EXHIBIT H

PHASE 1 CULTURAL RESOURCE INVESTIGATION

Minard Run Oil Company
609 South Avenue
Bradford, PA 16701
PHASE 1 CULTURAL RESOURCES INVESTIGATION
FOR THE MINARD RUN OIL COMPANY
COMPRESSOR STATION EXPANSION PROJECT,
TOWN OF SENECA FALLS, SENECA COUNTY,
NEW YORK

New York State Office of Parks, Recreation, and Historic Preservation #18PR01088

Prepared for:

HALEY & ALDRICH
200 Town Centre Drive, Suite 2
Rochester, New York 14623

Prepared by:

PANAMERICAN CONSULTANTS, INC.
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(716) 821-1650

February 2018
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Prepared for:
HALLEY & ALDRICH
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Prepared by:
Robert J. Hanley, M.A., RPA, Principal Investigator
Mark A. Steinback, M.A., Senior Historian

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February 2018
Management Summary

OPRHP/SHPO Project Review Number:  18PR01088

Involved State and Federal Agencies:  New York State Department of Environmental Conservation; Federal Energy Regulatory Commission

Phase of Survey:  Phase 1

Location Information:
  Location:  Mound Road (New York 414)
  Minor Civil Division:  Town of Seneca Falls
  County:  Seneca

Survey Area (Metric & English):  0.8-acre (0.32-hectare)

USGS 7.5 Minute Quadrangle Map:  Seneca Falls, NY 1953; photorevised 1978

Archaeological Survey Overview
  Number & Interval of Shovel Test Pits (STP):  16 STPs at the standard 15-m (50-ft) interval

Results of Archaeological Survey
  Number & name of precontact sites identified:  none
  Number & name of historic sites identified:  none
  Number and name of sites recommended for Phase II/Avoidance:  none

Report Author(s):  R. Hanley, M. Steinback

Date of Report:  February 2018
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1. The open agricultural field along the southern side of the APE, facing west
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1.0 Introduction

1.1 PROJECT DESCRIPTION

Panamerican Consultants, Inc., Buffalo, New York (Panamerican) was contracted by Haley & Aldrich of New York (H&A), on behalf of Minard Run Oil (MRO) to conduct a Phase 1 cultural resources investigation for the expansion of an existing compressor station located west of Mound Road (New York [NY] Route 414 in the Town of Seneca Falls, Seneca County, New York (Figure 1). MRO is adding another compressor to the existing circa 1980s compressor station. The Area of Potential Effect (APE) is 0.8-acre (0.32-hectare) and will encompass an addition to the existing building and an increased parking area to accommodate large trucks and turnaround space. Integrity Engineering and MRO are working with the New York State Public Service Commission (PSC) to submit an addendum to the original Article VII submission from 1984 (Case 70220).

The purpose of the Phase 1 investigation is to locate all cultural resources in the APE and to identify archaeologically sensitive areas, cultural areas, and structures 50 years of age and older that may be affected by the proposed project (New York Archaeological Council [NYAC] 1994:1). The cultural resources investigation included documentary and historical map research, a site file and literature search, the examination of properties listed in the New York State and National Registers of Historic Places (SNRHP), an intensive walkover reconnaissance, photographic documentation of field conditions, and shovel testing throughout the APE. Photographs of the field investigation are presented in Appendix A.

The cultural resource investigation was conducted in compliance with the National Historic Preservation Act, the National Environmental Policy Act, the New York State Historic Preservation Act, the State Environmental Quality Review Act, and all relevant federal and state legislation. The investigation was also conducted according to NYAC’s Standards for Archaeological Investigations and NYSHPO guidelines.

Fieldwork was conducted January 26, 2018. Mr. Robert J. Hanley, M.A., RPA, served as principal investigator, Mr. Mark A. Steinback, M.A., was project historian, and Mr. Marty Boratin was the field director, and was assisted in the field by two archaeological technicians. Dr. Michael A. Cinquino, RPA, served as project director.

1.2 ENVIRONMENTAL SETTING

Topography. The project area is situated within Ontario Drumlins section of the Erie-Onondaga-Mohawk Plain physiographic province, which is characterized by north-south trending hills that were formed during glaciation (Hutton 1972:136; Cressey 1966:26, 34). Elevations within and surrounding the project area gradually decrease from north to south. Elevations in the generally level project area are approximately 480 feet (146 meters) above mean sea level (U.S. Geological Survey [USGS] 1978 [1953]; see Figure 1).

Geology. Bedrock beneath the county formed in east-west oriented bands during the Silurian and Devonian periods (440 to 460 million years ago). The rocks are oldest in the northern part of the county, becoming progressively younger toward the south. Bedrock underlying the region consists of Manlius and Onondaga limestone, which, along with Queenston shale, is exposed in areas along Seneca River. The soils of Seneca County were formed from glacial till and lacustrine sediments but were also strongly influenced by the bedrock formations upon which they rest (Hutton 1972:133-135; Cressey 1966:24).

Soils. The project area is located within the Schoharie Odessa soil association (Hutton 1972: General Soils Map. 4-5). Specific soils within the project area include Collamer silt loam, 2 to 6 percent slopes (Ma); Madalin and Odessa silty clay loams, 0 to 3 percent slopes (Ma) (Hutton 1972: Sheets 10 and 13). These soils are presented in more detail in Table 1 and delineated in Figure 2 (Natural Resources Conservation Service [NRCS] 2017).

Panamerican Consultants, Inc.
Figure 1. Approximate location of the project area in the Town of Seneca Falls, Seneca County, New York (USGS 1978 [1953]).
Table 1. Soils within and adjacent to the project area.

<table>
<thead>
<tr>
<th>Name</th>
<th>Soil Horizon Depth inches (cm)</th>
<th>Color</th>
<th>Texture</th>
<th>Slope %</th>
<th>Drainage</th>
<th>Land Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collamer silt loam (CIB)</td>
<td>0-3 (0-8) -9 (-23) -14 (-36) -16 (-41) -22 (-56) -42 (-107)</td>
<td>V DK GR BR DK BR LT BR LT RD BR RD BR BR / DK BR</td>
<td>SI LO SI LO SI LO LT SI CL LO LT SA CL LO LT SI LO</td>
<td>2-6</td>
<td>Moderately well</td>
<td>Lake plains</td>
</tr>
<tr>
<td>Madalin and Odessa soils (Ma)</td>
<td>0-8 (0-20) -13 (-33) -21 (-53) -28 (-71) -31 (-79) -54 (-137)</td>
<td>V DK GR GR BR DK GR BR GR BR BR &amp; GR BR</td>
<td>LT SI CL LO HV SI CL LO LT SI CL HV SI CL LO HV SI LO SI CL &amp; SI CL LO</td>
<td>0-3</td>
<td>Poorly</td>
<td>Depressions</td>
</tr>
</tbody>
</table>

Color: BR = brown, DK = dark, GR = gray, LT = light, RD = red, V= very
Texture: CL = clay, LO = loam, LT= light, HV = heavy, SA = sand, SI = silt

Figure 2. Soils within and adjacent to the approximate project area (red polygon) (NRCS 2017).
**Drainage.** Situated within the Seneca River drainage, the project area is more than two miles north of the Seneca River. The river connects the northern ends of Seneca and Cayuga lakes. The project area is 5,500 ft (1,678m) north of Black Brook, which flows east towards the Montezuma Wildlife Refuge. A tributary of Black Brook flows circuitously around the project area approximately 400 ft (122 m) to the north. The stream also flows eastward toward the wildlife refuge (Hutton 1972:sheet 13; see Figure 1).

**Forest Zone and Vegetation.** The northern portion of Seneca County, including the project area, lies within the Elm-Red Maple-Northern Hardwood forest zone (de Laubenfels 1966:92). This zone is similar to the Oak-Northern Hardwood zone in both climate and in the types of trees present. The distinction between the zones is the dominance of elm and red maple in the Elm-Red Maple-Northern Hardwood Forest zone. While the climatic conditions of this zone and the Oak-Northern Hardwood zone are similar, the prevalence of elm and red maple is due to more recent conditions where poorly drained areas have been created by human activities, better drained areas have been utilized for agriculture, and the natural forest has been removed. The less water tolerant hardwood species are less likely to survive in the areas that are not suitable for, and therefore not utilized for, agriculture (de Laubenfels 1966:95).

