



PHASE I ARCHAEOLOGICAL SURVEY FOR THE SENEY NATIONAL WILDLIFE REFUGE DELTA CREEK POOL DAM REMOVAL PROJECT

SCHOOLCRAFT COUNTY, MICHIGAN

R-2152

DECEMBER 2024



*Image Credits: Overview of West Project Area of APE, view southwest (left), and
Overview of East Project Area of APE, view southeast (right)
by Jay Baril, Commonwealth Heritage Group, LLC*



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H E R I T A G E G R O U P

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Acknowledgements

James Parker, M.A., RPA, served as Commonwealth's principal investigator for this project and authored the report. Jay Baril conducted the archaeological survey. Amy Alleman processed the field GPS data and created maps and figures.

Freedom of Information Act (FOIA) Notice

The location of any archaeological site is considered sensitive information and is protected from release under the Freedom of Information Act (FOIA). Site location data should not be released to the public because the information may create a risk, harm, theft, or destruction of a non-renewable resource. Information on archaeological sites should only be shared with those individuals directly involved with the subject project. Archaeological site information should not be used for future unrelated projects.

ABSTRACT

Commonwealth Heritage Group, LLC (Commonwealth) conducted a Phase I archaeological survey for Stanley Consultants (Client) for the Seney National Wildlife Refuge Delta Creek Pool Dam Removal Project in Germfask (Section 14, 15, and 24 in T44N R14W), Schoolcraft County, Michigan. The Project is within the Seney National Wildlife Refuge (Seney NWR), which is managed by the U. S. Fish and Wildlife Service. Given the federal nexus, the Project is considered an undertaking under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (Public Law 89-665), and is therefore subject to review by the Michigan State Historic Preservation Office (SHPO) under the Section 106 implementing regulations (36 CFR 800).

The proposed Project includes two work areas. The proposed Project involves decommissioning the Delta Creek low-hazard dam in the Seney NWR. Planned Project activities include removing approximately 30.5 m (100.0 ft) of the Delta Creek Pool Dam embankment down to natural grade, removing the Water Control Structure, and constructing a rock ‘roadway’ across the breached dam opening for refuge staff to maintain access (West Project Area). The work will also affect the Culvert (1) - Route 405 Driggs River Road over Delta Creek, and the Culverts (2) - Route 405 Driggs River Road over Delta Creek (East Project Area). These work areas, as defined by the Client, comprise the Project Area.

The work areas in which ground disturbing activities are planned to occur as well as any permanent and temporary rights-of-way are assumed to be the Project Area, which is the area of potential effects (APE) for archaeological resources. Planned ground disturbing activities associated with the Project include excavation and grading to remove the existing dam embankment and water control structure, placement of the rock “roadway” across the breached dam, and rutting or other surface disturbance from the use of heavy equipment. Overall, the APE for the Project encompasses 1.5 ha (3.7 ac). The depth of disturbance presumably will not exceed the depth of existing disturbance.

Background research for the Project was conducted by Commonwealth (Burns and Reyes 2024). Commonwealth’s literature review revealed that the sediments in the APE were disturbed by the construction of the Delta Creek Dam and its associated infrastructure in ca. 1937, making the preservation of Precontact period archaeological features or artifacts unlikely. However, the APE had not been subjected to previous archaeological survey and, given that it is located along a named waterway, the APE has an elevated potential to contain historic period archaeological features or artifacts associated with late nineteenth century logging or early to mid-twentieth century federal activities. Therefore, Commonwealth recommended further archaeological investigation of the APE in areas where ground disturbing activity is planned. Specifically, Commonwealth recommended a Phase I archaeological survey (pedestrian walkover observation and the excavation of shovel test pits) be conducted within the APE in areas of planned ground disturbing activity prior to the commencement of ground disturbing activities.

Commonwealth conducted a Phase I archaeological survey of the APE on October 16 and 17 2024. The survey included ground surface reconnaissance (observation), followed by the excavation of shovel test pits (STP). A total of 22 STPs were plotted across six transects within the APE; 18 STPs in the West Project Area and four STPs within the East Project Area. In the West Project Area, STP placement was hindered by the existing road and dam area along the west side and a low wet area in the central eastern section. A total of 12 of the 18 plotted STPs were excavated. In the East Project Area, STP placement was hindered by the existing road running through the area. Three of the four plotted STPs were excavated. No Precontact or historic period artifacts were observed during the ground surface reconnaissance or during shovel testing in the APE.

No new archaeological sites were recorded during the survey. Because no archaeological resources were identified as a result of the field investigation, Commonwealth recommends no additional archaeological investigation in the APE.

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INTRODUCTION

Commonwealth Heritage Group, LLC (Commonwealth) conducted a Phase I archaeological survey for Stanley Consultants (Client) for the Seney National Wildlife Refuge Delta Creek Pool Dam Removal Project in Germfask (Section 14, 15, and 24 in T44N R14W), Schoolcraft County, Michigan. The Project is within the Seney National Wildlife Refuge (Seney NWR), which is managed by the U. S. Fish and Wildlife Service. Given the federal nexus, the Project is considered an undertaking under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (Public Law 89-665), and is therefore subject to review by the Michigan State Historic Preservation Office (SHPO) under the Section 106 implementing regulations (36 CFR 800).

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Background research for the Project was conducted by Commonwealth (Burns and Reyes 2024). Commonwealth’s literature review revealed that the sediments in the APE were disturbed by the construction of the Delta Creek Dam and its associated infrastructure in ca. 1937, making the preservation of Precontact period archaeological features or artifacts unlikely. However, the APE had not been subjected to previous archaeological survey and, given that it is located along a named waterway, the APE has an elevated potential to contain historic period archaeological features or artifacts associated with late nineteenth century logging or early to mid-twentieth century federal activities. Therefore, Commonwealth recommended further archaeological investigation of the APE in areas where ground disturbing activity is planned. Specifically, Commonwealth recommended a Phase I archaeological survey (pedestrian walkover observation and the excavation of shovel test pits) be conducted within the APE in areas of planned ground disturbing activity prior to the commencement of ground disturbing activities.

Commonwealth conducted a Phase I archaeological survey of the APE on October 16 and 17, 2024. This report provides the results of the Phase I archaeological survey conducted by Commonwealth. Because no archaeological resources were identified as a result of the field investigation, Commonwealth recommends no additional archaeological investigation in the APE.

Table 1 Project Area dimensions and locations

Project Area	PLSS Location	Length (N – S) Meters	Length (N – S) Feet	Width (E – W) Meters	Width (E – W) Feet	Area Hectares	Area Acres
West	T44N R14W S14 NW-SW, SW-SW & S15 NE-SE, SE-SE	285	935	139	456	1.48	3.66
East	T44N R14W S24 NW-NW	15	49	19	62	0.02	0.05
Total	-	-	-	-	-	1.50	3.71

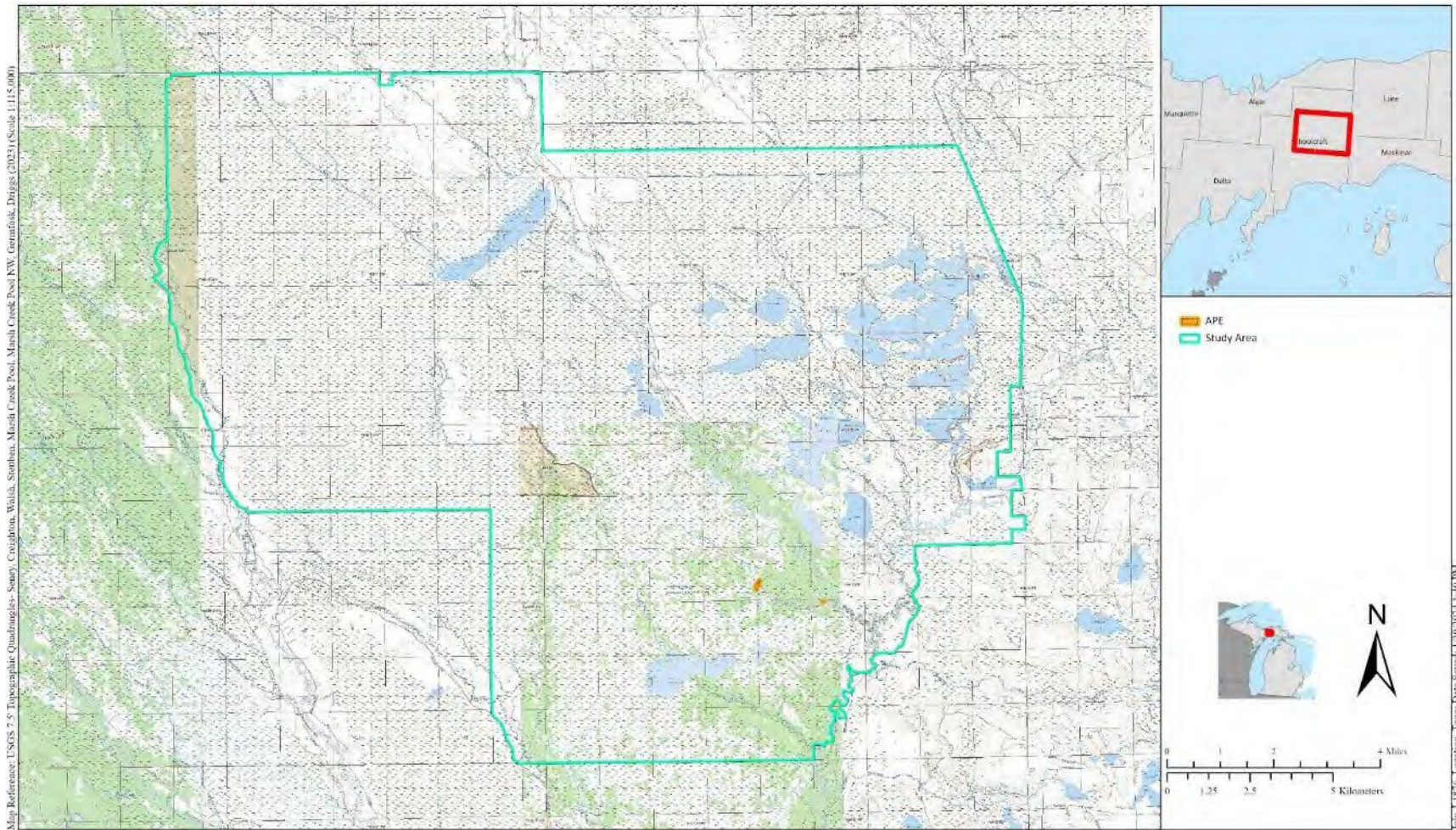


Figure 1 Project Area, Study Area, and displayed on the Seney, Creighton, Walsh, Steuben, Marsh Creek Pool, Marsh Creek Pool NW, Germfask, and Driggs topographic quadrangles



Figure 2 West Area of Potential Effects or APE



Figure 3 East Area of Potential Effects or APE

ENVIRONMENTAL BACKGROUND

The APE is 202 to 208 m (663 to 682 ft) above mean sea level. At each Project Area, Delta Creek flows along the north edge of the APE. Delta Creek empties into the Driggs River approximately 175 m (574 ft) east of the East Project Area of the APE.

