

## Appendix K: Phase I Archaeological Survey

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- Response from Ohio Historic Preservation Office – Dated November 10, 2015
- Phase I Archaeological Investigation for Proposed 35 ha (85.6 ac) South Field Energy Facility in Yellow Creek Township, Columbiana County, Ohio
- Transmittal Letter – received by Ohio Historic Preservation Office on December 1, 2015
- Phase I Archaeological Investigation for the Proposed 5.1 ha (12.6 ac) South Field Energy Laydown Area in Yellow Creek Township, Columbiana County, Ohio



November 10, 2015

In reply, please refer to:  
2015-COL-32153

Christopher Nelson  
Weller & Associates, Inc.  
1395 West Fifth Avenue  
Columbus, Ohio 43212

RE: Proposed 35 ha (86.5 ac) South Field Energy Facility  
Near Intersection of Hibbetts Mill Road and Forbes Road  
Yellow Creek Township, Columbiana County, Ohio

Dear Chris:

This letter is in response to additional information received on November 4, 2015 regarding the above referenced project. Our comments are made pursuant to ORC Section 149.53 and the rules of the Ohio Power Siting Board.

Due to the rural location of this project, a refined Area of Potential Effects (APE) has been established for this project. Although the APE remains a five-mile radius from the project location, an intensive architectural survey was recommended for properties located within a one-mile radius from the project location. All architectural resources 50 years of age or older were surveyed within the one-mile radius, while only those resources listed on, or eligible for inclusion in, the National Register for Historic Places were considered outside the one-mile radius, up to a five-mile radius from the project location. Please note that this refined APE applies to this specific project only and may be different for future projects submitted.

We have reviewed the information submitted, including a Phase I Archaeological Investigation, photographs, and site plans. Four National Register listed properties are located within the five-mile radial APE: the Ikirt House (Ref. 80002964); the Elks Club (Ref. 85003512); the Episcopal Church of the Ascension and Manse (Ref. 86001061); and the Daniel McBean Farmstead (Ref. 05001518). You have provided information supporting your contention that the project will have no adverse effect on these properties due to the rugged terrain, presence of large and mature forested areas, and other visible modern or industrial elements.

Christopher Nelson  
November 10, 2015  
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Based on your analysis, we agree with your determination that there will be no adverse effect on historic properties as result of the construction of the proposed energy facility. No further coordination with this office is necessary unless there is a change in the project.

In order for the Ohio Historic Inventory form to be accepted by this office, there may be some technical corrections and amendments that need to be made by the consultant who prepared the document. You may receive copies of communications from staff in our Department of Inventory and Registration about the form.

If you have any questions about this letter or our review of this project, please contact Joy Williams at [jwilliams@ohiohistory.org](mailto:jwilliams@ohiohistory.org) or (614) 298-2000. Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark J. Epstein', with a long horizontal flourish extending to the right.

Mark J. Epstein, Deputy State Historic Preservation Officer For  
Resource Protection and Review

RPR Serial No: 1060697

**OHIO HISTORY CONNECTION**

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**Phase I Archaeological Investigations for Proposed 35 ha  
(86.5 ac) South Field Energy Facility in  
Yellow Creek Township, Columbiana County, Ohio**

**Ryan J. Weller**

**July 17, 2015**

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**Phase I Archaeological Investigations for a Proposed 35 ha  
(86.5 ac) South Field Energy Facility in Yellow Creek  
Township, Columbiana County Ohio**

**By**

**Ryan J. Weller**

**Submitted By:**

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**Prepared For:**

**Tetra Tech  
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**Lead Agency:**

**Ohio Power Siting Board**



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**Ryan Weller, P.I.**

**July 17, 2015**

## **Abstract**

In June of 2015, Weller & Associates, Inc. completed Phase I archaeological investigations for the proposed 35-hectare (86.5-acre) South Field Energy facility (the Project) located in Yellow Creek Township, Columbiana County, Ohio (the Project Area). The lead agency for this Project is the Ohio Power Siting Board; review by the United States Army Corps of Engineers is also anticipated. These investigations were conducted to identify any sites or properties and to evaluate them in a manner that is reflective of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). This report summarizes the results of the archaeological fieldwork and an intensive literature review.

The Project Area is irregularly shaped and located on the north side of Hibbets Mill Road. It is in the central part of Section 18 of Yellow Creek Township. The area is contained in an upland ridge top setting that had been cleared for farming in the past, but has since been left fallow or wooded. This area is to the north and west of the community of Hillcrest, and the Wellsville City Reservoir is about a mile to the southwest. Coal strip mining activity occurred in the unnamed stream valley to the west of the project. This unglaciated and open landscape is drained by unnamed tributaries of Little Yellow Creek, which flows to the Ohio River. There are dual parallel First Energy transmission lines that extend through the eastern part of the Project Area. There are two residences with outbuildings in the Project Area, but these are modern and are absent from late twentieth century topographic maps.

The literature review for this Project identified only a few recorded resources within the 5-mile study area (the Study Area). However, a survey was completed (Soldo 2002) for an area that overlaps with the northern and western part of the current Project Area. There are no recorded architectural or archaeological sites located within the Project Area. There are two cemeteries identified in the Study Area and they are well north of the Project. Otherwise, there is only one architectural site, the Wellsville Reservoir (COL0042317) recorded in the far western part of the Study Area. There are no National Register of Historic Places (NRHP) of Determination of Eligibility (DOE) resources recorded in the study area.

The field investigations involved subsurface testing and visual inspection, which identified two previously unrecorded archaeological sites (i.e., 33CO963 and 964). These sites are not considered to be significant and are therefore, not considered to be eligible for the NRHP. If this Project were subject to Section 106, an appropriate finding of 'no historic properties affected' would be considered. No further archaeological work is deemed necessary for this Project.

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## **Introduction**

In June of 2015, Weller & Associates, Inc. (Weller) completed Phase I archaeological investigations for a proposed 35-hectare (ha) (86.5-acre [ac]) South Field Energy facility (the Project) in Yellow Creek Township, Columbiana County Ohio (Figures 1-3). The work was conducted under contract with Tetra Tech (TT) for submittal to the Ohio Power Siting Board (OPSB); approval from the United States Army Corps of Engineers may also be required. These investigations were conducted to identify any sites or properties and to evaluate them in a manner that is reflective of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). This report summarizes the results of the archaeological fieldwork and an intensive literature review. The report format and design is similar to that established in *Archaeology Guidelines* (Ohio Historic Preservation Office [OHPO] 1994). The work includes archaeological literature review, field investigations, and visual inspection/documentation of the Area of Potential Effects (APE) as it pertains to OPSB projects of this type.

The 35-ha property (the Project Area) is proposed for development of a proposed combined cycle electric generating facility and temporary construction laydown and parking area. As an element of its review by the OPSB, the Project is required to consider potential resources within the Project Area as well as within a 5-mile radius (the Study Area).

Abraham Ledezma, and Chris Nelson conducted the literature review of the Study Area in June of 2015. Chris Nelson was responsible for the history/architectural component of this project, which was completed as a separate and stand-alone document (Nelson 2015). Ryan Weller served as the archaeological Principal Investigator and Project Manager; Chris Nelson served as the history/architectural Principal Investigator. The Phase I field investigations were conducted in mid-June of 2015. The archaeological field crew included Ryan Weller, Alex Thomas, Seth Cooper, Matt Sanders, and Abraham Ledezma.

## **Environmental Setting**

### ***Climate***

Columbiana County, similar to all of Ohio, has a continental climate, with hot and humid summers and cold winters. February is the driest month, while July tends to be the wettest month for Columbiana County [United States Department of Agriculture, Soil Conservation Service (USDA, SCS) 2011].

### ***Physiography, Relief and Drainage***

Columbiana County is at the limits of the Wisconsin and Illinoian glacial boundaries. The Study Area is located within a diverse physiographic setting. The northeastern part is contained in Wisconsin glacial landforms associated with end moraines and ground moraines; these are within the Killbuck-Glaciated Pittsburgh Plateau region. The localized setting has been glacially planed with comparably flatter

and homogeneous landforms. The central part cuts through a narrow band of Illinoian glacial dissected ground moraine as the physiographic region is listed as the Illinoian Glaciated Allegheny Plateau. This narrow band is very rugged and similar to unglaciated parts of the region. The southern part, including the Project Area, includes unglaciated landforms that tend to be dissected with more rugged terrain. This is part of the Muskingum-Pittsburgh Plateau region (Brockman 1998). The Project Area is drained by unnamed tributaries of Little Yellow Creek, which flows directly to the Ohio River.

### ***Geology***

The underlying bedrock in this area is associated with sedimentary rocks of the Pennsylvanian period (Brockman 1998). Coal is included in the underlying bedrock deposits and is evidenced by strip mining activity to the west of the Project Area. Upper Mercer chert has been observed in float deposits and outcrops from the Salem, Ohio area.

### ***Soils***

The Project Area is located in the Berks-Coshocton-Gilpin association. There are nine soil series types present within the Project Area and they are attributable to unglaciated uplands. Per guidelines, soils associated with 15 percent slope or greater were subject to inspection, but do not necessarily require physical archaeological testing. There are no soils within the Project Area that are attributed with deep alluvial deposits (USDA, SCS 2011).

<b>Table 1. Soils identified within the Project Area.</b>			
<b>Map symbol</b>	<b>Soil Name</b>	<b>Drainage capabilities</b>	<b>Landform</b>
CoC	Coshocton silt loam, 6-15 % slopes	Moderately well drained	Ridge tops
GaB	Gavers silt loam, 2 to 6 % slopes	Moderately well drained	Ridge tops
KeB	Keene silt loam, 3 to 8 % slopes	Moderately well drained	Ridge tops
GnB	Gilpin silt loam, 3 to 8 % slopes, occasionally flooded	Moderately well drained	Ridge tops
BkC, BkE	Berks channery silt loam, 8 to 15 and 25 to 35 % slopes	Well drained	Side slopes
HeB, HeC	Hazelton channery loam, 2 to 6 and 6 to 15 % slopes	Moderately well drained	Ridge tops
WkE	Westmoreland-Berks Complex, 25 to 40 % slopes	Well drained	Side slopes

### ***Flora***

There is or at least was great floral diversity in Ohio. This diversity is relative to the soils and the terrain that generally includes the till plain, lake plain, terminal glacial margins, and unglaciated plateau (Forsyth 1970). Three major glacial advances, including the Kansan, Illinoian, and Wisconsinan, have affected the landscape of Ohio. The effects of the Wisconsin glaciation are most pronounced and have affected more than half of the state (Pavey et al. 1999).

The least diverse part of Ohio extends in a belt from the northeast below the lake-affected areas through most of western Ohio (Gordon 1966). These areas are part of the late Wisconsinan ground moraine and lateral end moraines. It is positioned between the lake plains region and the terminal glacial moraines. This area included broad forested areas of beech maple forests interspersed with mixed oak forests in elevated terrain or where relief is greater (Forsyth 1970; Gordon 1966). Prairie environments such as those in Wyandot and Marion County areas would contain islands of forests, but were mostly expansive open terrain dominated by grasses.

The northwestern Ohio terrain is nearly flat because of ancient glacial lakes and glaciation, which affected the flora. However, the vegetation was more diverse than the till plain to the south and east because of the variety of factors that contributed to its terrain. Forests within the Black Swamp were generally comprised of elm/ash stands; however, dissected areas along drainages and drier, elevated areas from beach deposits would contain mixed forests of oak and hickory (Gordon 1966, 1969). There was little upland floral diversity in the lake plains (Black Swamp region) except for the occasional patches of oak and hickory. Floral variety was most evident in narrow sleeves along larger stream valleys where there is relief.

The most biological diversity in Ohio is contained within the Allegheny Plateau, which encompasses the southeastern two-thirds of the state (Sheaffer and Rose 1998). Because this area is higher and has drier conditions, it is dominated by mixed oak forests. Some locations within the central part of this area contain beech and mixed mesophytic forests. There are large patches of oak and sugar maple forests to the south of the terminal moraine from Richland to Mahoning County (Gordon 1966).

Southwestern Ohio from about Cincinnati to Bellefontaine east to the Scioto River historically contained a very diverse floral landscape. This is an area where moraines from three glacial episodes are prevalent (Pavey et al. 1999). Forests in this area include elm-ash swamp, beech, oak-sugar maple, mixed mesophytic, prairie grasslands, mixed oak, and bottomland hardwoods (Core 1966; Gordon 1966, 1969). These forest types are intermingled with prairies being limited to the northern limits of this area mostly in Clark and Madison Counties.

Generally, beech forests are the most common variety through Ohio and could be found in all regions. Oak and hickory forests dominated the southeastern Ohio terrain and were found with patchy frequency across most of northern Ohio. Areas that were formerly open prairies and grasslands are in glacial areas, but are still patchy. These are in the west central part of the state. Oak and sugar maple forests occur predominantly along the glacial terminal moraine. Elm-ash swamp forests are prevalent in glaciated areas including the northern and western parts of Ohio (Gordon 1966; Pavey et al. 1999).

Central Columbiana County, including the Project Area, is generally within what is considered to a mixed oak forest area (Gordon 1966).

### ***Fauna***

The upland forest zone offered a diversity of mammals to the prehistoric diet. This food source consisted of white-tailed deer, black bear, Eastern cottontail rabbit, opossum, a variety of squirrels, as well as other less economically important mammals. Several avian species were a part of the upland prehistoric diet as well (wild turkey, quail, ruffed grouse, passenger pigeon, etc.). The lowland zone offered significant species as well. Raccoon, beaver, and muskrat were a few of the mammals, while wood duck and wild goose were the economically important birds. Fishes and shellfish were also an integral part of the prehistoric diet. Ohio muskellunge, yellow perch, white crappie, long nose gar, channel catfish, pike, and sturgeon were several of the fish, whereas, the Ohio naiad mollusc, butterfly's shell, long solid, common bullhead, knob rockshell, and cod shell were the major varieties of shellfish. Reptiles and amphibians, such as several varieties of snakes, frogs, and turtles, were also part of the prehistoric diet (Trautman 1981; Lafferty 1979; Mahr 1949).

## **Cultural Setting**

The first inhabitants of Ohio were probably unable to enter this land until the ice sheets of the Wisconsin glacier melted around 14,000 B.C. Paleoindian sites are considered rare due to the age of the sites and the effects of land altering activities such as erosion. Such sites were mostly used temporarily and thus lack the accumulation of human occupational deposits that would have been created by frequent visitation. Paleoindian artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. In Ohio, major Paleoindian sites have been documented along large river systems and near flint outcrops in the Unglaciaded Plateau (Cunningham 1973). Otherwise, Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds or open air scatters.

The Paleoindian period is characterized by tool kits and gear utilized in hunting Late Pleistocene megafauna and other herding animals including but not limited to short-faced bear, barren ground caribou, flat-headed peccary, bison, mastodon, giant beaver (Bamforth 1988; Brose 1994a; McDonald 1994). Groups have been depicted as being mobile and nomadic (Tankersley 1989); artifacts include projectile points, multi-purpose unifacial tools, burins, graters, and spokeshaves (Tankersley 1994). The most diagnostic artifacts associated with this period are fluted points that exhibit a groove or channel positioned at the base to facilitate hafting. The projectiles dating from the late Paleoindian period generally lack this trait; however, the lance form of the blade is retained and is often distinctive from the following Early Archaic period (Justice 1987).

Certain artifacts indicate Paleoindian activity. These artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. The most common artifacts from the Paleoindian period are lanceolate-shaped projectile points. These may be fluted (flake removed from the base to facilitate hafting) and have some evidence of grinding on the hafting element (base and lower portion of the biface). Other artifacts that may be part of a Paleoindian assemblage include pitted stones, burins, bipolar flakes, backed knives, and unifacial endscrapers with graver spurs. Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds.

There are several sites that pertain to this period from northeastern Ohio, including Nobles Pond, Paleo Crossing, and Krill Cave. The Nobles Pond site in Stark County is situated in a nearly level area that had been glaciated. Based on a fairly large Paleoindian artifact assemblage recovered from this site, it has been interpreted as a semi-circular base camp occupation. The site was systematically collected for a period of 12 years by Gramly and Summers (1986). There have been over 3,000 tools recovered from this site, including Gainey style projectile points. This site appears to have been occupied from 10,000 to 11,000 years ago over a short time span (Seeman et al. 1994).

The Paleo Crossing site was occupied around 11,000 years ago. This site contained a large number of Clovis and Clovis-like points recovered from plow zone deposits. There was a lack of Upper Mercer flint contained within the Paleoindian portion of this assemblage. The majority of the flint from this site was acquired from southern and southeastern Indiana. Brose (1994a) has suggested that this site represents one of the earliest known structural remains associated with this period. A post mold from the site has been dated to  $12,250 \pm 100$  B.P.

Krill Cave (33SU18) is situated within Summit County. This is a stratified site that has been dated from the Paleoindian to Early Archaic periods. Little information is readily available concerning this site. It is located along an intermittent drainage with sandstone outcrops and overlooks a poorly drained marsh that is fed by springs (Prufer et al. 1989: 3).

