is situated. The results confirmed that the lands of concern to this assessment generally had a potential for archaeological remains by virtue of proximity to water, the presence of or proximity to farmsteads and other buildings or residences, proximity to historic transportation routes and the presence of a known archaeological site that is located upstream of the subject lands. The site in question is Darnley Mill (AhHa-122).

Granting that the lands involved in the proposed removal of the dam satisfied a number of positive archaeological site potential criteria, Mr. Muller confirmed that neither the municipal archaeological master plan nor the heritage files that are maintained by the City have any information on previously documented archaeological sites within the subject lands (personal communication to Dana Poulton, June 9, 2011). As such, this element of the archaeological assessment, and the data search of the files maintained by D.R. Poulton & Associates Inc., both satisfy the standard required by the second bullet of Section 1.1.1 of the standards and guidelines for archaeological resource assessment formulated by the Ministry of Tourism and Culture (2011: 14).

The background study also examined several different sources concerning the 19<sup>th</sup> century Euro-Canadian settlement of the area. They included the reprint of the Illustrated Historic Atlas of Wentworth County (Page & Smith 1875). In addition, the archaeological assessment benefited from the report on the standing heritage resources and cultural landscapes of the Crooks' Hollow Dam that was prepared by Golder Associates Ltd. (2011).

This section of the report consists of several distinct elements as defined in Section 7.5.8 of the standards and guidelines (Ministry of Tourism and Culture 2011: 125-126). They are described below.

### ***Registered Archaeological Sites***

The Ministry of Tourism and Culture does not maintain a database of properties that have been covered by past archaeological surveys. In consequence, a history of past archaeological surveys

for a given property will only be evident to a person conducting an archaeological assessment under one of two circumstances: if the past investigations resulted in the discovery and registration of an archaeological site that now forms part of the Ministry of Tourism and Culture's Archaeological Sites Database; or if the individual conducting the assessment has personal knowledge of a past investigation. Both circumstances apply in the present case.

Granting the above provisos, the present study determined that past archaeological discoveries within the study area have been carried out on an intermittent basis over at least the past 29 years. It also determined that three archaeological sites have been registered in the study area.

The first archaeological investigation in the study area for the Crooks' Hollow Dam removal was carried out in 1982 by William Noble of McMaster University. It involved what the site record form essentially describes as a desultory investigation of an early 19<sup>th</sup> to early 20<sup>th</sup> century industrial site. The site was registered under its original name, as Darnley Mill (AhHa-122) (a grist mill) but the site record form identifies the site by its later name and function, as Stutt's Paper Mill.

The second registered site in the study area was discovered in 1987 by Fischer Archaeological Consulting, during the course of an archaeological assessment of a proposed residential subdivision. It was registered as AhHa-176 and is an isolated First Nations findspot of unknown age and cultural affiliation.

The third site was discovered by Archaeologix Inc. in 2006, during the course of an archaeological assessment of a proposed quarry. The site was registered as AhGx-631. As with AhHa-176, it is an isolated First Nations findspot of unknown age and cultural affiliation.

The most recent archaeological investigation to be carried out within the study area was a 2007 Stage 1-2 assessment of the proposed severance of 392 Moxley Road. It was conducted by D.R. Poulton & Associates Inc. No archaeological remains were discovered during the course of the assessment.

Of the three sites that have been registered in the study area, the closest to Crooks' Hollow Dam is the mill site that was registered as AhHa-122. It is located approximately 500 metres west of the lands that will be impacted by the proposed removal of the dam.

### ***Previous Archaeological Fieldwork***

The Stage 1 archaeological background study did not identify any previous archaeological investigations of the lands that are involved in the proposed removal of Crooks' Hollow Dam. The information that is presented herein is being included to satisfy Sections 7.5.8.4 and 7.5.8.5 of the standards and guidelines (Ministry of Tourism and Culture 2011: 126).