The south side of the APE is an open agricultural field whereas the north side of the APE is lightly wooded terrain (Appendix A: Photographs 1 and 2).

**Man-made Features and Alterations.** The northern half of the APE includes the existing compressor station and the western end of the existing access road. An existing north/south oriented subsurface pipeline crosses the APE along its eastern side (Appendix A: Photographs 3, 4, and 5).
2.0 Historical and Documentary Review

2.1 PREHISTORIC PERIOD

The three major cultural traditions manifested in central New York State during the prehistoric era were the Paleo-Indian, Archaic, and Woodland. Cultural development of the area can be summarized as a gradual increase in social complexity, punctuated by several important cultural or technological innovations.

**Paleo-Indian Period (ca. 12,000-8000 BC).** Hunter-gatherer bands of the Paleo-Indian culture were the first humans in New York State after the last glacial retreat approximately 15,000 years ago. At this time, Lake Ontario and the St. Lawrence River were locked in ice, and the project area would have been underneath an ice sheet (Fitting 1975:27). It is possible, however, that the environmental fluctuations that occurred during this early period were conducive to periodic forays by the Paleo-Indian groups into the region when conditions were suitable. Micro-environments such as glacial lakes, boggy areas, and swamps probably attracted game animals and concomitantly humans. As the climate gradually became more temperate, these forays may have become more extended.

At the end of the Pleistocene Era, what is now central New York provided an important habitat for large mammals and other game potentially significant for human subsistence. The area represented a major wetland/glacial lake environment that supported a large Pleistocene biomass. The Paleo-Indian subsistence strategy traditionally has been viewed as emphasizing big-game hunting. These species, many of which are extinct, included mastodon, mammoth, great beaver, caribou, and moose-elk, along with a variety of smaller game. Few tool associations have been made with aquatic resources remains, although this diverse and abundantly available food source was probably utilized once water conditions allowed (Funk 1972:11; Ritchie 1980; Salwen 1975). Evidence for the fauna and human association is seen at the Hiscock site in Genesee County, at which Paleo-Indian stone tools were found along with the remains of mastodon, elk, caribou, and condor (Laub 1995). Mammoth remains have been identified near the northern end of Seneca Lake and in southern Wayne County and Pleistocene beaver remains have been found in south-central Wayne County (Ritchie 1980:4, 10).

Adapted to the harsh tundra or park-tundra environment, Paleo-Indians utilized a nomadic settlement system in which their movements were directed by the migration of game animals and locations of lithic raw materials. During seasonal peaks of resources, larger populations occupied strategically located large camps; during periods of low resource potential, the population dispersed, occupying small camp sites and rockshelters on a temporary basis. A band-level social organization is attributed to Paleo-Indian groups, with each band consisting of 25 or 30 people (Snow 1980:150; Fitting 1968; Funk 1978). As climatic conditions allowed more permanent occupation of an area, this wandering became more restrictive and bands settled into loose territories. Located near the margin of extinct glacial lakes, many Paleo-Indian sites in the Northeast are located on elevated areas "where good drainage, meaning a dry living floor, was an important consideration" (Funk 1978:18). These hills or rises also served as loci for monitoring the migratory patterns of game species.

Paleo-Indian sites have not been excavated in the vicinity of the current project area. However, numerous loci of fluted points have been recorded for eastern Wayne County and northeast Cayuga County. Fluted points were eventually replaced in the late Paleo-Indian period (8000-6000 BC) with unfluted triangular points, stemmed points and Plano points, which are lanceolate-shaped points without flutes (Kraft 1986; Ritchie 1980). This general Paleo-Indian adaptive pattern overlapped the beginning of the subsequent Archaic period, leading some to refer to the earlier periods of the Archaic as a transitional stage.

**Archaic Period (ca. 8000-1500 BC).** The Archaic period is differentiated from the Paleo-Indian period by a functional shift in lithic technology, an apparent increase in population, changes in the subsistence strategy, and a less nomadic settlement system (Funk 1978; Tuck 1978a). These changes reflect an adaptation to an improved climate and a more diversified biome (Funk 1972:10).
Although the Early Archaic period began in the eastern United States as early as 10,000 years ago, there is little extant settlement data this early in the Northeast (Ritchie and Funk 1973:337; Funk 1993). It has been suggested that the lack of dated sites in the Northeast prior to 10,000 years ago is due to the low carrying capacity of the postglacial boreal forest environment (e.g., Ritchie 1980; Fitting 1968; Mason 1981:132). Despite the lack of data for the Early Archaic, it appears that big-game hunting was no longer central to subsistence and band movement was less erratic. It has been suggested that groups began to settle into territories and that camp movement adjusted to a seasonal round (Snow 1980). Floral resources, fish, and other aquafauna began to play a more significant role in subsistence. People of the Early Archaic used end scrapers, side scrapers, spokeshaves, drills, gravers, choppers, hammers, and anvil stones.

Although archaeological sites from these periods are rare and poorly understood for the Finger Lakes region, important sites from the Early and Middle Archaic have been found in eastern New York, in Ulster County and near Sylvan Lake, as well as western Connecticut, the upper Delaware valley and the Susquehanna valley (Dent 1991; Funk 1991, 1993; Nicholas 1988). Sites from these periods cluster along major rivers and marshy, swampy land as well as lowlands.

In addition to an improved climate and more diversified biome, a few technological changes, such as the production of ground and polished stone tools, serve to identify the Middle Archaic period (6000-4000 BC) (Funk 1991; Kraft 1986). People began to develop woodworking tools during this period, using coarse-grained stones and river cobbles as their raw materials. These stones were commonly available in large sizes and allowed toolmakers to reserve high quality lithic materials for finely flaked tools. The Middle Archaic tool kit included anvil stones, bannerstones, choppers, netsinkers, an array of projectile points, axes, adzes, gouges, and other woodworking implements (Braun and Braun 1994; Funk 1991; Kraft 1986).

The Late Archaic is seen as the flowering of preceramic culture in the Northeast (Snow 1980; Mason 1981). The period begins about 6,000 years ago and continues to the advent of pottery around 1200 BC. During the Late Archaic hunting, fishing, and gathering remained the principal daily activities, although greater emphasis was placed on deer and small game like birds and turtles, shellfish, nuts and possibly wild cereal grains like *chenopodium*. Charred acorn shells were found in hearths at the Lamoka Lake site in Schuyler County (Ritchie 1980). Associated with the shift in subsistence strategies was an increase in population densities and, as population increased, camps became larger and more numerous. People still lived in bands whose territories may have been well defined. They moved seasonally or when resources dwindled. Most sites of the Late Archaic period were seasonal, special purpose habitation sites. These include winter hunting camps, spring fishing stations, fall nut-gathering and processing stations, and shellfish processing. Principal settlements, such as Frontenac Island (Cayuga County), Lamoka Lake (Schuyler County), and Geneva (Seneca County), were located near major rivers or lakes and were multi-activity spring and summer villages (Ritchie and Funk 1973). Lamoka-phase beveled adzes have been found around the northeast side of Seneca Lake, and in southeastern Wayne County (Ritchie 1980:45).