The Archaic period has been broken down into three sub-categories, including the Early, Middle, and Late Archaic. During the Early Archaic period (ca. 10,000-8000 B.P.), the environment was becoming increasingly arid as indicated by the canopy (Shane 1987). This period of dryness allowed for the exploitation of areas that were previously inaccessible or undesirable. The Early Archaic period does not diverge greatly from the Paleoindian regarding the type of settlement. Societies still appear to be largely mobile with reliance on herding animals (Fitting 1963). For these reasons, Early Archaic artifacts can be encountered in nearly all settings throughout Ohio. Tool diversity increased at this time including hafted knives that are often re-sharpened by the process of beveling the utilized blade edge and intense basal grinding (Justice 1987). There is a basic transition from lance-shaped points to those with blades that are triangular. Notching becomes a common hafting trait. Another characteristic trait occurring almost exclusively in the Early and Middle Archaic periods is basal bifurcation and large blade serrations. Tool forms begin to vary more and may be a reflection of differential resource exploitation. Finished tools from this period can include bifacial knives, points, drills/perforators, utilized flakes, and scrapers.

The Middle Archaic period (8000-6000 B.P.) is poorly known or understood in archaeological contexts within Ohio. Some (e.g., Justice 1987) regard small bifurcate points as being indicative of this period. Ground stone artifacts become more prevalent at this time. Other hafted bifaces exhibit large side notches with squared bases, but this same trait can extend back to the Paleoindian period. The climate at this time is much like that of the modern era. Middle Archaic period subsistence tended to be associated with small patch foraging that involved a consistent need for mobility with a shift towards stream valleys (Stafford 1994). Sites encountered from this time period

throughout most of Ohio tend to be lithic scatters or isolated finds. The initial appearance of regional traits may be apparent at this time.

The Late Archaic period in Ohio (ca 6000-3000 B.P.) diverges from the previous periods in many ways. Preferred locations within a regional setting appear to have been repeatedly occupied. The more intensive and repeated occupations often resulted in the creation of greater social and material culture complexity. The environment at this time is warmer and drier. Most elevated landforms in northeastern Ohio have yielded Archaic artifacts (Prufer and Long 1986: 7), and the same can be stated for the remainder of Ohio.

Various artifacts are diagnostic of the Late Archaic period. Often, burial goods provide evidence that there was some long-distance movement of materials, while lithic materials used in utilitarian assemblages are often from a local chert outcrop. There is increased variation in projectile point styles that may reflect regionalism. Slate was often used in the production of ornamental artifacts. Ground and polished stone artifacts reached a high level of development. This is evident in such artifacts as grooved axes, celts, bannerstones, and other slate artifacts.

It is during the Terminal Archaic period (ca 3500-2500 B.P.) that extensive and deep burials are encountered. Cultural regionalism within Ohio is evident in the presence of Crab Orchard (southwest), Glacial Kame (northern), and Meadowood (central to Northeastern). Along the Ohio River, intensive occupations have been placed within the Riverton phase. Pottery makes its first appearance during the Terminal Late Archaic.

There are two Terminal Late Archaic cultures known from northeastern Ohio. Situated to the north and west of an imaginary line drawn from Cincinnati to Cleveland, the Glacial Kame culture (2950 to 2450 B.C.) is best interpreted as part of a burial cult that developed in the Late Archaic period. Glacial Kame can be considered the earliest of two Late Archaic cultural expressions in Ohio. The most diagnostic artifact of the Glacial Kame culture is the three-hole sandal-sole gorget (Converse 1979). The Meadowood culture (1,100 to 300 B.C.) is considered similar to Glacial Kame. Meadowood cultural traits are found mainly in the northeastern portions of Ohio; however, sporadic isolated finds of diagnostic artifacts are found throughout Ohio (Ritchie 1965).

The Early Woodland period (ca 3000-2100 B.P.) in Ohio is often associated with the Adena culture and the early mound builders (Dragoo 1976). Early and comparably simple geometric earthworks first appear with mounds more spread across the landscape. Pottery at this time is thick and tempered with grit, grog, or limestone; however, it becomes noticeably thinner towards the end of the period. There is increased emphasis on gathered plant resources, including maygrass, chenopodium, sunflower, and squash. Habitation sites have been documented that include structural evidence. Houses that were constructed during this period were circular, having a diameter of up to 18.3 meters (m) (Webb and Baby 1963) and often with paired posts (Cramer 1989). Artifacts dating from this period include leaf-shaped blades with parallel to lobate hafting elements, drilled slate pieces, ground stone, thick pottery, and increased use of copper. Early Woodland artifacts can be recovered from every region of Ohio.

The Early Woodland of northern Ohio is somewhat different from that of the remainder of the State. There are fewer mounds and the artifact assemblage is more attributable to the Leimbach Phase. Adena-like bifaces and tools are commonly found in river and stream valleys that drain into Lake Erie as well as in the uplands. It is assumed that Early Woodland inhabitants used these areas for little more than a transient hunting-collecting subsistence with occasional 'hot spots' of activity. One of the best-known Early Woodland sites is the Leimbach site. This site is located where the Huron River empties into Lake Erie (Shane 1975). Early Woodland ceramics and lugged vessels have been recovered from this site. An Early Woodland component of the Krill Cave site (33SU18) has been dated to about 145 B.C. Evidence of activity during this period, such as the ceramics, has been encountered infrequently at locations across north central and northwestern Ohio.

The Middle Woodland period (ca 2200-1600 B.P.) is often considered to be equivalent with the Hopewell culture. The largest earthworks in Ohio date from this time period. There is dramatic increase in the appearance of exotic materials that appear most often in association with earthworks and burials. Artifacts representative of this period include thinner, grit-tempered pottery, dart-sized projectile points (Lowe Flared, Steuben, Snyders, and Chesser) [Justice 1987], exotic materials (mica, obsidian, and marine shell, etc.). The points are often thin, bifacially beveled, and have flat cross sections. There seems to have been a marked increase in the population as well as increased levels of social organization. Middle Woodland sites seem to reflect a seasonal exploitation of the environment. There is a notable increase in the amount of Eastern Agricultural Complex plant cultigens, including chenopodium, knotweed, sumpweed, and little barley. This seasonal exploitation may have followed a scheduled resource extraction year in which the populations moved camp several times per year, stopping at known resource extraction loci. Middle Woodland land use appears to center on the regions surrounding earthworks (Dancey 1992; Pacheco 1996); however, there is evidence of repeated occupation away from earthworks (Weller 2005a). Household structures at this time vary with many of them being squares with rounded corners (Weller 2005a). Exotic goods are often attributed to funerary activities associated with mounds and earthworks. Utilitarian items are more frequently encountered outside of funerary/ritual contexts. The artifact most diagnostic of this period is the bladelet, a prismatic and thin razor-like tool, and bladelet cores. Middle Woodland remains are more commonly recovered from central Ohio south and lacking from most areas in the northern and southeastern part of the state. The few northeastern Ohio Middle Woodland sites that have been identified include the Cole Mound in Tuscarawas County and mounds near Pippen Lake, Portage County. Other than an occasional mound and projectile point, Middle Woodland sites are rare in northeastern Ohio (Zakucia 1964). However, excavations at the Szalay Site in Summit County encountered a series of postmolds that yielded dates and artifacts that were attributable to the Middle Woodland period. This site is located on at the confluence of Furnace Run and the Cuyahoga River. Bladelets, pottery, postmolds, and radiocarbon dates obtained from the site confirm its Hopewellian affiliation (Richner and Volf 2000).

The Late Woodland period (ca A.D. 400-900) is distinct from the previous period in several ways. There appears to be a population increase and a more noticeable aggregation of groups into formative villages. The villages are often positioned along large streams, on terraces, and were likely seasonally occupied (Cowan 1987). This

increased sedentism was due in part to a greater reliance on horticultural garden plots, much more so than in the preceding Middle Woodland period. The early Late Woodland groups were growing a wide variety of crop plants that are collectively referred to as the Eastern Agricultural Complex. These crops included maygrass, sunflower, and domesticated forms of goosefoot and sumpweed. This starch and protein diet was supplemented with wild plants and animals. Circa A.D. 800 to 1000, populations adopted maize agriculture, and around this same time, shell-tempered ceramics appear. Other technological innovations and changes during this time period included the bow and arrow and changes in ceramic vessel forms.

Evidence suggests that the Late Woodland occupations in northern Ohio developed from the Western Basin Middle Woodland tradition. The Late Woodland period in northern Ohio is best defined by ceramic traditions. Western Basin Late Woodland sites have been identified in most of the river valleys in northwestern Ohio such as the Maumee, Auglaize, and the Sandusky Rivers. Radiocarbon dating establishes this Late Woodland occupation at the first century B.C. to A.D. 500 (Pratt and Bush 1981:88). The Western Basin tradition consists of three primary phases, which include the Riviere au Vase, the Younge (Fitting 1965), and the Springwells phase.

The Late Prehistoric period (ca A.D. 1000-1550) is distinctive from former periods. It has been suggested that this cultural manifestation developed out of the local Middle Woodland cultures and may have lasted to be contemporaneous with the Late Prehistoric period (Barkes 1982; Baby and Potter 1965; Potter 1966).

The Late Prehistoric period in northern Ohio is often associated with an intensification of the use of plant resources, the presence of large villages, and a steady population increase. Permanent villages were associated with a heavy dependence on farming. These villages were often located on the meander belt zones of river valleys (Stothers et al. 1984:6). Subsistence of these farming communities relied upon maize, beans, and squash as the major cultigens. Villages were often strategically located on bluff tops. There is a change in social structure to a chiefdom-based society.

The Whittlesey cultural groups (A.D. 900 to 1650) inhabited most of northern Ohio in an area described as being south of Lake Erie from the Pennsylvania boundary to the western end of Lake Erie, as well as on some of the islands. Similar sites have been identified in northern Indiana and southern Michigan. These groups inhabited villages that encompassed an area of approximately 1.6 ha. These villages were often situated on top of high bluffs on stream bends, or high inaccessible areas of land located at stream junctions. These villages were usually fortified with wooden stockades or earthen embankments with ditches on the outer side (Brose 1994b).

The Fort Meigs and Indian Hills phases occur late in the Late Prehistoric period. The Fort Meigs phase may be related to the Wolf phase in that the pottery is similar. Fort Meigs phase occupations are identified by specific rim and neck motifs that are applied to their pottery. The Indian Hills phase is associated with shell-tempered pottery. Some villages show evidence of defensive features such as stockade lines, ditches, or earthen walls (Pratt and Bush 1981:155). There is little evidence to support inter-village



relationships, such as trade; this lack may have been due to competition for localized resources.

### *Protohistoric to Settlement*

By the mid-1600s, French explorers traveled through the Ohio country as trappers, traders, and missionaries. They kept journals about their encounters and details of their travels. These journals are often the only resource historians have regarding the early occupants of seventeenth century Ohio. The earliest village encountered by the explorers in 1652 was a Tionontati village located along the banks of Lake Erie and the Maumee River. Around 1670, it is known that three Shawnee villages were located along the confluence of the Ohio River and the Little Miami River. Because of the Iroquois Wars, which continued from 1641-1701, explorers did not spend much time in the Ohio region, and little else is known about the natives of Ohio during the 1600s. Although the Native American tribes of Ohio may have been affected by the outcome of the Iroquois Wars, no battles occurred in Ohio (Tanner 1987).

French explorers traveled extensively through the Ohio region from 1720-1761. During these expeditions, the locations of many Native American villages were documented. In 1751, a Delaware village known as Maguck existed near present-day Chillicothe. In 1758, a Shawnee town known as 'Lower Shawnee 2' existed at the same location. The French also documented the locations of trading posts and forts, which were typically established along the banks of Lake Erie or the Ohio River (Tanner 1987).

While the French were establishing a claim to the Ohio country, many Native Americans were also entering new claims to the region. The Shawnee were being forced out of Pennsylvania because of English settlement along the eastern coast. The Shawnee created a new headquarters at Shawnee Town, which was located at the mouth of the Scioto River. This headquarters served as a way to pull together many of the tribes which had been dispersed because of the Iroquois Wars (Tanner 1987).

Warfare was bound to break out as the British also began to stake claims in the Ohio region by the mid-1700s. The French and Indian War (1754-1760) affected many Ohio Native Americans; however, no battles were recorded in Ohio (Tanner 1987). Although the French and Indian War ended in 1760, the Native Americans continued to fight against the British explorers. In 1764, Colonel Henry Bouquet led a British troop from Fort Pitt, Pennsylvania to near Zanesville, Ohio.

In 1763, the Seven Years' War, which was being fought between France and Britain, had finally ended. The Treaty of Paris in 1763 granted the entire Ohio region to the British. In 1783, the second Treaty of Paris ending the American Revolution granted the entire Ohio region to the Americans; however, Ohio was specifically described as Native American territory. Native Americans were not to move south of the Ohio River (Tanner 1987).

By 1783, Native Americans had established fairly distinct boundaries throughout Ohio. The Shawnee tribes generally occupied southwest Ohio, while the Delaware tribes stayed in the eastern half of the state. Wyandot tribes were located in north-central Ohio,

and Ottawa tribes were restricted to northeast Ohio. There was also a small band of Mingo tribes in eastern Ohio along the Ohio River, and there was a band of Mississauga tribes in northeastern Ohio along Lake Erie. The Shawnee people had several villages within Ross County along the Scioto River (Tanner 1987). Although warfare between tribes continued, it was not as intense as it had been in previous years. Conflicts were contained because boundaries and provisions had been created by earlier treaties.

In 1795, the Treaty of Greenville was signed as a result of the American forces defeat of the Native American forces at the Battle of Fallen Timbers. This allocated the northern portion of Ohio to the Native Americans, while the southern portion was opened for Euro-American settlement. Although most of the battles which led up to this treaty did not occur in Ohio, the outcome resulted in dramatic fluctuations in the Ohio region. The Greenville Treaty line was established, confining all Ohio Native Americans to northern Ohio, west of the Tuscarawas River (Tanner 1987).

Ohio Native Americans were again involved with the Americans and the British in the War of 1812. Unlike the previous wars, many battles were fought in the Ohio country during the War of 1812. By 1815, peace treaties began to be established between the Americans, British, and Native Americans. The Native Americans lost more and more of their territory in Ohio. By 1830, the Shawnee, Ottawa, Wyandot, and Seneca were the only tribes remaining in Ohio. These tribes were contained on reservations in northwest Ohio. By the middle 1800s, the last of the Ohio Native Americans signed treaties and were removed from the Ohio region.

### ***Columbiana County History***

Columbiana County was organized March 25, 1803 from land that originally made up Jefferson and Washington Counties. Governor Edward Tiffin signed the bill officially creating the county on April 16, 1803. Many of the first settlers that came into this area were of English, German, Scotch, Irish, Jewish, Welsh, and Italian decent. The settlers moved into one of five sub-divisions that made up Columbiana County. The original townships were Springfield, Middleton, St. Clair, Salem, and Center. John Quinn, a hunter, who in 1792 moved into St. Clair Township, made the earliest semi-permanent settlement. Around the same time that John Quinn was building a cabin in 1792, Col. Boquet built a base camp in Middleton Township to pursue Native Americans. Also in 1792, a farmer named Mr. Carpenter cleared land near West Point for a farm. Carpenter is probably the first permanent settler in the county (Barth 1926; McCord 1905; Bentley 1902).

The original county seat was located in Fairfield Township in 1803. Courts for the county seat were first held in a barn owned by Mathias Lower. The first sheriff of the County was John Corzer and Reasin Beall was clerk. The first courthouse and jail were log structures located in Lisbon authorized for construction in 1803. These were replaced in 1817 and in 1887, a fire destroyed that courthouse and they built a third (Barth 1926; McCord 1905; Bentley 1902).

In 1828, the Sandy and Beaver Canal Company was created and operated out of New Lisbon (i.e., Lisbon). The company went about raising money through selling stock

and land speculators began driving up the costs of property along the proposed canal corridor. This led to a construction boon to several of the smaller communities in Columbiana County including Kensington, Guilford, Hanover, Lisbon, and Dunganon. Part of the difficulty in its construction was the ruggedness of the terrain and the eventual creation of the Big and Little Tunnels that were part of the middle component of the canal corridor. The design, survey, and canal construction was under the initial direction of Major D. B. Douglas and finalized by E. H. Gill. Hanover was essentially considered to be the turning point of the canal venture. Locks and constructions were labeled as being east or west of this community. There are numerous locks (n=90), dams (n=30), and reservoirs positioned along its alignment including a large one that is extant at Guilford. The advent and extensive utilization of the railroad system sealed the fate of the canal era in Ohio.

As an aside, Rebecca Furnace was an early enterprise and construction that was built to the west of Lisbon in about 1807 by Gideon Hughes. Hughes would later open a rolling mill and nail making establishment further up the creek, but would end up in failure. The furnace was later operated by James McKinley, grandfather of the former President. A short-lived railroad line was constructed from the furnace to the nail production area in 1829. This furnace is located on the west/south side of Little Beaver Creek.

Since its inception, Columbiana County has been reduced in size three times while accommodating land to other counties. The first reduction occurred in 1808 when Stark County was created. The second time Carroll County received land for its inception in 1832. The third time occurred in 1845 when Mahoning County was created (Barth 1926).

