

**PRELIMINARY ARCHAEOLOGY SURVEY
OF CAMPBELL COUNTY CONSERVATION DISTRICT:
ST ANNE WOODS AND WETLEANDS
CAMPBELL COUNTY, KENTUCKY**

Submitted to:
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ABSTRACT

The Campbell County Conservation District (CCCD) requested a preliminary archaeological assessment of approximately 146.46 acres of recently purchased land known as the St. Anne's Woods and Wetlands Purchase. The land is located in Melbourne, Campbell County, Kentucky, along the Ohio River. The St. Anne's and Wetlands are divided into four parcels; Wetland 1 North, Wetland 1 South, Wetland 2, and Woods (Table 1). Wetland 1 North and Wetland 1 South are located north of Route 8 then are separated by the C&O Railroad tracks. Wetland 1 North is located between the railroad tracks and the Ohio River. Wetland 1 South is located between the railroad tracks and Route 8. Wetland 2 is located south of Route 8 and west of the existing structures located on the St. Anne's property. The Woods is located directly behind (south) the cemetery and buildings on the St. Anne's property.

Table 1. CCCD Property Parcels with acreage and recommendations.

PARCEL	ACREAGE	LOCATION	ARCHAEOLOGY PROBABILITY
Wetland 1 North	35.858 acres	North of Rt 8, btw RR tracks and Ohio River	Low probability for significant prehistoric archaeological sites
Wetland 1 South	52.105 acres	North of Rt 8, btw Rt 8 and RR tracks	Low probability for significant prehistoric archaeological sites
Wetland 2	14.276 acres	South of Rt 8, west of St Anne Convent	High probability for an historic homestead/house site, low to moderate for prehistoric archaeological sites
Woods	44.221 acres	South of Rt 8, south of St Anne Convent	Low to moderate probability for small prehistoric sites
TOTAL ACRES	146.46 acres		

The project is being conducted in accordance with 36CFR800 regulations for Section 106 and with regulations of the Kentucky Heritage Council (revised 2006). The overall Area of Potential Effect (APE) consists of the entire 146.46 acres. The archaeological assessment is conducted due to receipt of a Kentucky Heritage Land Conservation Fund Grant. K & V Cultural Resources Management, LLC conducted the project area walkover in February 2015.

The Kentucky Office of State Archaeology provided Project Registration Number FY15-8183 and the Kentucky Heritage Council in Frankfort provided information under Registration Number FY15-1878. Neither review identified any previously documented National Register, Historic Inventory, or Archaeological sites within the property.

The preliminary archaeological assessment is designed to identify the potential for the project area to contain archaeological sites (either Native American or historical period). Designations of high, medium, and low probability areas have been assigned to portions of the project area based on factors including soils, topographic setting, and historical land-use (Table 1).

TABLE OF CONTENTS

ABSTRACT.....	I
TABLE OF CONTENTS.....	II
LIST OF FIGURES.....	II
LIST OF PHOTOS.....	II
INTRODUCTION.....	1
ENVIRONMENTAL SETTING.....	6
PREVIOUS INVESTIGATIONS AND LITERATURE REVIEW RESULTS	9
Cultural Overview	12
FIELD METHODS AND SURVEY RESULTS	19
SUMMARY AND RECOMMENDATIONS.....	25
REFERENCES CITED.....	27

LIST OF FIGURES

Figure 1. Portion of USGS Newport and Withamsville 7.5 minute topos showing the project area parcels.	2
Figure 2. Aerial and topographic map showing four parcels.	3
Figure 3. Portion of Lake (1883) atlas showing project area vicinity.....	12
Figure 4. NKU Applied Ecology environmental setting map for the St Anne Parcels.....	20
Figure 5. Portion of 1898 15 minute topo map showing structure location in Wetland 2.	21
Figure 6. Portion of 1914 15 minute topo map showing structure location in Wetland 2.	22
Figure 7. Portion of 1952/1953 topo maps showing structure in Wetland 2.	22
Figure 8. Portion of 1961 topo map showing structure in Wetland 2.....	23
Figure 9. Probability map for Wetland 2 and Woods parcels.	26
Figure 10. Probability map for Wetland 1 North and Wetland 1 South.	27

LIST OF PHOTOS

Photo 1. Facing southeast along a trail in the center of the Woods Parcel.	4
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Photo 2. Facing north through a ravine in the Woods Parcel.4

Photo 3. Facing west along the southern boundary of Wetland 2.....5

Photo 4. Facing northwest inside Wetland 1 South.5

Photo 5. Facing west inside Wetland 1 North.....6

Photo 6. View west at possible structure/house site in Wetland 2.....23

INTRODUCTION

The Campbell County Conservation District (CCCD) requested a preliminary archaeological assessment of approximately 146.46 acres of recently purchased land known as the St. Anne's and Wetlands Purchase (Figures 1 and 2). Representative photos are included after Figures 1 and 2: Photos 1-5). The land is located in Melbourne, Campbell County, Kentucky, along the Ohio River. The St. Anne's and Wetlands are divided into four parcels; Wetland 1 North, Wetland 1 South, Wetland 2, and Woods (Table 2). Wetland 1 North and Wetland 1 South are located north of Route 8 then are separated by the C&O Railroad tracks. Wetland 1 North is located between the railroad tracks and the Ohio River. Wetland 1 South is located between the railroad tracks and Route 8. Wetland 2 is located south of Route 8 and west of the existing structures located on the St. Anne's property. The Woods is located directly behind (south) the cemetery and buildings on the St. Anne's property.

Table 2. Parcels and acreage.

PARCEL	ACREAGE	LOCATION
Wetland 1 North	35.858 acres	North of Rt 8, btw RR tracks and Ohio River
Wetland 1 South	52.105 acres	North of Rt 8, btw Rt 8 and RR tracks
Wetland 2	14.276 acres	South of Rt 8, west of St Anne Convent
Woods	44.221 acres	South of Rt 8, south of St Anne Convent
TOTAL ACRES	146.46 acres	

The geography changes dramatically from the south lying parcels to the north parcels along the Ohio River. The north parcels (Wetland 1 North and South) are low lying level areas with wooded wetlands. Both exhibit some evidence of mechanical disturbance especially near the railroad tracks that separate them from each other. The Wetland 2 area is located on sloping uplands south of Route 8. The Woods parcel lies in dissected upland south of the Convent property.

The project is being conducted in accordance with 36CFR800 regulations for Section 106 and with regulations of the Kentucky Heritage Council (revised 2006). The overall Area of Potential Effect (APE) consists of the entire 146.46 acres. The archaeological survey is being conducted due to receipt of a Kentucky Heritage Land Conservation Fund Grant through the Energy and Environment Cabinet.

Field investigation included walkover of the project area and documentation of landform, setting, and land use history. Different landforms and settings were evaluated regarding potential for both historical period and prehistoric Native American archaeological sites. Survey coverage is described and illustrated below in the Survey Results Section. Figures 1 and 2 illustrate the location of the project area on the USGS topographic map and an aerial photo. Photos 1-5 illustrate the nature of the project area topographic setting. These are included after Figures 1 and 2.

Figure 1. Portion of USGS Newport and Withamsville 7.5 minute tops showing the project area parcels.

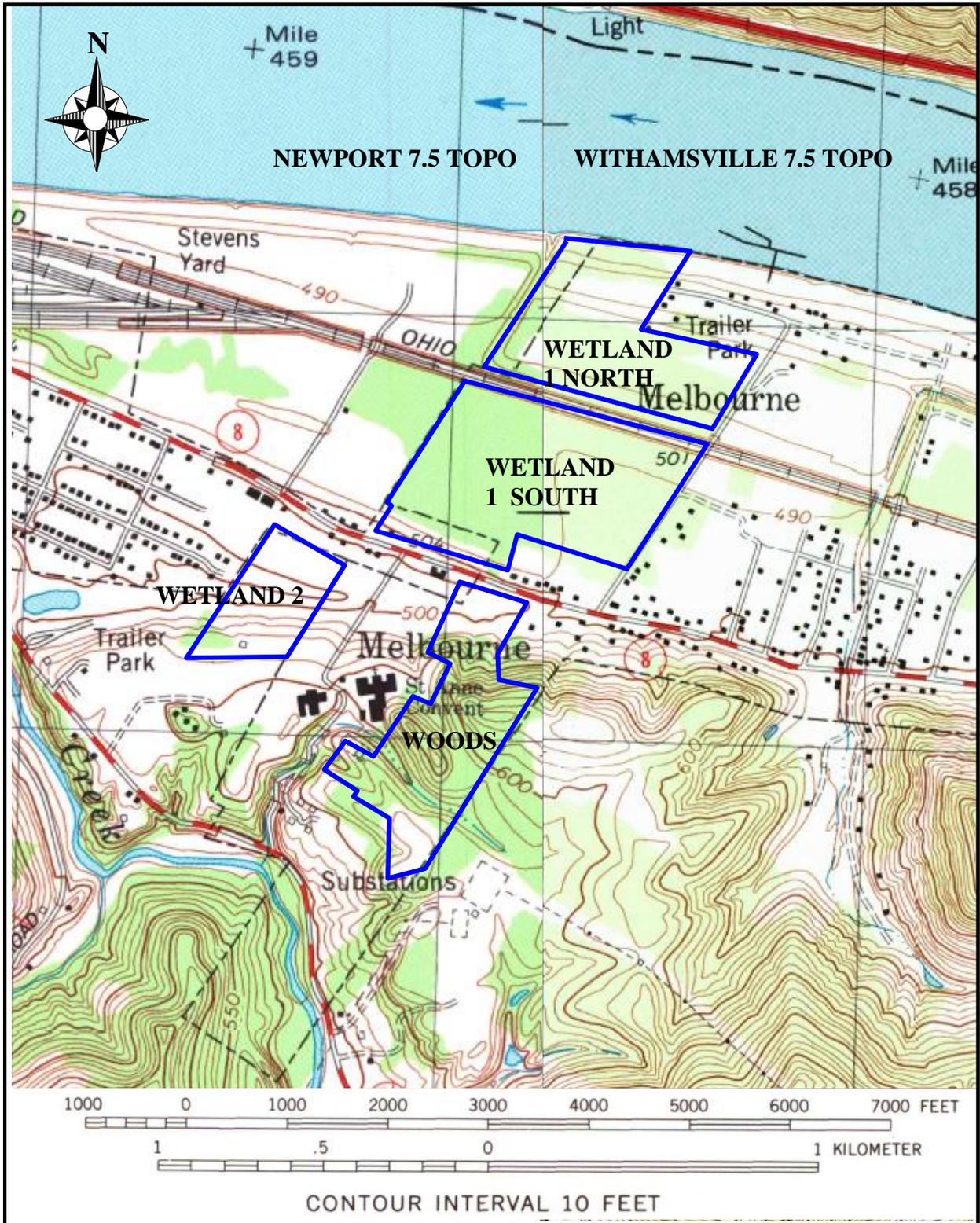


Figure 2. Aerial and topographic map showing four parcels.