### ***Condition of the Study Corridor***

As stated in Section 1.1 of this report, the lands that are involved in the proposed removal of Crooks' Hollow Dam are located in the Spencer Creek valley southwest of the village of

Greensville, in the City of Hamilton. They form part of the southern third of Lot 8, Concession 2, West Flamborough Geographic Township. The description of the proposed undertaking that is presented herein has been prepared to satisfy the standard in Section 7.5.8.2 of the standards and guidelines (Ministry of Tourism and Culture 2011: 125).

The lands of concern to the assessment are located south of Crooks' Hollow Road and west of Old Brock Road. The eastern limit of the lands is a point 50 metres downstream from Crooks' Hollow Dam. The western limit of the lands is the former Morden's Mill Dam; it is situated 450 metres upstream from Crooks' Hollow Dam.

The north and south slopes of Spencer Creek, which delimit the lands that are involved in the proposed dam removal, are forested. The subject lands all form part of the floodplain of Spencer Creek Valley. The reservoir had been emptied prior to the archaeological assessment and most of the former reservoir consisted of broad mud flats bounded to the south by the creek. The course of the creek through this area generally follows the south side of the valley lands. The valley slopes are relatively steep, particularly the south slope, and bedrock is exposed along the base of the south slope. Figure 7 illustrates existing conditions within the subject lands at the time of the May 2011 survey.

The report by Golder Associates Ltd. (2011) has a lengthy description of Crooks' Hollow. Excerpts from the description are presented below.

The Dam is a monolithic concrete gravity structure 100 feet (30.5 m) long and 17½ feet (5.3 m) high from the bed of the creek to the crest of the spillways. Although no drawings exist today, the height concurs with field measurements and core sampling undertaken in 1992. The dam has four spillways of which spillway #2 is considerably lower than the other three and had stoplog slots in order to raise the water to the crest of the other three. The design of the spillways was typical of the early 20<sup>th</sup> century. (Figure 3, Plates 7-11)

Extending across the spillways are buttresses that supported a bridge across the dam. The buttresses were built with stoplog slots such that the water level could be raised to increase the capacity of the reservoir (Plate 11). It is not known if this extra capacity was ever used. By the late 20<sup>th</sup> century the crest of the spillway was the operating height of the reservoir.

The south abutment of the spillway is very short and butts into the rock of the steep valley wall. The abutment on the north end is considerably longer and visually appears to be an earth structure with a concrete retaining wall on the reservoir side. Road access to the dam came from Crooks' Hollow Road onto the embankment.

A single cast iron conduit carried water from the dam to the reservoir. In 2011 a portion of the conduit was visible on the surface of the north bank of the creek (Plates 12, 13). A valve chamber was located on the north embankment. (Golder 2011: 16)

The proposed undertaking will involve the removal of the Crooks' Hollow Dam as well as the dredging of 0.3 to 1.0 metres of previously-deposited reservoir sediments from the original low flow channel. Figure 4 illustrates what will be involved in the proposed removal of the dam. The dredged sediments will be deposited in a one metre high Sediment Management Area; it was previously inundated by the reservoir. The latter is situated on the north side of the river. The area will then be graded and vegetated with native plant species.

## 2.0 FIELD METHODS

The Stage 2 survey of the proposed replacement of Crooks' Hollow Dam was carried out on May 2, 2011. It was conducted by a crew of three under the direction of Chris Neill of D.R. Poulton & Associates Inc. The weather at the time was overcast and cool, with a light drizzle. Lighting conditions for the observation of cultural remains were good.

Figure 6 shows the location of the points from which the 12 photographic plates that are illustrated in this report were taken. Plate 1 is a view from the former Morden's Mill Dam on the north side of the creek looking east toward the mud flats. Plate 2 is a view further downstream looking east toward the mud flats. Plate 3 is a view of the test pit survey of the mud flats in progress looking west. Plate 4 is a close-up of a test pit in the mud flats. Plate 5 is a view of the test pit survey on the north side of the creek in progress looking east toward Crooks' Hollow Dam. Plate 6 is a view of the nearby base of the north slope of the valley showing the exposed bedrock.