The county had many drainages, which provided opportunities for grist and saw mills. Joseph Fawcett, on Carpenter's Run, built the first gristmill. John Beaver, on Little Beaver Creek, built the second. Beaver also built the first sawmill. The first paper-mill, named The Ohio Paper Mill, was built in 1805 on little Beaver Creek. The owners were John Beaver and John Coulter. One of the earliest newspapers was *The Ohio Patriot* that was established in 1808 by William D. Lepper. James Bennett, who made Yellow-ware, established the first pottery in 1840. The coal, salt, iron ore, free stone, pottery ware, and wool were all strong industries for the economy. George James established the first salt well in Salineville in 1809. By 1835, there were 20 operating salt wells along Little Yellow Creek. Another resource was charcoal, which was an industry that became popular in Columbiana after Gideon Hughes started an iron furnace in 1808. Coal became a large industry after 1852 when the Cleveland and Pittsburg Railroad came through East Palestine. Prior to this date, coal was extracted in small quantities and used for local demands. Columbiana County had 35 operating coal companies by 1903 according to the Ohio State mine report for that year. The first productive oil well in Columbiana County was on the farm of George Hamilton in 1865. He was able to extract heavy oil that was later used for fuel oil. By 1866, there were 15 more wells near Fredericktown and Calcutta producing 100 barrels per day. The oil and gas industry in Columbiana was so extensive that East Liverpool was the first community anywhere to utilize piped gas. By 1885, Columbiana was one of the faster growing counties in Ohio and had a very strong economy. There were 118,656 acres of farmland, 90,692 acres of

pasture, 45,065 of woodland, and 14,603 acres were unused. Population growth was a reflection these industries making Columbiana the third largest County. Between 1820 and 1830 the population expanded by 13,473 for a total population of 35,506 inhabitants (McCord 1905; Bentley 1902).

### *Yellow Creek Township History*

Yellow Creek Township lies in the southeast corner of Columbiana County along the Ohio River. The river has played a large part in the development of the region, through its people, towns, and economy. Its name comes from the two Yellow Creeks, Big and Little, which meander their way through the township emptying into the Ohio River. The township is rife with mineral resources, contains some fertile bottomlands, and is suitably placed for a strong transportation industry (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

The ownership and settlement of the township is an interesting narrative of how these “western” lands were perceived at the end of the 18<sup>th</sup> century. Robert Johnston was a surveyor whom the federal government owed a hefty debt upon completion of his work in the Northwest Territory. In 1788, Johnston obtained 30 townships worth of land to settle the debt. This rate works out to \$6 per 100 acres. Yellow Creek was part of his survey and part of his payment. In 1795, a Pennsylvanian, James Clark bought 304 or 350 acres from Johnston at \$6 per acre. This tract included the land where Wellsville now sits. The next year, in order to escape some financial difficulties, Clark transferred the ownership of much of this parcel to his son-in-law. The new landlord was the man from whom Wellsville takes its name. William Wells came to his Ohio lands in 1797 during the spring in order to clear and plant. He crossed the river every morning to work his land in the wild Ohio Territory and returned to the blockhouse on the Virginia side every evening. Wells received a commission from Governor St. Clair to serve as the justice of the peace for the area. The year before he arrived, two squatters, Richard Vaughn and George Clark had come to Yellow Creek and built the township’s first log cabin. And by the time Wells’ father-in-law came to live on the remainder of his lands in 1800, there were a handful of other men and families living on the west side of the Ohio. The township was officially organized in 1805 (Barth 1926; McCord 1905).

A large portion of those who came to Yellow Creek Township was of Scottish decent and thus there was a region known as the “Scotch Settlement.” From the early histories one can determine that the people who chose to live here were hard people who were neither afraid of work nor a good fight (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

Wellsville is the only municipality of much consequence in the township. Though there were people living on Wellsville land from the very first, the town was not laid out until 1820 and not platted until 1823. Village incorporation came ten years later. Similarly, though nearly all of the original settlers were religious and met together with regularity, it was not until 1833 that the first church edifice was raised in the township; and that year there were three, Presbyterian, Methodist Episcopal, and Methodist Protestant. Again, education was a priority of the first settlers; and teaching took place beginning in 1800 with Richard Boyce’s log school. This was a good school for a

logged-frame, frontier version mostly because of its financial backing and community support. Robert Dobbins donated some of his farmland to build upon; William Wells volunteered to cover the cost of education for five students per term, and a free black man, Edward Devore, provided for four. However, it was not until the Union School Law passed in 1850 that the community built a tax-funded school, free for all. This was the first “Union School” in the state (Barth 1926; McCord 1905).

In 1902, Yellow Creek Township held some of the world’s largest brick and tile manufacturing plants. The townships earliest industries were typical of all Ohio settlements: a tavern in 1800; a gristmill in 1806; and a sawmill in 1815. River transportation was an early benefit to the community of Wellsville. A turnpike (SR 14) added to the town’s vitality once it connected the river to Lake Erie and the markets and ports of Cleveland. Wellsville was also an important midway point between that city and Pittsburg and the trails to the greater East. For twenty years, Wellsville dominated the trade of Ohio’s northeast until 1852 when the railroads rendered river transport all but obsolete. Joseph Wells, William’s son, began the region’s pottery manufacturing industry in 1826. In 1874, the American Tin Plate Company opened a plant in Wellsville, which was the first of its kind in the country. US Steel Corp. eventually acquired this plant and provided many jobs and much revenue for the town (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

## **Research Design**

The purpose of a Phase I survey is to locate and identify cultural resources that will be affected by the planned energy facility construction. This includes archaeological deposits that are older than 50 years. Once these resources are identified and sampled, their significance is determined/evaluated in a manner that is reflective of the eligibility requirements relative to the National Register of Historic Places (NRHP). These literature review is directed to answer or address the following questions:

- 1) Did the literature review reveal anything that suggests the Project Area had been previously surveyed and what is the relationship of previously recorded properties to the Project Area?
- 2) Are cultural resources likely to be identified in the Project Area?

## ***Archaeological Field Methods***

The survey conducted within the Project Area used four methods of sampling and testing to identify and evaluate cultural resources. These included shovel test unit excavation, shovel probe excavation, and visual inspection.

*Shovel test unit excavation.* Shovel test units were placed at 15-m intervals. Shovel test units measure 50 cm on a side and are excavated to 5 cm below the topsoil/subsoil interface. Individual shovel test units were documented regarding their depth, content and color (Munsell). Wherever sites are encountered, Munsell color readings are taken per shovel test unit. All of the undisturbed soil matrices from shovel test units are screened using 0.6 cm hardware mesh. When sites are encountered, additional shovel test units will be excavated at 7.5 m

intervals extending on grid and in the two cardinal directions within the Project Area from the positive locations.

*Shovel probe excavation.* Shovel probes were excavated during these investigations to document the extent of the disturbance associated with modern construction activities. These probes were excavated similarly to shovel test units. They had the same dimensions of 50 cm on a side, but were not screened. They were excavated at 15-m intervals and to a depth of 15-20 cm or deep enough to establish lack of soil integrity.

*Visual inspection.* Locations where cultural resources were not expected, such as disturbed areas and steeply sloped areas were walked over and visually inspected. This method was used to verify the absence or likelihood of any cultural resources being located in these areas. This method was also utilized to document the general terrain and the surrounding area.

The application of the resulting field survey methods was documented in field notes, field maps, and Project plan maps.

### ***Prehistoric Artifact Analysis***

An artifact inventory was accomplished upon completion of the fieldwork. This involved identifying the functional attributes of individual artifacts, as well as the artifact cluster(s) or site assemblage collectively. The prehistoric artifact types and material were identified during the inventory process. The lithic artifact categories are modeled after Flenniken and Garrison (1975) and include the following:

*Primary Thinning Flakes.* This flake type represents a transitional mode of chert reduction. The intent of this reduction activity is to reduce a core to a crude biface. Flakes have a steep platform angle (i.e., >65°) and lack cortex. However, occasional small remnants of cortex are prevalent at this point, especially on the striking platform.

*Sharpening flake.* This type of debitage is produced during the creation of a finished edge or rejuvenation of an existing tool edge. It is created by pressure flaking rather than percussion. These flakes are typically small and have evidence of grinding and platform preparation near their striking platform. This flaking often produces small concoidal ripples in the chert centering on the striking platform.

Identification of the material type of individual artifacts is based on several attributes, including color, inclusions, and luster. Several resources were used to aid in the inventory of the material types, including Converse (1994), DeRegnaucourt and Georgiady (1998), and Stout and Schoenlaub (1945).

## ***Curation***

A letter regarding the disposition of the cultural materials (artifact) identified and collected during survey for this project will be sent to the landowner. A return letter outlining the disposition of these materials had not been received at the time of this report. Notes and maps affiliated with this Project will be maintained at Weller & Associates, Inc. files.

## **Literature Review**

The literature review study area is defined as a 1.6 km (1.0 mile) radius from the center of the Project Area (Figures 2 and 3). In conducting the literature review, the following resources were consulted at OHPO and the State Library of Ohio:

- 1) *An Archaeological Atlas of Ohio* (Mills 1914);
- 2) OHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) OHPO Cultural Resource Management (CRM)/contract archaeology files; and
- 8) Columbiana County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s).

A review of the *Atlas* (Mills 1914) was conducted. There were no resources situated within or adjacent the Project Area.

The OHPO topographic maps indicated that there are no recorded archaeological sites recorded within the Study Area.

The Ohio Historic Inventory (OHI) forms indicated that is one resource located within the Study Area, the Wellsville Reservoir (COL0042317). This is located at the southwestern edge of the Study Area and is not near the Project Area.

A review of the NRHP and consensus Determination of Eligibility files was conducted and revealed that there are applicable resources identified within the Study Area.

A review of the CRM surveys was conducted for this Project. There have been two surveys conducted in the Project vicinity (Soldo 2002 and 2003) and neither of these surveys identified any archaeological or architectural sites. Soldo's 2003 survey was conducted in the eastern part of the Study Area and does not involve the Project. The Soldo (2002) survey includes the northwestern and northern part of the current Project Area.

Historic cartographic/atlas were consulted for this Project. The *Atlas of Columbiana County, Ohio* (Lake 1870) indicated that the area was on the Mrs. David Rose property (Figure 4). The residence associated with the Rose parcel is to the east and

outside of the Project Area. The western part of the Project Area extends to the Duncan Smith property, the associated residence is not within or near the Project Area (Figure 4). The USGS 1937 Wellsville, Ohio 7.5 Minute Series (Topographic) map does not indicate that there are any structures or buildings in or near the Project Area (Figure 5). The USGS 1960 West Point, Ohio 7.5 minute Series (Topographic) map noted the same information as the 15 minute map (Figure 2); there are no buildings/structures in the Project Area.

### ***Evaluation of Research Questions 1 and 2***

There were two questions presented in the research design that will be addressed at this point. These are:

- 1) Did the literature review reveal anything that suggests the Project Area had been previously surveyed and what is the relationship of previously recorded properties to the Project Area?
- 2) Are cultural resources likely to be identified in the Project Area?

The literature review did not indicate that there were any archaeological sites within the Project's Study Area. This is a remote upland location and there have been two CRM surveys completed in the Study Area (Soldo 2002 and 2003). Prehistoric and historic period cultural materials do not seem likely during these investigations. Cartographic/topographic maps do not indicate that there were any older buildings in the Project Area.

### **Fieldwork Results**

The field investigations for this Project were conducted from June 17-23, 2015 (Figure 6-19). There were occasional bouts of rainfall, but the fieldwork was conducted during the drier intermissions. Precipitation is not an issue at this location as it is elevated and drains well. At the time of survey, the Project Area was in various states of being fallow. As a result, these investigations involved subsurface testing methods and visual inspection. The work focused on the footprint of the Project Area and its archaeological component. Some situations and conditions within the Project Area were not physically investigated due to disturbances, overlapping previous investigations, or steep slope. The work resulted in the identification of two prehistoric period sites, 33CO963 and 964 (Figure 6).

The Project Area is located on a comparably wide and flat ridge top that is bracketed to the east and west by unnamed tributaries of Little Yellow Creek. These stream valleys are entrenched and provide decent drainage capabilities for the Project Area. Coal mining activity was conducted in the stream valley to the west, but there is no evidence of this activity extending into the Project Area. The northern and northwestern parts of the Project Area are contained in fallow land and was also the subject of previous investigations. Taller and more mature woods are located in the east, central, and southwestern part of the Project Area. The southcentral part of the Project Area contains lawn and tall grass that were formerly contained in agricultural fields. There are two residences and their associated buildings/amenities that are less than 50 years old located



in this area (Figures 15 and 16). Scrubland conditions were experienced in the west central part of the Project Area and within a nearly rectangular section that is just north and west of a residence. Transmission lines and underground utility lines traverse the eastern part of the Project Area.

Certain conditions within the Project Area were subject to shovel probing or visual inspection (Figures 7-10). These areas include locations that are contained in steeply sloping conditions, severely disturbed, or previously surveyed. Steeply sloping conditions were inspected to verify that there were no rock shelters or cultural activity that would have not been detected otherwise. The north and western part of the Project Area was previously investigated (Soldo 2002) and these investigations did not result in the identification of any cultural materials. Weller did not resurvey these areas as they have been subsequently disturbed and altered by the water plant and its survey methods were pursuant to the current guidelines. Severe disturbance was identified in the eastern part of the Project Area due to underground natural gas lines and aboveground electric transmission lines. Visual inspection and shovel probing of the area under the transmission lines failed to encounter any topsoil and there were slabs of tabular bedrock displaced about the surface. These areas had been disturbed by grading activity associated with construction of the utility features. Steeply sloping conditions (>15 percent) were indicated and verified in the southwestern and northeastern part of the Project Area; soil survey data further indicated these conditions. Similar steep conditions and grading activity were present along Hibbets Mill Road and just south of one of the residences. Disturbances associated with modern constructions, such as the residences or their driveways were noted, but account for a small part of the overall Project Area. There were 18 shovel probes excavated within the Project Area.

The field investigations were initiated by establishing a datum in the central part of the Project Area and at the corner of fields, scrubland, and woods (Figure 7). Other datums were established as needed. There were 403 shovel test units excavated during these investigations. The topsoil that was identified extended to what is the base of the plowzone. A typical shovel test unit profile demonstrated the topsoil to be about 19 cm deep, dark yellowish brown (10YR 4/4), and terminate at an abrupt interface. Occasionally this interface was equivalent to decomposing bedrock materials, which is not unusual as these soils are formed from residuum. Subsoil was identified in most of the shovel test units and was dark yellowish brown (10YR4/6) silt loam (Figure 18). The soils contained bedrock fragments within increased amounts near and along the slope margins. Archaeological sites 33CO963 and 964 were identified during shovel test unit excavation and were identified from the plowzone.

There were two archaeological sites identified during these investigations. These sites both date from the prehistoric period. The following text provides further and more detailed information regarding these sites.

## ***Site Descriptions***

### ***33CO963***

This is a prehistoric period isolated find spot that was identified during shovel test unit excavation in a manicured lawn (Figure 7). This is located to the north of Hibbets Mill Road. The artifact was identified from within plowzone contexts and was within 20 cm of the ground surface. There were four radial shovel test units excavated in the four cardinal directions around this artifacts provenience, but there were no additional materials identified. The site is located near the middle of a comparably broad and flat ridge top that is drained by unnamed tributaries of Little Yellow Creek; this flows to the Ohio River. The artifact is a primary thinning flake of Upper Mercer chert. These flakes are indicative of core reduction activities, but they are not considered to be temporally diagnostic. By definition, the site size of an isolated find is considered to be 1 square meter (sq m).

This site was evaluated for its eligibility for the NRHP. This site lacks integrity (Little et al. 2000:39-43; U.S. Department of the Interior, National Park Service [USDI, NPS] 1997:44-45) and the ability to yield further and important information regarding prehistory. The site has a numerically, temporally, and functionally limited assemblage. This site is not considered to be significant or eligible for inclusion into the NRHP, and further work is not deemed necessary.

### ***33CO964***

This is a prehistoric period isolated find spot that was identified during shovel test unit excavation in a manicured lawn (Figure 7) to the west of a residential outbuilding. This is located to the north of Hibbets Mill Road. The artifact was identified from within plowzone contexts and was within 20 cm of the ground surface. There were four radial shovel test units excavated in the four cardinal directions around this artifacts provenience, but there were no additional materials identified. The site is located near the middle of a comparably broad and flat ridge top that is drained by unnamed tributaries of Little Yellow Creek; this flows to the Ohio River. The artifact is a sharpening flake of Upper Mercer chert. Sharpening flakes are functionally indicative of pressure flaking to rejuvenate or finish tool edges, it is not temporally diagnostic. By definition, the site size of an isolated find is considered to be 1 sq m.

This site was evaluated for its eligibility for the NRHP. This site lacks integrity (Little et al. 2000:39-43; USDI, NPS 1997:44-45) and the ability to yield further and important information regarding prehistory. The site has a numerically, temporally, and functionally limited assemblage. This site is not considered to be significant or eligible for inclusion into the NRHP, and further work is not deemed necessary.

## **APE Definition and NRHP Determination**

The APE is a term that must be applied on an individual project basis. The nature of the project or undertaking is considered in determining the APE. This may include areas that are off the property or outside of the actual project's boundaries to account for

possible visual impacts. Archaeological investigations are typically limited to the footprint of the construction activity and a very limited area around it if deemed appropriate and depending upon the type of construction. The APE for this project pertains to the footprint of the Project Area as this document is relative to the archaeological aspect of the cultural resources survey.

These archaeological investigations identified two prehistoric period archaeological sites, 33CO963 and 964. These are isolated find spots and are not considered to be significant and would not be regarded as eligible for the NRHP. This Project is not considered to affect any historic properties regarding the archaeological aspect of the footprint of the Project Area.

## **Recommendations**

In June of 2015, Weller & Associates, Inc. completed Phase I archaeological investigations for a proposed 35 ha (86.5 ac) South Field Energy facility in Yellow Creek Township, Columbiana County Ohio. These investigations involved subsurface methods of sampling and visual inspection. A large part of the Project Area was previously surveyed as recent as 2002; this area was not revisited. Steep slope and severe disturbances were identified in several locations within the Project Area, primarily in the northeast and southwestern parts. The fieldwork resulted in the identification of two previously unrecorded archaeological sites including 33CO963 and 964 (Figure 19). These sites each consist of a single prehistoric period artifact. It is Weller's opinion that there are no significant archaeological deposits contained within the Project Area. If the agency is in agreement with these findings, then a recommendation of no further work is considered and "no historic properties affected" is appropriate and the planned work will not affect any significant archaeological sites.