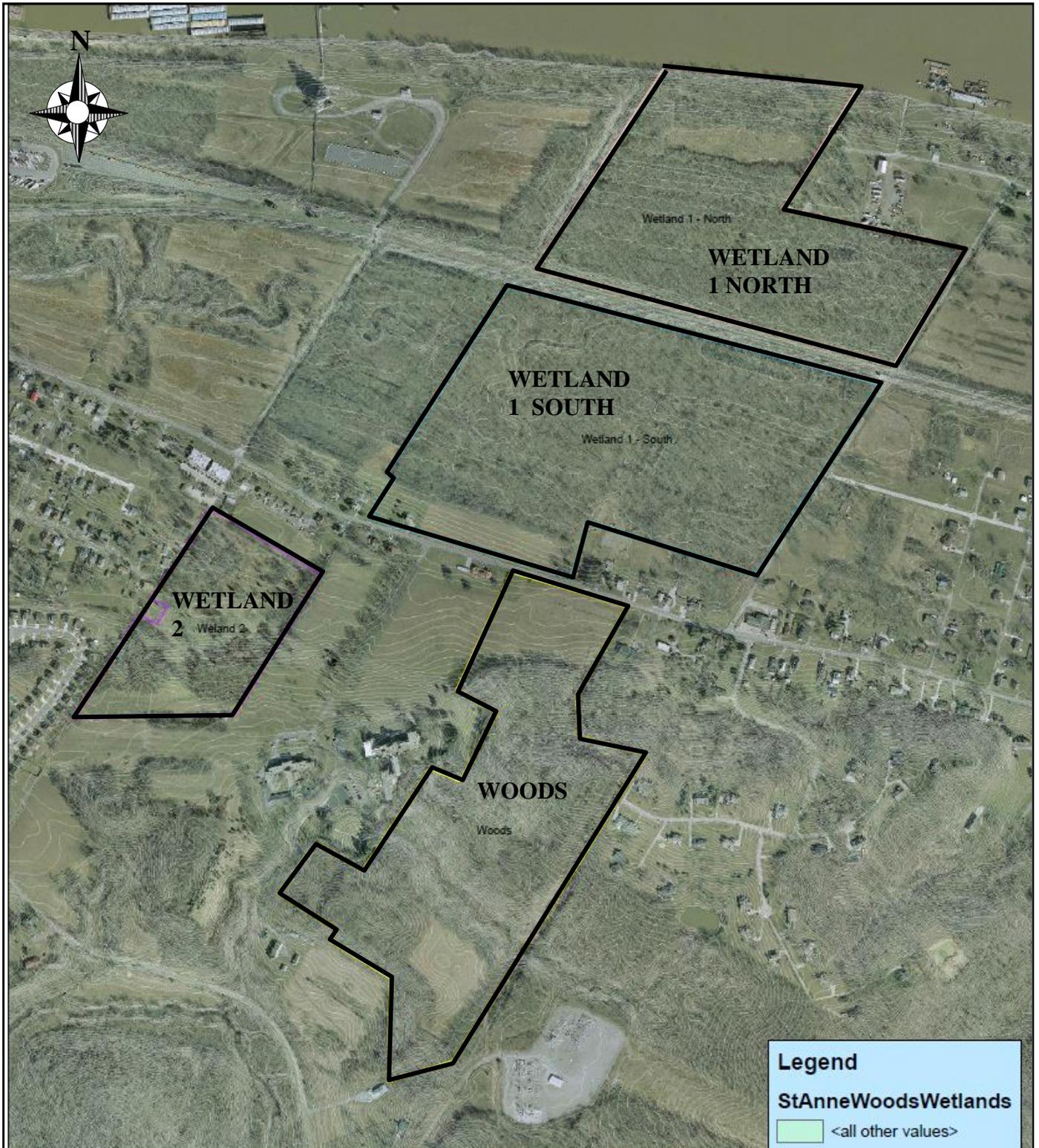




Photo 1. Facing southeast along a trail in the center of the Woods Parcel.

. Typical example of small ridge top in the Woods parcel.



Photo 2. Facing north through a ravine in the Woods Parcel.



Photo 3. Facing west along the southern boundary of Wetland 2.



Photo 4. Facing northwest inside Wetland 1 South.

The railroad is in the upper right side of photo. Typical view in this parcel.



Photo 5. Facing west inside Wetland 1 North.

This is a typical view across the wooded area of this parcel.

ENVIRONMENTAL SETTING

Northern Kentucky lies in the northern part of the Interior Low Plateaus Region, in the Outer Bluegrass subsection (USDA 1989). The modern surface topography resulted from the entrenchment of the drainage systems that occurred prior to, during and after the Pleistocene glacial advances. This unglaciated area of gently dipping Paleozoic age sedimentary rocks has relatively moderate topographic relief.

Sedimentary rocks of the Ordovician Age including limestone, shale, and siltstone underlie the soils of northern Kentucky. Known as the Cincinnati Arch, the Ordovician is the upper, exposed layer of interbedded limestone and shale found at the ground surface.

Although only one of the earlier glaciers actually crossed into northern Kentucky, the succeeding glacial advances/retreats had a profound effect on the creation of the local, modern drainage system including the Ohio River, soil formation, and the deposition of glacial outwash along the major river valleys. The present channels of the Ohio River and other local streams are a direct result of the successive advances and retreats of glaciers into the local region (Teller 1973; Potter 1996).

The modern topography of Northern Kentucky is the result of a combination of factors. The underlying bedrock formed as horizontal sedimentary layers in a succession of salt water seas. These horizontal layers were uplifted to form the Cincinnati Arch. Succeeding geologic periods saw the erosion of surface layers leaving the Ordovician bedrock layers at the top of the Cincinnati Arch. Glacial advances and retreats during the Quaternary period left varying depths of windblown soil (loess) and glacial outwash including sand and gravels along the major river valleys (Potter 1996; USDA 1989). Modern soil formed from both glacial deposits and weathering of the limestone and shale bedrock. The environment had shifted to a more depositional one during the Pleistocene Ice Age. However, the erosional environment also continues with the down cutting of stream valleys, creating stream channels, ravines and other dissected features in the old Lexington peneplain.

The soils reported for the four parcels reflects this complex geological and geomorphological history. Two soil associations are mapped, one comprised of upland soils, the other of alluvial soils. Twelve individual soil types (based on soil type and slope) are defined. These are summarized below.

Eden-Cynthiana Association

These soils are found on steep slopes of limestone and shale in high dissected areas in southern Boone, Kenton, and Campbell counties. The soils are common on the very steep hills along the Licking River. This association covers just under half of the three counties (42 percent of Kenton Co.) with the Eden soils being dominant. These soils are used for pasture or remain wooded. Very little of the soils can be plowed due to the stones and erosion.

Wheeling-Huntington Association

This soil association is generally found along the Ohio River bottoms and terraces covering approximately six percent of Campbell County with Wheeling soil amount totals equaling the amount of Huntington soil amount totals. The Wheeling soils drain well and are found on stream terraces and slight slopes and are dark grayish brown to dark brown and can be loamy in the subsurface and surface soils. The Huntington soils are similar to the Wheeling soils but are found across the flood plains on level ground. Huntington soils drain well like the Wheeling soils but appear much darker with a silty loam texture. Alluvial soils are found on the steep banks of terraces and stream edges and can include sand and silty clay. The towns/cities along the banks of the Ohio River from Dayton in the east and Ludlow in the west are all located within this soil association. These soils work well for non-agriculture uses when protected by flooding.

Hu Huntington silt loam (0-4 percent slopes)

Huntington silt loam is a well-drained, deep soil found in narrow stretches on flood plains along the Ohio River. Moisture content can be high with a minimal amount of erosion. This soil is formed in new alluvium and is suited well for agriculture.

AiD Alluvial Land, Steep

This land includes steep and narrow areas around edges of stream terraces, edges of glaciated soils, and river banks. These soils can be sandy loam to silty clay and in some cases mottled. Much of this land is left in scrub brush and trees with erosion as major hazard.

RsB Rossmoyne silt loam, 0-6 percent slopes

These soils are found on tops of ridges and are well drained. They can be found in areas of 100 acres or more. Crops can be grown in this soil with erosion being moderate.

Nk Newark Silt loam (0-4 percent slope)

Newark silt loam is found in small tracts in depressions on flood plains and is poorly drained. Erosion can be light but usually maintains deep soil. This soil is formed in new alluvium.