Figure 7 shows the extent of the archaeological survey coverage as well as the conditions that were encountered. Although the main concern for the assessment was the bottom lands that will be impacted by the dam removal, the archaeological assessment also considered the adjacent slopes. That provided additional context for the assessment.

As previously stated, the assessment included lands that extended 450 metres upstream from Crooks' Hollow Dam to the former Morden's Mill Dam. It also extended 50 metres downstream from Crooks' Hollow Dam. A number of obstructions reduced the area that could be test pitted. In addition to the water course itself, these obstructions included bedrock outcroppings, steep (70 degree) slope and poorly-drained lands.

As illustrated in Figure 7, the assessment determined that past construction had impacted two key areas. One was the immediate area of Crooks' Hollow Dam near the east end of the subject lands. The other was the former Morden's Mill Dam at the west end of the subject lands.

The southern slope adjacent to the proposed dam removal impacts is steep and uninhabitable and does not have a potential for archaeological remains. It was assessed by a visual examination. The base of the south slope of the Spencer Creek Valley in the subject lands is partly composed of coluvial deposits (rock, stone and dirt deposited by the force of gravity). In addition, large exposures of bedrock occur at the base of the south slope upstream and downstream of Crooks' Hollow Dam, as well along the base of the north slope downstream from the former Morden's Mill Dam and upstream from Crooks' Hollow Dam. These areas were assessed by a visual examination. They represent roughly 10% of the lands that are subject to possible impact from the proposed removal of the dam.

The northern slope of the valley lands adjacent to the proposed dam removal impacts is less steep than the south slope. It was assessed by judgemental shovel test pitting where the slope was not too severe. This technique involved the excavation of test pits by shovel. All test pits measured roughly 30 cm in diameter and were excavated to subsoil. In addition, all soils were screened through 6 mm mesh in order to maximize artifact recoveries. Finally, each test pit was backfilled immediately upon completion

Within the subject lands, Spencer Creek itself comprises a surface area of approximately 2.4 hectares, representing roughly 65% of the lands that are subject to possible impact from the proposed removal of the dam. The creek channel was visually assessed.

The mud flats on the north side of Spencer Creek have an approximate surface area of 0.54-hectares and comprise another 15% of the lands that are subject to possible impact from the proposed removal of the dam. They were assessed by judgemental shovel test pitting. The silted deposits forming the mud flats were excavated to depths of as much as 40 centimetres before water seeped into the test pit. Most pits excavated on the mud flats could only be excavated to a depth of 25 centimetres before they filled with groundwater.

Judgemental test pitting was also completed on the lower bank along the north edge of the stream between the former Morden's Mill Dam and a point 50 meters downstream of Crooks' Hollow Dam. This zone was comprised of a dark brown loamy clay and silt deposit formed by dead organic vegetative matter mixed with periodic flooding of the lower bank. Some bedrock exposures interrupted the judgemental test pitting, as well as the structural disturbances that were involved in the 1916 construction of Crooks' Hollow Dam. Test pits reached 20 centimetres or less due to near surface bedrock or substrate. This zone comprised approximately 10% of the subject lands.

Plate 7 is a view of the south end of Crooks' Hollow Dam looking across Spencer Creek to the exposed bedrock at the base of the south slope of the valley. Plate 8 is a view of the built-up disturbed area on the north side of the dam looking northwest to Crooks' Hollow Road. Plate 9 is a view of the test pit survey in progress downstream from the dam, looking across the creek. Plate 10 is a view of a segment of a cast iron conduit; it is located on the north side of the creek just downstream from the dam. Plate 11 is a view of the test pit survey in progress just upstream from the dam, with the dam in the background. Finally, Plate 12 is a close-up of wetland vegetation downstream from the dam.