The APE is within the Seney NWR, which is on the remnants of the Great Manistique Swamp. This swamp was characterized by marshes bordered by small, sandy islands and ridges, and is in the Seney Sand Lake Plain sub-subsection of Albert's (1995) landscape ecosystem scheme for the Upper Great Lakes. This sub-subsection is characterized as a very poorly drained or excessively drained sandy lake plain with relict beach ridge and swale complexes, sand spits, transverse sand dunes, and sand bars. The sub-subsection contains the largest wetlands in Michigan, with numerous streams rising in the wetlands and meandering through the sub-subsection, creating oxbows and other fluvial landforms. The Manistique River forms the area's main watershed and flows into Lake Michigan. Soils tend to be excessively drained sands on level lake plains, outwash plains, and dune ridges and very poorly drained peaty soils on depressions and the floodplains of streams. Vegetation in the sub-subsection is primarily marshes, sedge-dominated wet meadows, shallow peatlands, and swamps. Jack pine grows on the droughty dune soils, and red pine, white pine, and aspen grow on the lake plain. Early twentieth century efforts to drain the wetlands were abandoned due to low productivity soils (Albert 1995:169–170).

The Michigan State University Extension (2022) maps the Precontact period vegetation in most of the West and Central Project Areas as muskeg/bog, with a small shrub swamp/emergent marsh around the Delta Creek Pool in between the West and Central Project Areas and jack pine- red pine forest on the higher ground south of the Delta Creek floodplain in the Central Project Area. The mapped Precontact vegetation in the East Project Area is hemlock-white pine forest.

The U.S. Department of Agriculture Natural Resource Conservation Service (USDA NRCS) lists five soil types present in the APE: Rousseau fine sand, 6–15% slopes; Rousseau fine sand, 15– 35% slopes; Spot-Finch complex, 0–3% slopes; Ausable, Deford, and Tawas mucks; and Pelkie- Deford complex, 0–4% slopes (Table 2; Figure 4) (USDA NRCS 2024). The well drained Rousseau fine sands are found on the slopes on the margins of the Delta Creek floodplain as well as on the artificial slopes on the downstream (southeast) side of the dam. These are sandy upland soils associated with dunes and outwash plains. Very poorly drained Ausable, Deford, and Tawas mucks are found on the Delta Creek floodplain downstream (southeast) of the dam in the West Project Area. The moderately well drained Pelkey-Deford complex, which consists of floodplain soils formed from sandy alluvium, is found in the East Project Area of the APE.

Table 2 Soil types in the Area of Potential Effects

Soil Code	Soil Name	Associated Landforms	Parent Material	Drainage	Acres	% of APE
24D	Rousseau fine sand, 6–15% slopes	Dunes	Eolian sands	Well drained	0.1	1.4%
24E	Rousseau fine sand, 15–35% slopes	Dunes	Eolian sands	Well drained	0.6	15.0%
26A	Spot-Finch complex, 0–3% slopes	Depressions on outwash plains	Sandy outwash	Poorly drained	<0.1	0.6%
65	Ausable, Deford, and Tawas mucks, frequently flooded	Flood plains	Woody organic material over glacial drift	Very poorly drained	2.6	69.6%
67B	Pelkie, occasionally flooded-Deford, frequently flooded, complex, 0–4% slopes	Flood plains	Sandy alluvium	Moderately well drained	<0.1	1.4%
W	Water	N/A	N/A	N/A	0.4	12.0%
Total	-	-	-	-	3.7	100.0%



Figure 4 Identified soils in the Project Areas and surrounding area

CULTURAL BACKGROUND

General Archaeological and Historical Background

The Great Lakes region has a rich and complex cultural history which incorporates at least 14,500 years of environmental change and human adaptation (Bieder 1995; Birmingham et al. 1997; Cleland 1992; Grayson and Meltzer 2002; Halsey 1999; Martin and Martin 1979; Mason 1981; Milwaukee Public Museum 2016). The archaeological and historical records reflect alterations in the economy, belief systems, social organization, cultural composition, and lifeways of the people who lived in the region. Understanding the culture history of Michigan's Upper Peninsula requires an understanding of the regional cultural chronology and consideration of its place within the broader environmental and cultural milieu of the Great Lakes region. The following section outlines the cultural history of the Upper Great Lakes.

Precontact Period Resources

Paleoindian Period (9550 to 7550 BC)

Paleoindian peoples were the first inhabitants of North America. Following the retreat of Wisconsinan glaciation from its southern limits, Paleoindians entered the Great Lakes region from a generally southern direction. As the retreat of the Laurentide ice sheet continued northward, these early groups migrated north, taking advantage of available resources that developed near glacial margins. Although the Ice Age was waning, episodes of glacial advance and retreat occurred, covering, and then exposing portions of northern Wisconsin and upper Michigan. While the center of the lower part of Michigan was ice-free ca. 14,000 BC (Hansel et al. 1985; Overstreet 1998), Michigan's Upper Peninsula remained beneath ice until sometime following the retreat of the Two Rivers (formerly Valdres) ice advance, which dates to ca. 9500 BC (Farrand 1988). At that time, the environment was far different from what it is today. Much of the region was covered, or significantly affected, by glacial ice. Spruce-fir forests, muskeg, swamps, and barren glacial outwash plains occurred over most of the area, while tundra persisted along the fringes of the receding ice. Research suggests that the transition from a post-glacial environment to forest communities more similar to today may have been significantly more rapid than previously thought (Davis 1983; Huber 1995). Modern floral communities were becoming established by 8000 BC in the Upper Midwest.

Despite the similarity of the forest communities, the landscape was rapidly changing, largely as a result of changing water levels in the Great Lakes basins. At about 9850 BC, following the retreat of the Two Rivers glacial advance, the region experienced isostatic rebound and downcutting of outlet channels to the east. The high-water levels of glacial Lake Algonquin, which occupied portions of the Lake Michigan and Lake Huron basins, began to drain eastward toward the Atlantic as the lower drainage outlets to the north were unblocked (Hough 1958; Larsen 1987). During the Lake Algonquin stage, much of the eastern Upper Peninsula formed an archipelago (Futyma 1981).

Paleoindian groups are believed to have entered lower Michigan between 12,000 and 11,500 BC (Cleland et al. 1998) and Wisconsin ca. 12,500 BC (Grayson and Meltzer 2002). In lower Michigan, early Paleoindian occupations are noted by Cleland et al. (1998) as far north as Otsego County. Research from northeastern Wisconsin suggests that Paleoindian groups were present along the northern ice margins that were just south of the Michigan border ca. 10,500 BC following the initial retreat of the Green Bay lobe (Farrand 1988). Paleoindians likely returned to this area following the final retreat of the lobe ca. 8,000 BC (Farrand 1988). The northern limit of these early Paleoindian occupations occurs at approximately the same latitude in Michigan (Cleland et al. 1998) and Wisconsin (Morrow 2014). Most Paleoindian sites in the northern Great Lakes region have been identified on Lake Algonquin shorelines and other proglacial lake features, as well as in inland contexts such as post-glacial river terraces and glacial moraines (Buckmaster and Paquette 1996; Dudzik 1993; Mulholland et al. 1997).

Early Paleoindian sites (prior to 8000 BC) are poorly represented in the northern Great Lakes area (Cleland et al. 1998; Mason 1986:189–190; Nero 1955; Palmer and Stoltman 1976; Ritzenthaler 1966). Initial research suggested that these early groups were highly mobile, big-game hunters that were well adapted to a forest-steppe environment. As a result, sites were interpreted as short-term encampments (Mason 1986:198). More recent research suggests that immediately following deglaciation and the establishment of small lakes and wetlands in southern and central Wisconsin, Early Paleoindian groups quickly became less mobile once stable and reliable wetland resources became available (Epstein 2016). These resources would have included a wider variety of game and flora than previously available. Early Paleoindian flaked stone tools are best characterized by large, often fluted, lanceolate projectile points, burred end scrapers, and the use of *outré passe* (over pass) flakes in the reduction of bifacial tools.

Groups occupying areas in southwestern Wisconsin, where post-glacial lakes and wetlands did not form, traveled to the northeastern periglacial areas where wetlands were becoming established. Because of deglaciation, the environment was becoming less capable of supporting large herd animals, leading to a change of subsistence practices placing additional emphasis upon expanding game variety to include those species found in wetland habitats. Archaeological investigations from Michigan indicate, however, that Paleoindian groups continued to actively pursue animals such as caribou, whose population was apparently much larger than in Wisconsin (Cleland 1965). There is, however, a growing number of archaeological sites in Michigan accessible by traveling along interior ridgelines that is suggestive of targeted environmental diversity and wetland exploitation. Among others, these include the Gainey, Holcombe, and Leavitt sites.

The Late Paleoindian period began around 8000 BC and overlaps in time with the Early Archaic period. It is difficult to say exactly when the Paleoindian period ends because the Paleoindian tradition was replaced by Archaic period cultures at different times in different places; therefore, the end of the period is broadly estimated to be sometime between 6000 BC and 5000 BC.