## References Cited

- Baby, R. S., and M. A. Potter  
1965 "The Cole Complex: A Preliminary Analysis of the Late Woodland Ceramics in Ohio and Their Relationship to the Ohio Hopewell Phase." In: *Papers in Archaeology of the Ohio Historical Society*, February 1965, No. 2. Ohio Historical Society, Columbus.
- Bamforth, D.  
1988 *Ecology and Human Organization on the Great Plains*. Plenum, New York.
- Barkes, B. M.  
1982 *Analysis of Late Woodland Ceramics from the Decco (33DL28), Ufferman (33DL12), and W. S. Cole (33DL11) Sites: The Cole Complex Reconsidered*. Copy available at the Ohio Historic Preservation Office, Columbus.
- Barth, H. B.  
1926 *History of Columbiana County, Ohio, Vol. I*. Historical Publishing Co., Topeka, Kansas.
- Bentley, W. G.  
1902 *Atlas of surveys of Columbiana County, Ohio*. Columbiana County Map and Atlas Company, Lisbon, Ohio.
- Brose, D. S.  
1994a "Archaeological Investigations at the Paleo Crossing Site, a Paleoindian Occupation in Medina County, Ohio." In: *The First Discovery of America: Archaeological Evidence of the Early Ohio Area*, edited by W. S. Dancey, pp. 61-76. The Ohio Archaeological Council, Columbus.  
  
1994b "The South Park Village Site and the Late Prehistoric Whittlesey Tradition of Northeast Ohio." In: *Monographs in World Archaeology* No. 20. Prehistory Press, Madison, Wisconsin.
- Bush, D. R., J. R. Cardinal, R. M. Martello, and M. Miller  
1990 *A Cultural Resource Survey for Proposed Permit Application 1062 in Center Township, Columbiana County, Ohio*. David R. Bush, Inc. Copy available for review from the Ohio Historic Preservation Office, Columbus.
- Converse, R.  
1979 *The Glacial Kame Indians*. The Archaeological Society of Ohio, Columbus.  
  
1994 *Ohio Flint Types*. The Archaeological Society of Ohio, Columbus.
- Core, E.  
1966 *Vegetation of West Virginia*. McClain, Parsons, West Virginia.

- Cowan, W. C.  
1987 *First Farmers of the Middle Ohio Valley: Fort Ancient Societies, A.D. 1000-1670*. The Cincinnati Museum of Natural History, Cincinnati.
- Cramer, A.  
1989 *The Dominion Land Company Site: An Early Adena Mortuary Manifestation in Franklin County, Ohio*. M.A. Thesis, Kent State University, Kent, Ohio.
- Cranmer, G. L.  
1891 *History of the Upper Ohio Valley*. Brant & Fuller, Madison, Wisconsin.
- Cunningham, R. M.  
1973 "Paleo Hunters along the Ohio River." In: *Archaeology of Eastern North America* 1(1): 116-118. Eastern States Archeological Federation, Bethlehem, Connecticut.
- Dancey, W. S.  
1992 "Village Origins in Central Ohio: The Results and Implications of Recent Middle and Late Woodland Research." In: *Cultural Variability in Context: Woodland Settlements of the Mid-Ohio Valley*, edited by M. F. Seeman, pp. 24-29. Special Papers 7, *Midcontinental Journal of Archaeology*, Kent State University Press, Kent, Ohio.
- DeRegnaucourt, T. D., and J. Georgiady  
1998 *Prehistoric Chert Types of the Midwest*. Hothem House, Lancaster.
- Dragoo, D.  
1976 "Some Aspects of Eastern North American Prehistory: A Review 1975." In: *American Antiquity* 41(1):3-27. The Society for American Archaeology, Washington, DC.
- Fitting, J. E.  
1965 "Late Woodland Culture in Southeastern Michigan." In: *Anthropological Papers, the Museum of Anthropology*, No. 24, University of Michigan, Ann Arbor.  
  
1963 "The Hi-Lo Site: A Paleo-Indian Site in Western Michigan." In: *Wisconsin Archaeologist* 44:87-96. Wisconsin Historical Society, Madison, Wisconsin.
- Flenniken, J. J., and E. G. Garrison  
1975 Thermally Altered Novaculite and Stone Tool Manufacturing Techniques. *Journal of Field Archaeology* 2:125-131.
- Forsyth, J. L.  
1970 "A Geologist Looks at the Natural Vegetation Map of Ohio." In: *The Ohio Journal of Science* 70(s):180-191. The Ohio Academy of Science, Columbus.
- Gordon, R. B.  
1969 "The Natural Vegetation of Ohio in Pioneer Days." In: *Bulletin of the Ohio Biological Survey, New Series* 3(2). Ohio State University, Columbus.

- 1966 *Natural Vegetation of Ohio at the Time of the Earliest Land Surveys*. Ohio Biological Survey and the Natural Resources Institute of the Ohio State University, Columbus.
- Gramly, R. M., and G. L. Summers  
 1986 "Nobles Pond: A Fluted Point Site in Northeastern Ohio." In: *Mid-Continental Journal of Archaeology* 11(1): 98-123.
- Howe, H.  
 1888 *Historical Collections of Ohio, Vol. I*. H. Howe & Son, Columbus.
- Justice, N.  
 1987 *Stone Age Spears and Arrow Points of the Midcontinental and Eastern United States*. Indiana University Press, Bloomington and Indianapolis.
- Lafferty, M. B.  
 1979 *Ohio's Natural Heritage*. Ohio Academy of Science, Columbus.
- Lake, D. J.  
 1870 *Atlas of Columbiana County, Ohio*. C. O. Titus, Philadelphia.
- Mahr, A. C.  
 1949 "A Chapter of Early Ohio Natural History." In: *Ohio Journal of Science* 49(1). The Ohio Academy of Science, Columbus.
- McCord, W. B.  
 1905 *History of Columbia County, Ohio and Representative Citizens*. Biographical Publishing Co., Chicago.
- McDonald, H.  
 1994 "The Late Pleistocene Vertebrate Fauna in Ohio: Coinhabitants with Ohio's Paleoindians." In: *The First Discovery of America: Archaeological Evidence of the Early Ohio Area*, edited by W. S. Dancey, pp. 23-41. The Ohio Archaeological Council, Columbus.
- Mills, W. C.  
 1914 *An Archeological Atlas of Ohio*. Ohio State Archaeological and Historical Society, Columbus.
- Ohio Historic Preservation Office  
 1994 *Archaeological Guidelines*. Ohio Historic Preservation Office and Ohio Historical Society, Columbus.
- Pacheco, P.  
 1996 "Ohio Hopewell Regional Settlement Patterns." In: *A View From The Core: A Synthesis of Ohio Hopewell Archaeology*, edited by P. Pacheco, pp. 16-35. The Ohio Archaeological Council, Columbus.

Pavey, R.R., R.P. Goldthwait, C.S. Brockman, D.N. Huyll, E. MacSwinford, and R.G. Van Horn

1999 *Quaternary Geology of Ohio*. Ohio Division of Geological Survey Map No. 2. The Ohio Department of Natural Resources, Division of Geological Survey, Columbus.

Potter, M. A.

1966 "Cole Ceramics: A Study of Late Woodland Pottery." Unpublished M.A. thesis on file at the Ohio Historical Society, Department of Archaeology, Columbus.

Pratt, G. M., and D. R. Bush

1981 *Archaeological Resource Management in Ohio: A State Plan for Archaeology (Draft)*. Copy available for review at the Ohio Historic Preservation Office, Columbus.

Prufer, O. H., D. A. Long, and D. J. Metzger

1989 "Krill Cave: A Stratified Rockshelter in Summit County, Ohio." In: *Kent State Research Papers in Archaeology No. 8*. Kent State University Press, Kent, Ohio.

Prufer, O. H., and D. A. Long

1986 "The Archaic of Northeastern Ohio." In: *Kent Research Papers in Archaeology, No. 6*, Kent State University Press, Kent, Ohio.

Richner, J. and W. Volf

2000 "Front Yard Archeology: Hopewellian Occupation at the Szalay Site." In: *The Newsletter of Hopewell Archaeology in the Ohio River Valley Volume 4, Number 1, June 2000*. U.S. Department of the Interior National Park Service, Midwest Archaeological Center, Lincoln, Nebraska.

Ritchie, W. A.

1965 *The Archaeology of New York State*. Natural History Press, Garden City, New York.

Seeman, M. F., G. Summers, E. Dowd, and L. Morris

1994 "Fluted Point Characteristics at Three Large Sites: The Implication for Modeling Early Paleoindian Settlement Patterns in Ohio." In: *The First Discovery of America: Archaeological Evidence of the Early Inhabitants of the Ohio Area*, edited by W. S. Dancey, pp. 77-93. The Ohio Archaeological Council, Columbus, Ohio.

Shane, L.

1987 "Late-glacial Vegetational and Climatic History of the Allegheny Plateau and the Till Plains of Ohio and Indiana, U.S.A." In: *Boreas* 16:1-20. The Boreas Collegium, Blackwell Publishing Ltd., Edinburgh.

Shane, O. C., III

1975 "The Mixer Site: A Multicomponent Locality in Erie County, Ohio." In: *Studies in Ohio Archaeology* (rev. ed.), edited by O.H. Prufer and D. M. McKenzie, Kent State University Press, Kent, Ohio.

Sheaffer, C., and M. A. Rose

1998 *The Native Plants of Ohio, Bulletin 865*. The Ohio State University Extension (College of Food, Agricultural & Environmental Sciences) Department of Horticulture. Electronic document, [http://ohioline.osu.edu/b865/b865\\_01.html](http://ohioline.osu.edu/b865/b865_01.html), accessed November 28, 2005.

Soldo, D.

2003 *A Phase I Archaeological Survey for the Buckeye Water District Expansion, Center, Madison, Middleton, St. Clair, & Yellow Creek Townships, Columbiana County, Ohio*. American Archaeological Services LTD. Copy available for review from the Ohio History Connect.

2002 *A Phase I Inventory and Archaeological Survey for the Water Treatment Plant Land Acquisition: A 200 Acre Parcel of Land in Madison and Yellow Creek Townships, Columbiana County, Ohio*. American Archaeological Services LTD. Copy available for review from the Ohio History Connect.

Stafford, R.

1994 "Structural Changes in Archaic Landscape Use in the Dissected Uplands of Southwestern Indiana." In: *American Antiquity*, 59:219-237. The Society for American Archaeology, Washington, DC.

Stothers, D. M., J. R. Graves, and B. G. Redmond

1984 "The Sandusky and Western Basin Traditions: A Comparative Analysis of Settlement-Subsistence Systems." In: *Toledo Area Aboriginal Research Society Bulletin* 7 (1&2): 1-73. Toledo Area Aboriginal Research Society, Toledo, Ohio.

Stout, W., and R. A. Schoenlaub

1945 *The Occurrence of Flint in Ohio*. Bulletin 46, Fourth Series. Department of Natural Resources, Ohio Division of the Geological Survey, Columbus.

Tankersley, K.

1994 "Was Clovis a Colonizing Population in Eastern North America?" In: *The First Discovery of America: Archaeological Evidence of the Early Ohio Area*, edited by W. S. Dancey, pp. 95-116. The Ohio Archaeological Council, Columbus.

1989 *Late Pleistocene Lithic Exploitation and Human Settlement Patterns in the Midwestern United States*. Unpublished Ph.D. dissertation, Department of Anthropology, Indiana University, Bloomington.

Tanner, H.

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman.



Trautman, M. B.

1981 *The Fishes of Ohio*. The Ohio State University Press, Columbus.

United States Department of Agriculture, Soil Conservation Service

2011 *Soil Survey of Columbiana County, Ohio*. The Ohio Department of Natural Resources, Division of Soil and Water Conservation, Columbus and the Ohio Agricultural Research and Development Center, Washington D. C.

Webb, W. S., and R. S. Baby

1963 *The Adena People No. 2*. The Ohio Historical Society, The Ohio State University Press, Columbus.

Weller, R. J.

2005 *Data Recovery at the Haven Site (33DL1448) Located in Liberty Township, Delaware County, Ohio*. Weller & Associates. Submitted to the Delaware County Sanitary Engineer's Office. Copy available for review at the Ohio Historic Preservation Office.

Zakucia, J.

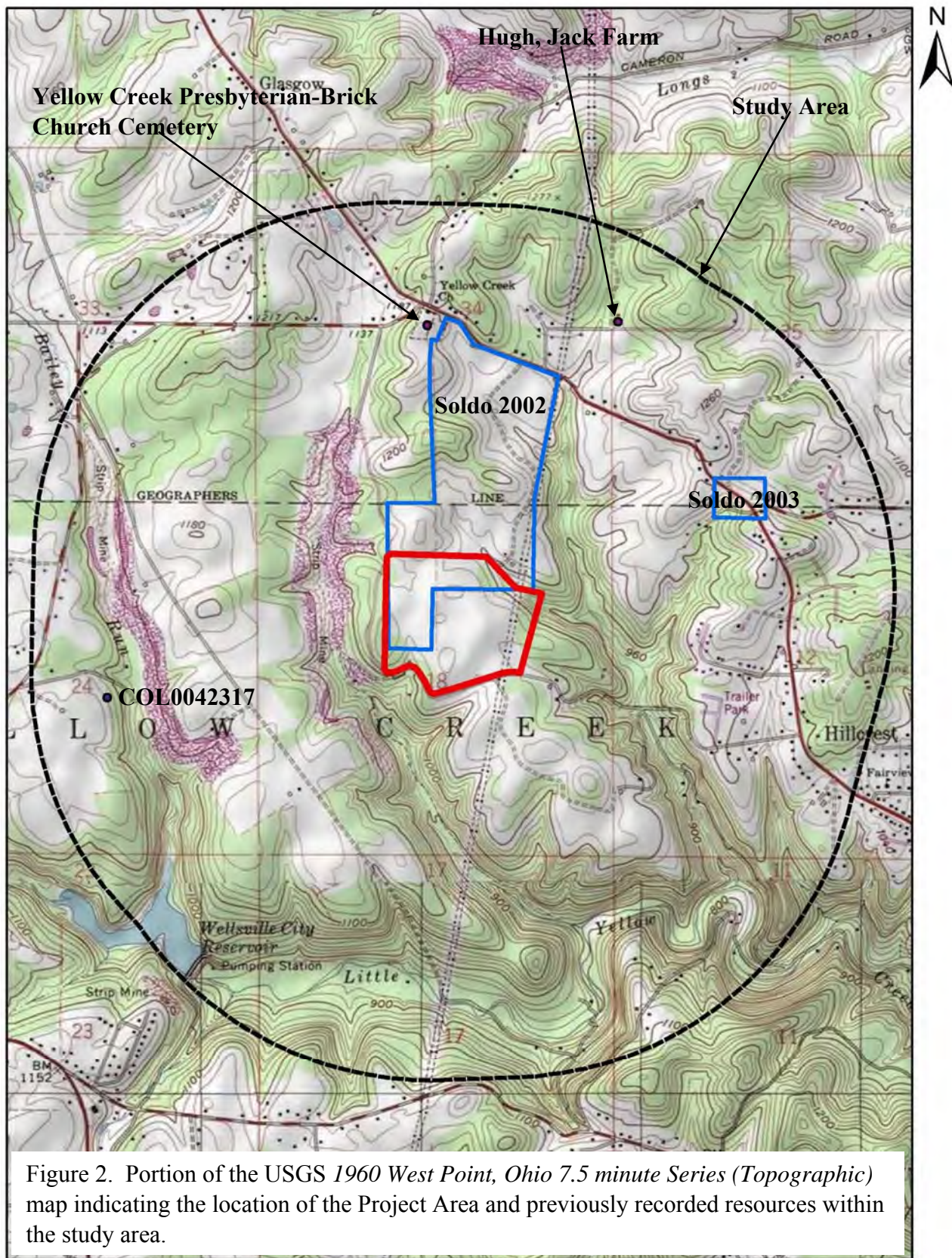
1964 "The Middle Woodland period in the Beaver Valley." In: *Eastern States Archaeological Federation*, Bulletin No. 23. Eastern States Archeological Federation, Bethlehem, Connecticut.