In summary, approximately 75% of the subject lands could not be test pitted due to the presence of the stream course, the presence of bedrock, poor drainage and past construction impacts. The remaining 25% was assessed by judgemental test pitting down to the underlying bedrock, inundated level or the occasional subsoil deposit. No archaeological remains were discovered during the course of the survey.

### **3.0 RECORD OF FINDS**

Section 7.8.2 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137-138), the Record of Finds section of the document, requires that Stage 2 assessment reports provide specific types of information on all archaeological discoveries. It also states that the archaeological assessment report should not include documentation on non-archaeological cultural heritage features (e.g. built heritage and cultural heritage landscapes).

In the present case, it is impossible to document the archaeological assessment without also documenting Crooks' Hollow Dam, as the subject of the report is the assessment of possible impacts to archaeological resources that could be involved in the removal of the dam. That said, the formal assessment of built heritage and cultural heritage landscapes is not the subject of this report. They are the subject of the report by Golder Associates Ltd. (2011).

Further to the above, the survey of the proposed removal of Crooks' Hollow Dam did not result in the discovery of any archaeological remains. In consequence, the requirements of Section 7.8.2 of the archaeological standards and guidelines do not apply to this report.

## 4.0 ANALYSIS AND CONCLUSIONS

The standard that is specified in Section 7.8.3.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 138) requires that the Analysis and Conclusions section of reports on Stage 2 fieldwork addresses the following statement: "Summarize all findings from the Stage 2 survey, or state that no archaeological sites were identified." The information that is presented below is intended to satisfy the standard that is specified in Section 7.8.3.1 of the 2011 standards and guidelines.

As stated in Section 3.0 of this report, the survey that was carried out on May 2, 2011 covered the lands that will be subject to potential impact from the proposed removal of Crooks' Hollow Dam. No archaeological remains whatsoever were discovered during the Stage 2 survey.

Further to the above, the standard that is articulated in Section 7.8.3.2b of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 139) requires that this section of the report include a comparison against the criteria in Stage 2 *Property Assessment* to determine whether further assessment is required. Those elements of the standard are addressed below.

The standard that is specified in Section 7.8.1.2a of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage 2 report provide detailed and explicit descriptions of how each standard was addressed for property survey generally. The standard that is articulated in Section 2.1.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 28) requires that the entire property be included in the survey. The present survey covered 100% of the lands that will be subject to impact from the proposed removal of Crooks' Hollow Dam. Accordingly, the survey satisfies this standard.

The standard that is articulated in Section 2.1.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 29) requires that the property be surveyed when weather and lighting conditions permit good visibility of land features. The weather and lighting conditions that pertained during the May 2, 2011 survey that is described in this report satisfied this standard. The standard that is articulated in Section 2.1.5 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 29) requires that assessment reports map all field activities (e.g. extent and location of field methods, survey intervals) in reference to fixed landmarks, survey stakes and development markers. The standard also requires that mapping must be accurate to a five metre scale or to the best scale available. The mapping in this report satisfies this standard.

As detailed in Section 1.3, the Stage 1 background study determined that three archaeological sites have been registered within one kilometre of the lands that will be subject to impact from the proposed removal of Crooks' Hollow Dam, but the closest site is approximately 500 metres west of the subject lands. As stated above, the subsequent Stage 2 survey of the subject lands did not result in the discovery of any archaeological sites. In conclusion, there are no archaeological planning concerns for the proposed removal of the dam.



## 5.0 RECOMMENDATIONS

As detailed in Section 1.3 of this report, the Stage 1 background study determined that no past archaeological investigations had been carried out within the lands that will be subject to impact from the proposed removal of Crooks' Hollow Dam and that no archaeological sites had been recorded within the subject lands or in close proximity to them. In consequence, possible archaeological planning concerns for the proposed undertaking were limited to the potential for as-yet undiscovered archaeological remains, including remains that relate to 19<sup>th</sup> century mills.