LaA Lakin loamy fine sand (0-2 percent slopes)

This soil is formed in deposits created by water and wind. Generally located in on terraces along the Ohio River Lakin loamy fine sand is deep, extremely well drained and is found in small tracts. Flooding is occasional and irrigating for agriculture is recommended.

LaC Lakin loamy fine sand (2-12 percent slopes)

This soil is formed in deposits created by water and wind and is found small tracts of uneven ground along the Ohio River. Erosion is medium and irrigation is need for agriculture.

Ro Robertsville silt loam (0-2 percent slopes)

Robertsville silt loam is formed in mixed alluvium on terraces along streams. These soils are deep and poorly drained and can be in tracts up to 50 acres. Erosion is usually not a problem and can be used for agriculture.

Av Avonburg silt loam (0-4 percent slopes)

Avonburg silt loam is formed in loamy loess in glacial till on glaciated uplands. These soils are deep poorly drained and can occur in tracts up to 100 acres in size. Erosion is light and is suited better for pasture rather than agriculture.

AsB Ashton silt loam (0-2 percent slopes)

Aston silt loam is found on slopes on stream terraces, are well drained and deep. Formed in alluvium these soils are found in small tracts and are susceptible to erosion.

BsD3 Brashear silty clay (12-20 percent slopes)

These soils are deep and somewhat well drained and are formed in colluvium washed from Eden soils. Brashear silty clay is found in tracts up to 20 acres in size and are located on foot slopes of hills. Erosion is great and is not suited for cultivation.

WhB Wheeling silt loam (2-6 percent slopes)

This soil is formed in mixed alluvium and is deep and well drained. In tracts from 15 to 50 acres this soil is found on terraces along the Ohio River. Cultivation is good with a moderate risk of erosion.

WhC Wheeling silt loam (6-12 percent slopes)

This soil is formed in mixed alluvium and is deep and well drained. In tracts from 10 to 30 acres this soil is found on terraces along the Ohio River. Cultivation is good with a high risk of erosion.

PREVIOUS INVESTIGATIONS AND LITERATURE REVIEW RESULTS

As part of the required documentation for the project, K&V Cultural Resources Management requested an archaeological site file check from the Kentucky Office of State Archaeology (KYOSA) in Lexington. They provided the information and assigned the project Registration Number FY15-8183. The literature review information is summarized below. The historical site file check was requested from the Kentucky Heritage Council in Frankfort. They provided the information under Registration Number FY15-1878. The KHC site file check found no National Register or Kentucky Historic Inventory properties previously documented within the project area.

The KYOSA documents two previously recorded archaeological sites within two kilometers of the four parcels. Both are documented near the Ohio River upstream of the Wetland 1 North parcel and just within the two kilometers. One is an historic farm/residence site (15CP54), but no information is recorded for site 15CP200.

The KYOSA documents five archaeological survey projects within two kilometers of the project area (Table 3). The Quick and Faberson (2012) and Quick and Higgins (2011) reports surveyed Four Mile Creek Road for a proposed sewer line project. Four Mile Creek Road and stream are located south of the Woods Parcel of this project. They did not document any archaeological sites during their survey.

Table 3. Cultural Resources Management project conducted within two kilometers.

KYOSA ID/NADB#	DATE	AUTHOR	TITLE
008-009 575186	1968	Michael J. Rodeffer	An Archaeological Survey and Preliminary Test Excavation: Interstate 275, Section 9, Boone, Campbell and Kenton Counties, Kentucky
019-021 578939	1991	Niquette, Charles M.	A Phase One Archeological Assessment of Three Alternative Pump Station Locations for the Melbourne Sewer System Project Campbell County, Kentucky
019-024 580105	1994	Stallings, Richard and Nancy Ross-Stallings	A Phase I Cultural Resource Survey of a 20 Acre Storage Facility Located Near Melbourne, Campbell County, Kentucky
019-053 586766	2011	Russell S. Quick and Alan Higgins	A Cultural Resource Survey of the Proposed Ash Street Pump Station and Force Main Project in Campbell County, Kentucky
019-057 587024	2012	Russell S. Quick and Jennifer Faberson	An Archaeological Survey of the Proposed Ash Street Pump Station and Force Main Project in Campbell County, Kentucky

The Stallings and Ross-Stallings (1994) study documented site 15CP54, a late nineteenth century artifact scatter near the Ohio River bank. None of the other surveys listed in Table 3 documented any archaeological sites. None of the cultural resources studies intersect with the current project area.

A review of Pollack (1990), the *Archaeology of Kentucky: Past Accomplishments and Future Directions*, the Kentucky comprehensive state plan, places Campbell County in Management Area 5, the Bluegrass, and in the Outer Bluegrass physiographic and cultural region. As of 1990, they reported that over 2,189 archaeological sites had been documented in this Management Area. The research found that 57.5 percent of the sites are located on upland settings such as hillsides or ridge tops, while 36.2 are documented on floodplains or terraces. The exact physiographic setting was not documented for 6.3 percent of the sites. This information was updated for the revised state plan (Pollack 2008), where they reported at least 4,206 sites for the Bluegrass Region as a whole. The new plan reorganizes the cultural areas slightly, separating Boone, Kenton and Campbell counties into the Ohio Valley Urban Center cultural region. Its natural area remains the northern Bluegrass section of the Bluegrass Region (Pollack 2008).

Fewer than 200 sites have been documented in Campbell County. A review of available dates on Native American site locations in northern Kentucky in general (including counties from Mason through Carroll Counties) finds the following correlation between settings and time periods. Site components are based on a spreadsheet from the OSA for a cultural overview study (Kreinbrink 2009) (Table 3).

Table 4. Native American sites and settings in northern Kentucky.

TIME PERIOD	FLOODPLAIN/TERRACE	UPLAND SETTINGS
PALEO	14	2
EARLY ARCHAIC	47	10
MIDDLE ARCHAIC	16	8
LATE ARCHAIC	68	14
EARLY-MIDDLE WOODLAND	33	8
LATE WOODLAND/FORT ANCIENT*	41	0
BURIAL OR OTHER MOUNDS	25	63

*combined because of how sites are listed in the database, does not include mounds

The project area setting includes Ohio River terraces and adjacent upland ridges. Based on informant information and regional data, all appear to have a low to moderate potential for Native American archaeological sites. The subsurface geological setting is not conducive to caves or rockshelters along the steep side slopes (greater than 15% slope) and the streams within the property have little or no developed terraces. Those areas are of low probability.

Historic Period

The Kentucky Heritage Council project registration FY15-1878 documents no National Register or Kentucky Historic Inventory properties within the property. The nearby St. Anne Convent is listed as Kentucky Historic Inventory (KHI) property CP93. The current project area, especially Wetland #2 and the Woods have been part of the St Anne Convent property since the early twentieth century. A brief history of the Convent is included here as context for these two parcels of land.

The Sisters of Divine Providence arrived in Northern Kentucky in 1889 in consultation with the Diocese of Covington Bishop, Camillus P. Maes. Maes was a native of Belgium and knew of the Order. Mother Anna, Superior General of the Order contacted Maes and asked for permission to set up their Order in the Diocese of Covington. The Bishop offered them a house in Newport owned by the Diocese and they operated their convent and a school (called Mount St Martin Academy) from the Jones Mansion.

The Sisters were outgrowing their space in the early twentieth century. Peter O’Shaughnessy, a wealthy Newport resident, bought land and donated it to the Order in 1908 (see Table 5 below). They built the motherhouse and moved in circa 1919 (Ward 2009:832). The Sisters of Divine Providence have owned and occupied the property since that time. In 2013, the Order sold 146.449 acres to the Campbell County Conservation District. That land comprises the current study area.

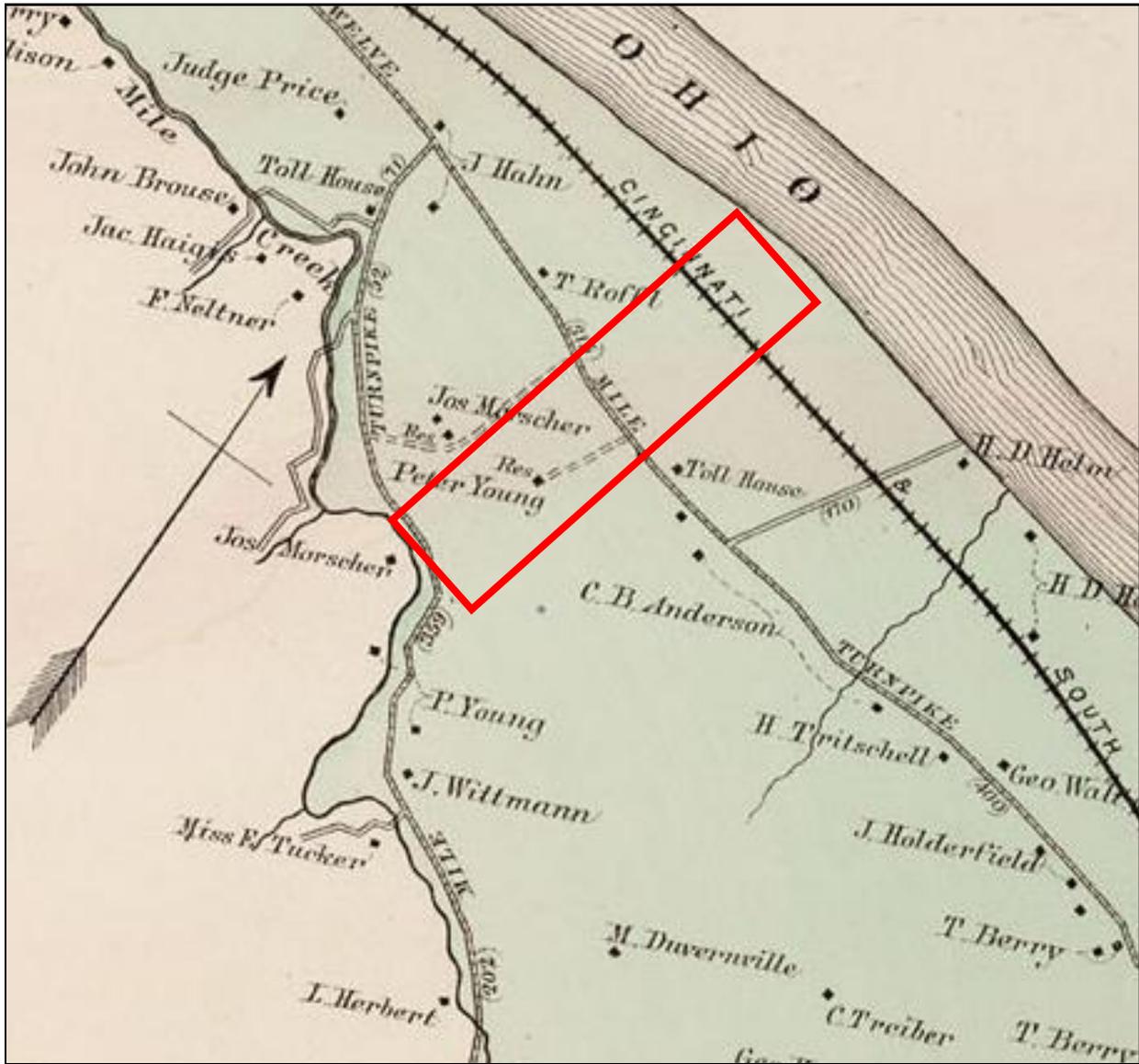
A review of deed transactions begins in the presents and follows the transactions into the past. The Campbell County Conservation District purchased the land from the Congregation of the Divine Providence in 2013 (Deed book 307 pg155) (Table 5). Mr. O’Shaughnessy donated land to the Sisters in 1908 (Deed book 66 pg 549).