## **Figures**

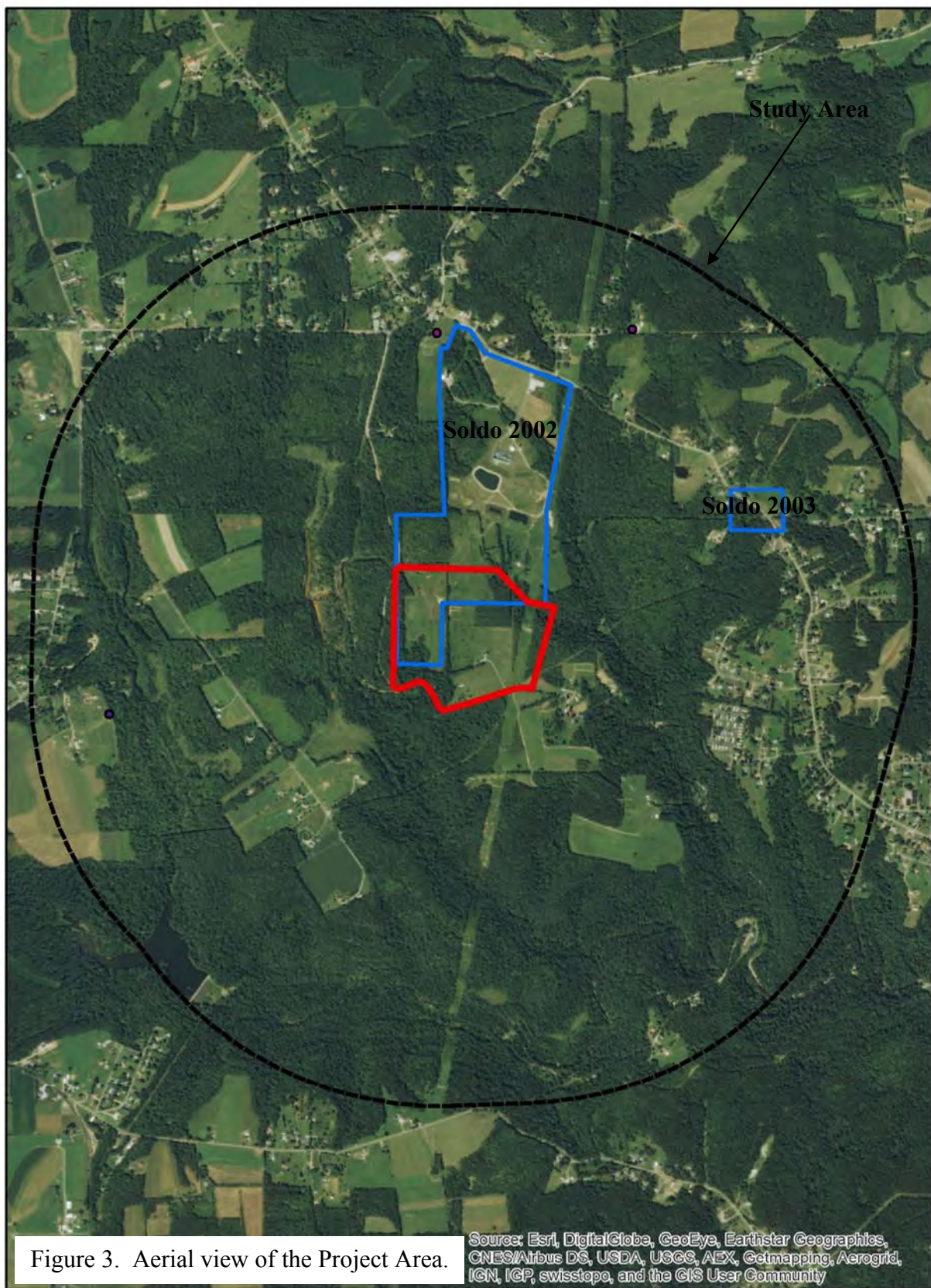


Figure 1. Political map of Ohio showing the approximate location of the Project Area.









0 1,000 2,000 4,000  
Feet

— Project Area  
— Previously Surveyed Area



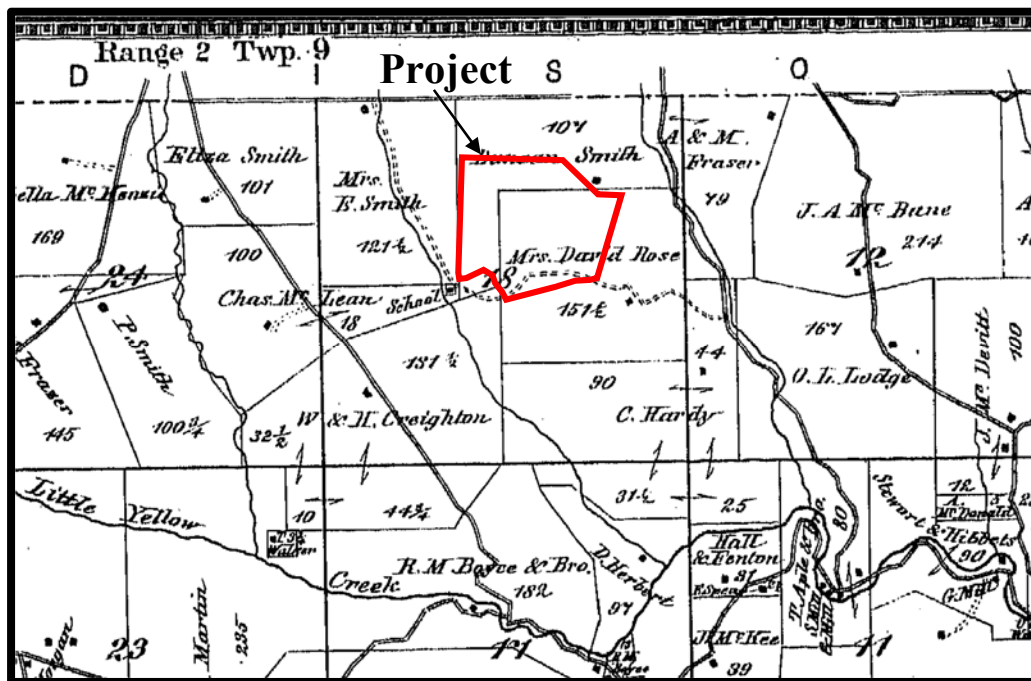


Figure 4. Portion of the *Atlas of Columbiana, Ohio* (Lake 1870) indicating the approximate location of the Project Area.

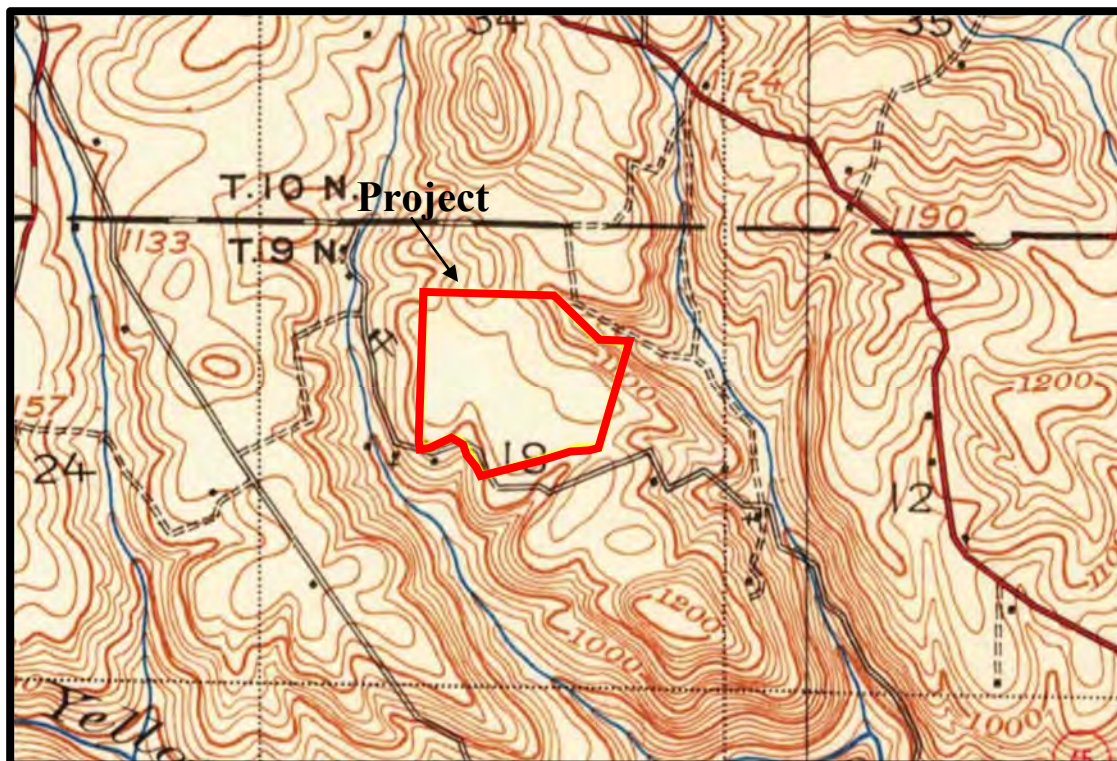


Figure 5. Portion of the USGS 1937 Wellsville, Ohio 7.5 Minute Series (Topographic) map indicating the location of the Project Area.



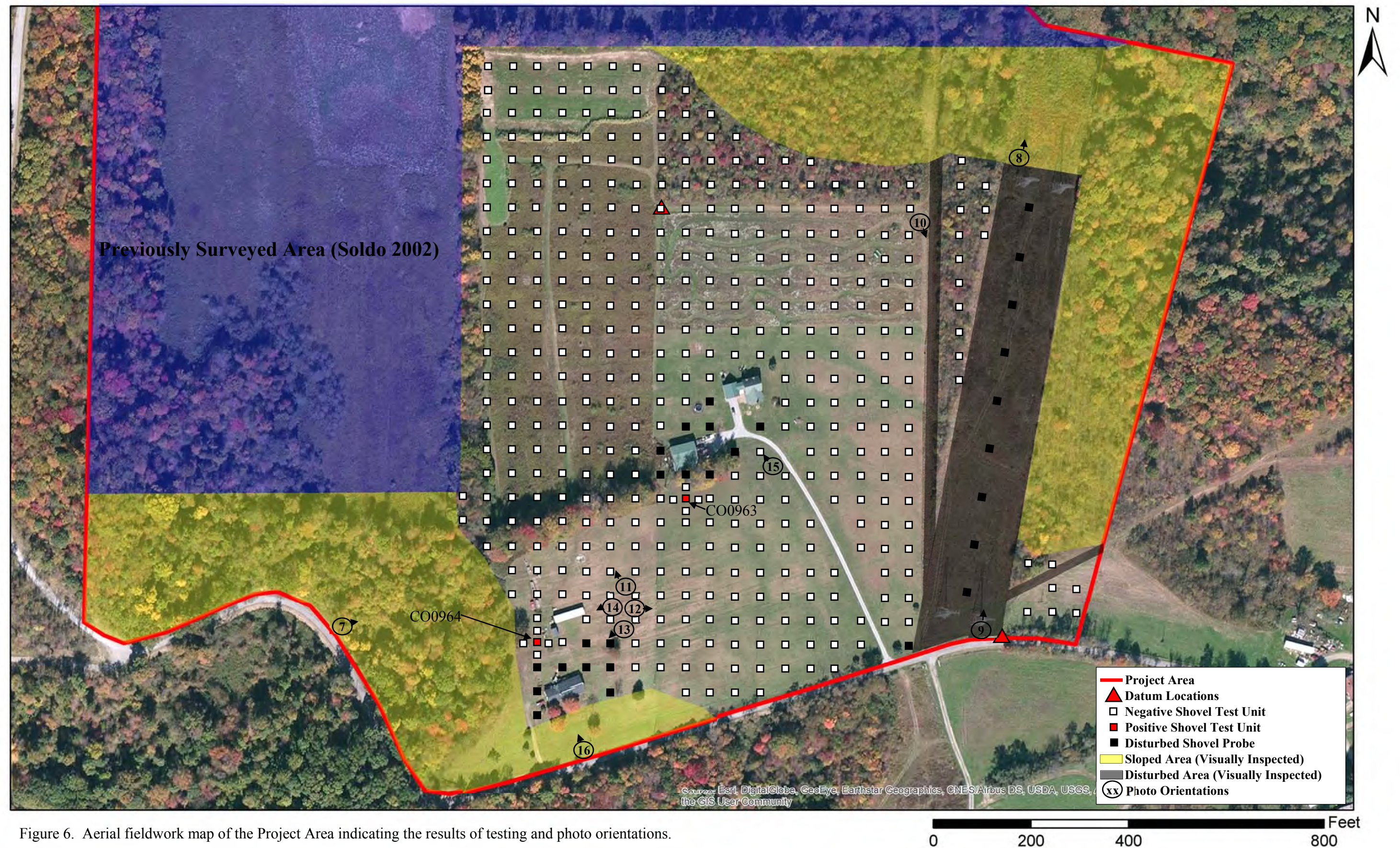


Figure 6. Aerial fieldwork map of the Project Area indicating the results of testing and photo orientations.





Figure 7. View of the sloped conditions within the southwestern portion of the Project Area.



Figure 8. View of some of the sloped conditions within the northeastern portion of the Project Area.





Figure 9. View of the disturbed utility easement in the eastern portion of the Project Area.



Figure 10. View of another disturbed utility easement in the eastern portion of the Project Area.





Figure 11. View facing north from the center of the Project Area of the shovel tested area.



Figure 12. View facing east from the center of the Project Area of the shovel tested area.





Figure 13. View facing southwest from the center of the Project Area of the shovel tested area.



Figure 14. View facing west from the center of the Project Area of the shovel tested area.





Figure 15. View of the residence and shovel tested area within the center of the Project Area.



Figure 16. View of the residence within the southwestern portion of the Project Area.



Figure 17. View of a disturbed shovel probe from the Project Area.



## Schematic of a Test Unit Profile

Hazelton Channery Loam (HeB)

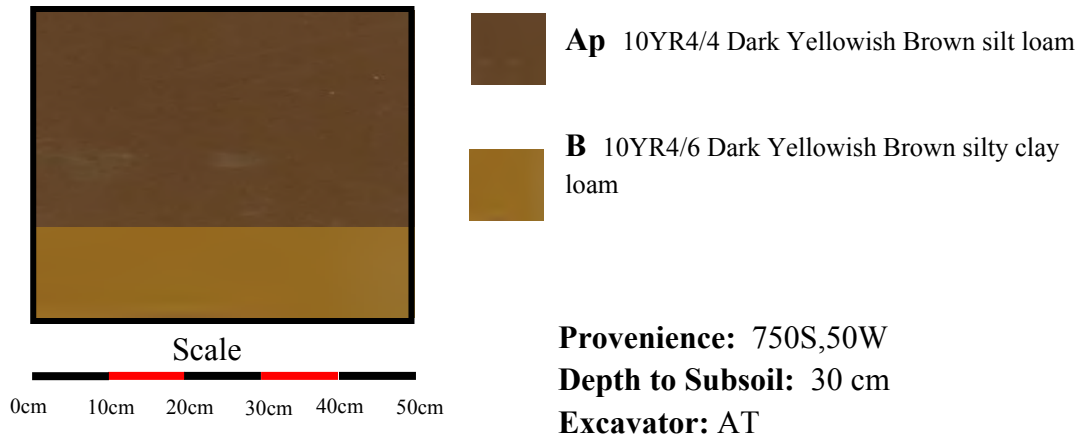


Figure 18. A typical shovel test unit excavated within the project.



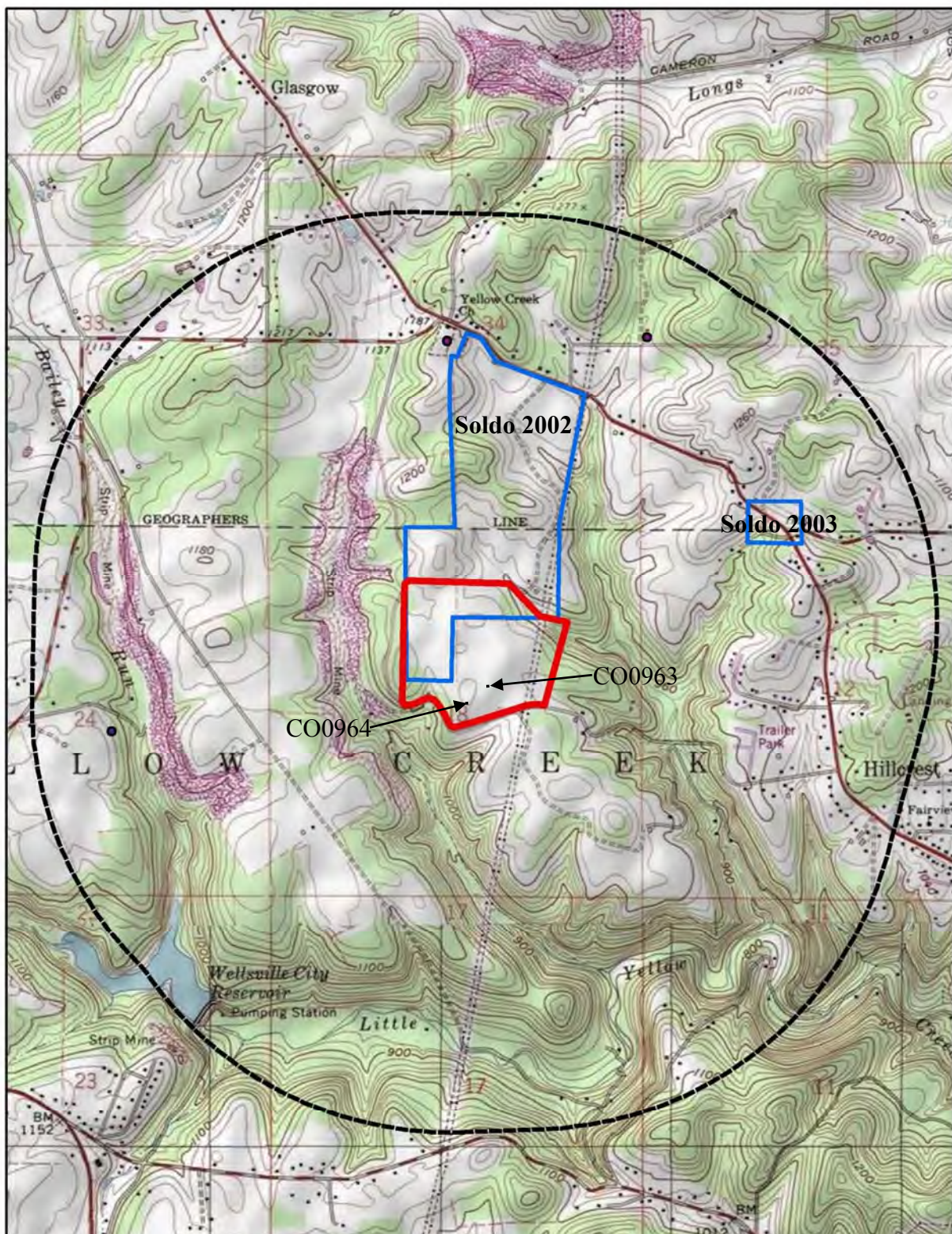
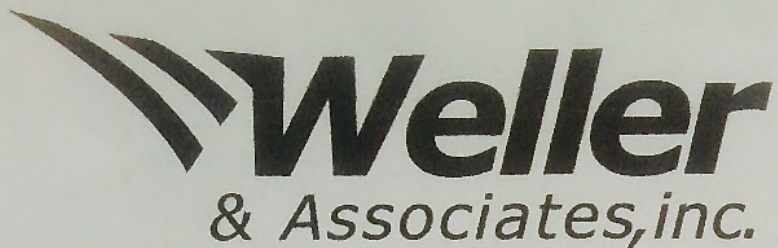


Figure 19. Portion of the USGS 1960 West Point, Ohio 7.5 minute Series (Topographic) map indicating the location of Sites CO0963-0964.