Much is known about the Late Archaic based on excavations conducted at the Geneva site in Seneca County and the Frontenac Island and O'Neil sites in Cayuga County. The Geneva site, at the north end of Seneca Lake, is the closest of these sites to the project area. Both the Geneva and Frontenac Island sites are large sites with deep middens. Numerous human burials reveal a substantial focus on community life. Evidence from Frontenac Island shows participation in the widespread Late Archaic exchange of copper and marine shell artifacts (Funk 1976, 1993). Artifacts characteristic of the Late Archaic Lamoka phase include hammerstones, anvils, beveled adzes, and Lamoka points which are small, narrow-bladed, thick-stemmed or side-notched points. Tools like these were also found at the north end of Cayuga Lake at the Lawson site in Seneca County and the Ross and DiSanto site in Wayne County (Ritchie 1980:36). Ritchie and Funk (1973) argue that several of the Finger Lakes Lamoka-type sites are unique in being permanent, sedentary, or semi-sedentary villages supported by food storage in addition to an optimum mix of a broad range of food resources.
While increased territorialization occurs during the Late Archaic, group isolation decreases. Communication and trade networks that characterize later periods have their developmental roots in this period. Burial ceremonialism, established in northern New England a few thousand years earlier (Tuck 1978b), is conspicuously absent in some areas of New York and well developed in others. Artifacts characteristic of the Late Archaic Lamoka phase include hammerstones, anvils, beveled adzes, and Lamoka points, which are small, narrow-bladed, thick-stemmed or side-notched points. Ritchie and Funk (1973) argue that several of the central New York Lamoka-type sites are unique in being permanent, sedentary, or semi-sedentary villages supported by food storage in addition to an optimum mix of a broad range of food resources.

Another Late Archaic phase identified by Ritchie (1980) is Brewerton, a local variant of the Laurentian tradition. Although Brewerton-type, notched points have been found throughout the state, the phase is known primarily from the Oberlander No. 1 and Robinson sites, which straddle the Oneida River at the foot of Oneida Lake (Ritchie 1940). Both of these sites are considered to represent recurrently occupied central base camps used primarily during the spring and summer (Ritchie and Funk 1973:339). Brewerton sites are said to be most closely associated with swamps and watercourses (Ritchie and Funk 1973). In contrast to Lamoka phase sites where nut-gathering and fishing was important, Brewerton people are thought to have been more focused on hunting since projectile points dominate site assemblages (Ritchie 1980:1294).

The Transitional period (ca. 1500-1000 BC) continues Late Archaic cultural and economic patterns with only a few innovative traits. Among these are a developing burial/ceremonial complex and, toward the end of the period, the introduction of ceramics. Frost Island phase culture was generally situated in Central New York with extensions into western and northern New York (Snow 1980; Ritchie 1980). Artifacts characteristic of this phase include Perkiomen, Susquehanna Broad points, drills and strike-a-lights made of reworked Susquehanna Broad points, flake tools, celts, netsinkers, hammerstones, pitted stones, anvilstones, and milling slabs (Funk 1993:197). The hallmark of this transition is the adoption of pottery around 1200 BC. The shift to pottery appears to have been preceded by the adoption of steatite or soapstone pots which made cooking and food preparation easier (Ritchie and Funk 1973:87; Funk 1993:198). The earliest pottery in New York State (Vinette 1 type) has been radiocarbon dated to about 1250 BC at the Frost Island component of the O'Neill site, and 500 to 600 BC at the Morrow site (Ontario County near Honeoye Lake) (Ritchie and Funk 1973:87).

Woodland Period (1000 BC-AD 1500). The definitive characteristic of the Woodland period in New York State is the adoption of pottery technology, a development that occurred at different times from one location to another. While the previous hunting-and-gathering economy continued as a means of subsistence during Woodland times, Native groups became more dependent on domesticated plants for food. Agriculture brought with it a score of new problems that required new adaptations and every aspect of Native culture was transformed. With agriculture came settled village life, a general increase in population, technological changes, warfare, and a litany of social and political changes. Early and Middle Woodland sites often contain exotic and numerous trade goods within burials, which suggest the existence of widespread exchange or trade networks.

The Early Woodland period (1000-100 BC) is marked by several cultural phases in New York State, including the Orient, Meadowood, Middlesex, and Bushkill phases. Some of these phases, such as Meadowood, are better understood than others, while some arguably may not be very important in some local sequences. An important Meadowood component is at the Vinette 1 site, located on the north shore of the Oneida River at Brewerton (Ritchie 1980:190). Vinette 1 pottery, the first ceramics in New York, was recovered at this site. The Middlesex phase is named for an Early Woodland burial complex at Vine Valley in the Town of Middlesex, Yates County (Ritchie 1980:201; Parker 1922).

The Middle Woodland period (100 BC-AD1000) shows continued long-distance exchange, although perhaps with varying strength at different times. In central New York, a sequence of occupation sites shows evidence of a long, Middle Woodland cultural tradition referred to as Point Peninsula (Ritchie 1980).
In Ritchie’s chronological framework, the end of the Middle Woodland, which he argued came around AD 1000, occurred when people in New York adopted the suite of characteristics he associated with the Late Woodland: primarily agriculture based on maize, beans, and squash; Owasco-style pottery; and house structures resembling historical Haudenosaunee (or Iroquois) longhouses. Ritchie believed people adopted these innovations relatively rapidly between AD 1000 and AD 1100. Recent studies, however, have demonstrated that none of these developments occurred at AD 1000, nor did they happen together at any other single time (Hart 1999, 2000, 2011; Hart et al. 2003; Hart and Brumbach 2003; Prezzano 1988; Schulenberg 2002). Moreover, this research has altered how events during the Middle Woodland are interpreted. The direct dating of maize using accelerator mass spectrometry (AMS), for example, has demonstrated that people in southern Ontario and central New York were growing the crop before AD 700 (Crawford et al. 1997:114-115; Hart et al. 2003:634). Meanwhile, Hart et al. (2003:624-625) and Schulenberg (2002:160-164) have obtained AMS dates from charred residue on the interiors of Owasco vessels that indicate people were manufacturing those pots as early as the seventh century AD (see also Hart and Brumbach 2003:743-744). Beyond this, Hart has demonstrated that people did not construct longhouses in central New York before the beginning of the thirteenth century AD and that they did not likely grow beans until an even later date (Hart 1999, 2000, 2011).

The Late Woodland, in Ritchie’s scheme for the Northeast, was the period between AD 1000 and the time at which Native people traded for or otherwise obtained European goods, the precise timing of which varied throughout the region. In the 1930s, Ritchie (1937[1936]) proposed dividing the Late Woodland into two shorter periods: the Owasco and Iroquois (see also Ritchie 1944). At the time, he believed Iroquoian groups migrated to the New York State area and replaced the Algonquian Owasco people already living there (see Tuck 1971:11-14). Although, since the 1950s, researchers have generally accepted that Iroquoian speakers did not immigrate to the Northeast at the beginning of the Late Woodland, the distinction between Owasco and Iroquois periods has remained. Also, with the development of radiocarbon dating, the two have acquired distinct temporal boundaries, with the Owasco lasting from AD 1000 to 1300, and the Iroquois spanning the years thereafter (Hart and Brumbach 2003:747). In terms of material culture, the primary differences between the two entities are related to ceramic vessel form and decoration.

Although, as outlined above, some of the cultural developments Ritchie associated with the Late Woodland did not occur between AD 1000 and 1100, some—particularly those related to the development of an agricultural system based on maize, beans, and squash—did happen in the succeeding years. In fact, several developments appear to cluster around AD 1200 to 1300: the earliest evidence for longhouses and multiple household villages is from the thirteenth century AD and people added beans to their diets around AD 1300 (Hart and Brumbach 2003: 744-746; Hart 2011). In addition, Snow (2000:30) notes that groups in Central New York began surrounding their settlements with defensive palisades after AD 1200. During the later years of the Iroquois period, people in some areas began clustering their villages within the territories occupied by historically known Native nations (Snow 2000:46-51). Likely in part because of the large amounts of wood consumed during the construction and maintenance of these settlements, as well as that needed for firewood, inhabitants periodically relocated their villages roughly every 10 to 20 years (Engelbrecht 2003:101-103). In several cases, researchers have reconstructed parts of the resulting sequences of settlements and produced detailed data concerning local culture change and the effects thereon of contact with Europeans (e.g., Wray 1987). However, there are many questions regarding New York State’s Woodland inhabitants that remain unanswered.