During the Late Paleoindian stage, small, mobile groups expanded further northward into recently deglaciated inland areas and onto shores recently exposed by lower Great Lakes water levels. These

opportunities were created by large, long-term events such as the Lake Chippewa low-water stage (8000 BC to 5500 BC), which lowered Lake Michigan water levels by approximately 113 meters (m) (370 feet [ft]), from 183 m (600 ft) to 70 m (230 ft) above mean sea level (amsl) (Larsen 1987:14). Late Paleoindian hunters and gatherers were probably attracted to lake-plain forests and lake margins because of the ecological productivity and diversity of these areas. Unfortunately, many Late Paleoindian and Early Archaic sites are probably now inundated by up to 122 m (400 ft) of water (Mason 1986:192–193). For example, O’Shea et al. (2014) report that on the Alpena-Amberley Ridge, located below Lake Huron’s current water level, there are over 60 stone constructions. These constructions include the Drop 45 Drive Lane, a caribou drive feature dating to ca. 7000 BC.

Late Paleoindian cultural material has been recovered from sites in the Lake Superior and Lake Michigan-Huron basins (Greenman and Stanley 1943; Julig 1984; Lee 1954, 1955; Mason 1986; Mason and Irwin 1960; Salzer 1974). Buckmaster and Paquette (1989, 1996) identified a series of Late Paleoindian, or Plano, period sites in the Upper Peninsula in association with quartzite outcrops, inland lakes, and glacial outwash features of the re-advance. Scottsbluff, Eden, Agate Basin, and other collaterally flaked points have been found in concentrations suggesting cremations or discrete activity areas. Several other Late Paleoindian sites have been identified in the northern Great Lakes, including northeastern Wisconsin (Cleland and Ruggles 1996; Dudzik 1993; Mason 1981, 1986; Salzer 1974). Although site location can be informative regarding generalized usage patterns, specific northern Great Lakes Late Paleoindian economic adaptations are poorly understood. Late Paleoindians were thought to have been nomadic, focusing primarily on the hunting of large game, such as elk and caribou, and opportunistically exploiting a variety of other resources (Cleland 1983; Kelly and Todd 1988:223; Mason 1981). More recent investigations in northern Wisconsin suggest, however, that Late Paleoindian hunters were exploiting a wide variety of game on a regular basis (Epstein 2016; Kuehn 1998; Meinholz and Kuehn 1996) including moose, white-tailed deer, and smaller animals.

Archaic Period (8000 to 1000 BC)

The Archaic tradition, dating from sometime after 8000 BC to 1000 BC, overlaps with and follows the Late Paleoindian stage (Mason 1986:198; Mason and Irwin 1960). At this time, post-glacial lake levels fluctuated dramatically in the Huron and Michigan basins (e.g., Anderton 1993; Hough 1958; Larsen 1985a, 1985b) and the phytogeography of the region also changed (Davis 1983; Webb et al. 1983). The tundra and spruce parkland of the Paleoindian tradition began to be replaced by pine forests around 8000 BC, and then changed to a mixed deciduous-coniferous forest ca. 6000 BC. This in turn gave way to the current Canadian-Carolinian biotic province by 5500 BC. Larger game began to disappear, and subsistence assemblages began to reflect further increases in the use of small game, aquatic resources, and plants. Although northern post-glacial river and Great Lakes fisheries had not significantly re-developed prior to 8000 BC as a result of cold water temperatures and torrent water flow, these resources began to be introduced into the archaeological record early in the period (Mandrak and Crossman 2011).

The three basic characteristics of the Archaic tradition are a continued increase in diet breadth, including a subsistence economy based on the exploitation of a wider variety of wild plant and animal resources, the absence of pottery, and burial of the dead in discrete areas or natural knolls. Tool kits expanded to include tool forms for the efficient exploitation of the new suite of resources (see Meinholz and Kuehn 1996).

Early and Middle Archaic sites are virtually absent in the Upper Peninsula, although Early Archaic-like sites have been identified in and Keweenaw Counties. This hiatus in the cultural record has been attributed to several factors. The seemingly low population density of the Early Archaic period may be due to a population decline following the Paleoindian period or inundation of the majority of Early Archaic sites. Alternatively, Stoltman (1986:213) suggests that “we have not learned to discriminate the archaeological remains of these peoples from those of either earlier or later cultures.” In other words, it is possible that lanceolate-shaped spear points characteristic of the Plano/Late Paleoindian stage were manufactured by Early Archaic populations. It is also possible that large, side-notched points currently ascribed to the Middle Archaic period were manufactured earlier. A third possibility is that large points with diagonal or corner notches, expanding stem points, or bifurcate base points—dated to the Early Archaic stage in other states—may be of comparable age in northern Michigan (e.g., Mason 1981:131–133; Stoltman 1986:215). These hypotheses cannot be tested until sites with projectile points of these types can be chronometrically dated.

Site 20KE20 is on the Keweenaw Peninsula. A radiocarbon date of 5920±350 BC places the site within the Early Archaic stage and is coincident with the onset of mixed deciduous-coniferous forest. Although the context of the carbon sample from which this date was derived remains somewhat ambiguous, it may be associated with a hearth feature and a worked copper artifact (Martin 1993). If the date is associated with the cultural deposits, it would minimally suggest that Early Archaic groups could access the Lake Superior and Lake Michigan shorelines and presumably interior areas of the Upper Peninsula. Although the physical evidence remains scant, the presence of sites from at least the Late Paleoindian/Early Archaic stage onward appears possible.

Research by Anderton (1993) shows that modern Upper Peninsula shorelines were not exposed prior to 2700–2000 BC, precluding modern shore use prior to late in the Archaic tradition. Legg and Anderton (2010) model site potential along the coast line of the Pictured Rocks National Lakeshore, noting that sites are coincident with shoreline that has been exposed for at least 1,000–2,000 years, river mouths, and estuaries. A recent study of the composition of debitage has demonstrated a relationship between raw material type and the relative age of coastal archaeological sites in the Munising Bay area (Drake et al. 2009). Based on this study, Archaic sites typically include 70 percent or more quartzite in their lithic assemblage, whereas Woodland sites include less than 30 percent quartzite. The proportion of quartzite on multicomponent sites falls between 30 and 70 percent. Considered together, the elevation of a site and the raw material composition of debitage can be used in tandem to date aceramic coastal archaeological sites in the Upper Peninsula. This suggests that if sites date prior to 2700 BC, they are likely associated with beach strand lines or

interior ridges proximate to old river beds or drainages and remnant lake or wetland features as Buckmaster and Paquette (1989, 1996) have noted regarding other sites in the Upper Peninsula.

The Middle Archaic period, which dates from ca. 3000 BC to 1200 BC, is distinguished by the manufacture of distinctive, large side-notched projectile points or chert knives. Copper tools and ornaments, as well as the increased use of groundstone items, are also associated with this period. The Old Copper culture, which is primarily identified as a mortuary complex, flourished during the Middle Archaic period (Ritzenthaler 1957). Goods were manufactured from Lake Superior copper using a cold-hammer technique. The vast majority of Old Copper culture sites in the northern Great Lakes have been surface finds. Few Old Copper sites have been systematically excavated. However, sites in Wisconsin (e.g., the Oconto, Reigh, and Osceola sites) provide some insight into the varied mortuary practices of this cultural tradition. Burials were interred in cemeteries singly, in multiple interments in both extended and flexed positions, as secondary bundle burials, and as cremations. Grave goods are often interred with the burials. There has been considerable controversy over the dating of the Old Copper culture because of inconsistencies in the radiocarbon dates from these sites. Current evidence suggests that the Old Copper culture postdates the Lake Nipissing maximum, dating between 2300 BC and 1200 BC (Stoltman 1986:224–226). Salzer (1986:273) suggests however that many of the so-called Old Copper artifacts may actually have been produced by Initial Woodland peoples.

Little is specifically known about the everyday life, economy, and social organization of the area's Middle Archaic peoples. If Weber I in the Saginaw Valley of Michigan can be used as an example of the Middle Archaic adaptation in Michigan, then a continuation of the diffuse subsistence pattern of the Early Archaic may be posited (Lovis 1989). Weber I yielded artifacts and subsistence remains suggestive of a small, late-summer/fall campsite indicative of high residential mobility (Robertson 1987). Subsistence remains from the site include a variety of animals (e.g., large and small game, fish, and turtle), fruits, and nuts (Smith and Egan 1990).

In contrast to the preceding Early and Middle Archaic periods, the Terminal or Late Archaic period is documented at a number of sites in the northern Great Lakes (Anderton 1993; Benchley et al. 1988; Conway 1980; Dunham and Anderton 1999; Fitting 1974; Franzen 1987; Hill 1994, 2006; Wright 1972). Late Archaic populations were hunter-gatherers. Cleland (1976) characterizes the Late Archaic subsistence strategy as a diffuse adaptation, based on the scheduled use of a wide variety of plant and animal resources. The availability and productivity of large terrestrial animals and nuts, and the potential for agricultural production, are limited in the northern Great Lakes and Upper Peninsula. However, fish are an abundant, highly productive, reliable resource in this region and were a key resource for precontact Native Americans (Cleland 1982). The earliest evidence for fishing in the northern Great Lakes is found in the context of the Old Copper complex, where fishing equipment is a common component of the artifact assemblages.

Several Archaic period sites have been identified in the Upper Peninsula. For example, the Popper site has been identified on Grand Island (Dunham and Anderton 1999; Dunham and Branstner 1995). This site is primarily comprised of a generalized quartzite lithic assemblage consisting of

flakes, cores, and expedient tools, although recent research has revealed a wider variety of tools and raw materials (Neubauer 2009). A Late Archaic date, 2100±50 BC, was recorded for one of the site's hearth features (Dunham and Branstner 1995). In the Ottawa National Forest, the Ottawa North site, a small temporary camp site, has produced radiocarbon dates of 1320±220 BC, and the Alligator Eye site, a small chert quarry, has produced radiocarbon dates of 1640±150 BC (Hill 1994). Terminal Archaic radiocarbon dates of 950±60 BC and 1630±90 BC were recorded for two sites (20MQ90 and 20MQ91) situated in County (Robertson et al. 1995).

The evolution of Late Archaic settlement/subsistence strategies is a major research interest in the region. Based on archaeological data from several sites in the Great Lakes, Cleland (1982) posited a general settlement/subsistence model for the Late Archaic. Hunting occupied the majority of the year, although during the spring and summer populations moved to coastal locales where they speared shallow-water spawning fish, hunted waterfowl and mammals in adjacent wetlands, and collected wild plant foods. For example, the Popper site has been interpreted to represent a coastal fishing camp and has provided evidence for multiple, possibly seasonal occupations during the Late Archaic period (Dunham and Anderton 1999). On the topic of seasonal site use, it is worth noting that 20MQ91 has been interpreted as a cold season occupation and 20MQ90 as being used in the late summer and fall (Robertson et al. 1995). If coastal fishing represents the garnering of a significant resource in the spring and interior hunting imperative throughout the rest of the year, then such a coastal/interior pattern might be expected (Dunham and Anderton 1999).