O’Shaughnessy bought the property from Peter Young (Deed book 61 pg 546) in 1908. Peter Young’s name is associated with a house shown on the Lake (1883) *Atlas of Boone, Kenton, and Campbell Counties, Kentucky* (Figure 3). The atlas also shows Young as the owner of the land along Four Mile Pike towards the south side of the Woods (Figure 3). The property transfer to Peter Young is dated in 1867 and the sale comes from Mr. Mastir (n?) and is referred to as the 115 acre Peter’s Farm (Deed book 50 pg 302). A previous deed book could not be found at this time. More information on Peter Young’s possible house location is discussed in Methods and Survey Coverage.

Table 5. Deed History of 4 Parcels.

GRANTOR	GRANTEE	ACREAGE	DEEDBK/ PG#	DATE
Congregation of Divine Providence	Campbell Co. Conservation Dist.	146.449	307/ 155	9-11-2013
Sisters of Providence	Sisters of Divine Providence (name change)	77.5, 39, 45.75, .61	67/261	6-14-1917
O’Shaughnessy and wife	Sisters of Providence	77.5, 39, 61	66/549	11-18-1908
Peter Young and wife	O’Shaughnessy	20, 10, 77.5, 20	61/546	11-18-1908
Mastir(n)	Peter Young	115.5 Peter’s Farm	50/302	2-16-1867

Figure 3. Portion of Lake (1883) atlas showing project area vicinity.



Cultural Overview

A brief general Cultural Overview is included for the Northern Kentucky region (taken from Kreinbrink 1999). Northern Kentucky site data are compiled from an OSA Excel database provided to this author for the 2009 article and from the KHC State Plan (Stackelbeck and Mink 2008). Native Americans lived in the northern Kentucky area from at least 12,000 years ago until at least the 1500s. By the eighteenth century, many Native Americans used northern Kentucky as a resource area rather than as a home. Hunting, salt making, and trapping were important activities conducted in northern Kentucky by regional tribes during this latter period. The period before 1492 is known as the prehistoric period. The prehistoric occupation of northern Kentucky is divided into four major time periods; Paleo, Archaic, Woodland, and Late

Prehistoric/Fort Ancient. These are arbitrary divisions, but are based in general on changes in lifestyle, technology, and culture from one period to the next.

Native American - Paleo Period (before 8,000 B.C.)

Paleo-Indian peoples entered the eastern United States after the Wisconsin glacial retreat, during a time of rapid environmental shifting. Extensive climate change altered the northern Kentucky environment as the glaciers retreated and the weather moderated during the Paleo period.

The first recognized Paleo tradition in the northern Kentucky area is the Clovis period, with characteristic projectile points and tools. Clovis points are long blades with a particular type of flute, or narrow channel flake, removed from the base. The Clovis tool kit includes a variety of tools besides the points, such as scrapers and knives. Within 1,000 years, Clovis point technology had spread across the continental United States. Whether the technology spread, or the Native Americans themselves spread out this quickly is still debated. They hunted the last of the large Pleistocene mammals such as mammoth and mastodon, but evidence also exists for a varied diet based on both plants and animals.

Locally, little is known about the Paleo-Indian use of northern Kentucky. A few Clovis and late Paleo points have been collected locally, from the Big Bone Creek valley in Boone County, for example. A review of the northern Kentucky counties finds eight Paleo sites documented for Boone County, two in Mason, and one each in Bracken, Gallatin, and Owen. No Paleo period sites are documented in Campbell, Carroll, Grant, Kenton, Pendleton, or Robertson Counties. The presence of the salt and mineral springs in Boone County on Big Bone Creek may account for the focus of Paleo period sites in that county, although most of the eight Boone County sites are based on the presence of Paleo points only. The lack of Paleo sites in Carroll County where the Kentucky River enters the Ohio River, and the absence of documented sites in Pendleton County, which has the second highest concentration of Early Archaic sites (see below) is surprising.

After approximately 10,800-10,000 years ago, regional complexity increased as documented through archaeological studies. Regionally specific projectile point styles such as Quad, Dalton, and Hardaway-Dalton replaced the Clovis type. Most of these are long blades similar to the Clovis point, but lack the distinctive flute at the base. The following Archaic period continued the shift from an emphasis on larger game pursued in a migratory pattern, to a reliance on more locally available plant and animal resources.

Native American - Archaic Period (c. 8,000 B.C.-1,500 B.C.)

The Archaic Period continued the development of region specific adaptations to local environments begun in the late Paleo period. The late Paleo people adapted to the changing climate, greater variety of animals and plants, but these are the same people. New groups may have moved into the area as populations increased, but for the most part, already present groups of people began to settle into smaller territories. Projectile point types change dramatically through the Early Archaic. Kirk and LeCroy type projectile points are found over much of the eastern

United States (Justice 1987). They indicate continued exploitation of large territories by small hunting bands during the Early Archaic period, but are very different from the preceding Paleo period blades. Kirk points include a variety of side and corner notched types, while LeCroy and other similar points are generally small and have distinctive notches on the base (hafting area) of the point.

Site investigations indicate that they made use of seasonal camps, often using a base camp with outlying activity camps, and extractive sites such as chert quarries, for periodic use throughout the year. The addition of sandstone abraders and mortars to the Early Archaic tool kit indicate that vegetable foods were becoming a substantial part of their diet. Throughout the Archaic period, the types and quantities of processing tools of all types increased in variety and form.

The northern Kentucky counties have produced a range of Early Archaic sites, from isolated projectile points found in fields to intensive sites located on river terraces. Boone County has at least 20 sites with documented Early Archaic projectile points. The presence of Big Bone Lick in the southern part of the county may account for the high number of Early Archaic sites; Boone County has more than twice as many sites of this period as the next county (Pendleton) which has ten sites. Grant County has no documented Early Archaic and Kenton County has only one site with diagnostic artifacts from this period. The other northern Kentucky counties have between two and seven sites each for a total of 59 sites, a big increase over the Paleo period site quantity.

Known as the Hypsothermal interval, a drier, possibly warmer climate prevailed and reached its maximum impact around 4,500 B.C. Culturally, this period is called the Middle Archaic and generally given a date range of 6000-3000 B.C. Overall, the variety of plant and animal resources increased as the weather moderated and began to appear much as it did at European contact in the eighteenth century. The common occurrence of ground stone mortars, pestles, nutting stones, grooved axes, and celts at Middle Archaic sites suggests an increased involvement in plant foraging and wood working during this period.

The quantity of sites with Middle Archaic projectile points in northern Kentucky drops dramatically during this period, from 59 Early Archaic to only 23 Middle Archaic. None of the Middle Archaic sites have been excavated, so this dramatic difference is difficult to characterize. It may be that during the Middle Archaic, the inhabitants did not move around to different sites as much, but because of the milder climate were able to stay in one place longer. Alternatively, some archaeologists believe that at least some of the Middle Archaic Native Americans may have temporarily left the region.

The Late Archaic period represented a time frame of increasing population, local complexity and specialization among the various regional groups. Evidence includes expanded trade networks, evidence of status differentiation, and possible horticultural activities. Imported copper, marine shell, and mica demonstrate trade networks, and the presence of burial goods in some graves may indicate status differentiation. Plant processing tools including groundstone items, increase again during the Late Archaic. Evidence for domestication of plants such as gourds and sunflower has been found on excavated sites in the central Ohio River Valley. Projectile point types increase in quantity and stylistic variation, but there is a decrease in workmanship quality.

The earliest Late Archaic manifestations occur about 2,600 B.C. in southwestern Ohio, and related diagnostic artifacts appear in northern Kentucky during this same time frame. One regional manifestation is called the Central Ohio Valley Archaic (generally dated to 2,750 B.C. to 1,750 B.C.). Diagnostic artifacts include McWhinney points, atlatl or bell-pestle parts, hafted end scrapers, and grooved axes. Projectile point types associated with the overall Late Archaic period include a variety of point types including stemmed points such as the McWhinney Heavy Stemmed points, notched points such as Brewerton points, and very small points known as Merom or Trimble.