The horticultural complex of corn, beans and squash, called the Three Sisters by the Haudenosaunee in later times, are found together in some of the earliest Late Woodland sites (Ritchie and Funk 1973; Hart et al. 2003), indicating the importance of these plants for at least some early garden systems and subsistence strategies. However, the frequency with which these crops were grown together is poorly understood (Fritz 1990; Smith 1992; Kuhn and Funk 2000). The common perception is that a heavy reliance on corn horticulture was supplemented by growing beans and squash, with declining roles for hunting, fishing and gathering. Primary animal prey most likely included one or more of deer, fish, and
shellfish, based on faunal evidence, site locations, and the prevalence of netsinkers and other fishing technology at some sites (Cleland 1982; Ritchie 1980; Ritchie and Funk 1973).

The Late Woodland period brought increasing sociopolitical complexity and diversification of resource exploitation. These trends were greatly accelerated by contact with European explorers beginning in the sixteenth century (Kuhn and Funk 2000). Native groups were profoundly affected by direct and indirect contacts with the fur trade, long before the arrival of a permanent European-American population to the area (Brasser 1978:79-81). These contacts mark the beginning of the end of traditional Native American cultural patterns due to ever-increasing political, military, religious and economic interactions with Europeans.

Cultural changes within the Late Woodland period laid the groundwork for the development of the individual nations of the Haudenosaunee or Iroquois Confederacy during the historic period. In Central New York, this occurred in three areas: the Western Finger Lakes (Canandaigua, Keuka, Seneca, Cayuga), the Little Finger Lakes (Honeoye, Hemlock, Conesus, Canadice), and the Bristol Hills and Genesee valley (Cayuga and Seneca tribal emergence). Archaeologists generally agree that the historic Haudenosaunee nations were preceded in their home territories by Haudenosaunee ancestors during the late prehistoric era. This interpretation is based partly on settlement patterns. In both prehistoric and historic times, Haudenosaunee nations moved their villages at intervals that may have been related to the exhaustion of local resources, such as soil, wood or game. Sequences of village movement spanning the prehistoric, protohistoric and historic periods have been inferred for each of the individual Haudenosaunee nations, for example the Seneca (Wray and Schoff 1953; Wray et al. 1987) and Seneca and Cayuga (Niemczycki 1984). Prior to the time of European contact Seneca territory comprised an area extending from Lake Ontario to the headwaters of the smaller Finger Lakes and from the Genesee River to Cayuga Lake. Areas of Cayuga settlement included the Montezuma Marsh-Seneca River, and both sides of Cayuga Lake. In general, Seneca County, New York, is intermediate between the traditional Seneca and Cayuga homelands (Wray and Schoff 1953; Niemczycki 1984; Abler and Tooker 1978; Engelbrecht 2003).

**Contact Period (AD 1500–1650).** During the late Prehistoric and Contact periods, tribal clusters of Iroquoian-speaking peoples were distributed throughout New York State and lower Ontario. Comprising several thousand people in at least one, and usually several, villages in proximity to one another, each tribal cluster was separated from the others by extensive and widespread hunting and fishing areas (Trigger 1978:344; Engelbrecht 2003). Native nations in central and western New York were profoundly affected by the introduction of the fur trade, long before the arrival of a permanent European-American population in the area. This period dates the beginning of the end of traditional Native American cultural patterns due to ever-increasing political, military, religious and economic interactions with Europeans.

Each of the five nations of the Haudenosaunee confederacy is represented by a cluster of sites during the late prehistoric and contact periods. In some cases, so-called Owasco sites occur in sufficient proximity to suggest hypothetical ancestors of the Haudenosaunee site cluster (Tuck 1971; Snow and Starna 1986), although settlement pattern change is apparent. Owasco sites are often located adjacent to rivers, other sizeable streams and lakes, or on bluffs or terraces immediately overlooking these kinds of water bodies. Haudenosaunee villages, however, tend to be located on hillier sites, often defensible elevations near springs or small creeks. Niemczycki (1987) argues that the merger or alliance of western Owasco and Ontario Iroquoian populations accounts for prominent characteristics of later Seneca culture, including the division of the Senecas into eastern and western branches. Seneca cultural history, village formation and abandonment sequences after AD 1500 took place in Ontario and Livingston counties (Niemczycki 1987; Vandrei 1988; Wray and Schoff 1953).

Beginning in the last decades of the sixteenth century, the increasingly regular encounters between Europeans and Native Americans incubated a pandemic of European diseases among unprepared Native populations which decimated many Native nations. The presence of typhus, smallpox, measles, and others ravaged Native communities. In addition to the tensions introduced through simple contact with Europeans, trade has been recognized as having a major impact upon traditional aboriginal cultural patterns (Brasser 1978:83). The most immediate changes were due to the introduction of a superior
material culture. Once the fur trade was established, assuring a stable supply of these goods, the manufacture of native goods rapidly declined until they were entirely replaced by European manufactured implements. Finally, changes occurred in sociopolitical relationships after 1640 as the fur trade intensified and the supply of furs declined. The most important of these changes was the formation of confederations such as the Haudenosaunee Confederacy of New York State, the Neutral Confederacy and the Huron Confederacy.

The fur trade was central to the Seneca economy (Abler and Tooker 1978:505-507; Trigger 1978:354-356). After AD 1600, the supply of animal skins diminished within Haudenosaunee territory. Because of this shift in resources, the Seneca began to expand the range of their hunting and trading efforts into the traditional areas of other Iroquoian nations. Between 1638 and 1655, large-scale, concerted attacks by the Seneca against their rivals in western New York secured the resources of the Niagara Frontier. The Haudenosaunee “dispersed” the Wenro (by 1638), the Huron Confederacy (1649), the Petun (1650), the Neutral Confederacy (1651) and, finally, the Erie Confederacy (1655). By the mid-seventeenth century, the Haudenosaunee of New York emerged as a politically, militarily, and economically united confederacy with sole access to both the land and resources surrounding the lower Great Lakes. Until the Revolutionary War, the project area was situated within the lands of the Seneca, one of the original Five Nations of the Haudenosaunee Confederacy.

2.2 HISTORIC PERIOD

For almost all of the seventeenth and eighteenth centuries European activities in central New York involved limited religious, commercial, and military endeavors. The French were the first Europeans to penetrate the Finger Lakes region, as French traders were establishing contacts with Native nations ca. to 1610. For example, Courer de bois Étienne Brûlé reputedly traversed the Genesee country in 1615 to meet representatives of the Susquehannock nations at what is now Tioga, New York. These visits, however, were infrequent until the 1650s.

Beginning in the seventeenth century, Recollét (Franciscans) and Jesuit missionaries visited Native American villages across New France (Canada) and what is now New York, although in some cases they were treated rather brutally. The earliest recorded Jesuit contact with the Seneca occurred in 1656 when Pierre Joseph Marie Chaumonot visited them at Ganondagan (the Boughton Hill site, now a New York State Historic Site) in the Town of Victor, west of the project area. He reported that the Seneca had two large villages in addition to numerous smaller ones. In the same year, Jesuit priests visited the Cayuga, where René Ménard established a short-lived mission. As hostilities intensified between the Haudenosaunee and the French over territorial issues related to the fur trade, the Jesuits were forced to evacuate their missions in the region in 1658. Several years later, upon invitation from the Cayuga, Simon Le Moyne briefly left the Onondaga to visit the Cayuga for a few weeks during the winter of 1661-1662. The Jesuits finally returned to the western Finger Lakes in 1668 and missions were established among the Seneca under the direction of Jacques Frémin and Julien Garnier and among the Cayuga at a mission called St. Joseph. While the sowing of Christianity among the Seneca and Cayuga by the Jesuits generally bore little fruit during this period, the missions had modest effects on moderating the hostility between the Haudenosaunee and the French. Also in 1668, René-Robert Cavelier de La Salle and a small party of men solicited the Seneca for guides to direct them to the Ohio River (Jennings 1978:365; Abler and Tooker 1978:505-507; White et al. 1978:500-501; Tooker 1978a:431-432; Blau et al. 1978:492-493).