Woodland Period (1000 BC to 1600 AD)

Throughout much of the Midwest, the Woodland tradition is divided into three stages: Early Woodland (1000 BC to 200 BC); Middle Woodland (200 BC to AD 600); and Late Woodland (AD 600 to AD 1600). The standard hallmark for the beginning of the Woodland tradition is the introduction of ceramics. In northern Michigan, including the Upper Peninsula, the Archaic tradition persists about 1,000 years longer than in more southern parts of the Midwest, and the Woodland tradition does not begin until around AD 1 (see Brose and Hambacher 1999; Fitting 1975). Ceramics have not been recovered in the eastern Upper Peninsula dating prior to this time period, which generally corresponds to the Middle Woodland stage elsewhere in the Midwest.

The first ceramics to appear in the eastern Upper Peninsula are Middle Woodland forms representing Laurel and North Bay expressions (Brose 1970; Brose and Hambacher 1999; Janzen 1968; Mason 1981). Thus, the terms Initial and Terminal Woodland are often substituted for Middle and Late Woodland in the Upper Peninsula.

During the Woodland period (AD 1 to AD 1600), a number of cultural changes occur. Sites become larger and technological innovations, such as ceramics and new tools for fishing, are added to the material assemblages. Evidence for agriculture also appears during this time. Boyd and Surette (2010) analyzed food residue from 58 archaeological sites and found that corn (*Zea mays* ssp. *mays*) residue was present upon Laurel phase vessels as far north as the subarctic boreal forest as early as AD 500, suggesting that long-distance trade networks linking temperate and boreal forests

may have been established. By AD 1000, corn was found to be a widespread dietary constituent in the region (Boyd and Surette 2010).

Early Woodland occupations are not well documented in the Upper Peninsula. However, assemblages from three sites within the Menominee River watershed argue for an Early Woodland designation based on the presence of Dane Incised ceramics (Buckmaster 1979). Similar ceramics have been recovered from the Winter site on the Garden Peninsula (Richner 1973). Early Woodland groups in the northern Great Lakes continued to pursue a broad-spectrum subsistence strategy, with aquatic resources comprising an important component of the subsistence regime. Cleland (1982) posits that near-shore fishing became increasingly important during this period. Further, evidence from the Dunn Farm site in Leelanau County in the Lower Peninsula indicates that wild rice was added to the subsistence economy during the Early Woodland period (Ford and Brose 1975).

The Middle Woodland, or Initial Woodland, period (AD 1 to AD 500) in the northern Great Lakes represents the first widespread introduction of ceramics in the Upper Peninsula. In general, Middle or Initial Woodland sites in the Upper Peninsula may represent Lake Forest (Fitting 1975) or Northern Tier (Mason 1966) adaptations, sharing material culture affinities with Laurel sites to the south, north, and west (Janzen 1968). Settlement and subsistence patterns suggest seasonal fishing, collecting, and hunting, with an increasing emphasis upon exploiting aquatic resources. Sites such as Summer Island (Brose 1970), Winter (Richner 1973), and Naomikong Point (Janzen 1968) are interpreted as Middle Woodland warm-season fishing villages. In the St. Ignace area, a number of sites having Middle or Initial Woodland components are thought to have been satellite summer or winter camps (Fitting 1978; Fitting and Clarke 1974). Spider Cave on the Garden Peninsula may have been a ritual locale (Cleland and Peske 1968).

Although the best known Initial Woodland site in the region is Naomikong Point (Janzen 1968), other recognized Initial Woodland sites include the Timid Mink site (Hill 1995), the Gooseneck Lake IV site (Franzen 1987), the multicomponent Williams Landing locale (Dunham and Branstner 1995), the stratified Bark Dock site in Chippewa County (Dunham and Hambacher 2007), and the Carp River site (Dunham et al. 1993). The Carp River site has been interpreted as a transitional Middle-Late Woodland fishing encampment at the mouth of the Carp River. Faunal evidence from the site suggests an emphasis on spring-spawning species (e.g., sturgeon and walleye), although fall spawning species (e.g., whitefish and lake trout) are also represented. The location of the site is consistent with a transitional Middle-Late Woodland fishing village based on current regional settlement subsistence models (Cleland 1976, 1982; Martin 1989). The mouth of the Carp River likely provided excellent access to both river-spawning spring species and deep-water-spawning fall species. Anderton (1993) posits that some of the sites on paleo shorelines are, in fact, aceramic Woodland sites with a focus on interior wetland resources.

The Late Woodland or Terminal Woodland period (AD 500 to AD 1600) is the best documented cultural period in the northern Great Lakes and Upper Peninsula. Archaeological data suggests there were two separate populations within the Upper Peninsula during this time period. Cultural affiliations for the western Upper Peninsula are associated with Oneota populations to the south and

west in Wisconsin. The eastern Upper Peninsula, Straits of Mackinac, and northern Lower Peninsula reflect a shift from a more western, Blackduck affiliation during the early Late Woodland to an eastern, Iroquoian influence during the Late Woodland (McPherron 1967).

Research suggests that cultural affiliations during the Late Woodland in the Upper Peninsula generally conform to those of the Lake Superior basin. Cultural affiliations of the Bay de Noc region are clearly tied to the south and west in Wisconsin. The presence of Oneota wares in some abundance, rather than Straits sequence ceramics, reveals that the Bay de Noc region is part of a different cultural system (Brose 1970; Buckmaster 1979; Dunham and Hambacher 2002). This is further attested to by the fact that Oneota ceramic wares occur across the region at many Terminal Woodland sites, e.g., Bar Lake site (Dunham and Hambacher 2002), Sturgeon River site (Buckmaster 1983; Martin and Martin 1980), and Ogontz Bay site (Anderton et al. 1991).

In the Lake Superior Basin, few Terminal Woodland sites have been formally excavated, although evidence for Terminal Woodland copper mining has been documented at 20ON209 (Ferone 1999) and Naomikong Point contains a Terminal Woodland component (Janzen 1968). The ceramic styles found across much of the eastern part of the Superior basin that indicate an affinity towards the south and east include Juntunen wares and Iroquoian motifs. In the central and western Upper Peninsula, along Lake Superior, the ceramic wares are more westerly in association.

Native American cultures were dramatically affected by European influences, land use, political control, and trade practices. French explorers, traders, and Jesuit missionaries began making contact with Native Americans in the Upper Great Lakes ca. 1650 (Bieder 1995; Cleland 1992, 1993; Stone and Chaput 1978; Tanner 1987). Sault Ste. Marie, at the outlet of Lake Superior, and St. Ignace, in the Straits of Mackinac, were centers of early historic fur trade and religious activity in the Upper Peninsula during the late seventeenth century. Archaeological investigations in the St. Ignace area have identified many sites relating to this period (Branstner 1992; Cleland 1971; Fitting 1976; Nern and Cleland 1974; Stone 1972). During this time, as political control of the area passed from French (before 1760), to British (1760–1796), and finally to American jurisdiction (1796–present), Native Americans changed in many respects as they became increasingly dependent on European technologies. Early postcontact Native American villages, fur trading posts, and other special activity sites, such as maple sugaring camps and burial locations, can potentially provide valuable insights into the adaptive changes that occurred during this period.

Postcontact Period

The first Europeans in the Upper Great Lakes region were French fur traders and priests (Balesi 1996; Stone and Chaput 1978). The French established missions in Sault Ste. Marie (1668) and St. Ignace (1670), which were followed by fur trading posts, settlements, and forts. The remains of the French missions or settlements at these locations have not been located. The eighteenth-century French component at Michilimackinac has been investigated in Mackinaw City (Heldman 1991, 1999; Scott 1985; Stone 1974). While the official French presence was limited to the missions and trade centers, voyageurs and metis often lived among the Native American population. The French

lost political control of the Upper Great Lakes in 1760.

The British takeover of the upper lakes was effectively an administrative move, and they continued the fur trade from the same centers established and operated by the French. The administrative center of the British fur trade for the region was at Michilimackinac from 1760 to 1780, at which time the fort was relocated to Mackinac Island. The British relinquished control of the region to the United States in 1796, whereupon forts were established first on Drummond Island and subsequently on St. Joseph Island (Demers 1998; Pilling and Anderson 1999). As the fur trade began to decline, the Upper Peninsula's land and natural resources were ceded to the United States through a series of treaties between the federal government and Native Americans (Cleland 1992; Tanner 1987).

American interest in the region was limited to the fur trade through the first decades of the nineteenth century. As the nineteenth century progressed, other extractive industries emerged. The first commercial venture to stem from the fur trade was commercial fishing. The American Fur Trade Company became established in the fishing trade by the 1830s (Nute 1926). The logging industry also reached the eastern Upper Peninsula at this time. Sawmills and logging camps were on or near the Escanaba River, Rapid River, Sturgeon River, and Pendills Creek by the 1840s.

The economic value of the mineral resources in the Upper Peninsula was first recognized in the 1840s, when state geologist Douglas Houghton reported to the Michigan legislature on the wealth of copper available in the Keweenaw region. During the late 1850s and early 1860s, following the initial speculative period (1840s), economically successful copper-mining operations developed. Mineralogical surveys proved that copper deposits were limited to the Keweenaw region; however, during these surveys, they discovered valuable high-grade iron ore deposits in what is now known as the District. Iron ore extraction subsequently became an important economic interest in the Upper Peninsula (Day 1996; Krause 1992; Lankton and Hyde 1982). During the 1870s, groups were brought to the Upper Peninsula to work in the mines.

The first substantial occupation by Euroamericans within the Upper Peninsula began during the 1870s with the logging era. Following the depletion of forest resources on the east coast of North America, loggers turned their attention to the Great Lakes region. During the late nineteenth and early twentieth centuries, the lumber industry began to wane. Railroads that had initially penetrated the region to accommodate the growing extractive industries, began to promote tourism in the Upper Peninsula. Dunbar (Dunbar 1965:490) reports "the Grand Rapids and Indiana Railroad called itself the 'fishing line' and widely advertised the attractiveness of northern Michigan to the angler and hunter." To attract tourists, the Grand Rapids & Indiana Railroad, as well as others, built huge hotels such as the Grand Hotel on Mackinac Island. Ski clubs and winter sports facilities were established to attract tourists in the winter. By 1900, numerous northern Michigan cities and towns were becoming resort communities. Tourism in the Upper Peninsula continued to grow as transportation routes improved (Dunbar 1965).