As detailed in Section 2.0 of the report, approximately 75% of the subject lands could not be surveyed due to the presence of the stream course, the presence of bedrock, poor drainage and past construction impacts. The remaining 25% of the subject lands was assessed by judgemental test pitting down to the underlying bedrock, inundated level or the occasional subsoil deposit. The assessment did make note of the structural remains of the 19<sup>th</sup> century Morden Mill Dam and the 20<sup>th</sup> century Crooks' Hollow Dam. However, no archaeological remains were discovered during the course of the survey.

As previously stated, a separate assessment of built heritage and cultural heritage landscapes for the proposed removal of Crooks' Hollow Dam has been conducted by Golder Associates Ltd. (2011). It includes a series of recommendations. One is that prior to the demolition and re-naturalization of the valley a plan should be developed that identifies culturally significant features that should be avoided during the project. A related recommendation is that the demolition be monitored by a person qualified to document the construction details of the dam (Golder 2011: Section 6.2.1, page 38).

Further to the above, the report by Golder recommends that as much as possible of the waterworks dam should be retained (Golder 2011: Section 6.2.2, page 38). In addition, it recommends that a Crooks Hollow Conservation Area Master Plan be developed that includes, among other things, a new pedestrian bridge and a Mills Ruins Conservation Plan (Golder 2011: Section 6.3, pages 39).

Under the *Ontario Heritage Act* (1990a), it is a requirement of archaeological consulting licences that consultants prepare and submit assessment reports to the Ontario Ministry of Tourism and Culture. Archaeological Review Officers of the Ministry then review each report to ensure that the assessment and the report satisfy consulting licence requirements under the Act and other pertinent legislation, and that they conform to current archaeological standards and guidelines. If the report and the assessment do so conform, the pertinent Archaeological Review Officer then issues a letter confirming that and accepting the report into the Provincial registry of archaeological reports.

Further to the above, it is the finding of the archaeological assessment that the implementation of the recommendations presented in the report by Golder would satisfy any potential concerns for heritage resources that might be raised by the proposed removal of Crooks' Hollow Dam. It is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Ontario Provincial Register of Archaeological Reports. It is also recommended that the letter include a statement of concurrence with the findings of this report. In addition, it is

recommended that this report be reviewed as a companion piece to the Heritage Impact Statement that was prepared by Golder Associates Ltd., as the two reports address separate but equal aspects of the overall cultural heritage of Crooks' Hollow Dam and vicinity. Finally, it is requested that a copy of the letter be forwarded to Hazel Breton, Manager, Water Resources Engineering, Watershed Planning & Engineering, Hamilton Conservation Authority. Her e-mail address is [hbretton@conservationhamilton.ca](mailto:hbretton@conservationhamilton.ca).

The above concludes the general and site-specific recommendations of this report. Nevertheless, it should be emphasized that no archaeological survey can be considered to totally negate the potential for deeply buried cultural remains, including human burials. In recognition of that fact, the 1993 archaeological assessment technical guidelines formulated by the Province of Ontario require that all reports on archaeological assessments include recommendations to address the possibility that deeply buried remains may be encountered during construction (MCTR 1993:12).

Further to the above, it is recommended that archaeological staff of the Ontario Ministry of Tourism and Culture be notified immediately if any deeply buried archaeological remains should be discovered during earthmoving related to the proposed removal of Crooks' Hollow Dam. The pertinent contact person at the Ministry is Katherine Cappella. She is the Archaeological Review Officer of the Culture Programs Unit of the Ministry who is responsible for the Central West Region, within which Crooks' Hollow Dam is situated. Her telephone number is 416 314-7143 and her e-mail address is [Katherine.Cappella@ontario.ca](mailto:Katherine.Cappella@ontario.ca).

In the event that human remains should be encountered during earthmoving related to the proposed removal of Crooks' Hollow Dam, it is similarly recommended that the proponent immediately contact the aforementioned Katherine Cappella as well as the police, the coroner and Michael D'Mello. Mr. D'Mello is the Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Ontario Ministry of Consumer Services. His telephone number is 416 326-8404 and his e-mail address is [Michael.D'Mello@ontario.ca](mailto:Michael.D'Mello@ontario.ca).