Late Archaic period sites increase dramatically in the northern Kentucky counties compared to the Middle Archaic period. At least 94 sites (versus 23 in the Middle Archaic) sites in the eleven county area contain Late Archaic diagnostic artifacts. This almost four-fold increase remains unexplained due to lack of excavations in this area. Almost half (43) of these sites are documented in Boone County, the most studied of the eleven counties, so some of the increase may be the result of survey intensity rather than site density. However, all the counties except Pendleton and Robertson see a dramatic upswing in site quantity during this period.

The transitional period between the Archaic period and the ensuing Woodland period ranges from before 1,000 B.C. up to about 500 B.C., depending on location and settlement patterns. The shift becomes evident in northern Kentucky during the 1000-500B.C. range when site quantity decreases again and pottery appears for the first time in this area.

Native American - Woodland Period (c. 1000 B.C. - A.D. 1000)

The Woodland period was marked by significant shifts in subsistence strategy, technological changes, and changing settlement patterns, although these did not appear instantly. Divided traditionally into the Early Woodland, Middle Woodland, and Late Woodland periods, those periods have been assigned varying date ranges. Kentucky archaeology generally assigns the approximate date ranges of 1000-200 BC, 200BC - AD 500, and AD 500 - AD 1000 respectively, however, these date ranges are arbitrary. Cultures assigned to the Early Woodland in Ohio (Adena for example); span the Early Woodland-Middle Woodland dividing point in Kentucky. Adena is assigned a date range of 500 B.C. – 200 A.D. by many Kentucky archaeologists.

Three important differences in northern Kentucky mark the separation of Late Archaic and Early Woodland. The first is the presence of pottery, which appears for the first time in this region by at least 700 BC. Secondly, the quantity of sites again decreases across northern Kentucky. Thirdly, and a bit later in time, burial mounds make their first appearance. In general, continuity from the Late Archaic into the Woodland period is seen for stone tools such as scrapers, knives, drills, nutting stones, and so forth. Bone tools also continue to be an important component of the Native American tool kit. Technological changes are seen primarily in projectile point form and in the introduction of pottery.

A total of 51 sites in the eleven counties contain Early Woodland diagnostic artifacts. These include some open sites that have produced diagnostic projectile points, and conical burial mounds (most of which are documented in Boone County). No intensive village sites have been documented in any of the eleven counties. The open sites are primarily artifact concentrations that include at least one Adena type point such as ovate stemmed, Robbins (square stemmed with a broad blade), or other similar point types.

Referred to as the Adena culture in the Ohio Valley, researchers have found evidence for their settlements on river and stream terraces, with possible winter upland resource extraction. The Adena Tradition is considered the most widely known, yet poorly understood, Early Woodland culture in this region, partly because it is usually discussed only in terms of its elaborate burial ceremonialism. Some burial mounds include significant evidence of social status differentiation. The presence of copper and shell ornaments in burial contexts provided evidence for extensive trade networks among the eastern woodlands and southeast. The Adena sphere of influence was quite far reaching. Encompassing not only northern Kentucky and surrounding states, it extended to some degree eastward through New England and the Midatlantic area, and northward through the Upper Great Lakes.

During the Middle Woodland period, circa 200 B.C. to A.D. 500, trade networks in the Ohio Valley produced complex sociocultural integration across regional boundaries. The Middle Woodland period is typically defined by the Hopewell complex that was centered near Chillicothe, Ohio on the Scioto River. Another focus of development was in Illinois. Extensive Hopewell earthworks are known from southwest Ohio in Hamilton County for example. Hopewell Culture is characterized by elaborate geometric earthworks, enclosures, mounds that are often associated with multiple burials, and a wide array of exotic ceremonial goods. Ceremonially, Hopewell appears to represent a continuation of Adena, but on a more expanded and elaborate scale. Hopewellian trade networks, for example, were more extensive.

Little evidence, however, has been found in the northern Kentucky counties that connects them intensively to the Hopewell complex. No Hopewell geometric earthworks or hilltop enclosures have been documented in northern Kentucky. The Ohio River seems to have marked some type of cultural boundary, although Hopewell associated sites have been documented further south in Kentucky.

The Hopewell Culture was the climax of the Middle Woodland Period in the Ohio Valley. Lasting only a few hundred years, its influence waned after about A.D. 450. Ceremonial centers were abandoned; trade networks dissipated, and less emphasis was placed on burial ceremonialism. The ensuing period is called the Late Woodland and lasted from approximately 500 – 1000 A.D., although some local cultures such as the Newtown tradition seem to have begun a bit earlier, perhaps as early as 300 A.D.

During the Late Woodland there was an increasing emphasis on domesticated plants, supplemented by hunting and intensive gathering. Regional variants of this pattern became focused within major drainages, where semi-permanent horticultural villages were located on broad terraces. Additional fall and winter hunting stations also occur along smaller tributaries. Mound building as a mortuary

custom did continue during at least the early part of the late Woodland period. Seasonal, and in some cases year-round, occupation of village sites located on terraces overlooking major stream valleys is seen in the Newtown phase. The Newtown phase was an early Late Woodland cultural period defined for southwest Ohio and northern Kentucky. Characteristic artifacts include distinctive pottery rims and pottery shoulder traits, Chesser or Lowe projectile points (corner notched points), groundstone celts, and other unique tool types.

Subsistence strategies included a growing reliance on domesticated plants including squash, seed plants, and maize agriculture by the end of the late Woodland period. Toward the end of the late Woodland, however, a decrease in plant diversity is found, as maize increased in importance. Technological changes were also introduced during this period. The Late Woodland people began to rely on agricultural crops instead of gathering nuts and wild plants. Archaeological sites contain many large storage pits dug deep into the ground for storage of plant harvests. Evidence is also found for houses built from wood framing with wattle and daub walls.

Native American – Late Prehistoric Period (AD 1000-AD 1600+)

By 800-900 AD, the bow and arrow may have been introduced into the Ohio Valley. Other changes in settlement and subsistence soon changed the character of the Late Woodland archaeological record. About 1000 AD, the local Native American inhabitants of northern Kentucky practiced maize agriculture, used the bow and arrow, and tempered their pottery with shell instead of grit or limestone. Social and political changes may have also accompanied the technological changes. The Mississippian period, as seen in the Mississippi Valley, included large town and mound complexes that influenced and controlled many of their neighbors. Influence reached the Ohio Valley in terms of technological change as mentioned above and perhaps social changes as well, although those are not as well documented.

In the central Ohio Valley, including northern Kentucky, this time frame is known as the Fort Ancient period. During the Fort Ancient period, permanently occupied villages have been documented along most of the major streams and rivers in northern Kentucky. Divided into at least three cultural time frames by many researchers, the Fort Ancient period saw changes in pottery styles and village layout through the more than 600 year period. The Fort Ancient period reaches into the historic period, well into the 1600s.

Northern Kentucky has quite a few Fort Ancient period villages, including documented sites in all eleven counties. The sites are concentrated along the Ohio River valley and major streams. The sites in northern Kentucky are generally village sites that include houses and in some cases stockade walls. They usually built their houses in a circular pattern, with the doors facing in toward the center of the village. The center of the village was a plaza, or open-space area, used for ceremonies and other community activities. The Northern Kentucky Fort Ancient peoples farmed corn, beans, and squash/pumpkins. They also hunted deer and many smaller mammals, birds, and fish. Their farmlands were the fertile stream valleys that surrounded their village site. They collected mussel shells from the local streams and rivers in large quantities. They ate the mussel animals and used the shells to temper their pottery and as hoes and other tools.

They buried their dead either in mounds located nearby to their village, or later, in small cemeteries actually located right within the village itself. Each village contained at least one community building or meeting place. Other buildings in the village included sweat lodges and houses. The Fort Ancient people usually had a surplus of food at the end of each growing season. They excavated very large storage pits, similar to a small cellar, in which to store corn and other foods for the winter. The Native Americans of the Fort Ancient Period used a variety of tools and raw materials. Pottery vessels include shell tempered pottery, bowls, shallow pans, larger storage vessels, and decorative containers. Triangular arrow points are characteristic of the Fort Ancient period. Stone tools also include knives, drills, scrapers, and celts. They manufactured hoes, fishhooks, and other implements of freshwater mussel shell or bone.

Some sites that date after the sixteenth century may also contain fragments of brass or copper trade items, glass beads, iron kettles and axes. These artifacts, including some items found at Petersburg in Boone County, indicate contact with European explorers. These may have been acquired through direct contact with French missionaries or trappers who had entered the region by the early seventeenth century. Local Native American tribes may have received trade goods even earlier by trading with more coastal tribes, especially those in eastern Canada with direct contact with French explorers and missionaries.

Historic Period Settlement

Campbell County became the nineteenth county in the Commonwealth of Kentucky in 1994, created out of Harrison, Madison and Scott Counties. The County originally included additional territory, including land split out in 1840 to create Kenton County to the west. The Ohio River borders the eastern and northern edges of the County and serves as the major water traffic route. Small towns sprang up along the Ohio River banks to serve as barge and steamboat ports. The Chesapeake and Ohio Railroad also served the river towns and was in place before 1883 (Lake 1883; Wessling 2009:144).

The project area includes farm land and wetlands near the small communities of Mentor and Melbourne. Mentor has been a local community since the mid nineteenth century although it was not incorporated until 1957. Serving the local farming community, the village also had a well-known brick yard between the 1880s and 1918. Limestone mines have been a more recent industry in the vicinity (Reis 2009:614). Melbourne is a small community just east of the project area. Laid out in 1891 the village has been a small residential community since that time (Tenkotte and Claypool 2009:612).