Project Area Background

Land Use History of the Area of Potential Effect

Commonwealth reviewed the original Bureau of Land Management General Land Office (BLM GLO) survey map that includes Section 14, 15, and 24 in T44N R14W, as well as other historical maps, U.S. Geological Survey (USGS) topographic maps, and aerial images that include the APE. Commonwealth also consulted previously conducted research on the historic context of the Seney NWR, completed by Commonwealth in 2021 (Remensnyder et al. 2021).

The original survey for T44N R14W was approved in 1850 (BLM GLO 1850). The original survey map shows Delta Creek and the Driggs River in their general modern channels and indicates details of the topography and vegetation, but does not depict any roads, structures, or other cultural features in or adjacent to the APE. The BLM GLO issued patents for the aliquots in Sections 14 and 24 containing the APE between 1868 and 1881 (Table 3) (BLM GLO 2024). The BLM GLO database does not contain any patents for land in Section 15.

Table 3 Patents issued by Bureau of Land Management General Land Office for land containing the Area of Potential Effect

Date	Accession	Name	PLSS Township	PLSS Section	PLSS Aliquots
3/5/1868	MI2030.078	Eric McArthur	T44N R14W	24	NW $\frac{1}{4}$ NW $\frac{1}{4}$
6/10/1873	MW-0951-072	George E. Dole, James Elliott	T44N R14W	14	S $\frac{1}{2}$ SW $\frac{1}{4}$
6/23/1881	MI2140.129	Wilhelm Boeing	T44N R14W	14	NW $\frac{1}{4}$ SW $\frac{1}{4}$

Commonwealth's previous historical work on the Seney NWR indicates that European contact in the region began with the establishment of French missions in Sault Ste. Marie (1668) and St. Ignace (1670), which were followed by fur trading posts, settlements, and forts (Remensnyder et al. 2021:17). The region was under the nominal administrative control of the British from 1760 to 1796, when the United States assumed control, but Euroamerican activity in the region largely was limited to the fur trade through the first decades of the nineteenth century. As the nineteenth century progressed, the first shifts from the fur trade to other extractive industries emerged. The first commercial venture to stem from the fur trade was commercial fishing. The American Fur Trade Company became established in the fishing trade by the 1830s (Nute 1926). The logging industry also reached the eastern Upper Peninsula at this time.

Following the depletion of forest resources on the east coast of North America, loggers turned their attention to the Great Lakes region. Sawmills and logging camps were located on or near the Escanaba River, Rapid River, Sturgeon River, and Pendills Creek by the 1840s. The village of Germfask was settled in 1866 (Kopecky 2020:13). Several years later, in 1881, the village of Seney was settled. Seney initially served as a train stop on the Detroit, Mackinac, and Railroad for passengers who wanted to travel north to Grand Marais. Only one year later, logging companies, most notably the Alger, Smith Company, took advantage of the increased access granted by the

railroad and moved into the area to begin logging the white pine on the Seney Plains. Immigrant workers quickly followed and Seney's population boomed to three thousand people. Despite the small population, the village boasted twenty-one saloons, ten hotels, one church, and several grocers and dry goods stores (Remensnyder et al. 2021:18–19).

By the late 1800s most of the Upper Peninsula's timber had been logged. Logging reached its peak in the Upper Peninsula shortly after the turn of the twentieth century, and lumber interests subsequently moved to western areas of the United States. By this time, most of the region's pineries were completely harvested and much of the natural vegetation had been transformed into second-growth forests and stump prairies (Remensnyder et al. 2021:18). Large fires swept through the Seney area in 1891, 1895, and 1904, leaving the land barren (Wood 2000). However, sensing an opportunity to repopulate the area, several residents formed the Upper Peninsula Development Bureau around 1910 with the hope of repurposing the land for agriculture (Remensnyder et al. 2021:19). In 1911 developers began a promotional campaign to attract farmers and settlers to the area, naming the area "Cloverland" and excavating large ditches and drainage canals to "reclaim several thousand acres of swamp" on the Seney Plain (Central Upper Peninsula and Northern Michigan University Archives 2008; Remensnyder et al. 2021:19).

However, the settlers who arrived would soon learn that the land was not suitable for agriculture at all and that the claims were grossly exaggerated. In addition to the poor soils, farming attempts throughout the Upper Peninsula were mostly unsuccessful due to a variety of factors: long distances to potential markets, the high cost of receiving goods and supplies, short growing seasons, and the collapse of market prices. Eventually, most of the resource-depleted lands became tax delinquent and reverted to the state government, forming the base for the public lands of Michigan. By the early 1930s, much of the former marsh land on the Seney Plain had been drained by the land companies, settlers and homesteaders had largely abandoned their lands, and fishing, hunting, and tourism were becoming more of a draw to tourists (Remensnyder et al. 2021:20).

A county atlas published in 1930 shows the ongoing federal land acquisition within what would become the Seney NWR, with parcels of federally owned land interspersed among parcels owned by banks, lumber companies, and private individuals (Hixson 1930). This map shows the portion of the APE that is in Section 14 overlapping a 65-ha (160-ac) parcel owned by J. Gerves that takes up the southwest quarter of Section 14; the portion in Section 15 overlapping a 210-ha (520-ac) federally owned parcel that occupies most of Section 15; and the portion in Section 24 overlapping a 16-ha (40-ac) parcel labeled as state tax land that makes up the northwest quarter of the northwest quarter of Section 24. A USGS topographic map published in 1931 shows the APE along Delta Creek with scattered wetlands in the surrounding area (Figure 5) (USGS 2024). This map also shows a road running through the eastern portion of the APE.

In 1935 Harry L. Hopkins, a federal emergency relief administrator, approved the purchase of fifty thousand acres of land in Schoolcraft County to be developed as a refuge for migratory waterfowl, administered by the Bureau of Biological Survey. Options were approved on land that was determined to be unfit for agriculture. Although about forty percent of the land had become tax

delinquent and reverted to the State of Michigan, families were still living on some of the parcels that the federal government wished to acquire in order to avoid a patchwork of federal lands (Remensnyder et al. 2021:22). On December 10, 1935, President Franklin D. Roosevelt authored an executive order that officially established the Seney Migratory Waterfowl Refuge “as a refuge and breeding ground for migratory birds and other wildlife” (Roosevelt 1935).

A 1937 map (Figure 6) of the “Seney Migratory Waterfowl Refuge,” the precursor to the Seney NWR, shows numerous canals and ditches dissecting the wetlands that make up the refuge, with water management infrastructure such as open spillways, spill boxes, culverts, and pools indicated. However, none of these cultural features are shown in or near the APE (Migratory Waterfowl Division 1937).

Dahlke’s [NO_PRINTED_FORM] county atlas labels the sections that make up the Seney NWR as belonging to the “U. S. Govt.” This atlas shows and labels Delta Creek and other waterways and shows a road running along the west side of the Driggs River in the east half of Section 14, well outside the APE. This map does not depict any roads, structures, or other cultural features in or near the APE. A county plat book published in 1963 has a label for the Seney NWR covering all of T44N R14W and does not show any cultural features in or near the APE (Rockford Map Publishers 1963:28).

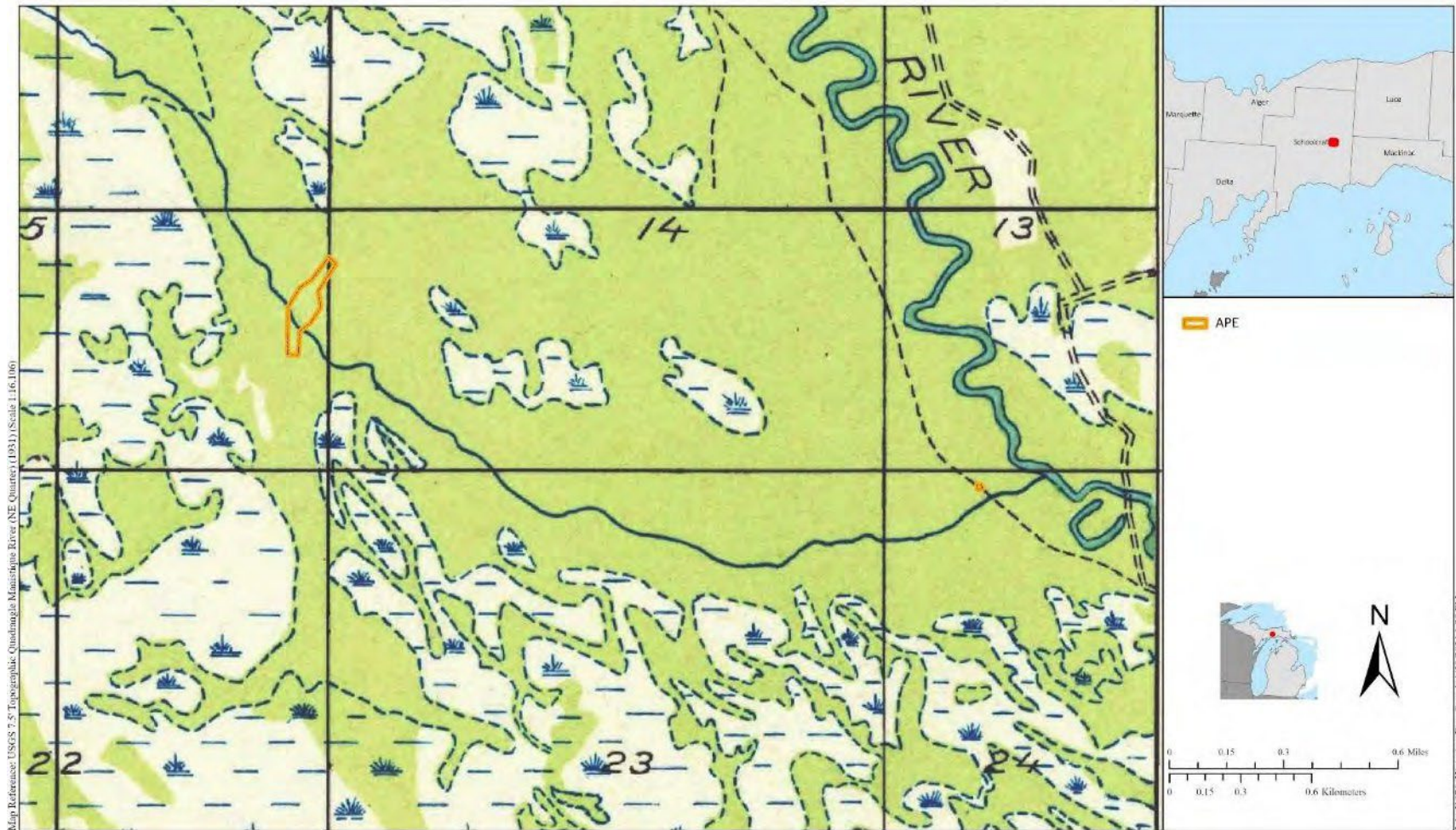


Figure 5 Area of Potential Effect georeferenced to the Manistique River NE (1931) USGS topographic quadrangle (USGS 2024)