From an imperial perspective, the French sought to establish dominion over the interior of the continent, and their Jesuit missionaries provided an obvious tool to acquire influence with the resident Native nations of each region. However, the relationship between the French and the Haudenosaunee continually fluctuated between grudging acceptance and outright war. Moreover, the importance of the fur trade intensified during the latter half of the seventeenth century, and the ancient hostilities between the French and English resulted in the erection of fortified trading posts along the frontier. In 1664, the British seized New Netherland from the Dutch (renaming it New York), which stoked their imperial rivalry with the
French. This rivalry affected the various Native nations, who were attempting to play one European kingdom against the other. Having to choose sides, Native nations were drawn into these continuous conflicts that marked the European's struggle for colonial empire. As a result, by the 1730s the Seneca were pinched between the French fur traders at Fort Niagara on the west and the British fur traders at Fort Oswego on the east (Abler and Tooker 1978:506-507).

Dealings between the Seneca and the French and their Native American allies over the western fur trade flared periodically into violence. In July 1687, forces under the command of Jacques René de Brisay, Marquis de Denonville, governor of New France (Canada), attacked the Seneca in an attempt to eliminate them from the fur trade. Denonville and his forces landed at Irondequoit Bay and moved southeastward into what is now Ontario County where the larger Seneca villages were located. However, the Seneca ambushed the French invaders before Denonville reached their principal eastern village, which the Seneca themselves burned prior to the ambush. After the attack, the Seneca, badly outnumbered, fled the field. The French enjoyed great success destroying the ripening corn crop and burning several vacated Seneca villages, two of which were located in present-day Ontario County, before retreating to reconstruct the fort at Niagara. Ganondagan was one of the villages destroyed during Denonville’s assault. The French launched punitive expeditions against other members of the Confederacy in 1693 and 1696. The Haudenosaunee did not reach a final peace with the French until 1701 (Abler and Tooker 1978:505-7; Niemczycki 1984; White et al. 1978:501; Tooker 1978a:431-432; see also Engelbrecht 2003).

During the ensuing half-century of peace between the Europeans and the Seneca, the Seneca expanded their influence over the beaver trade to the south and west, but did not resettle the towns destroyed by the French. Subsequent Seneca settlements trended both eastward toward the Canandaigua and Geneva areas and the Finger Lakes and westward through the Genesee Valley (Abler and Tooker 1978:505-507; Wray and Schoff 1953:53; Jordan 2002:15).

The eastern Seneca drifted east, finally establishing one village at the foot of Canandaigua Lake and another, their principal village, at the foot of Seneca Lake. From there, they also established settlements on both sides of Seneca Lake and down the Chemung River. The western Seneca drifted westward, settling along the fertile flats of the middle Genesee. From there, they also moved up the Genesee, across to the Allegheny and down that river into Ohio. No longer threatened by attack, the eighteenth-century Senecas built unpalisaded villages in which the houses were dispersed [Abler and Tooker 1978:507].

Jordan (2002) presents a chronology of selected Seneca sites for the early historic period (1687-1779), presented as Table 2.

**Table 2. Chronology of Seneca Sites (Jordan 2002:295).**

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Occupation Dates (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boughton Hill (Ganondagan)</td>
<td>1670-1687</td>
</tr>
<tr>
<td>Rochester Junction</td>
<td>1670-1687</td>
</tr>
<tr>
<td>Snyder-McClure</td>
<td>1688-1710/1715</td>
</tr>
<tr>
<td>White Springs</td>
<td>1688-1715</td>
</tr>
<tr>
<td>New Ganechstage</td>
<td>1715-1754</td>
</tr>
<tr>
<td>Huntoon</td>
<td>1710/1715-1740</td>
</tr>
<tr>
<td>Kendala</td>
<td>1710/1720-1779</td>
</tr>
<tr>
<td>Fall Brook</td>
<td>1740-1775</td>
</tr>
<tr>
<td>Honeoye</td>
<td>1740-1779</td>
</tr>
<tr>
<td>Kanadesaga</td>
<td>1754-1779</td>
</tr>
<tr>
<td>Genesee Castle</td>
<td>1775-1779</td>
</tr>
</tbody>
</table>
During the eighteenth century, construction of fortified trading posts by the French and British occurred along Lake Ontario. In 1716, the French erected Fort des Sables on the west side of Irondequoit Bay. The British countered by erecting Fort Oswego in what is now Oswego County in 1727. This fort became their main frontier outpost during this period; and, as a result, the provisioning and protection of it became a primary imperial concern (Abler and Tooker 1978:505-507; Trigger 1978:354-356). The ancient rivalry between the two European monarchies reached a crescendo in the 1750s, when the two countries again went to war. Despite gaining total control over Lake Ontario during the early stages of the conflict, the French ultimately lost the French and Indian War and all of their North American colonies to the British with the Treaty of Paris in 1763 (Aldenderfer et al. 1982:III/29-30; Hale 1972).

During the American Revolution, both the British and Americans enlisted the aid of individual Haudenosaunee nations in their battles on the frontier. Although the Confederacy itself maintained a policy of neutrality, several of the nations allied with Great Britain and several with the Americans. As part of their strategy to cripple the frontier economy by disrupting agricultural activities, the British enlisted their Haudenosaunee allies to participate in raids on isolated farming communities. In response, Commander-in-Chief General George Washington ordered a punitive assault into the heart of Haudenosaunee country in 1779 to halt the attacks against American settlers. Directed by Major General John Sullivan and Brigadier General James Clinton, the Continentals moved through the valley of Catherine Creek and up the east side of Seneca Lake after defeating a combined force of British Rangers and Native Americans at Newtown (the future city of Elmira). Sullivan’s “scorched earth” tactics destroyed everything in the army’s path, including settlements, cornfields and orchards. The Continentals destroyed the Seneca villages of Kanadesaga (at the present-day location of Geneva) at the north end of Seneca Lake. After flattening Seneca villages, the army set out for Cayuga communities around Cayuga Lake. One detachment under Colonel William Butler destroyed the Cayuga villages on the east side of Cayuga Lake and a smaller detachment under Major Henry Dearborn devastated those on the west side of the lake. The swath of destruction stretched from Newtown to Honeoye Lake all the way to the Genesee River. On Sullivan’s return from the Genesee, Colonel Peter Gansevoort was dispatched from Geneva with 100 men to march to Albany through Haudenosaunee territory. For the first night Gansevoort’s troops encamped at Seneca Falls. This annihilation included all the principal Cayuga villages and all but two of the Seneca villages, including twelve villages between Seneca and Cayuga Lakes. In total, the army razed more than 40 villages and hundreds of acres of crops in an area between the eastern Finger Lakes and the Genesee River. Seeking refuge in the Niagara River valley, many Haudenosaunee suffered through a difficult winter of hardship and hunger. They remained in this area until after the completion of the Treaty of Paris (Abler and Tooker 1978:507-508; Ellis et al. 1967:115-117; Peirce 1879:13-19; Child 1867:39; Everts et al.1876:6-7, 96, 149; White et al. 1978:501-502). Provisioned and armed by the British, groups of Haudenosaunee periodically attacked colonial settlements until the end of the war, although the Seneca were no longer a major military threat.

The British and their Loyalist allies were expelled from the new United States after the Treaty of Paris (1783) ended the Revolutionary War, although the British did not vacate forts along Lake Ontario or farther west until 1796. The Haudenosaunee, abandoned in the United States by their British allies after the Treaty of Paris, were forced to make peace as separate nations with the Americans. During these negotiations the individual nations as well as individuals themselves had to decide whether to live in the United States or relocate to Canada. “Some Senecas determined that they would continue to live in the Genesee Valley where they had lived before the war, but others decided to move to or remain in the more westerly parts of New York State” (Tooker 1978a:435).