FIELD METHODS AND SURVEY RESULTS

Each of the four parcels is described below regarding survey coverage, setting, and recommendations for archaeological probability. Figure 4 illustrates the environmental setting and delineated wetlands for the four parcels (map provided by NKU Applied Ecology).

Wetland 1 North

Wetland 1 North consists of 35.858 acres and is situated between the C&O Railroad tracks and the Ohio River (Figure 4). This is the northern most parcel of land and is bounded by private property to the west and Anderson Lane to the east. It lies within the 100 year floodplain. The terrain is relatively level with minor depressions and consists of alluvial soils. This area is mostly wooded with a small clearing/pasture found in the north central portion of the parcel. There are hardwoods and wetland flora throughout along with some thick honeysuckle.

Small drainages with standing water were found some of which were likely man-made as farm drainage ditches. The probability of archaeological sites in this parcel is low to moderate given the low lying terrain.

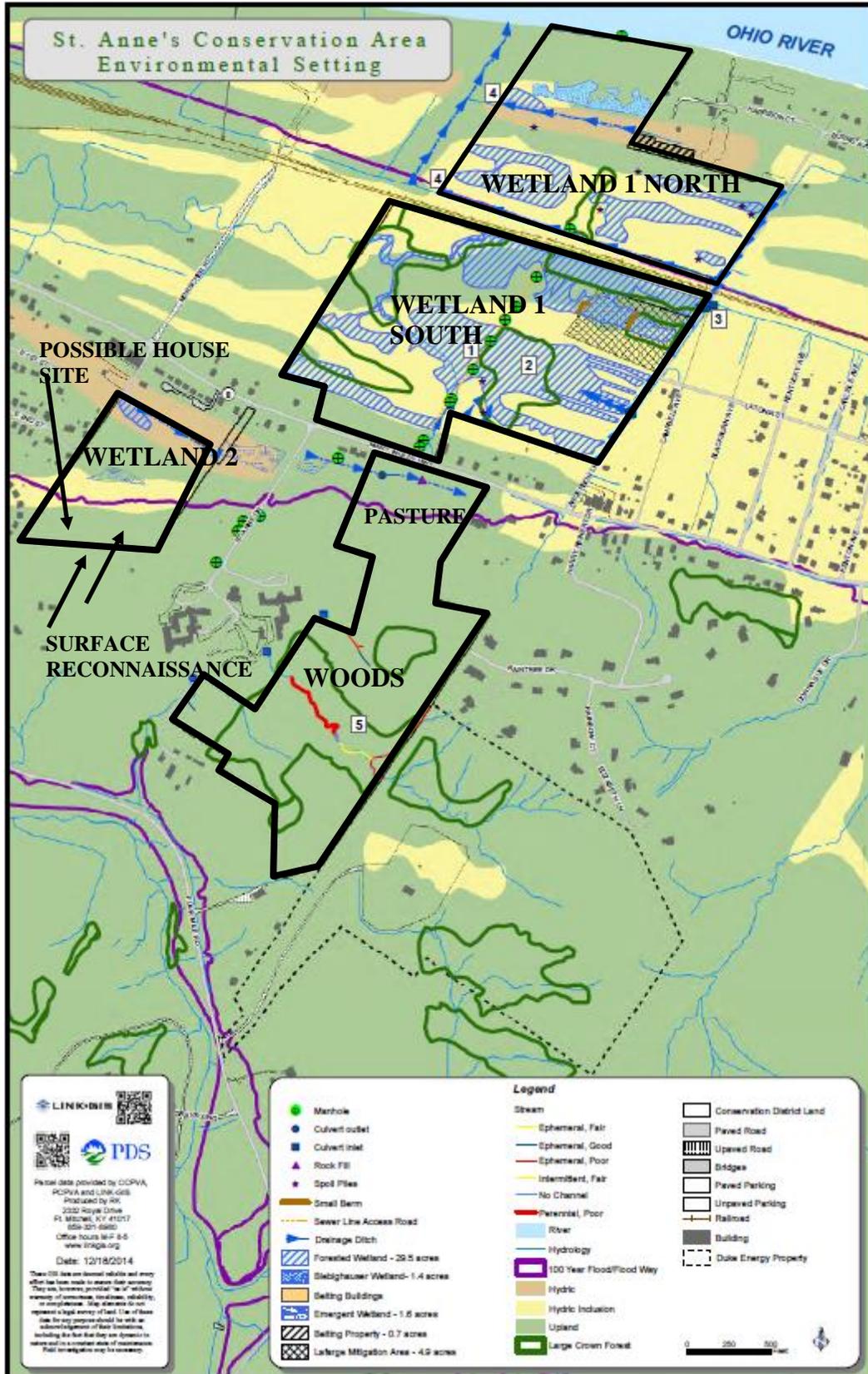
The soils in Wetland 1 North are alluvium deposits. The soils are defined as Huntington Alluvial land (steep), Wheeling silt loam (2-6 percent slope), Robertsville silt loam, Rossmoyne silt loam (0-6 percent slopes), Avonburg silt loam, and Newark silt loam. These soils are commonly found on terraces and bottom land close to rivers, are mostly level, and can vary in texture.

Wetland 1 South

Wetland 1 South consists of 52.105 acres and is situated on the south side of the railroad tracks and runs south to Route 8 (Figure 4). The southeastern corner stops well before the highway into the woods and excludes a row of four houses adjacent to Route 8. Most of this area is covered by hardwoods, honeysuckle, and wetland flora. Similar to Wetland 1 North, this area is mostly level with some minor depressions. Some standing water was evident at the time of the survey and but Wetland 1 South and North are both likely to have standing water throughout the early part of the year. Small drainages are present; some could be natural and others man-made. This parcel also lies within the 100 year floodplain. No major disturbances were recorded here. The probability of archaeological sites in this parcel is low to moderate given the terrain.

The soils in Wetland 1 South are also based in alluvium. The soils include Wheeling silt loam (2-6 percent slopes), Ashton silt loam (2-6 percent slopes), Rossmoyne silt loam (0-6 percent slopes), Avonburg silt loam, and Newark silt loam.

Figure 4. NKU Applied Ecology environmental setting map for the St Anne Parcels.



Wetland 2

Wetland 2 is located to the west of the main driveway that leads up to the Convent buildings and consists of 14.276 acres (Figure 4). There is a large area to the south side of this parcel that over the years has been plowed for the Sisters to work and garden. The surface visibility was 75-100 percent at the time of the survey and much of the garden was walked (Figure 4). No artifacts were found. This south section of the parcel where the garden is sits high on a natural terrace that runs parallel to Route 8. Within the wooded portion the land slopes down into a low lying area with depressions. This area contains a mix of hardwoods, grasses, and wetland flora. The soils in Wetland 2 consist of glacial outwash and loess soils. These soils are found on the terrace south of Route 8 giving the texture of sand and fine silt. The soils associated here include Wheeling silt loam (2-6 percent slopes), Wheeling silt loam (6-12 percent slopes), Robertsville silt loam, Alluvial land (steep), Avonburg silt loam, and Lakin loamy fine sand (2-12 percent slopes). These soils are common on terraces in this area.

Along the edge of the woods just north of the garden area is a thickly vegetated area with an abundance of *Vinca minor* vines, a non-native species. The ground is heavily disturbed (mechanically) with mounds of push piled dirt in the immediate vicinity. A comparison of topo maps a house is shown in this area as early as 1898 (earliest topo available), there in 1914, and still shown as an occupied house up through at least 1952 (Figures 5 - 7). A black square on the topographic map indicates a structure still in active use. The 1961 topo map has the footprint of the house (open square), that indicates that the house is no longer used or is an outbuilding (Figure 8).

Figure 5. Portion of 1898 15 minute topo map showing structure location in Wetland 2.

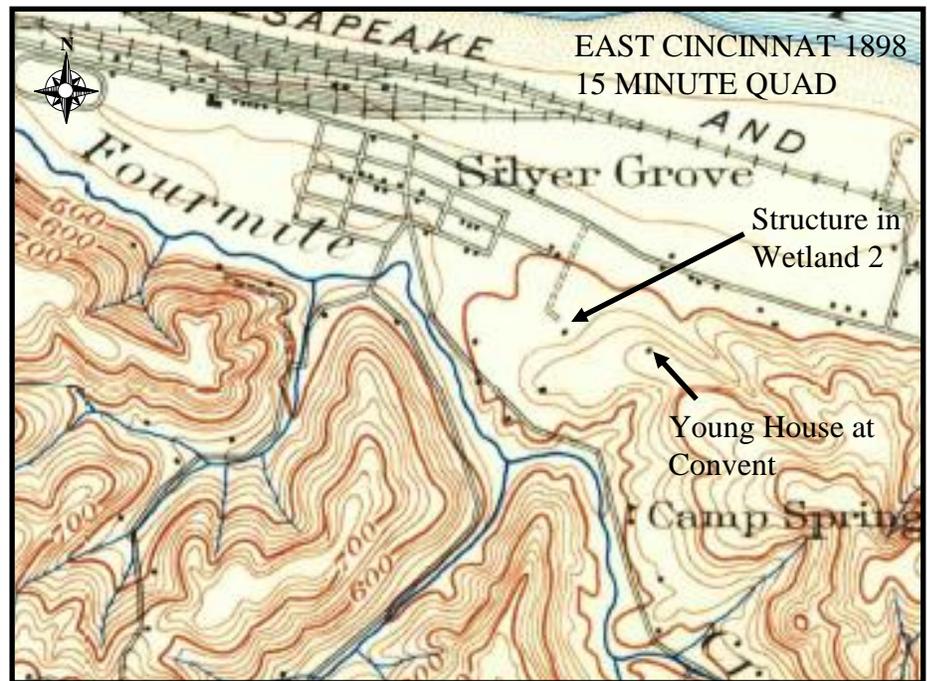


Figure 6. Portion of 1914 15 minute topo map showing structure location in Wetland 2.