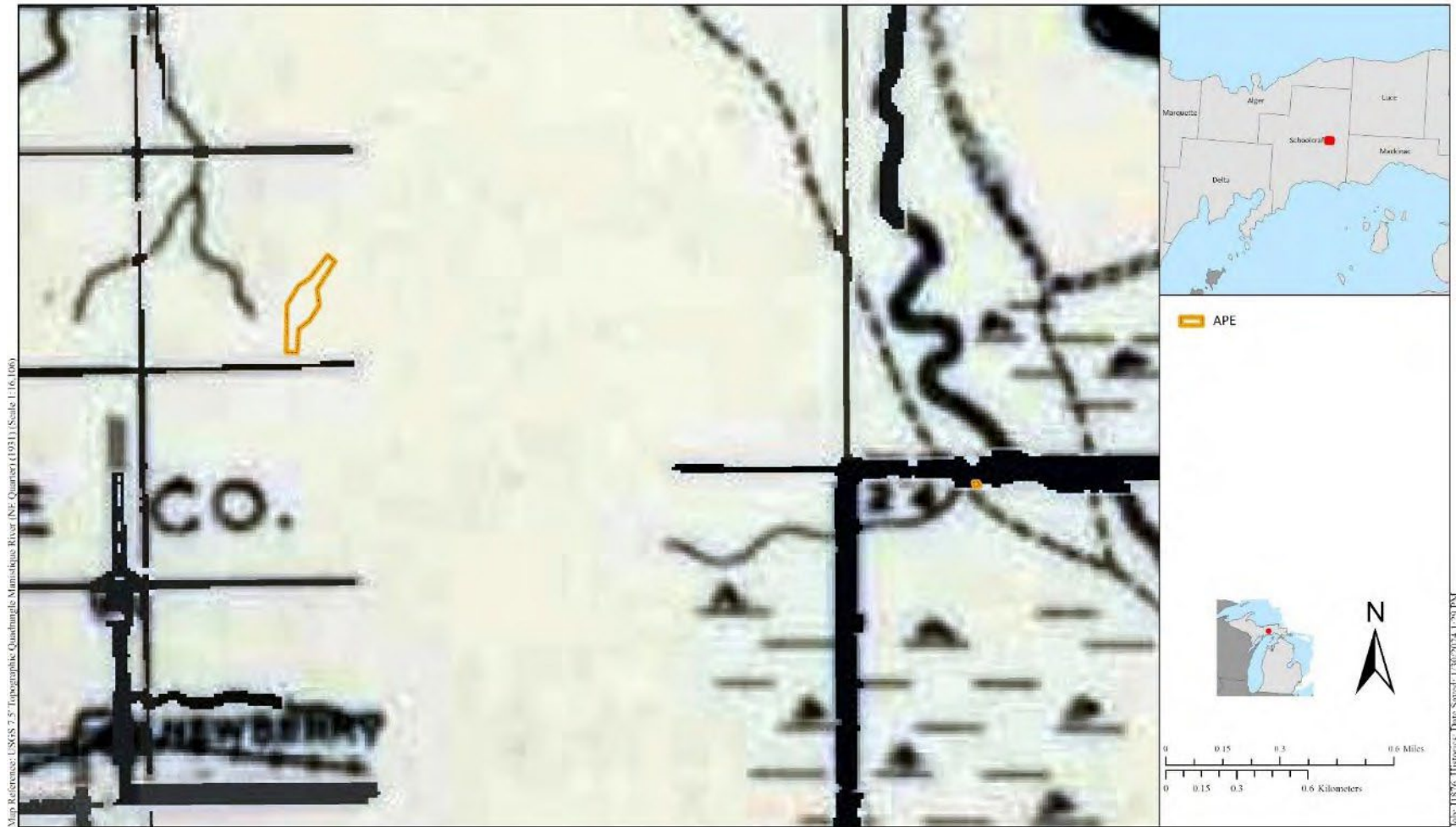


Figure 6 Area of Potential Effect georeferenced to a 1937 refuge map (Migratory Waterfowl Division 1937)

Archaeological Sites and Surveys

According to the Michigan SHPO files, no previously recorded archaeological sites are in the APE and no previously recorded archaeological investigations occurred inside the APE (Figure 7). The Michigan SHPO and the Seney NWR have files for seventeen previously recorded archaeological sites (20ST124 through 20ST140) in the Study Area, defined for this Project to include the entire Seney NWR, and four previously recorded archaeological investigations (ER- 2257, ER-89059, ER-89508, and ER-890059) having occurred in the Study Area (Table 4 and Table 5; Figure 7).

All seventeen previously recorded archaeological sites are from the historic period and are included in Larsen's (1978) report on historic and archaeological resources in the Seney NWR (ER-2257). This report indicates that some areas were field checked, but exact locations and extent of field checking was unreported. None of the sites have been evaluated for their eligibility for listing in the NRHP.

These sites include four logging camps (20ST128, 20ST129, 20ST132, and 20ST140), three cabins (20ST125, 20ST126, and 20ST129), two farms (20ST137 and 20ST138), two railroad stations (20ST133 and 20ST134), two farmsteads/homesteads (20ST131 and 20ST136), a hunting camp (20ST135), and three sites of undetermined function (20ST124, 20ST127, and 20ST130).

The sites tend to be near named waterways, including the Driggs River (20ST125, 20ST126, 20ST127, 20ST128, 20ST129, 20ST130, 20ST132, and 20ST133); Walsh Creek (20ST131 and 20ST134); Pine Creek (20ST124); Greys Creek (20ST137); the Manistique River (20ST139), and Mead Creek (20ST140). Sites 20ST135 and 20ST136 are located near unnamed tributaries of Marsh Creek and the Manistique River, respectively. The only site not located on or near a waterway is the Chicago farm site (20ST138), which is located in between the Manistique River, which is approximately 1.2 km to the east, and the Driggs River, which is approximately 0.9 km to the west.

Previous investigation ER-2257 is a desktop study that summarizes "the existing knowledge concerning archaeological and historical sites" within the Seney NWR (Larsen 1978). The bibliography report on file for ER-2257 with Michigan SHPO states that some areas were field verified, but that the report does not include the exact locations and extent of fieldwork or any discussion of the sites. As a result, the basis for placing sites on the 1978 map (i.e., field survey, historical reference, informant information, or other) is not known. The aerial distribution of the previously identified sites, mainly along named waterways, may be the result of survey conducted along the area's major waterways or the result of postcontact period preferential site placement. Two previous investigations within the Seney NWR are assigned environmental review number ER-890059. The first is a survey conducted in 1991 on 70 acres in Section 36 of T46N R15W, Sections 1 and 12 of T45N R15W, and Section 6 of T45N R14W in support of the Driggs River Timber Sale (Figure 7) (Branstner 1991a). This survey did not result in the identification of any archaeological sites. The second project included under ER-890059 is a conservation plan and environmental assessment prepared for the Seney NWR (Casselman et al. 2008). The bibliography report on file with Michigan SHPO for ER-890059 states that there are 40 recorded cultural resource properties on the refuge. The environmental assessment does not include any specific

information about any of the cultural resource properties; therefore, it is assumed that 17 of the 40 previously identified cultural resource properties are the archaeological sites referred to in Larsen's

SHPO Site Number	Seney Refuge Identifier	Site Name	Location	Period	Culture	Function	NRHP Eligibility	In APE
20ST124	SNY-FN001	Curly	T45N R14W S20 SE-NE-NW	Historic	American	Undetermined	Unevaluated	No
20ST125	SNY-FN002	Hadsall	T45N R14W S28 SW-SW-NW	Historic	N/A	Cabin	Unevaluated	No
20ST126	SNY-FN003	Kelsey	T45N R14W S28 W-SE-SW	Historic	N/A	Cabin	Unevaluated	No
20ST127	SNY-FN004	Cookson S Camp	T45N R14W S20 SE-NE-NW	Historic	American	Undetermined	Unevaluated	No
20ST128	SNY-FN005	Chicago Lumbering Co.	T45N R14W S17 SW-SE-SW	19 th century	American	Logging Camp	Unevaluated	No
20ST129	SNY-FN006		T45N R14W NW-SE-NE	Historic	N/A	Logging Camp	Unevaluated	No
20ST130	SNY-FN007	Old Hemlock Camp	T45N R14W S18 NE-NE-NE	Historic	American	Undetermined	Unevaluated	No
20ST131	SNY-FN008	Clark	T45N R15W S12 SW-NW-NE	Historic	N/A	Farmstead	Unevaluated	No
20ST132	SNY-FN009		T45N R15W S1 SE-SE-NE	Historic	American	Logging Camp	Unevaluated	No
20ST133	SNY-FN010	Driggs Station	T45N R15W S35 NE-NE-NE	19 th century	American	Railroad Station	Unevaluated	No
20ST134	SNY-FN011	Walsh Station	T45N R15W S33 NE-NE-NE	19 th century	American	Railroad Station	Unevaluated	No
20ST135	SNY-FN012	Creighton	T44N R15W S12 SE-SE-SE	Historic	N/A	Hunting Camp	Unevaluated	No
20ST136	SNY-FN013	Stillson	T44N R14W S1 SE-NE-NW	Historic	N/A	Homestead	Unevaluated	No
20ST137	SNY-FN014	Cheesboro	T44N R13W S8 NE-NW-NE	Historic	N/A	Farm	Unevaluated	No

SHPO Site Number	Seney Refuge Identifier	Site Name	Location	Period	Culture	Function	NRHP Eligibility	In APE
20ST138	SNY-FN015	Chicago	T44N R14W C- E	Historic	N/A	Farm	Unevaluated	No
20ST139	SNY-FN016	Painter	T44N R13W S17 SW-SW-SW	Historic	N/A	Cabin	Unevaluated	No
20ST140	SNY-FN017	-	T44N R13W S30 NW-NW-NE	Historic	American	Logging Camp	Unevaluated	No

(1978) report and the remaining 23 previously identified cultural resource properties are not archaeological sites.