As a result of the Second Fort Stanwix Treaty (1784), the Haudenosaunee relinquished all their land west of the Niagara River. This treaty was disputed by groups of Haudenosaunee until 1794, when a treaty was signed at Canandaigua between the United States government and the Six Nations which defined the boundaries of Seneca lands and the reservations to the other Haudenosaunee nations (e.g., the Pickering or Canandaigua Treaty) (Abler and Tooker 1978:508). Native American title to the land in the
Genesee Valley was largely extinguished with the Treaty of Big Tree in 1797, although several areas were reserved for the Haudenosaunee to use and live on (Abler and Tooker 1978:509, 512).

The post-1779 period witnessed extensive cessions of Native American land by the Haudenosaunee to European-Americans and the establishment of reservations in New York State. The Treaty of Big Tree in 1797 marks the beginning of the reservation period for the Seneca. Early in the nineteenth century, the Seneca, succumbing to the intense pressure and unscrupulous tactics of land speculators to sell their remaining reservations in the state, began to divest themselves of their Genesee Valley property. With the Buffalo Creek Treaty of 1826, the Seneca sold their remaining reservations on the Genesee River. Prior to this treaty, David A. Ogden, later the Ogden Land Company, had acquired the pre-emption right to the remaining Seneca reservations from the Holland Land Company. Under the 1826 treaty the Seneca sold the Big Tree, Canawaugus, Canaede, Squawkie Hill reservations, and the remaining lands at Gardeau, in addition to parts of the Buffalo Creek, Cattaraugus, Tonawanda reservations (Tooker 1978b:452; Abler and Tooker 1978:511). By the end of the 1820s, most of the Seneca had relocated to areas west of the Genesee Valley.

With the return of peace after the American Revolution, settlers and land speculators again began to trickle westward, exerting pressure to open up land formerly occupied by the Haudenosaunee. Further, states, especially New York, viewed the granting of former Indian lands as a cheap way to compensate Continental soldiers for serving in the fight for American independence and to settle their claims of being owed back pay. Although the land was physically open for European-American settlement with the removal of the Haudenosaunee, border disputes between New York and Massachusetts, both of which claimed the new territory, frustrated the actual, legal sale of these lands. Under an agreement signed in Hartford, Connecticut, in 1786, the land once occupied by the Haudenosaunee came under the jurisdiction of New York State, but the Commonwealth of Massachusetts maintained the pre-emption right to land west of Seneca Lake once the Indian title to the land was extinguished. During the next decade large grants of land in western and central New York would be sold to private investors who would attempt to open the land to settlement (Ellis et al. 1967:152-156; Schein 1993:5-8; Abler and Tooker 1978:507-509).

The Commonwealth of Massachusetts sold the pre-emption rights to the entirety of western New York (more than 6 million acres) to a syndicate of land speculators headed by Oliver Phelps and Nathaniel Gorham. This land, called the Phelps & Gorham purchase, became Ontario County in January 1789. The 1788 Treaty of Buffalo Creek extinguished the Haudenosaunee title to land east of the Genesee River. The pre-emption line was supposed to run due north along a geographic meridian from the 82° milestone on the New York-Pennsylvania border to the shore of Lake Ontario. The line should have passed close to or through Seneca Lake with the former Seneca village of Kanadesaga west of the line. However, the surveyors apparently followed magnetic north rather than due north and the line cut by Col. Hugh Maxwell in the summer of 1788 strayed to the west by approximately 2° 40’ or about four miles. The line was resurveyed in 1792, and determined to run through Seneca Lake east of present-day Geneva, but lots had already been established and had already been sold based on the old line. The triangular area between the two lines, comprising 85,896 acres, became known as “the Gore.” The settlements at what are now Geneva and Watkins Glen are situated within it (Ellis et al. 1967:154-156; Abler and Tooker 1978:508; Robortella 2004).

One of the earliest attempts to settle a large area of central New York occurred in the mid-1780s when the New York State legislature awarded more than 1,500,000 acres of former Haudenosaunee territory east of the pre-emption line to veterans of the Revolutionary War. By treaty with the Onondaga in 1788 and the Cayuga in 1789, all the territory that would be divided and organized into the future counties of Onondaga, Seneca, Cayuga and Cortland, including portions of the counties of Oswego, Wayne, Schuyler, and Tompkins, was set aside by the land commissioners for bounties for soldiers. This area was known as the New or Onondaga Military Tract and constituted the original Onondaga County. After much delay surveyors from the Land Office began laying out the townships as a total of 28 townships were created from this territory—twenty-five 60,000-acre townships with three additional townships set aside as hospital wards. With each named after an individual in Classical history or letters, the townships were
further surveyed into smaller lots of 600 acres. The amount of land granted by the state was supposed to be commensurate with the completion of a specified term of service as well as military rank. For example, a colonel was entitled to 500 acres, and a soldier was to receive 100 acres. The territory that would become Seneca County contained a total of 300 Military Lots, each approximately 600 acres in area, organized into the townships of Junius, Ovid and Romulus (Schein 1993:16; Everts et al.1876:7, 96; Gable 2007c). By the 1790s, however, New York State was strapped for cash and quickly sold off unclaimed lots to speculators. These lots were advertised for public sale and any lot unsold could be taken by any applicant for one-quarter down and an agreement to pay off the rest at a specific interval. Distributed initially by ballot, the individuals and families who migrated to this area came primarily from New England, Pennsylvania, New Jersey, and other areas of New York (Schein 1993:5-8, 16, 21; Ellis et al. 1967:153-154; Abler and Tooker 1978:507-509).

While most of the land in what would become Seneca County was reserved as part of the Military Tract whose lands would be distributed officially by lot in 1791, actual settlement began much earlier. Horatio Jones operated a short-lived trading post along the Seneca River near what is now the Town of Waterloo in 1786 before relocated to near present-day Geneva. The first recorded European-American settlement on the Military Tract in Seneca County occurred in 1787 when Job Smith erected a log home at Seneca Falls (Everts et al.1876:7, 96; Klein et al. 1986:2-13). The second settler of the county was Andrew Dunlap who arrived from Pennsylvania to settle on the 600 acres of Military Lot 8 in Ovid in May 1789. Other squatters filtered into the area at the same time. Lawrence Van Clef, who served under Major Gansevort in 1779, settled near Job Smith in 1789 and kept the first tavern in the Town of Seneca Falls in a double log cabin. Van Clef built the first frame house in the town in 1794. The first European-American settler of the Town of Waterloo was John Greene of Rhode Island in 1789. An early settler of the Village of Waterloo, Samuel Bear erected a grist mill along the Seneca River by 1795 (Okada 1985:6-7; Child 1867:38-40, 42, 55, 1894:36; Everts et al. 1876:97, 149; Gable 2007b).

The licenses for these bounty lots were a valuable commodity on the early national market, and most were sold to speculators so that few actual veterans established homesteads on their allotted lands. These speculators neither made capital improvements on the lots they purchased nor invested in the creation of an infrastructure to facilitate settlement, but relied on selling the property quickly to make a profit (Klein et al. 1986:2-13; Schein 1993:21). In general, the pioneers who eventually settled these areas utilized the path Sullivan's forces followed in 1779, moving in from the south along the eastern portion of the future Seneca Lake. Homesteaders had generally settled the county by 1795, farming an average plot of about 100 acres. Seneca Falls, Waterloo and Ovid became local centers for commerce during the early years of the nineteenth century, and John McGrath kept one of the earliest stores in the county at Ovid in 1797, which later became the first inn there in 1800. (Previously, in order to get groceries, early settlers had to make the long 40-mile trek south to what is now Elmira.) (Child 1867:36; Everts et al. 1876:11-12, 32; Klein et al. 1986:2-13; Gable 2007c).