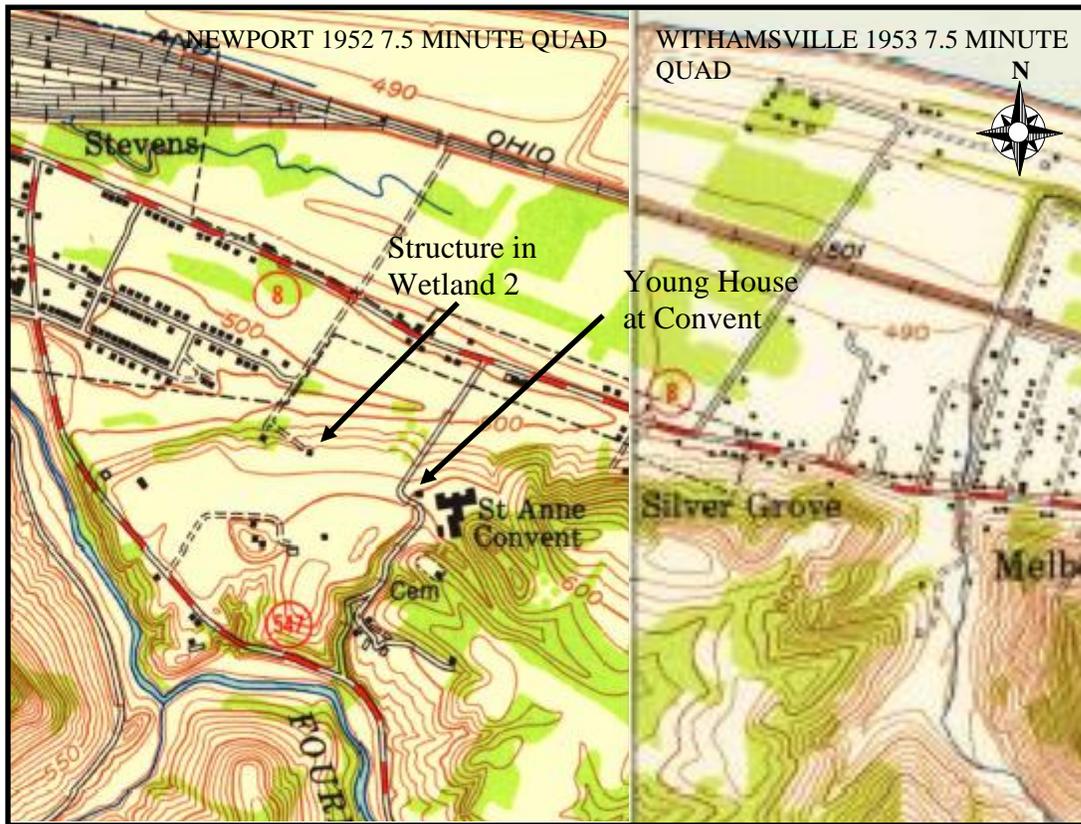
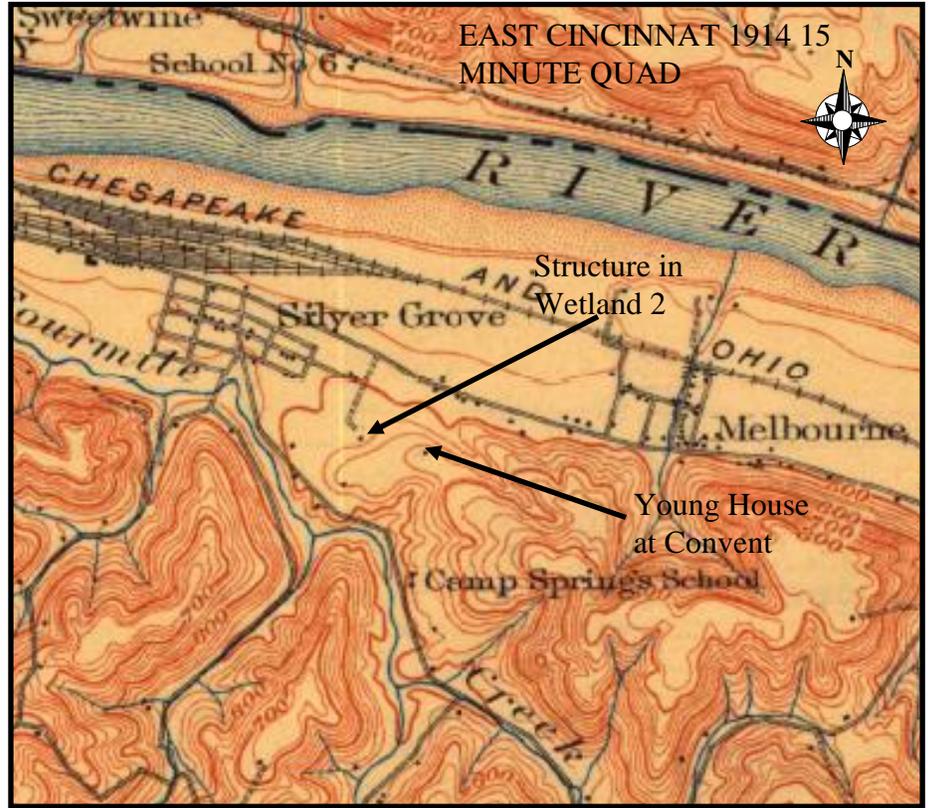
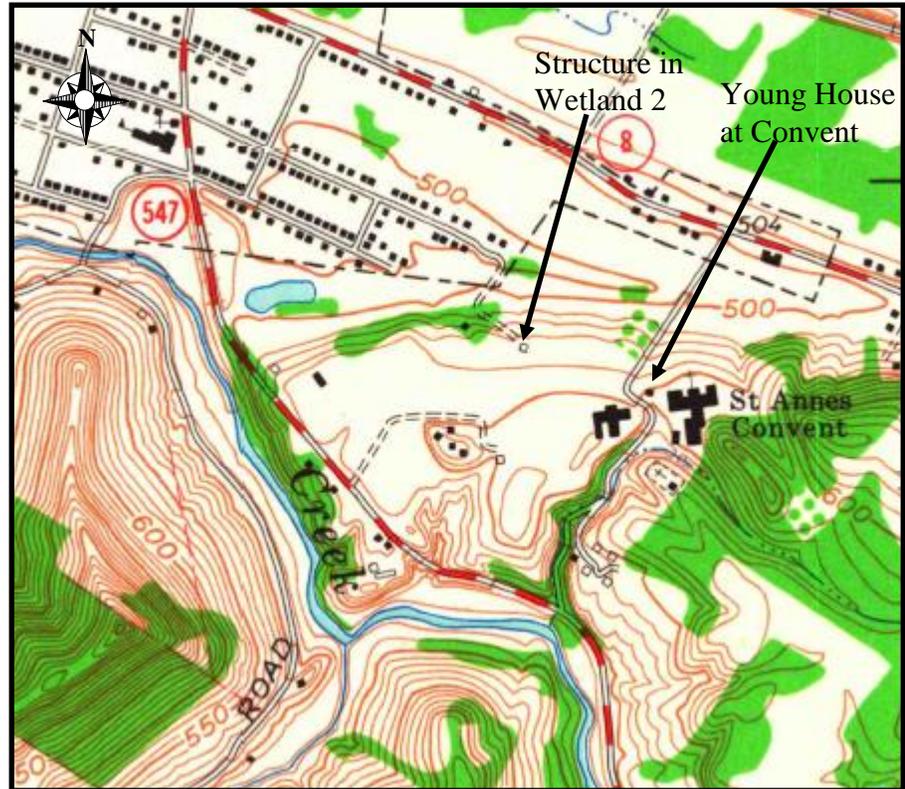


Figure 7. Portion of 1952/1953 topo maps showing structure in Wetland 2.

Figure 8. Portion of 1961 topo map showing structure in Wetland 2.



During the survey no foundations or walls were found but they could exist beneath the push piles of soil (Photo 6). The Sisters of Divine Providence have no formal records on this structure but in a phone interview in March 2015 indicated that the structure was removed most likely in the 1950s and it had been a ruin at that time.

Photo 6. View west at possible structure/house site in Wetland 2.



This house/structure location should be considered high probability to contain an historical homestead site. The house shown on the 1883 atlas as Peter Young's house (Figure 3) may be the larger brick house still extant adjacent to the convent buildings, or it may be this structure in Wetland 2 and shown on Figures 5-8. Both the house adjacent to the convent and this house are illustrated on Figures 5-8 so both existed by 1898. If this area in Wetland 2 will be physically impacted, additional historic and archaeological research is recommended to document archaeological site boundaries, determine whether additional historical information is available on the Young family and previous landowners, and to determine the archaeological/historical significance of this potential historical archaeological site.

Wetland 2 is recommended as high probability for an historical period house/farm site. Wetland 2 is recommended as low to moderate probability to contain prehistoric Native American archaeological sites. Moderate probability only applies to the upper terrace along the south edge of the Wetland 2 parcel.

Woods

The Woods is a 44.221 acre irregular shaped parcel that begins in the north along Route 8 and runs south to the back property lines of the farm and houses located on Four Mile Rd (Figure 4). The main building and the convent sit on the property to the west separating the Woods from Wetland 2. This parcel consists of mostly mature hardwoods and thin undergrowth with some pasture at its northern edge along Route 8 (Figure 4). The pasture between Route 8 and the beginning of the forested area is low lying and level with one stream passing through it. The forested area begins at the northern edge of the upland part of the parcel. A small pasture was also found in the southeastern corner of the property. Except for the pasture between the forest and Route 8 the Woods is upland ground that are highly dissected by drainages running northwest throughout the parcel. Some water was visible during the survey and most if not all would have running water during the wet periods through the year. Some of the drainages may be runoff from past agricultural practices and some may be due to natural springs. Several old well-worn paths are in the Woods and could be old farm roads and or logging roads. No evidence of buildings or other cultural structures were noted during the walkover. The historical maps (Figures 3, 5-8) do not show any buildings/structures within the Woods parcel. The probability of significant archaeological sites is low to moderate for this area.