The ER-89508 survey was conducted in 1990 on one acre in Section 30 of T44N R13W, in support of a gas pipeline expansion project (Figure 7) (Branstner 1991b). No archaeological remains were found during either project.

Table 4 Previously identified sites within the Study Area

Table 5 Previous archaeological investigations conducted within the Study Area

ER Number	Report Title	Reference	Comments	Includes APE
ER- 2257	Historic and Archaeological Sites, in Technical Report for the Seney National Wildlife Refuge	(Larsen 1978)	This report summarizes the existing knowledge concerning archaeological and historical sites in the Seney NWR. No prehistoric and few historic archaeological sites are known within the refuge's boundaries. Some areas were field checked during this project, but the exact locations and extent of field-checking was unreported. Sites notes on the project map were given state designations 20ST124-140. The text omits any discussion concerning these sites.	No
ER- 89508	1990 Great Lakes Gas Transmission Company Pipeline Expansion Projects: Michigan TCPL-2/Loops 11- 14, 16-17 Addendum J-Additional Extra Work Space	(Branstner 1991b)	This survey was conducted on one acre in Section 30, T44N, R13W using Phase I archaeological techniques. No archaeological remains were found.	No
ER- 890059	A Phase I Archaeological Survey of the Driggs River Timber Sale, Seney National Wildlife Refuge, Schoolcraft County, Michigan	(Branstner 1991a)	A survey was conducted on 70 acres in Section 36, T46N, R15W, Sections 1 and 12 T45N, R15W, and Section 6, T45N, R14W. No archaeological sites were encountered.	No
ER- 890059	Seney National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Assessment	(Casselman et al. 2008)	Conservation plan and environmental assessment for the Seney National Wildlife Refuge. Page 20 indicates that 40 recorded cultural resource properties have been recorded on the Refuge. The EA does not include any specific information about any sites.	No

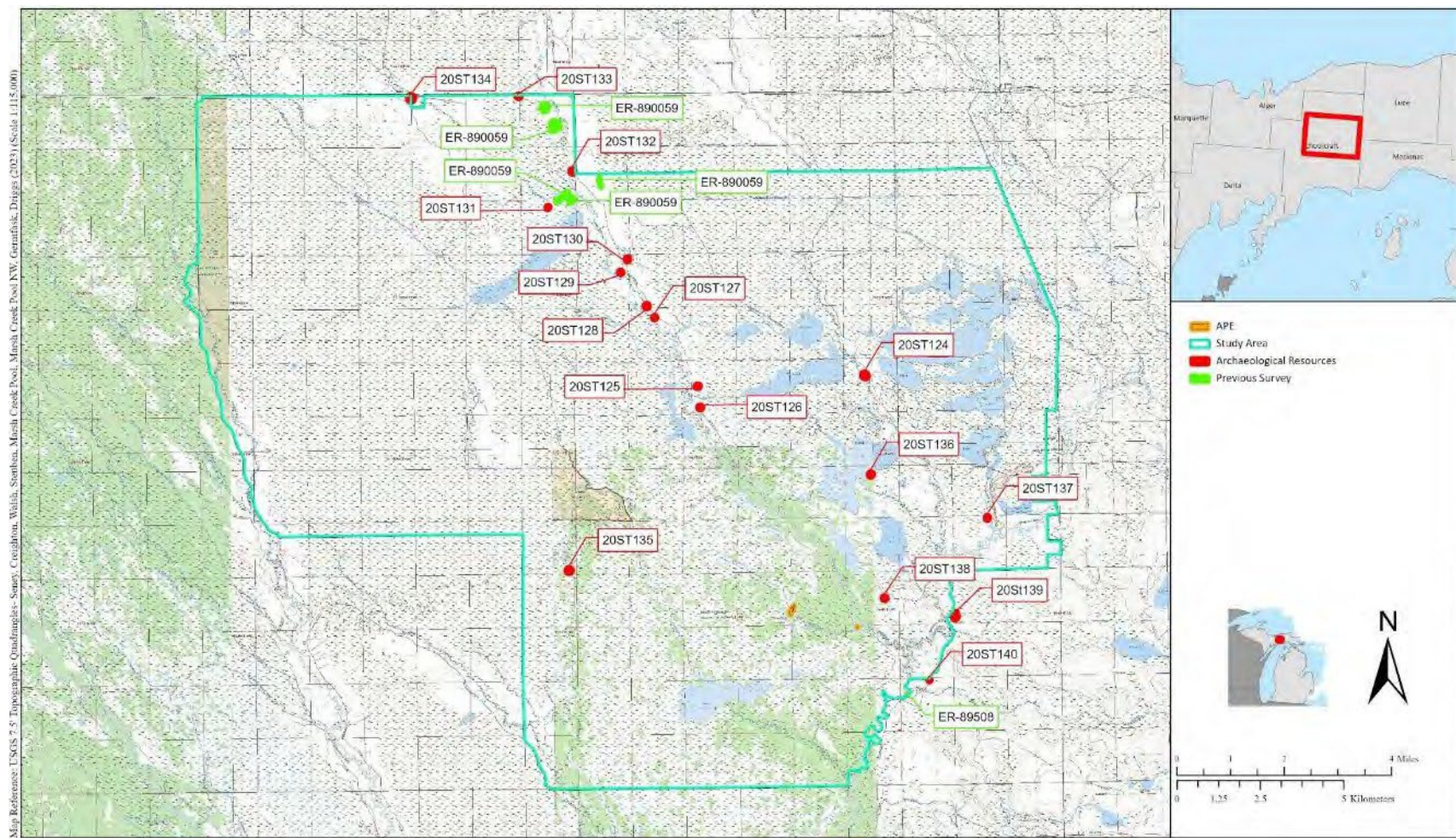


Figure 7 Archaeological sites and investigations

METHODS

Prefield Research

Commonwealth staff conducted background research using the archaeological files maintained by Michigan SHPO as well as online resources (e.g., US Department of Agriculture web soil series descriptions and maps, Bureau of Land Management General Land Office maps, US Geological Service historic topographic maps, etc.) and Commonwealth's physical and digital libraries. The literature review and context development entailed reviewing historical references for the APE and the surrounding area, determining land use history through historical maps and aerial photographs, and compiling information on previously recorded cultural resources. The compiled materials were used to create appropriate tables, figures, and text in this report.

Identified cultural resources, if any, were compared to the contexts and information about known resources to evaluate potential eligibility for listing in the NRHP. A 1.6-km (1.0-mi) research radius was used for the literature review to identify previously recorded archaeological resources. Pre-field research was presented in the previous section.

Field Survey

The Phase I archaeological field survey included the manual excavation of shovel test pits (STP), and visual inspection of areas where surface impediments prevented shovel testing. Exposed ground surfaces were carefully examined for evidence of archaeological resources and for evidence of erosion or other disturbance that may have affected the survival and integrity of archaeological resources.

Commonwealth's field personnel were provided with printed versions of topographic and aerial imagery maps with the APE georeferenced and equipped with a sub-meter accurate GPS unit configured to display the APE. In areas where the ground surface was not impermeable (e.g., not paved, not compacted gravel, etc.), surface visibility was less than 25 percent and buried utilities did not pose a heightened risk to Commonwealth's personnel, STPs were plotted at 15-m (49-ft) intervals to try to locate and identify cultural materials and/or features.

STPs were typically 35 to 40 cm (14 to 16 in) in diameter and excavated 10 cm (4 in) into sterile subsoil, when possible. Soil from each STP was passed through 0.60-cm (0.25-inch) hardware cloth to recover any artifacts. Information on the soils observed in each STP was recorded on standardized forms. Excavated soils were backfilled and STPs restored at the completion of testing. STP results are presented in Appendix A.

Artifact Processing and Curation

No artifacts were observed during Commonwealth's field survey.

National Register of Historic Places Evaluation

NRHP evaluation criteria are used as a commonly understood and accepted method of assessing the importance of identified archaeological sites. According to the Advisory Council for Historic Preservation (ACHP 2008), to be eligible for the NRHP, a property must possess the quality of significance in American history, architecture, archaeology, and culture present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and it must:

- A. be associated with events that have made a contribution to the broad patterns of history; or,
- B. be associated with the lives of persons significant in our past; or,
- C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant or distinguishable entity whose components may lack individual distinction; or,
- D. have yielded, or may be likely to yield, information important in prehistory or history.

To be included in the NRHP, a property must meet one of the criteria for evaluation and must possess integrity. Integrity may be defined as the authenticity of a property's historic identity as demonstrated by the survival of physical characteristics that existed during the historical or Precontact period of the property, and is defined here as a characteristic of a property that both renders it significant to modern cultural groups and is representative enough of its historic quality so that a person from the represented period would theoretically be able to recognize its value as it exists today. To retain historic integrity, a property will always exhibit several, if not all, of seven necessary aspects: location, design, setting, materials, workmanship, feeling, and association. A property that has retained the physical characteristics that it possessed in the past has the capacity to convey associations with historic patterns or persons, architectural or engineering design and technology, or information about a culture or people (Andrus 1997).

Archaeological sites are typically evaluated under Criterion D, whereas architectural properties are usually assessed under Criteria A, B, and C; however, all these criteria can be applied to both archaeological and architectural properties. Integrity of archaeological sites is based on the site's potential to yield specific data that may be addressed by vital research questions. Spatial relationships of deposits at archaeological sites may be altered by cultural processes (farming, development) and natural processes (erosion, plant, and animal disturbance), which affect the integrity of these sites. For example, sites that possess a high density of artifacts but are highly disturbed are considered to have low integrity. Archaeological integrity is typically considered in two ways: the physical condition of a site and the utility of the site in addressing important research questions (its information potential).