Initially a part of Onondaga County and later Cayuga County, Seneca County was formed from Cayuga County on March 24, 1804, although portions were removed to create Tompkins County in 1817 and Wayne County in 1823 (Child 1867:21, 38; Everts et al. 1876:32). The towns of Waterloo and Seneca Falls were organized from the Town of Junius on March 26, 1829. After 1794, with the construction of the Geneva Road (also known as the Mohawk Turnpike), which connected Whitestown (near the future city of Utica) to Geneva (once known as Canadasaga), the number of immigrants who came to till the fertile soil increased. However, the majority of the county lay well south of this road, and Seneca County remained generally an isolated area which served as a stopover for those settlers heading farther west. The inclination of settlers to move west intensified with the extension of the Mohawk Turnpike from the Genesee River to Buffalo, completed by 1803. Seneca County remained a farming area throughout the nineteenth century with the cultivation of wheat and barley a general agricultural focus, but dairying and sheep raising were an important supplement (Child 1867:38; Okada 1985).

The original settlers of the Military Lots of Seneca County were largely tradesmen-mechanics who had developed important skills in more settled areas before moving their families west (or in some cases
north) to farm. These pioneers had been blacksmiths, carpenters, coopers, wheelwrights, and shoemakers before becoming farmers, and many still practiced their trade after they put down stakes in Seneca County. These early settlers also developed local commerce and industry by starting the first commercial enterprises in the towns of Seneca Falls and Waterloo during the first two decades of the nineteenth century, including saw and grist mills, tanneries, distilleries, and fulling mills as well as asheries to manufacture potash. Inns, taverns and stores were opened during the early 1800s as well. “The settlement pattern consisted of dispersed small clusters of cabins [made from hewn logs] (the first permanent frame construction was built in 1794) and isolated farmsteads” (Klein et al. 1986:2-13; Everts et al. 1876:107). Near the intersections of roads, mill locations and along the lakes, several small rural centers developed, such as Varick, Seneca Falls, Romulusville, and Ovid. However, since transportation was easier along the lakeshore, these areas received the attention of early settlers. Surveyed before settlement during the creation of the Military Lots, roads ran mostly north-south through the county, although some roads ran diagonally (Everts et al. 1876:97, 149-153; Okada 1985; Child 1867:32-38).

In 1794, Stephen Bayard, Nicholas Gouverneur, Robert Troop, and Elkanah Watson purchased at State sale 100 acres of land on the north side of the Seneca River at the falls. Their purchase included most of the water power on that side. The Bayard Company, as it was known, added Col. Wilhelmus Mynderse as a partner in 1795 and over the next 20 years purchased large tracts of land along both sides of the Seneca River, totaling more than 1,450 acres and all the water power at Seneca Falls. Mynderse erected the upper and lower Red Mills and built a double log cabin from which he operated the first store at the falls. By 1825 population of the town was 300 and the village consisted of two mills, a cooper, a blacksmith and a few small farms (Everts et al. 1876:21; Child 1867:40-41). Other commercial activities after 1800 included two taverns (operated by Mr. Parkhurst and Jacob Pohlman) and Andrew Tillman’s tannery. The Village of Seneca Falls was incorporated in April 1831. After incorporation, the various mills operating at the falls turned the village into a manufacturing center. Industries included leather works, flour and paper mills, and three mills operated by the Seneca Woolen Mills (founded 1844), later Phoenix Mills (after 1854), which employed more than 600 people (Child 1867:42-45; Everts et al. 1876:906, 109).

South of the project area, Waterloo also was developing a strong mill-oriented economy. The Waterloo Manufacturing Company was established in 1836 by John Sinclair, Richard P. Hunt and Jesse Clark. In addition, the Village of Waterloo, incorporated in April 1824, contained a shawl factory, three distilleries (although all were out of business by 1865), five saw mills, a number of flour mills, malt houses, foundries, and machine shops. Other early settlers of Waterloo included Jabez Gorham (keeper of the first inn in 1795), Salmon Disbrow, Isaac Gorham (the first teacher in 1810), and Charles Smith (keeper of the first store in 1815) (Child 1867:52-56).

The Seneca and Cayuga Canal, completed in 1821 although portions had been opened as early as 1818, followed the path of the Seneca River and provided the area with linkages to Cayuga and Seneca lakes. In addition, improvements to the canal and its locks by the 1830s enhanced its connection with the Erie Canal, which had been completed in 1825. This was a boon to the northern part of the county, especially the Waterloo-Seneca Falls corridor (Everts et al. 1876:13, 43). Other transportation improvements included the completion of the Rochester & Auburn Railroad (later the Rochester & Syracuse), with the first train arriving from Rochester at Seneca Falls in July 1841. A line of the New York Central & Hudson River Railroad ran west of the project area by the end of the nineteenth century (USGS 1902).

The canals and the railroads provided the necessary transportation options that allowed the industrial and agricultural products of the area to reach their markets. These transportation networks also supported the arrival of immigrants to provide the labor to power the area’s economy. By the beginning of the Civil War, the villages of Seneca Falls and Waterloo supported a growing collection of industrial operations, including Gould pumps; John A. Rumsey created the first hand fire engine in the village in 1849 and in 1855, the Holley company manufactured rotary steam fire engines.

By the closing decades of the nineteenth century farming was well-established as the primary occupation of the residents of Seneca County. In 1880 the amount of land under the plow had risen to 204,258 acres.
with the average farm comprising 86 acres. The primary agricultural products were corn (542,412 bushels), wheat (475,626 bushels), oats (470,012 bushels), and barley (421,012 bushels). Dairying was an important component as well with 206,681 gallons of milk, 769,512 pounds of butter, and 1,876 pounds of cheese produced. These products were supplemented by fruit trees, such as apples, pears, and peaches (Child 1894:225). By the close of the century, grape-growing and wine-making expanded with the founding of the Seneca Lake Niagara Vineyard in the Romulus area in 1889. Six years later, in October 1895, the successful vineyard had used the train depot in Romulus to ship 300 tons of grapes (McVarish and Cook 1996:26). In 1926, the Romulus depot saw 45 railroad cars full of grapes shipped to markets throughout the northeast (McVarish and Cook 1996:28-30).

By the early twentieth century, the Seneca Falls-Waterloo corridor was an area of industrialization within a generally rural economy. Factories in Waterloo produced woolen cloth, wagons and other horse-drawn vehicles, articles of apparel, and canned goods, notably vegetables. The repair yards of the Geneva & Auburn Railroad were located in Waterloo (Gable 2007a; Sullivan 2004 [1927]). During the twentieth century, agriculture remains the predominant economic activity of the area. Since the late-nineteenth century, dairying and stock-raising, including horse and sheep, are the predominant farm specialties. Into the 1960s agriculture remained the focus of most of the area’s residents, as 64 percent of Seneca County was in farms, with the average farm containing 162 acres. In addition to agriculture, small trade and manufacturing operations are located in the villages of Waterloo, Ovid and Seneca Falls. By 1960 Waterloo had 4,395 residents and Seneca Falls had 7,439 inhabitants. As late as 1972, the project area was part of an extensive area of farmland (Child 1894; Hutton 1972:140, sheet 10).

At present, the Seneca Meadows, Inc. Sanitary Landfill encompasses a large portion of the area south of the project area, along New York 414 and Salcman Road. In 2010, the Town of Seneca Falls had a population of 9,040, and the Town of Waterloo had a population of 7,642. The villages of Seneca Falls and Waterloo had 6,681 and 5,171 residents, respectively.

2.3 DOCUMENTARY RESEARCH

2.3.1 Site File and Records Review. A review of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) archaeological site and historic structures files accessed through the online Cultural Resources Information System (CRIS) identified three archaeological sites within approximately one mile (1.6 kilometers) of the project area (Table 3). Of these sites, two are prehistoric/precontact and one is historic Euro-American. The nearest site to the project area is OPRHP 09907.000073 (Dove West-1 Prehistoric Site), a Late Archaic-Early Woodland camp or workshop site, located approximately 4,160 ft (1,269m) to the east of the APE. Numerous other prehistoric scatters and camps were identified farther east and south of the project area.

Table 3. Archaeological sites within one-mile of the project area.