The soils in the Woods consist of mostly of Loess soils with pockets of Kope formation and glacial outwash from the terrace to Route 8. The soils here are associated with Lakin loamy fine sand (0-2 percent slopes), Brashear silty clay, (12-20 percent), Alluvial land (steep), Wheeling silt loam (6-12 percent slopes), Rossmoyne silt loam (0-6 percent slopes), Lakin loamy fine sand (2-12 percent slopes), and Ashton silt loam (2-6 percent slopes). The soils range from fine sandy soils to silt loam with limestone formations throughout this area.

SUMMARY AND RECOMMENDATIONS

The archaeological assessment of the CCCD St Anne Woods and Wetlands Study Area included walkover, some surface reconnaissance survey, and some historical research. The study has identified high, medium, and low probability areas within the project area.

Figure X identifies high, medium and low probability zones in the project area.

HIGH Probability: A small area within Wetland 2, approximately 30 meters in diameter, may be the location of an historic homestead house. The site is located just inside the southern edge of Wetland 2 (Figure X). *Vinca minor* (non-native ground cover plant) covers this area and several very large trees (over 2 ft in diameter) are present. Personal communication from the Sisters of Divine Providence indicate that a house/structure stood in this vicinity until approximately the 1950s. It was a ruin at that time. As noted above, the structure is shown on early to mid-twentieth century topographic maps.

LOW TO MODERATE Probability: The Woods Parcel is recommended as having low to moderate probability to contain prehistoric Native American archaeological sites. However, these are likely to be small, ephemeral sites such as camps or activity areas (associated with hunting and/or food gathering).

LOW Probability: All of Wetland 1 North and Wetland 1 South, and the lower portions of Wetland 2 are recommended as low probability to contain significant archaeological sites of either the historical or prehistoric periods. Based on the NKU wetland assessment as noted above, these include wooded wetlands, ponded and backwater areas.

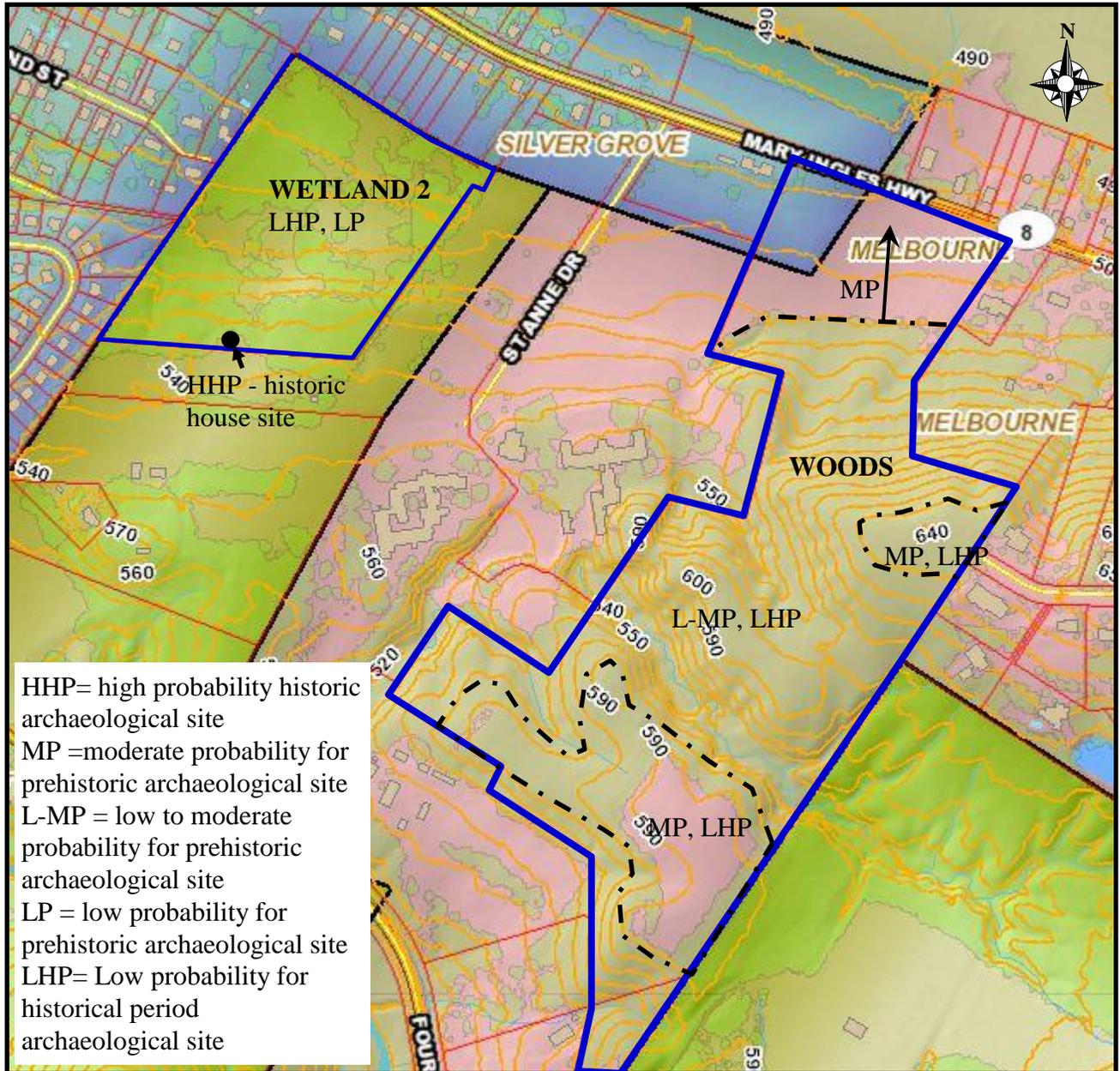


Figure 9. Probability map for Wetland 2 and Woods parcels.

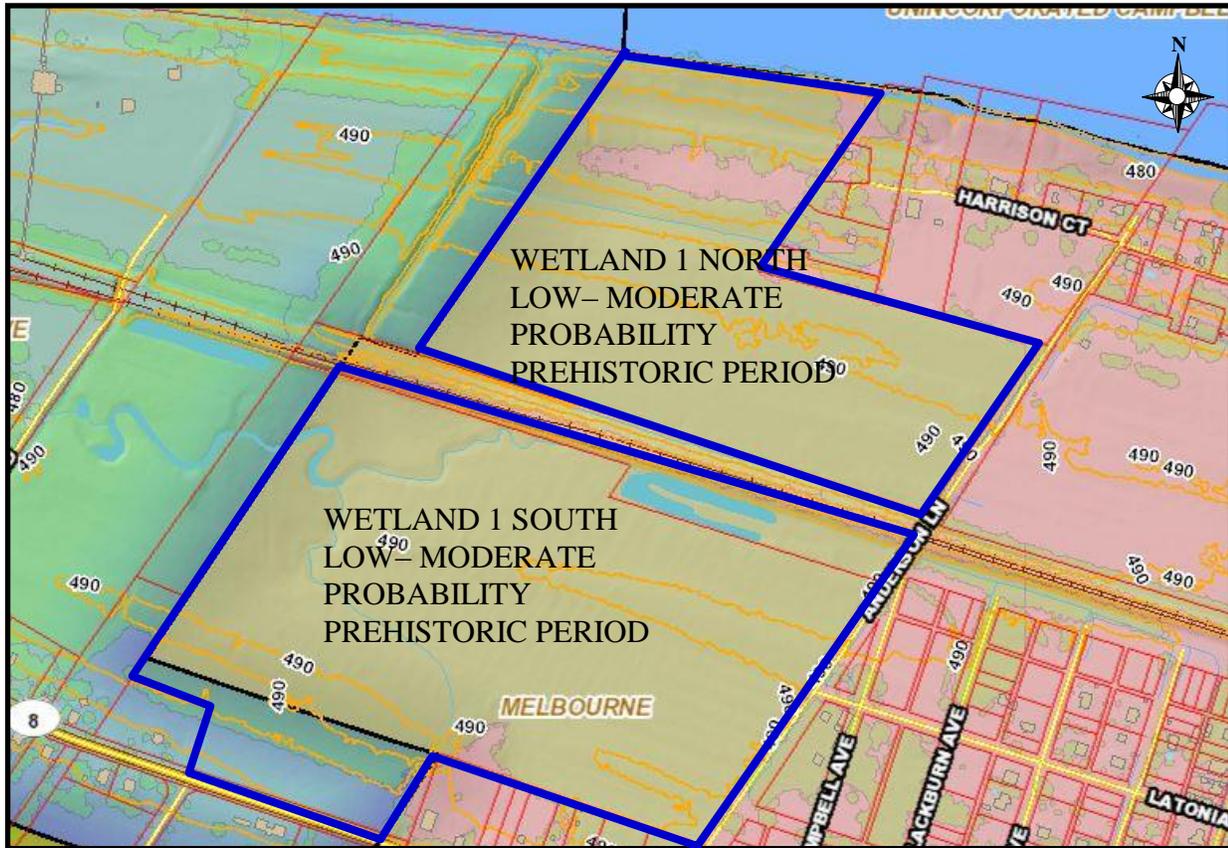


Figure 10. Probability map for Wetland 1 North and Wetland 1 South.

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