## 6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

The standards and guidelines formulated by the Ministry of Tourism and Culture (2011) that came into effect on January 1, 2011 have requirements that archaeological assessment reports must include statements that concern compliance with pertinent legislation. Those statements were draughted by the Ministry's legal department. Furthermore, it is understood that in order for reports to conform to the current standards and guidelines the pertinent statements regarding compliance legislation must not only be cited but must also be quoted verbatim.

The pertinent standards in the current standards and guidelines are as follows:

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 following 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. 1990a, c 0.18. 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 complete 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 Section 48 (1) of the *Ontario Heritage Act*.
  - d. The *Cemeteries Act*, R.S.O. 1990c 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 Consumer Services.

2. Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following 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."

The above standards are quoted verbatim from Section 7.5.9 of the standards and guidelines (Ministry of Tourism and Culture 2011: 126-127). All of them apply to the present report.

## 7.0 REFERENCES CITED

Crooks' Hollow History

n.d. www.ghosttownpix.com

Golder Associates Ltd.

2011 Heritage Impact Assessment. Crooks' Hollow Dam at Spencer Creek, Town of Flamborough, Regional Municipality of Hamilton Wentworth County, Ontario. On file, Hamilton Conservation Authority. Prepared by Christopher Andreae and Meaghan Rivard. June 2011.

Government of Ontario

1990a **The Ontario Heritage Act (RSO 1990)**. Queen's Printer, Toronto.

1990b **The Environmental Assessment Act (R.S.O. 1990)**. Queen's Printer, Toronto.

1990c **The Cemeteries Act (R.S.O. 1990)**. Queen's Printer, Toronto.

2002 **The Funeral, Burial and Cremation Services Act**. Queen's Printer, Toronto.

Ontario Ministry of Culture, Tourism and Recreation (MCTR)

1993 **Archaeological Assessment Technical Guidelines (Stages 1-3 and Reporting Format)**. Ministry of Culture, Tourism and Recreation, Cultural Programs Branch, Archaeology and Heritage Planning Unit.