<table>
<thead>
<tr>
<th>OPRHP Site #</th>
<th>Additional Site #</th>
<th>Distance to APE ft (m)</th>
<th>Time Period</th>
<th>Site Type</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>NYSM 4821; ACP SNCA-18</td>
<td>4,610 (1,406)</td>
<td>Unidentified precontact</td>
<td>Village</td>
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<tr>
<td>09907.000073</td>
<td>PCI/Dove West-1 Prehistoric Site</td>
<td>4,160 (1,269)</td>
<td>Late Archaic/Early Woodland</td>
<td>Camp/Workshop</td>
</tr>
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<td>09907.000077</td>
<td>PCI/Dove West-5 Historic Site</td>
<td>4,445 (1,356)</td>
<td>Mid- to late nineteenth century</td>
<td>Domestic Scatter</td>
</tr>
</tbody>
</table>

Early archaeological compendia such as Squier (1851), Beauchamp (1900), and Parker (1922) do not indicate the presence of any prehistoric sites within the project area. Later archaeological works by
Ritchie (1980) and Ritchie and Funk (1973) also do not indicate the presence of archaeological sites within the project area.

**Previous Surveys.** No previous surveys have been conducted for the project area. Several studies have been completed for projects within one mile of it (Ladd 2000; Cinquino et al. 2003; Wood et al. 2004a; Hanley et al. 2006a, 2006b, 2006c, 2007, 2013; Breetzke 2007). The Dove West sites were identified and evaluated by Panamerican in 2006 (Hanley et al. 2006b and 2006c). Areas just north and just south of the current project area were investigation by Panamerican in 2004 (Wood et al. 2004); no cultural resources were identified in either area by the survey.

**2.3.2 Historical Map Analysis.** Five historical maps were reviewed for the project area—Gibson 1852 (Figure 3), Browne 1858 (Figure 4), Nichols 1874 (Figure 5), and USGS 1902 (Figure 6). All of the maps illustrated dispersed farmsteads along what is now NY 414, as well as other roads in the area, and no structures were depicted in the project area on any of the maps. Further, early maps indicated the area as part of a larger forested area and later maps illustrated the tributary of Black Brook.

Figure 3. The approximate location of the project area (red polygon) in 1852 (Gibson 1852).
Figure 4. The approximate location of the project area (red polygon) in 1858 (Browne 1858).

Figure 5. The approximate location of the project area (red polygon) in 1874 (Nichols 1874).
Figure 6. The approximate location of the project area (red polygon) in 1902 (USGS 1902).
3.0 Field Investigation

3.1 METHODOLOGY

Cultural resource investigations are designed to provide a complete examination of the area of potential effect (e.g., impact area) in order to identify and assess any known or unknown cultural resources. These resources include prehistoric and historic archaeological sites as well as standing structures or other above-ground features. The field investigation includes an intensive surface and subsurface examination (e.g., shovel testing) of the project area (APE) and photographic documentation of the project site and vicinity. Pedestrian or walkover reconnaissance surveys are conducted across the project area to identify testable locations, cultural features, surface visibility, soil disturbance, and wet or poorly drained areas, as well as well-drained sensitive areas that would require testing. An intensive surface inspection is utilized as a primary method of survey when ground-surface visibility is not obscured by vegetation (e.g., plowed agricultural fields) or standing water.

Shovel test pits (STPs) are excavated at a standard 15-m (50-ft) interval throughout the APE. Shovel tests average a minimum of 40 centimeters (16 inches) in diameter and are excavated to at least 10 cm (4 in) below potentially artifact-bearing soils. All soils are matched to Munsell® color charts and sieved through ¼-inch hardware screens. Tests are terminated if water is encountered in the test pit, indicating poorly drained soils. Areas of severe disturbance, standing water, and slope greater than 15 percent are documented but not shovel tested. All shovel tests are backfilled to natural contour upon completion. Additional shovel tests are excavated around positive shovel tests to define preliminary site boundaries, artifact concentrations or determine that the find spot is an isolated occurrence. Closer-interval shovel testing is implemented when surface features (e.g., a foundation or depression or the presence of map documented structures [MDS]) are identified.

Artifacts found during the survey are collected and placed in plastic or paper bags and labeled with pertinent provenience information. Modern materials, such as plastic and container glass, are noted on field forms but not collected. Materials, such as coal, red brick fragments, and miscellaneous nail fragments also are noted but not collected unless they can be clearly identified as historic or found in association with historic period artifacts. All field information collected from shovel tests is recorded on shovel test forms, including the location, pertinent stratigraphic data, soil types, natural or man-made disturbances in the area, and the presence or absence of cultural materials. The field director maintains a daily log, and photographs pertinent man-made disturbances and environmental conditions. All shovel tests are recorded on a project map and included in the report.

3.2 LABORATORY ANALYSIS

Recovered cultural materials are stored at Panamerican’s Buffalo Office for processing and analysis. Processing of recovered artifacts follows guidelines elaborated in 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections) and in NYAC’s Standards and Curation of Archaeological Collections document (1994). Standard archaeological procedures of cleaning and storage are also followed, with provenience information kept with artifacts at all times. Permanent curation of artifacts is arranged with landowner consent.

3.3 RESULTS OF THE FIELD INVESTIGATION

The field investigation included a walkover reconnaissance of the project area, photographic documentation of site conditions, and subsurface shovel testing. The project is situated largely within a large corn field (see Appendix A: Photographs 1 through 6). The APE nearly encompasses the existing compressor facility and the west end of the access road (Figure 7; see Appendix A: Photographs 2, 3, and 5). A total of 16 STPs were dug at 15-m (50-ft) intervals within APE to sample potentially natural soil.
stratigraphy undisturbed by the existing compressor facility structures, access road, or buried pipe (see Figure 7). Soil stratigraphy was typically observed as a 22-cm (8.7-in) top stratum of dark grayish brown silty loam (A-horizon) over mottled brown and pale brown clay or silty clay loam B-horizon subsoil. The average final STP depth is 33 cm (13 in). A gravel impasse occurred in one STP (3.1). No precontact, historic, or modern cultural materials were found during shovel testing or reconnaissance (Appendix B: Shovel Test Log).

Figure 7. Locations of shovel tests, photograph angles, and areas of disturbance across the project area (Base aerial: NYS Orthos Online 2018).

3.4 CONCLUSIONS AND RECOMMENDATIONS

No cultural resources were identified within the project’s APE. Background research and a review of the archaeological site and historic structures files recorded in the online CRIS found no sites located within or adjacent to the APE. The review of historical maps found no map-documented structures within the APE. Therefore, construction of the project will not impact any cultural resources.

No cultural resources listed or eligible for listing in the State or National Registers of Historic Places are present and, therefore, none will be impacted by the project. No further cultural investigations are recommended.
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Wood, Laura B., Robert J. Hanley, Rebecca J. Emans, Mark A. Steinback, and Michael A. Cinquino


Wray, Charles F., and Harry Schoff


Wray, Charles F., M. L. Sempowski, L. P. Saunders, and G. C. Cervone

Appendix A. Photographs
Photograph 1. The open agricultural field along the southern side of the APE, facing west (Panamerican 2018).

Photograph 2. Lightly wooded terrain around the existing compressor station in the north portion of the APE, facing southeast (Panamerican 2018).
Photograph 3. A view of the existing access road and existing compressor facility in the northern portion of the APE, facing west (Panamerican 2018).

Photograph 4. A view of the existing access road connecting the compressor facility to Route 414, facing east (Panamerican 2018).
Photograph 5. An existing pipeline corridor along the east side of the APE, facing north (Panamerican 2018).

Photograph 6. A view of the channelized Black Brook tributary located north and west of the APE, facing southwest (Panamerican 2018).
Appendix B. Shovel Test Log
<table>
<thead>
<tr>
<th>Transect/STP</th>
<th>Stratum</th>
<th>Depth (cm)</th>
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<th>Soil Color</th>
<th>Soil Description</th>
<th>Comments</th>
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Key: Soil Color: BL = black, BR = brown, DK = dark, GR = gray, LT = light, V = very, YL = yellow
Soil Description: CL = clay, LO = loam, SA = sand, SI = silt
Comments: NCM = no cultural material