0 1,000 2,000 4,000  
Feet

- Project Area
- Previously Surveyed Area





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December 1, 2015

**Ohio History Connection**  
**800 East 17<sup>th</sup> Avenue**  
**Columbus, OH 43211**

**RE: Phase I Archaeological Investigations for the Proposed 5.1 ha (12.6 ac) South Field Energy Laydown Area in Yellow Creek Township, Columbiana County, Ohio**

Weller is submitting an archaeological report titled *Phase I Archaeological Investigations for the Proposed 5.1 ha (12.6 ac) South Field Energy Laydown Area in Yellow Creek Township, Columbiana County, Ohio* to the Ohio History Connection on behalf of:

**Tetra Tech, Inc.**  
**Attn: Jackie Bruce/Lynn Gresock**  
**238 Littleton Road, Suite 201B**  
**Westford, MA 01886**

This report is being submitted pursuant to regulations and stipulations in accordance with the Ohio Power Siting Board (OPSB) and should be reviewed accordingly. The investigations did not identify any significant cultural materials within the surveyed area and Tetra Tech is asking the SHPO for their concurrence in these findings and the subsequent recommendations.

Thank you,

A handwritten signature in black ink, appearing to read "Ryan J. Weller", is written over a horizontal line.

Ryan J. Weller, MA/PI  
Weller & Associates, Inc.  
1395 West Fifth Avenue  
Columbus, OH 43212





**Phase I Archaeological Investigations for the Proposed 5.1 ha  
(12.6 ac) South Field Energy Laydown Area in Yellow Creek  
Township, Columbiana County, Ohio**

**Joshua D. Engle**

**November 23, 2015**

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**Phase I Archaeological Investigations for the Proposed 5.1 ha  
(12.6 ac) South Field Energy Laydown Area  
in Yellow Creek Township, Columbiana County, Ohio**

By

**Joshua D. Engle**

Submitted By:

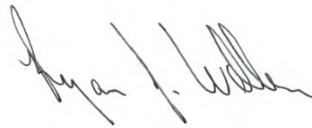
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**Ryan J. Weller, P.I.**

**November 23, 2015**

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W-1821

## **Abstract**

On October 28 and 29, 2015, Weller & Associates, Inc. completed Phase I archaeological investigations for the proposed 5.1-hectare (12.6-acre) South Field Energy laydown site located in Yellow Creek Township, Columbiana County, Ohio (Project Area). The lead agency for this Project is the Ohio Power Siting Board. These investigations were conducted to identify any sites or properties and to evaluate them in a manner that is reflective of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). This report summarizes the results of the archaeological fieldwork and an intensive literature review.

The Project Area is irregularly shaped and located on the south side of Hibbetts Mill Road. It is in the southeast portion of Section 18 of Yellow Creek Township. The area is contained in an upland ridge top setting that is primarily in pasture. This area is to the north and west of the community of Hillcrest, and the Wellsville City Reservoir is about a mile to the southwest. This unglaciated and open landscape is drained by unnamed tributaries of Little Yellow Creek, which flows to the Ohio River. There are dual parallel First Energy transmission lines that bisect the northwest corner of the Project Area. A gravel road parallels and bisects the western margin of the Project Area while a graded dirt road bisects the northern and eastern quadrant. The survey was completed for the Project Area plus an additional 305-meter (1,000-foot) buffer; this entire area constitutes the Study Area.

The literature review for this Project identified two previously recorded prehistoric isolated finds within the Study Area. One previously recorded find is associated with the previous survey was completed for the South Field Energy facility (Weller 2015). One architectural site is located within the Study Area, but outside the Project Area.

The field investigations involved subsurface testing and visual inspection. There were no cultural resources identified within the Project Area during systematic Phase I investigations. If this Project were subject to Section 106, an appropriate finding of 'no historic properties affected' would be considered. No further archaeological work is deemed necessary for this Project as it will not impact or affect any significant sites or historic landmarks.

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## **Introduction**

On October 28 and 29, 2015, Weller & Associates, Inc. (Weller) completed Phase I archaeological investigations for a proposed 5.1-hectare (ha) (12.6-acre [ac]) South Field Energy laydown site in Yellow Creek Township, Columbiana County, Ohio (Figures 1, 2, and 3). The work was conducted under contract with Tetra Tech, Inc. (Tetra Tech) for submittal to the Ohio Power Siting Board (OPSB). These investigations were conducted to identify any sites or properties and to evaluate them in a manner that is reflective of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 [36 CFR 800]). This report summarizes the results of the archaeological fieldwork and an intensive literature review. The report format and design is similar to that established in *Archaeology Guidelines* (Ohio Historic Preservation Office [OHPO] 1994). The work includes archaeological literature review, field investigations, and visual inspection/documentation of the Area of Potential Effects (APE) as it pertains to OPSB projects of this type.

The 5.1 ha (12.6 ac) property (Project Area) is proposed for development of a proposed temporary laydown and parking area for use during construction of a combined cycle electric generating facility to be located north of the Project Area within an area previously surveyed (Weller 2015). As an element of its review by the OPSB, the Project is required to consider potential resources within the Project Area as well as within a 305 meter (m) (1,000 feet [ft]) radius which, with the Project Area is called the Study Area.

Joshua Engle conducted the literature review of the Study Area in October of 2015. Joshua Engle served as the archaeological Principal Investigator and Project Manager; Chris Nelson served as the history/architectural Principal Investigator. The Phase I field investigations were conducted on October 28 and 29, 2015. The archaeological field crew included Joshua Engle, Seth Cooper, Matt Sanders, and Alex Thomas.

## **Environmental Setting**

### ***Climate***

Columbiana County, similar to all of Ohio, has a continental climate, with hot and humid summers and cold winters. February is the driest month, while July tends to be the wettest month for Columbiana County [United States Department of Agriculture, Soil Conservation Service (USDA, SCS) 2011].

### ***Physiography, Relief and Drainage***

Columbiana County is at the limits of the Wisconsin and Illinoian glacial boundaries. The county is located within a diverse physiographic setting. The northeastern part is contained in Wisconsin glacial landforms associated with end moraines and ground moraines; these are within the Killbuck-Glaciated Pittsburgh Plateau region. The localized setting has been glacially planed with comparably flatter and homogeneous landforms. The central part cuts through a narrow band of Illinoian glacial dissected ground moraine as the physiographic region is listed as the Illinoian

Glaciated Allegheny Plateau. This narrow band is very rugged and similar to unglaciated parts of the region. The southern part, including the Project Area, includes unglaciated landforms that tend to be dissected with more rugged terrain. This is part of the Muskingum-Pittsburgh Plateau region (Brockman 1998). The Study Area is drained by unnamed tributaries of Little Yellow Creek, which flows directly to the Ohio River.

### ***Geology***

The underlying bedrock in this area is associated with sedimentary rocks of the Pennsylvanian period (Brockman 1998). Coal is included in the underlying bedrock deposits and is evidenced by strip mining activity to the west of the Study Area. Upper Mercer chert has been observed in float deposits and outcrops from the Salem, Ohio area.

### ***Soils***

The Study Area is located in the Berks-Coshocton-Gilpin association. There are three soil series types present within the Study Area and they are attributable to unglaciated uplands (Table 1). There are no soils within the Study Area that are attributed with deep alluvial deposits (USDA, SCS 2011).

<b>Table 1. Soils identified within the Project Area.</b>			
<b>Map symbol</b>	<b>Soil Name</b>	<b>Drainage capabilities</b>	<b>Landform</b>
CoC	Coshocton silt loam, 6-15 % slopes	Moderately well drained	Ridge tops
GaB	Gavers silt loam, 2 to 6 % slopes	Moderately well drained	Ridge tops
KeB	Keene silt loam, 3 to 8 % slopes	Moderately well drained	Ridge tops

### ***Flora***

There is, or at least was, great floral diversity in Ohio. This diversity is relative to the soils and the terrain that generally include the till plain, lake plain, terminal glacial margins, and unglaciated plateau (Forsyth 1970). Three major glacial advances, including the Kansan, Illinoian, and Wisconsinan, have affected the landscape of Ohio. The effects of the Wisconsin glaciation are most pronounced and have affected more than half of the state (Pavey et al. 1999).

The least diverse part of Ohio extends in a belt from the northeast below the lake-affected areas through most of western Ohio (Gordon 1966). These areas are part of the late Wisconsinan ground moraine and lateral end moraines. It is positioned between the lake plains region and the terminal glacial moraines. This area included broad forested areas of beech maple forests interspersed with mixed oak forests in elevated terrain or where relief is greater (Forsyth 1970; Gordon 1966). Prairie environments, such as those in Wyandot and Marion County areas, would contain islands of forests, but were mostly expansive open terrain dominated by grasses.

The northwestern Ohio terrain is nearly flat because of ancient glacial lakes and glaciation, which affected the flora. However, the vegetation was more diverse than the

till plain to the south and east because of the variety of factors that contributed to its terrain. Forests within the Black Swamp were generally comprised of elm/ash stands; however, dissected areas along drainages and drier, elevated areas from beach deposits would contain mixed forests of oak and hickory (Gordon 1966, 1969). There was little upland floral diversity in the lake plains (Black Swamp region) except for the occasional patches of oak and hickory. Floral variety was most evident in narrow sleeves along larger stream valleys where there is relief.

The most biological diversity in Ohio is contained within the Allegheny Plateau, which encompasses the southeastern two-thirds of the state (Sheaffer and Rose 1998). Because this area is higher and has drier conditions, it is dominated by mixed oak forests. Some locations within the central part of this area contain beech and mixed mesophytic forests. There are large patches of oak and sugar maple forests to the south of the terminal moraine from Richland to Mahoning County (Gordon 1966).

Southwestern Ohio from about Cincinnati to Bellefontaine east to the Scioto River historically contained a very diverse floral landscape. This is an area where moraines from three glacial episodes are prevalent (Pavey et al. 1999). Forests in this area include elm-ash swamp, beech, oak-sugar maple, mixed mesophytic, prairie grasslands, mixed oak, and bottomland hardwoods (Core 1966; Gordon 1966, 1969). These forest types are intermingled with prairies being limited to the northern limits of this area mostly in Clark and Madison Counties.

Generally, beech forests are the most common variety through Ohio and could be found in all regions. Oak and hickory forests dominated the southeastern Ohio terrain and were found with patchy frequency across most of northern Ohio. Areas that were formerly open prairies and grasslands are in glacial areas, but are still patchy. These are in the west central part of the state. Oak and sugar maple forests occur predominantly along the glacial terminal moraine. Elm-ash swamp forests are prevalent in glaciated areas including the northern and western parts of Ohio (Gordon 1966; Pavey et al. 1999).

Central Columbiana County, including the Study Area, is generally within what is considered to a mixed oak forest area (Gordon 1966).

### ***Fauna***

The upland forest zone offered a diversity of mammals to the prehistoric diet. This food source consisted of white-tailed deer, black bear, Eastern cottontail rabbit, opossum, a variety of squirrels, as well as other less economically important mammals. Several avian species were a part of the upland prehistoric diet as well (wild turkey, quail, ruffed grouse, passenger pigeon, etc.). The lowland zone offered significant species as well. Raccoon, beaver, and muskrat were a few of the mammals, while wood duck and wild goose were the economically important birds. Fishes and shellfish were also an integral part of the prehistoric diet. Ohio muskellunge, yellow perch, white crappie, long nose gar, channel catfish, pike, and sturgeon were several of the fish, whereas, the Ohio naiad mollusc, butterfly's shell, long solid, common bullhead, knob rockshell, and cod shell were the major varieties of shellfish. Reptiles and amphibians,



such as several varieties of snakes, frogs, and turtles, were also part of the prehistoric diet (Trautman 1981; Lafferty 1979; Mahr 1949).

## **Cultural Setting**

The first inhabitants of Ohio were probably unable to enter this land until the ice sheets of the Wisconsin glacier melted around 14,000 B.C. Paleoindian sites are considered rare due to the age of the sites and the effects of land altering activities such as erosion. Such sites were mostly used temporarily and thus lack the accumulation of human occupational deposits that would have been created by frequent visitation. Paleoindian artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. In Ohio, major Paleoindian sites have been documented along large river systems and near flint outcrops in the Unglaciaded Plateau (Cunningham 1973). Otherwise, Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds or open air scatters.

The Paleoindian period is characterized by tool kits and gear utilized in hunting Late Pleistocene megafauna and other herding animals including but not limited to short-faced bear, barren ground caribou, flat-headed peccary, bison, mastodon, and giant beaver (Bamforth 1988; Brose 1994a; McDonald 1994). Groups have been depicted as being mobile and nomadic (Tankersley 1989); artifacts include projectile points, multi-purpose unifacial tools, burins, graters, and spokeshaves (Tankersley 1994). The most diagnostic artifacts associated with this period are fluted points that exhibit a groove or channel positioned at the base to facilitate hafting. The projectiles dating from the late Paleoindian period generally lack this trait; however, the lance form of the blade is retained and is often distinctive from the following Early Archaic period (Justice 1987).

Certain artifacts indicate Paleoindian activity. These artifact assemblages are characteristic of transient hunter-gatherer foraging activity and subsistence patterns. The most common artifacts from the Paleoindian period are lanceolate-shaped projectile points. These may be fluted (flake removed from the base to facilitate hafting) and have some evidence of grinding on the hafting element (base and lower portion of the biface). Other artifacts that may be part of a Paleoindian assemblage include pitted stones, burins, bipolar flakes, backed knives, and unifacial endscrapers with graver spurs. Paleoindian sites in the glaciaded portions of Ohio are encountered infrequently and are usually represented by isolated finds.

There are several sites that pertain to this period from northeastern Ohio, including Nobles Pond, Paleo Crossing, and Krill Cave. The Nobles Pond site in Stark County is situated in a nearly level area that had been glaciaded. Based on a fairly large Paleoindian artifact assemblage recovered from this site, it has been interpreted as a semi-circular base camp occupation. The site was systematically collected for a period of 12 years by Gramly and Summers (1986). There have been over 3,000 tools recovered from this site, including Gainey style projectile points. This site appears to have been occupied from 10,000 to 11,000 years ago over a short time span (Seeman et al. 1994).

The Paleo Crossing site was occupied around 11,000 years ago. This site contained a large number of Clovis and Clovis-like points recovered from plow zone

deposits. There was a lack of Upper Mercer flint contained within the Paleoindian portion of this assemblage. The majority of the flint from this site was acquired from southern and southeastern Indiana. Brose (1994a) has suggested that this site represents one of the earliest known structural remains associated with this period. A post mold from the site has been dated to  $12,250 \pm 100$  B.P.

Krill Cave (33SU18) is situated within Summit County. This is a stratified site that has been dated from the Paleoindian to Early Archaic periods. Little information is readily available concerning this site. It is located along an intermittent drainage with sandstone outcrops and overlooks a poorly drained marsh that is fed by springs (Prufer et al. 1989: 3).

The Archaic period has been broken down into three sub-categories, including the Early, Middle, and Late Archaic. During the Early Archaic period (ca. 10,000-8000 B.P.), the environment was becoming increasingly arid as indicated by the canopy (Shane 1987). This period of dryness allowed for the exploitation of areas that were previously inaccessible or undesirable. The Early Archaic period does not diverge greatly from the Paleoindian regarding the type of settlement. Societies still appear to be largely mobile with reliance on herding animals (Fitting 1963). For these reasons, Early Archaic artifacts can be encountered in nearly all settings throughout Ohio. Tool diversity increased at this time including hafted knives that are often re-sharpened by the process of beveling the utilized blade edge and intense basal grinding (Justice 1987). There is a basic transition from lance-shaped points to those with blades that are triangular. Notching becomes a common hafting trait. Another characteristic trait occurring almost exclusively in the Early and Middle Archaic periods is basal bifurcation and large blade serrations. Tool forms begin to vary more and may be a reflection of differential resource exploitation. Finished tools from this period can include bifacial knives, points, drills/perforators, utilized flakes, and scrapers.