The physical integrity of an archaeological site is measured through the degree of disturbance that has occurred at the site since the time of the primary deposition of the artifacts. Artifacts that are no

longer in their primary context of deposition often retain little information that could be useful in answering research questions.

In terms of the information potential of a site, the integrity of a site can be measured through its visibility and focus. Hardesty and Little define visibility as “the relative abundance of material remains. It is the extent to which the physical remains of a historic property have survived and are observable today.” They define focus as “the degree to which the physical remains are readable or interpretable and can be linked to the historic property” (Hardesty and Little 2000:46). Sites with very small assemblages that lack diversity in terms of artifact classes are usually considered low in visibility. The degree of disturbance at a site will affect focus. Sites with secondary artifact deposits or multiple temporally vague occupations mixed in a plow zone would be considered to lack focus. Isolated find spots of a single artifact or very few artifacts lack both visibility and focus, as very low densities of artifacts found in a very small area can be difficult to interpret in terms of function and association. As most archaeological sites are evaluated for NRHP eligibility under Criterion D, the visibility of a site is not as important as its degree of focus (Hardesty and Little 2000:46). If sites are difficult to interpret due to a lack of visibility and focus, then the sites may not be considered useful for adding significant knowledge to a region’s archaeological record. However, if a site has good focus but lacks visibility, the site could still be considered important in understanding an area’s archaeological record.

RESULTS

Commonwealth conducted a Phase I archaeological survey of the APE on October 16 and 17, 2024. The survey included ground surface reconnaissance (observation), followed by the excavation of STPs. No Precontact or historic period artifacts or features were observed on the surface in the APE.

A total of 22 STPs were plotted across six transects (Transect A through F) within the APE; 18 STPs in the West area (Figure 8 through Figure 24) and four STPs within the East area (Figure 25 through Figure 32). In the West area, STP placement was hindered by the existing road and dam area along the west side and a low wet area in the central eastern section. A total of 12 of the 18 plotted STPs were excavated. A typical soil profile consisted of an 8- to 12-cm thick O-horizon over three strata: a black (10YR 2/1) sand over gray (2.5Y 6/1) sand, underlain by dark yellowish brown (10YR 4/4) sand (Figure 33). In the East area, STP placement was hindered by the existing road running through the area. Three of the four plotted STPs were excavated. A typical undisturbed soil profile consisted of a very dark grayish brown (10YR 3/2) O-horizon/silty sand over dark yellowish brown (10YR 4/4) or brown sand (Figure 34). No Precontact or historic period artifacts were observed during shovel testing in the APE. The results of each individual shovel test are presented in Appendix A.



Figure 8 West Project Area and photo directions displayed on a 2022 aerial image



Figure 9 Survey results



Figure 10 Project Area, Delta Creek Dam, view to the north



Figure 11 Project Area, Delta Creek Pool, view to the northeast



Figure 12 Project Area, Delta Creek Dam, view to the south



Figure 13 Project Area, West bank of Delta Creek Pool and water control structure, view to the north



Figure 14 Project Area, Delta Creek Dam and water control structure, view to the northeast



Figure 15 Project Area, west bank of Delta Creek Pool and water control structure, view to the north



Figure 16 Project Area, water control structure, view to the southeast



Figure 17 Project Area, west bank of Delta Creek Pool, view to the northwest



Figure 18 Project Area, Delta Creek Dam, view to the southwest



Figure 19 Project Area, Delta Creek Dam, view to the northeast



Figure 20 Project Area, Delta Creek Dam, view to the southwest



Figure 21 Project Area, Delta Creek pool, view to the southeast



Figure 22 Project Area, Delta Creek Dam, view to the northeast



Figure 23 Project Area, Delta Creek Dam, view to the north



Figure 24 Project Area, Delta Creek Pool, view to the northwest



Figure 25 East Project Area and photo directions displayed on a 2022 aerial image



Figure 26 Survey results



Figure 27 Project Area, Driggs River Road Delta Creek Culvert, view to the southeast



Figure 28 Project Area, Driggs River Road Delta Creek Culvert, view to the west



Figure 29 Project Area, Driggs River Road Delta Creek Culvert, view to the southeast



Figure 30 Project Area, Driggs River Road Delta Creek Culvert, view to the south



Figure 31 Project Area, Delta Creek east of Driggs River Road, view to the southeast



Figure 32 Project Area, Driggs River Road Delta Creek Culvert, view to the south



Figure 33 Typical shovel test profile (STP A1) observed during the survey



Figure 34 Typical undisturbed shovel test profile (STP F1) observed during the survey

SUMMARY AND CONCLUSIONS

Commonwealth conducted a Phase I archaeological survey for Stanley Consultants for the Seney National Wildlife Refuge Delta Creek Pool Sam Removal Project in Germfask (Section 14, 15, and 24 in T44N R14W), Schoolcraft County, Michigan. Overall, the APE for the Project encompasses 1.5 ha (3.7 ac).

Background research for the Project was conducted by Commonwealth (Burns and Reyes 2024). Commonwealth's literature review revealed that the sediments in the APE were disturbed by the construction of the Delta Creek Dam and its associated infrastructure in ca. 1937, making the preservation of Precontact period archaeological features or artifacts unlikely. However, the APE had not been subjected to previous archaeological survey and, given that it is located along a named waterway, the APE has an elevated potential to contain historic period archaeological features or artifacts associated with late nineteenth century logging or early to mid-twentieth century federal activities. Therefore, Commonwealth recommended further archaeological investigation of the APE in areas where ground disturbing activity is planned.

Commonwealth conducted a Phase I archaeological survey of the APE on October 16 and 17 2024. The survey included ground surface reconnaissance (observation), followed by the excavation of shovel test pits. A total of 22 STPs were plotted across six transects within the APE; 18 STPs in the West Project Area and four STPs within the East Project Area. In the West Project Area, STP placement was hindered by the existing road and dam area along the west side and a low wet area in the central eastern section. A total of 12 of the 18 plotted STPs were excavated. In the East Project Area, STP placement was hindered by the existing road running through the area.

Three of the four plotted STPs were excavated. No Precontact or historic period artifacts were observed during the ground surface reconnaissance or during shovel testing in the APE.

No archaeological sites were observed during the survey. Because no archaeological resources were identified as a result of the field investigation, Commonwealth recommends no additional archaeological investigation in the APE.

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APPENDIX A

SHOVEL TEST PIT RESULTS

Table 6 Shovel Test Pit Results

Transect	STP No.	Stratum	Result	Start Depth (cm)	End Depth (cm)	Munsell	Color	Texture	Notes
A	1	I	Negative	0	10	N/A	N/A	Organic material	None
A	1	II	Negative	10	17	10YR 2/1	Black	Sand	None
A	1	III	Negative	17	30	2.5Y 6/1	Gray	Sand	None
A	1	IV	Negative	30	55	10YR 4/4	Dark yellowish brown	Sand	None
A	2	I	Negative	0	11	N/A	N/A	Organic material	None
A	2	II	Negative	11	20	10YR 2/1	Black	Sand	None
A	2	III	Negative	20	35	2.5Y 6/1	Gray	Sand	None
A	2	III	Negative	35	50	10YR 4/4	Dark yellowish brown	Sand	None
A	3	I	Negative	0	10	N/A	N/A	Organic material	None
A	3	II	Negative	10	20	2.5Y 6/1	Gray	Sand	None
A	3	III	Negative	20	50	10YR 4/4	Dark yellowish brown	Sand	None
A	4	I	Negative	0	12	N/A	N/A	Organic material	None
A	4	II	Negative	12	21	2.5Y 6/1	Gray	Sand	None
A	4	III	Negative	21	50	10YR 4/4	Dark yellowish brown	Sand	None

Phase I Archaeological Survey for the Graham Park Recreation Center

Transect	STP No.	Stratum	Result	Start Depth (cm)	End Depth (cm)	Munsell	Color	Texture	Notes
B	1	I	Negative	0	50	10YR 4/3	Brown	Sand	Disturbed
B	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Low/wet, not dug
B	3	I	Negative	0	21	10YR 3/3	Dark brown	Wet sand	None
B	3	II	Negative	21	50	10YR 5/6	Yellowish brown	Wet sand	None
C	1	I	Negative	0	12	N/A	N/A	Organic material	None
C	1	II	Negative	12	37	2.5 Y 6/1	Gray	Sand	None
C	1	III	Negative	37	50	10YR 4/4	Dark yellowish brown	Sand	None
C	2	I	Negative	0	10	N/A	N/A	Organic material	None
C	2	II	Negative	10	35	2.5YR 6/1	Gray	Sand	None
C	2	III	Negative	35	50	10YR 4/4	Dark yellowish brown	Sand	None
C	3	I	Negative	0	8	N/A	N/A	Organic material	None
C	3	II	Negative	8	34	10YR 7/1	Light gray	Fine sand	None
C	3	III	Negative	34	50	10YR 7/2	Light gray	Fine sand	None
C	4	I	Negative	0	8	N/A	N/A	Organic material	None
C	4	II	Negative	8	37	10YR 7/1	Light gray	Fine sand	None
C	4	III	Negative	37	50	10YR 7/2	Light gray	Fine sand	None
C	5	I	Negative	0	20	10YR 5/4	Yellowish brown	Mixed sand	Disturbed
C	5	II	Negative	20	50	10YR 7/1	Light gray	Fine sand	None
C	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Disturbed, not dug

Transect	STP No.	Stratum	Result	Start Depth (cm)	End Depth (cm)	Munsell	Color	Texture	Notes
C	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Disturbed, not dug
D	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Low/disturbed, not dug
D	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Low/disturbed, not dug
D	3	I	Negative	0	13	N/A	N/A	Organic material	None
D	3	II	Negative	13	50	10YR 7/1	Light gray	Fine sand	None
E	1	N/A	N/A	N/A	N/A	N/A	N/A	-	Low wet area, not dug
F	1	I	Negative	0	22	10YR 3/2	Very dark grayish brown	Organics/ silty sand	None
F	1	II	Negative	22	52	10YR 4/4	Dark yellowish brown	Fine sand	None
F	2	N/A	Negative	0	50	N/A	N/A	Gravel	Disturbed, gravel fill from road construction
F	3	N/A	Negative	0	50	N/A	N/A	Gravel	Disturbed, gravel fill from road construction
F	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Fill/slope down to Delta Creek, not dug