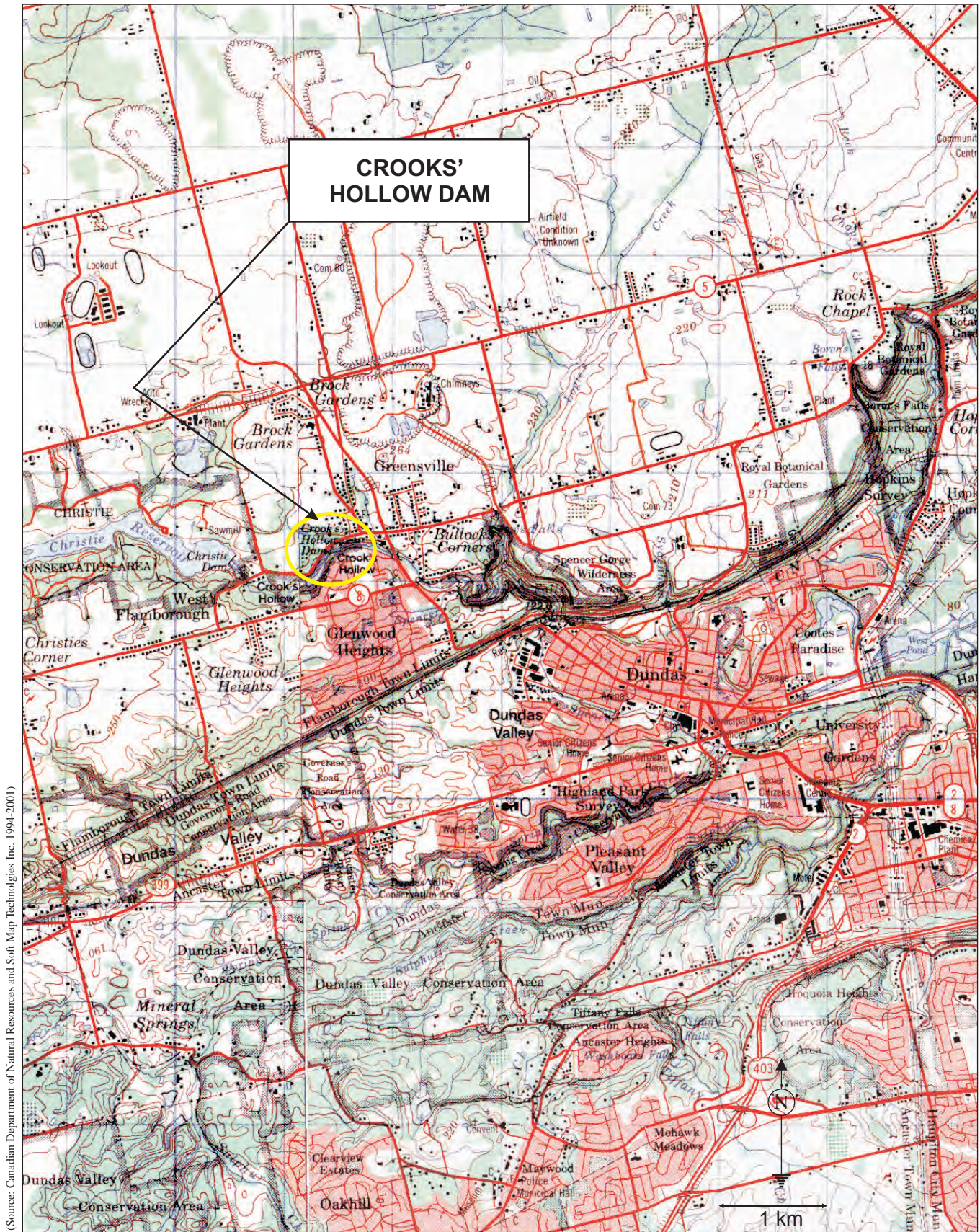
Ontario Ministry of Tourism and Culture

2011 Standards and Guidelines for Consultant Archaeologists.

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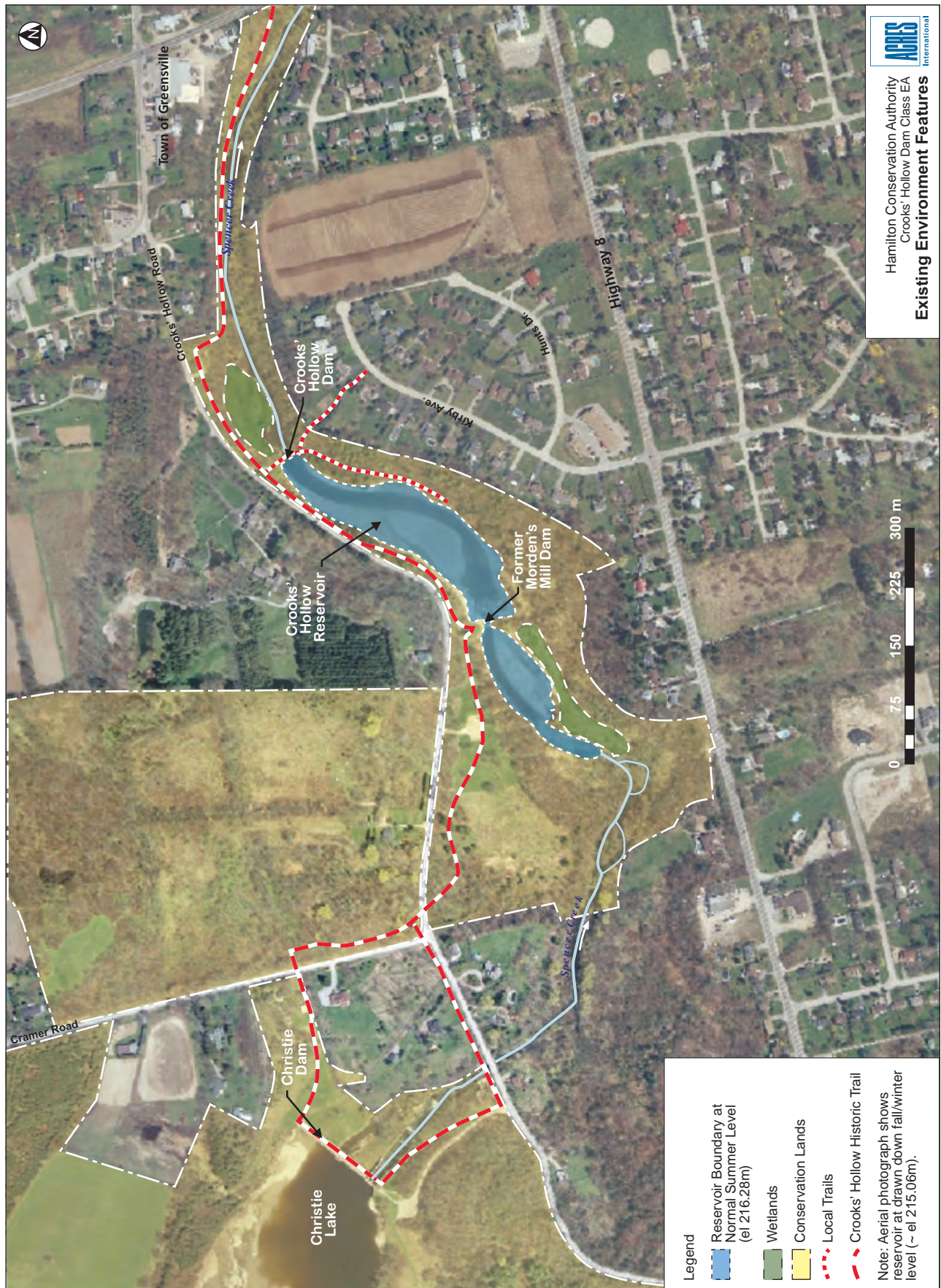
1875 **Historical Atlas of Wentworth County, Ontario**.

## **FIGURES**



(Source: Canadian Department of Natural Resources and Soil Map Technologies Inc. 1994-2001)

Figure 1 Location of Crooks' Hollow Dam



**Figure 2** Aerial Photograph of Crooks' Hollow Dam and Other Dams in the Vicinity





Figure 3 Current Water Levels Upstream from Crooks' Hollow Dam



**Figure 4** Proposed Impacts Involved in the Removal of Crooks' Hollow Dam



Figure 5 Facsimile of the 1875 Historic Atlas Map of Crooks' Hollow Dam and Vicinity



Figure 6 Key Plan of Photographic Plates



Figure 7 Extent of Stage 2 Archaeological Survey

## **PLATES**



**Plate 1** View Downstream from the Former Morden's Mill Dam



**Plate 2** View Downstream to the Mud Flats



**Plate 3** Test Pitting the Mud Flats, View Upstream



**Plate 4** Close-up of Muck Soils in Mud Flats Test Pit



**Plate 5** Area of Test Pit Survey, View Downstream to Crooks' Hollow Dam



**Plate 6** Slope and Low and Wet Area, View Downstream to Crooks' Hollow Dam



**Plate 7** Crooks' Hollow Dam, View to Slope and Bedrock on the South Bank of the Creek



**Plate 8** Crooks' Hollow Dam, View Northwest of Built-up Disturbed Area



**Plate 9** Test Pit Survey Downstream from Crooks' Hollow Dam in Progress, View South



**Plate 10** Close-up of Test Pit with Exposed Cast Iron Conduit



**Plate 11** Area of Test Pit Survey, View Upstream to Crooks' Hollow Dam



**Plate 12** Close-up of Wetland Vegetation Downstream of Crooks' Hollow Dam