The Middle Archaic period (8000-6000 B.P.) is poorly known or understood in archaeological contexts within Ohio. Some (e.g., Justice 1987) regard small bifurcate points as being indicative of this period. Ground stone artifacts become more prevalent at this time. Other hafted bifaces exhibit large side notches with squared bases, but this same trait can extend back to the Paleoindian period. The climate at this time is much like that of the modern era. Middle Archaic period subsistence tended to be associated with small patch foraging that involved a consistent need for mobility with a shift towards stream valleys (Stafford 1994). Sites encountered from this time period throughout most of Ohio tend to be lithic scatters or isolated finds. The initial appearance of regional traits may be apparent at this time.

The Late Archaic period in Ohio (ca 6000-3000 B.P.) diverges from the previous periods in many ways. Preferred locations within a regional setting appear to have been repeatedly occupied. The more intensive and repeated occupations often resulted in the creation of greater social and material culture complexity. The environment at this time is warmer and drier. Most elevated landforms in northeastern Ohio have yielded Archaic artifacts (Prufer and Long 1986: 7), and the same can be stated for the remainder of Ohio.

Various artifacts are diagnostic of the Late Archaic period. Often, burial goods provide evidence that there was some long-distance movement of materials, while lithic materials used in utilitarian assemblages are often from a local chert outcrop. There is increased variation in projectile point styles that may reflect regionalism. Slate was often used in the production of ornamental artifacts. Ground and polished stone artifacts reached a high level of development. This is evident in such artifacts as grooved axes, celts, bannerstones, and other slate artifacts.

It is during the Terminal Archaic period (ca 3500-2500 B.P.) that extensive and deep burials are encountered. Cultural regionalism within Ohio is evident in the presence of Crab Orchard (southwest), Glacial Kame (northern), and Meadowood (central to Northeastern). Along the Ohio River, intensive occupations have been placed within the Riverton phase. Pottery makes its first appearance during the Terminal Late Archaic.

There are two Terminal Late Archaic cultures known from northeastern Ohio. Situated to the north and west of an imaginary line drawn from Cincinnati to Cleveland, the Glacial Kame culture (2950 to 2450 B.C.) is best interpreted as part of a burial cult that developed in the Late Archaic period. Glacial Kame can be considered the earliest of two Late Archaic cultural expressions in Ohio. The most diagnostic artifact of the Glacial Kame culture is the three-hole sandal-sole gorget (Converse 1979). The Meadowood culture (1,100 to 300 B.C.) is considered similar to Glacial Kame. Meadowood cultural traits are found mainly in the northeastern portions of Ohio; however, sporadic isolated finds of diagnostic artifacts are found throughout Ohio (Ritchie 1965).

The Early Woodland period (ca 3000-2100 B.P.) in Ohio is often associated with the Adena culture and the early mound builders (Dragoo 1976). Early and comparably simple geometric earthworks first appear with mounds more spread across the landscape. Pottery at this time is thick and tempered with grit, grog or limestone; however, it becomes noticeably thinner towards the end of the period. There is increased emphasis on gathered plant resources, including maygrass, chenopodium, sunflower, and squash. Habitation sites have been documented that include structural evidence. Houses that were constructed during this period were circular, having a diameter of up to 18.3 meters (m) (Webb and Baby 1963) and often with paired posts (Cramer 1989). Artifacts dating from this period include leaf-shaped blades with parallel to lobate hafting elements, drilled slate pieces, ground stone, thick pottery, and increased use of copper. Early Woodland artifacts can be recovered from every region of Ohio.

The Early Woodland of northern Ohio is somewhat different from that of the remainder of the State. There are fewer mounds and the artifact assemblage is more attributable to the Leimbach Phase. Adena-like bifaces and tools are commonly found in river and stream valleys that drain into Lake Erie as well as in the uplands. It is assumed that Early Woodland inhabitants used these areas for little more than a transient hunting-collecting subsistence with occasional 'hot spots' of activity. One of the best-known Early Woodland sites is the Leimbach site. This site is located where the Huron River empties into Lake Erie (Shane 1975). Early Woodland ceramics and lugged vessels have been recovered from this site. An Early Woodland component of the Krill Cave site (33SU18) has been dated to about 145 B.C. Evidence of activity during this period, such

as the ceramics, has been encountered infrequently at locations across north central and northwestern Ohio.

The Middle Woodland period (ca 2200-1600 B.P.) is often considered to be equivalent with the Hopewell culture. The largest earthworks in Ohio date from this time period. There is dramatic increase in the appearance of exotic materials that appear most often in association with earthworks and burials. Artifacts representative of this period include thinner, grit-tempered pottery, and dart-sized projectile points (Lowe Flared, Steuben, Snyders, and Chesser) [Justice 1987], exotic materials (mica, obsidian, and marine shell, etc.). The points are often thin, bifacially beveled, and have flat cross sections. There seems to have been a marked increase in the population as well as increased levels of social organization. Middle Woodland sites seem to reflect a seasonal exploitation of the environment. There is a notable increase in the amount of Eastern Agricultural Complex plant cultigens, including chenopodium, knotweed, sumpweed, and little barley. This seasonal exploitation may have followed a scheduled resource extraction year in which the populations moved camp several times per year, stopping at known resource extraction loci. Middle Woodland land use appears to center on the regions surrounding earthworks (Dancey 1992; Pacheco 1996); however, there is evidence of repeated occupation away from earthworks (Weller 2005a). Household structures at this time vary, with many of them being squares with rounded corners (Weller 2005a). Exotic goods are often attributed to funerary activities associated with mounds and earthworks. Utilitarian items are more frequently encountered outside of funerary/ritual contexts. The artifact most diagnostic of this period is the bladelet, a prismatic and thin razor-like tool, and bladelet cores. Middle Woodland remains are more commonly recovered from central Ohio south and lacking from most areas in the northern and southeastern part of the state. The few northeastern Ohio Middle Woodland sites that have been identified include the Cole Mound in Tuscarawas County and mounds near Pippen Lake, Portage County. Other than an occasional mound and projectile point, Middle Woodland sites are rare in northeastern Ohio (Zakucia 1964). However, excavations at the Szalay Site in Summit County encountered a series of postmolds that yielded dates and artifacts that were attributable to the Middle Woodland period. This site is located on at the confluence of Furnace Run and the Cuyahoga River. Bladelets, pottery, postmolds, and radiocarbon dates obtained from the site confirm its Hopewellian affiliation (Richner and Volf 2000).

The Late Woodland period (ca A.D. 400-900) is distinct from the previous period in several ways. There appears to be a population increase and a more noticeable aggregation of groups into formative villages. The villages are often positioned along large streams, on terraces, and were likely seasonally occupied (Cowan 1987). This increased sedentism was due in part to a greater reliance on horticultural garden plots, much more so than in the preceding Middle Woodland period. The early Late Woodland groups were growing a wide variety of crop plants that are collectively referred to as the Eastern Agricultural Complex. These crops included maygrass, sunflower, and domesticated forms of goosefoot and sumpweed. This starch and protein diet was supplemented with wild plants and animals. Circa A.D. 800 to 1000, populations adopted maize agriculture, and around this same time, shell-tempered ceramics appear. Other technological innovations and changes during this time period included the bow and arrow and changes in ceramic vessel forms.

Evidence suggests that the Late Woodland occupations in northern Ohio developed from the Western Basin Middle Woodland tradition. The Late Woodland period in northern Ohio is best defined by ceramic traditions. Western Basin Late Woodland sites have been identified in most of the river valleys in northwestern Ohio such as the Maumee, Auglaize, and the Sandusky Rivers. Radiocarbon dating establishes this Late Woodland occupation at the first century B.C. to A.D. 500 (Pratt and Bush 1981). The Western Basin tradition consists of three primary phases, which include the Riviere au Vase, the Younge (Fitting 1965), and the Springwells phase.

The Late Prehistoric period (ca A.D. 1000-1550) is distinctive from former periods. It has been suggested that this cultural manifestation developed out of the local Middle Woodland cultures and may have lasted to be contemporaneous with the Late Prehistoric period (Barkes 1982; Baby and Potter 1965; Potter 1966).

The Late Prehistoric period in northern Ohio is often associated with an intensification of the use of plant resources, the presence of large villages, and a steady population increase. Permanent villages were associated with a heavy dependence on farming. These villages were often located on the meander belt zones of river valleys (Stothers et al. 1984). Subsistence of these farming communities relied upon maize, beans, and squash as the major cultigens. Villages were often strategically located on bluff tops. There is a change in social structure to a chiefdom-based society.

The Whittlesey cultural groups (A.D. 900 to 1650) inhabited most of northern Ohio in an area described as being south of Lake Erie from the Pennsylvania boundary to the western end of Lake Erie, as well as on some of the islands. Similar sites have been identified in northern Indiana and southern Michigan. These groups inhabited villages that encompassed an area of approximately 1.6 ha. These villages were often situated on top of high bluffs on stream bends, or high inaccessible areas of land located at stream junctions. These villages were usually fortified with wooden stockades or earthen embankments with ditches on the outer side (Brose 1994b).

The Fort Meigs and Indian Hills phases occur late in the Late Prehistoric period. The Fort Meigs phase may be related to the Wolf phase in that the pottery is similar. Fort Meigs phase occupations are identified by specific rim and neck motifs that are applied to their pottery. The Indian Hills phase is associated with shell-tempered pottery. Some villages show evidence of defensive features such as stockade lines, ditches or earthen walls (Pratt and Bush 1981). There is little evidence to support inter-village relationships, such as trade; this lack may have been due to competition for localized resources.

### ***Protohistoric to Settlement***

By the mid-1600s, French explorers traveled through the Ohio country as trappers, traders, and missionaries. They kept journals about their encounters and details of their travels. These journals are often the only resource historians have regarding the early occupants of seventeenth century Ohio. The earliest village encountered by the explorers in 1652 was a Tionontati village located along the banks of Lake Erie and the

Maumee River. Around 1670, it is known that three Shawnee villages were located along the confluence of the Ohio River and the Little Miami River. Because of the Iroquois Wars, which continued from 1641-1701, explorers did not spend much time in the Ohio region, and little else is known about the natives of Ohio during the 1600s. Although the Native American tribes of Ohio may have been affected by the outcome of the Iroquois Wars, no battles occurred in Ohio (Tanner 1987).

French explorers traveled extensively through the Ohio region from 1720-1761. During these expeditions, the locations of many Native American villages were documented. In 1751, a Delaware village known as Maguck existed near present-day Chillicothe. In 1758, a Shawnee town known as 'Lower Shawnee 2' existed at the same location. The French also documented the locations of trading posts and forts, which were typically established along the banks of Lake Erie or the Ohio River (Tanner 1987).

While the French were establishing a claim to the Ohio country, many Native Americans were also entering new claims to the region. The Shawnee were being forced out of Pennsylvania because of English settlement along the eastern coast. The Shawnee created a new headquarters at Shawnee Town, which was located at the mouth of the Scioto River. This headquarters served as a way to pull together many of the tribes which had been dispersed because of the Iroquois Wars (Tanner 1987).

Warfare was bound to break out as the British also began to stake claims in the Ohio region by the mid-1700s. The French and Indian War (1754-1760) affected many Ohio Native Americans; however, no battles were recorded in Ohio (Tanner 1987). Although the French and Indian War ended in 1760, the Native Americans continued to fight against the British explorers. In 1764, Colonel Henry Bouquet led a British troop from Fort Pitt, Pennsylvania to near Zanesville, Ohio.

In 1763, the Seven Years' War, which was being fought between France and Britain, had finally ended. The Treaty of Paris in 1763 granted the entire Ohio region to the British. In 1783, the second Treaty of Paris ending the American Revolution granted the entire Ohio region to the Americans; however, Ohio was specifically described as Native American territory. Native Americans were not to move south of the Ohio River (Tanner 1987).

By 1783, Native Americans had established fairly distinct boundaries throughout Ohio. The Shawnee tribes generally occupied southwest Ohio, while the Delaware tribes stayed in the eastern half of the state. Wyandot tribes were located in north-central Ohio, and Ottawa tribes were restricted to northeast Ohio. There was also a small band of Mingo tribes in eastern Ohio along the Ohio River, and there was a band of Mississauga tribes in northeastern Ohio along Lake Erie. The Shawnee people had several villages within Ross County along the Scioto River (Tanner 1987). Although warfare between tribes continued, it was not as intense as it had been in previous years. Conflicts were contained because boundaries and provisions had been created by earlier treaties.

In 1795, the Treaty of Greenville was signed as a result of the American forces defeat of the Native American forces at the Battle of Fallen Timbers. This allocated the northern portion of Ohio to the Native Americans, while the southern portion was opened

for Euro-American settlement. Although most of the battles which led up to this treaty did not occur in Ohio, the outcome resulted in dramatic fluctuations in the Ohio region. The Greenville Treaty line was established, confining all Ohio Native Americans to northern Ohio, west of the Tuscarawas River (Tanner 1987).

Ohio Native Americans were again involved with the Americans and the British in the War of 1812. Unlike the previous wars, many battles were fought in the Ohio country during the War of 1812. By 1815, peace treaties began to be established between the Americans, British, and Native Americans. The Native Americans lost more and more of their territory in Ohio. By 1830, the Shawnee, Ottawa, Wyandot, and Seneca were the only tribes remaining in Ohio. These tribes were contained on reservations in northwest Ohio. By the middle 1800s, the last of the Ohio Native Americans signed treaties and were removed from the Ohio region.

### *Columbiana County History*

Columbiana County was organized March 25, 1803 from land that originally made up Jefferson and Washington Counties. Governor Edward Tiffin signed the bill officially creating the county on April 16, 1803. Many of the first settlers that came into this area were of English, German, Scotch, Irish, Jewish, Welsh, and Italian decent. The settlers moved into one of five sub-divisions that made up Columbiana County. The original townships were Springfield, Middleton, St. Clair, Salem, and Center. John Quinn, a hunter, who in 1792 moved into St. Clair Township, made the earliest semi-permanent settlement. Around the same time that John Quinn was building a cabin, Col. Boquet built a base camp in Middleton Township to pursue Native Americans. Also in 1792, a farmer named Mr. Carpenter cleared land near West Point for a farm. Carpenter was probably the first permanent settler in the county (Barth 1926; McCord 1905; Bentley 1902).

The original county seat was located in Fairfield Township in 1803. Courts for the county seat were first held in a barn owned by Mathias Lower. The first sheriff of the County was John Corzer and Reasin Beall was clerk. The first courthouse and jail were log structures located in Lisbon authorized for construction in 1803. These were replaced in 1817, and in 1887 a fire destroyed that courthouse and they were rebuilt a third time (Barth 1926; McCord 1905; Bentley 1902).

In 1828, the Sandy and Beaver Canal Company was created and operated out of New Lisbon (i.e., Lisbon). The company went about raising money through selling stock and land speculators began driving up the costs of property along the proposed canal corridor. This led to a construction boon to several of the smaller communities in Columbiana County including Kensington, Guilford, Hanover, Lisbon, and Dungannon. Part of the difficulty in its construction was the ruggedness of the terrain and the eventual creation of the Big and Little Tunnels that were part of the middle component of the canal corridor. The design, survey, and canal construction was under the initial direction of Major D. B. Douglas and finalized by E. H. Gill. Hanover was essentially considered to be the turning point of the canal venture. Locks and constructions were labeled as being east or west of this community. There are numerous locks (n=90), dams (n=30), and reservoirs positioned along its alignment including a large one that is extant at Guilford.

The advent and extensive utilization of the railroad system sealed the fate of the canal era in Ohio.

As an aside, Rebecca Furnace was an early enterprise and construction that was built to the west of Lisbon in about 1807 by Gideon Hughes. Hughes would later open a rolling mill and nail making establishment further up the creek, but would end up in failure. The furnace was later operated by James McKinley, grandfather of the former President. A short-lived railroad line was constructed from the furnace to the nail production area in 1829. This furnace is located on the west/south side of Little Beaver Creek.

Since its inception, Columbiana County has been reduced in size three times while accommodating land to other counties. The first reduction occurred in 1808 when Stark County was created. The second time Carroll County received land for its inception in 1832. The third time occurred in 1845 when Mahoning County was created (Barth 1926).

The county had many drainages, which provided opportunities for grist and saw mills. Joseph Fawcett, on Carpenter's Run, built the first gristmill. John Beaver, on Little Beaver Creek, built the second. Beaver also built the first sawmill. The first paper-mill, named The Ohio Paper Mill, was built in 1805 on Little Beaver Creek. The owners were John Beaver and John Coulter. One of the earliest newspapers was *The Ohio Patriot* that was established in 1808 by William D. Lepper. James Bennett, who made Yellow-ware, established the first pottery in 1840. The coal, salt, iron ore, free stone, pottery ware, and wool were all strong industries for the economy. George James established the first salt well in Salineville in 1809. By 1835, there were 20 operating salt wells along Little Yellow Creek. Another resource was charcoal, which was an industry that became popular in Columbiana County after Gideon Hughes started an iron furnace in 1808. Coal became a large industry after 1852 when the Cleveland and Pittsburg Railroad came through East Palestine. Prior to this date, coal was extracted in small quantities and used for local demands. Columbiana County had 35 operating coal companies by 1903 according to the Ohio State mine report for that year. The first productive oil well in Columbiana County was on the farm of George Hamilton in 1865. He was able to extract heavy oil that was later used for fuel oil. By 1866, there were 15 more wells near Fredericktown and Calcutta producing 100 barrels per day. The oil and gas industry in Columbiana County was so extensive that East Liverpool was the first community anywhere to utilize piped gas. By 1885, Columbiana County was one of the fastest growing counties in Ohio and had a very strong economy. There were 118,656 acres of farmland, 90,692 acres of pasture, 45,065 of woodland, and 14,603 acres were unused. Population growth was a reflection these industries making Columbiana the third largest county. Between 1820 and 1830 the population expanded by 13,473 for a total population of 35,506 inhabitants (McCord 1905; Bentley 1902).

### ***Yellow Creek Township History***

Yellow Creek Township lies in the southeast corner of Columbiana County along the Ohio River. The river has played a large part in the development of the region, through its people, towns, and economy. Its name comes from the two Yellow Creeks,



Big and Little, which meander their way through the township emptying into the Ohio River. The township is rife with mineral resources, contains some fertile bottomlands, and is suitably placed for a strong transportation industry (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

The ownership and settlement of the township is an interesting narrative of how these “western” lands were perceived at the end of the 18<sup>th</sup> century. Robert Johnston was a surveyor to whom the federal government owed a hefty debt upon completion of his work in the Northwest Territory. In 1788, Johnston obtained 30 townships worth of land to settle the debt. This rate works out to \$6 per 100 acres. Yellow Creek was part of his survey and part of his payment. In 1795, a Pennsylvanian, James Clark, bought 304 or 350 acres from Johnston at \$6 per acre. This tract included the land where Wellsville now sits. The next year, in order to escape some financial difficulties, Clark transferred the ownership of much of this parcel to his son-in-law. The new landlord was the man from whom Wellsville takes its name. William Wells came to his Ohio lands in 1797 during the spring in order to clear and plant. He crossed the river every morning to work his land in the wild Ohio Territory and returned to the blockhouse on the Virginia side every evening. Wells received a commission from Governor St. Clair to serve as the justice of the peace for the area. The year before he arrived, two squatters, Richard Vaughn and George Clark, had come to Yellow Creek and built the township’s first log cabin. And by the time Wells’ father-in-law came to live on the remainder of his lands in 1800, there were a handful of other men and families living on the west side of the Ohio River. The township was officially organized in 1805 (Barth 1926; McCord 1905).

A large portion of those who came to Yellow Creek Township was of Scottish decent and thus there was a region known as the “Scotch Settlement.” It was apparent from the histories that these settlers were strong-willed and equal to the task of settling the harsh environment (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

Wellsville is the only municipality of the township. Though there were people living on Wellsville land from the very first, the town was not laid out until 1820 and not platted until 1823. Village incorporation came ten years later. Similarly, though nearly all of the original settlers were religious and met together with regularity, it was not until 1833 that the first church edifice was raised in the township; and that year there were three, Presbyterian, Methodist Episcopal, and Methodist Protestant. Again, education was a priority of the first settlers; teaching took place beginning in 1800 with Richard Boyce’s log school. This was a good school for a logged-frame, frontier version mostly because of its financial backing and community support. Robert Dobbins donated some of his farmland to build upon; William Wells volunteered to cover the cost of education for five students per term, and a free black man, Edward Devore, provided for four. However, it was not until the Union School Law passed in 1850 that the community built a tax-funded school, free for all. This was the first “Union School” in the state (Barth 1926; McCord 1905).

In 1902, Yellow Creek Township held some of the world’s largest brick and tile manufacturing plants. The township’s earliest industries were typical of all Ohio settlements: a tavern in 1800; a gristmill in 1806; and a sawmill in 1815. River

transportation was an early benefit to the community of Wellsville. A turnpike (State Route 14) added to the town's vitality once it connected the river to Lake Erie and the markets and ports of Cleveland. Wellsville was also an important midway point between Cleveland, Pittsburg, and the trails to the Greater East. For twenty years, Wellsville dominated the trade of Ohio's northeast until 1852 when the railroads rendered river transport all but obsolete. Joseph Wells, William's son, began the region's pottery manufacturing industry in 1826. In 1874, the American Tin Plate Company opened a plant in Wellsville, which was the first of its kind in the country. US Steel Corp. eventually acquired this plant and provided many jobs and much revenue for the town (Barth 1926; McCord 1905; The Columbiana County Map & Atlas Company 1902).

## **Research Design**

The purpose of a Phase I survey is to locate and identify cultural resources that will be affected by the planned energy facility construction. This includes archaeological deposits that are older than 50 years. Once these resources are identified and sampled, their significance is determined/evaluated in a manner that is reflective of the eligibility requirements relative to the National Register of Historic Places (NRHP). These literature review is directed to answer or address the following questions:

- 1) Did the literature review reveal anything that suggests the Study Area had been previously surveyed and what is the relationship of previously recorded properties to the Study Area?
- 2) Are cultural resources likely to be identified in the Study Area?

## ***Archaeological Field Methods***

The survey conducted within the Project Area used three methods of sampling and testing to identify and evaluate cultural resources. These included shovel test unit excavation, shovel probe excavation, and visual inspection.

*Shovel test unit excavation.* Shovel test units were placed at 15-m intervals. Shovel test units measure 50 centimeters (cm) on a side and are excavated to 10 cm below the topsoil/subsoil interface. Individual shovel test units were documented regarding their depth, content and color (Munsell). Wherever sites are encountered, Munsell color readings are taken per shovel test unit. All of the undisturbed soil matrices from shovel test units are screened using 0.6 cm hardware mesh. When sites are encountered, additional shovel test units will be excavated at 7.5 m intervals extending on grid and in the two cardinal directions within the Project Area from the positive locations.

*Shovel probe excavation.* Shovel probes were excavated during these investigations to document the extent of the disturbance associated with modern construction activities. These probes were excavated similarly to shovel test units. They had the same dimensions of 50 cm on a side, but were not screened. They were excavated at 15-m intervals and to a depth of 15-20 cm or deep enough to establish lack of soil integrity.

*Visual inspection.* Locations where cultural resources were not expected, such as disturbed areas and steeply sloped areas were walked over and visually inspected. This method was used to verify the absence or likelihood of any cultural resources being located in these areas. This method was also utilized to document the general terrain and the surrounding area.

The application of the resulting field survey methods was documented in field notes, field maps, and Project plan maps.

### ***Curation***

There were no cultural materials identified during these investigations. Notes and maps affiliated with this Project will be maintained in Weller & Associates, Inc. files.

## **Literature Review**

The literature review Study Area is defined as a 305-m (1,000-foot) area extending from the boundaries of the Project Area (Figures 2 and 3). In conducting the literature review, the following resources were consulted at OHPO and the State Library of Ohio:

- 1) *An Archaeological Atlas of Ohio* (Mills 1914);
- 2) OHPO United States Geological Survey (USGS) 7.5' series topographic maps;
- 3) Ohio Archaeological Inventory (OAI) files;
- 4) Ohio Historic Inventory (OHI) files;
- 5) National Register of Historic Places (NRHP) files;
- 6) Determinations of Eligibility (DOE) files;
- 7) OHPO Cultural Resource Management (CRM)/contract archaeology files; and
- 8) Columbiana County atlases, histories, historic USGS 15' series topographic map(s), and current USGS 7.5' series topographic map(s).

A review of the *Atlas* (Mills 1914) was conducted. There were no resources situated within or adjacent to the Study Area.

The OHPO topographic maps indicated that there are no recorded archaeological sites recorded within the Study Area. However, two unassigned prehistoric isolated finds (33CO963 and 964) were identified during the survey completed within the Study Area for the 35-hectare (86.5-acre) South Field Energy facility (Table 2), which is associated with work proposed within the Project Area (Weller 2015). Neither of the isolated finds were determined eligible for inclusion in the NRHP.

<b>Table 2. Ohio Archaeological Sites in the study area.</b>			
<b>OAI #</b>	<b>Affiliation</b>	<b>Temporal Components</b>	<b>Site Type</b>
33CO963	Prehistoric	Unassigned Prehistoric	Isolated find
33CO964	Prehistoric	Unassigned Prehistoric	Isolated find

The OHI forms indicated that there are no historic inventory resources located within the Study Area. However, one OHI resource (COL99417) was identified within the survey completed within the Study Area for the 35-hectare (86.5-acre) South Field Energy facility (Table 3, Figures 2 and 3) associated with the current project (Nelson 2015b).

<b>Table 3. Ohio Historic Inventory resources in the study area.</b>						
OHI #	Present Name	Other Name	Address	Arch Style	Historic Use	Date
COL99417	Kazee House	Rose House	43911 Hibbetts Mill Road	Italianate	Single Dwelling	1838

A review of the NRHP and consensus Determination of Eligibility files was conducted and revealed that there are no applicable resources identified within the Study Area.

A review of the CRM surveys was conducted for this Project. There has been one survey conducted in the vicinity of the Study Area (Weller 2015), which is for the related 35-hectare (86.5-acre) South Field Energy facility. Two prehistoric isolated finds were recovered (see Table 2).

Historic cartographic/atlasses were consulted for this Project. The *Atlas of Columbiana County, Ohio* (Lake 1870) indicated that the area was on the Mrs. David Rose property to the north and the C. Hardy property to the south (Figure 4). The residence associated with the Rose parcel is to the east and outside of the Study Area. There are no structures depicted on the C. Hardy property. The USGS *1937 Wellsville, Ohio 7.5 Minute Series (Topographic)* map does not indicate that there are any structures or buildings in or near the Study Area (Figure 5).

### ***Evaluation of Research Questions 1 and 2***

There were two questions presented in the research design that will be addressed at this point. These are:

- 1) Did the literature review reveal anything that suggests the Study Area had been previously surveyed and what is the relationship of previously recorded properties to the Study Area?
- 2) Are cultural resources likely to be identified in the Study Area?

The literature review indicated that there were two prehistoric finds sites within the Project's Study Area. This is a remote upland location and there has been one CRM survey completed in the Study Area (Weller 2015). Prehistoric and historic period cultural materials are possible during these investigations as the landform is a nearly level ridge top and sites have been identified in the surrounding setting and on similar situations.

Cartographic/topographic maps do not indicate that there were any older buildings in the Study Area.

## **Fieldwork Results**

The field investigations for this Project were conducted on October 28 and 29, 2015 (Figure 6). The weather during October 28 was mostly overcast with occasional rainfall, but the fieldwork was conducted during the drier periods. Precipitation is not an issue at this location as it is elevated and drains well. The weather was cool and sunny on October 29. At the time of survey, the Project Area was in pasture with the west half cut and baled for straw and the east half in tall field grasses (Figures 7 and 8). The entire Project Area was subject to shovel test units as well as visual inspection. The work focused on the footprint of the Project Area and its archaeological component. No archaeological sites or artifacts were recorded during systematic Phase I investigations of the Project Area.

The Project Area is located on a wide and gently rolling ridge top that is bracketed to the east and west by unnamed tributaries of Little Yellow Creek. These stream valleys are entrenched and provide decent drainage capabilities for the Project Area. The southern portion of the Project Area is located on a wide knob with a grove of trees covering the eastern portion (Figure 9). There are dual parallel First Energy transmission lines that bisect the northwest corner of the Project Area. A gravel road parallels and bisects the western margin of the Project Area while a graded dirt road bisects the northeastern quadrant (Figure 3).

The field investigations were initiated by establishing a datum in the northwest corner of the Project Area (Figure 6). There were 230 shovel test units excavated during these investigations. The topsoil that was identified extended to what is the base of the plowzone. A typical shovel test unit profile demonstrated the topsoil to be about 20 cm deep, dark grayish brown (10YR 4/2), and terminate at an abrupt interface. Subsoil consisted of a brownish yellow (10YR6/8) silt loam (Figure 10).

No archaeological sites were identified during these investigations.

## **APE Definition and NRHP Determination**

The APE is a term that must be applied on an individual project basis. The nature of the project or undertaking is considered in determining the APE. This may include areas that are off the property or outside of the actual project's boundaries to account for possible visual impacts. Archaeological investigations are typically limited to the footprint of the construction activity and a very limited area around it if deemed appropriate and depending upon the type of construction. The APE for this project pertains to the footprint of the Project Area as this document is relative to the archaeological aspect of the cultural resources survey.

There were no cultural materials identified. Considering the footprint of the Project construction and what is regarded as the APE, a finding of no historic properties affected is deemed appropriate.

## **Recommendations**

In October of 2015, Weller & Associates, Inc. conducted Phase I archaeological investigations for the South Field Energy laydown site located in Yellow Creek Township, Columbiana County, Ohio. The fieldwork involved shovel test units and visual inspection of the surrounding area. The fieldwork did not identify any cultural materials. It is Weller's opinion that the planned undertaking will have no effect to any historic properties. No further cultural resource management work is deemed necessary.

## References Cited

- Baby, R. S., and M. A. Potter  
1965 "The Cole Complex: A Preliminary Analysis of the Late Woodland Ceramics in Ohio and Their Relationship to the Ohio Hopewell Phase." In: *Papers in Archaeology of the Ohio Historical Society*, February 1965, No. 2. Ohio Historical Society, Columbus.
- Bamforth, D.  
1988 *Ecology and Human Organization on the Great Plains*. Plenum, New York.
- Barkes, B. M.  
1982 *Analysis of Late Woodland Ceramics from the Decco (33DL28), Ufferman (33DL12), and W. S. Cole (33DL11) Sites: The Cole Complex Reconsidered*. Copy available at the Ohio Historic Preservation Office, Columbus.
- Barth, H. B.  
1926 *History of Columbiana County, Ohio, Vol. I*. Historical Publishing Co., Topeka, Kansas.
- Bentley, W. G.  
1902 *Atlas of surveys of Columbiana County, Ohio*. Columbiana County Map and Atlas Company, Lisbon, Ohio.
- Brockman, C. S.  
1998 *Physiographic Regions of Ohio*. Ohio Department of Natural Resources, Division of Geological Survey, Columbus.
- Brose, D. S.  
1994a "Archaeological Investigations at the Paleo Crossing Site, a Paleoindian Occupation in Medina County, Ohio." In: *The First Discovery of America: Archaeological Evidence of the Early Ohio Area*, edited by W. S. Dancey, pp. 61-76. The Ohio Archaeological Council, Columbus.  
  
1994b "The South Park Village Site and the Late Prehistoric Whittlesey Tradition of Northeast Ohio." In: *Monographs in World Archaeology* No. 20. Prehistory Press, Madison, Wisconsin.
- Converse, R.  
1979 *The Glacial Kame Indians*. The Archaeological Society of Ohio, Columbus.
- Core, E.  
1966 *Vegetation of West Virginia*. McClain, Parsons, West Virginia.
- Cowan, W. C.  
1987 *First Farmers of the Middle Ohio Valley: Fort Ancient Societies, A.D. 1000-1670*. The Cincinnati Museum of Natural History, Cincinnati.

Cramer, A.

1989 *The Dominion Land Company Site: An Early Adena Mortuary Manifestation in Franklin County, Ohio*. M.A. Thesis, Kent State University, Kent, Ohio.

Cunningham, R. M.

1973 "Paleo Hunters along the Ohio River." In: *Archaeology of Eastern North America* 1(1): 116-118. Eastern States Archeological Federation, Bethlehem, Connecticut.

Dancey, W. S.

1992 "Village Origins in Central Ohio: The Results and Implications of Recent Middle and Late Woodland Research." In: *Cultural Variability in Context: Woodland Settlements of the Mid-Ohio Valley*, edited by M. F. Seeman, pp. 24-29. Special Papers 7, *Midcontinental Journal of Archaeology*, Kent State University Press, Kent, Ohio.

Dragoo, D.

1976 "Some Aspects of Eastern North American Prehistory: A Review 1975." In: *American Antiquity* 41(1):3-27. The Society for American Archaeology, Washington, DC.

Fitting, J. E.

1963 "The Hi-Lo Site: A Paleo-Indian Site in Western Michigan." In: *Wisconsin Archaeologist* 44:87-96. Wisconsin Historical Society, Madison, Wisconsin.

1965 "Late Woodland Culture in Southeastern Michigan." In: *Anthropological Papers, the Museum of Anthropology*, No. 24, University of Michigan, Ann Arbor.

Forsyth, J. L.

1970 "A Geologist Looks at the Natural Vegetation Map of Ohio." In: *The Ohio Journal of Science* 70(s):180-191. The Ohio Academy of Science, Columbus.

Gordon, R. B.

1966 *Natural Vegetation of Ohio at the Time of the Earliest Land Surveys*. Ohio Biological Survey and the Natural Resources Institute of the Ohio State University, Columbus.

1969 "The Natural Vegetation of Ohio in Pioneer Days." In: *Bulletin of the Ohio Biological Survey, New Series* 3(2). Ohio State University, Columbus. Gramly, R. M., and G. L. Summers

1986 "Nobles Pond: A Fluted Point Site in Northeastern Ohio." In: *Mid-Continental Journal of Archaeology* 11(1): 98-123.

Justice, N.

1987 *Stone Age Spears and Arrow Points of the Midcontinental and Eastern United States*. Indiana University Press, Bloomington and Indianapolis.

Lafferty, M. B.

1979 *Ohio's Natural Heritage*. Ohio Academy of Science, Columbus.



- Lake, D. J.  
1870 *Atlas of Columbiana County, Ohio*. C. O. Titus, Philadelphia.
- Mahr, A. C.  
1949 "A Chapter of Early Ohio Natural History." In: *Ohio Journal of Science* 49(1).  
The Ohio Academy of Science, Columbus.
- McCord, W. B.  
1905 *History of Columbia County, Ohio and Representative Citizens*. Biographical  
Publishing Co., Chicago.
- McDonald, H.  
1994 "The Late Pleistocene Vertebrate Fauna in Ohio: Coinhabitants with Ohio's  
Paleoindians." In: *The First Discovery of America: Archaeological Evidence of the  
Early Ohio Area*, edited by W. S. Dancey, pp. 23-41. The Ohio Archaeological  
Council, Columbus.
- Mills, W. C.  
1914 *An Archeological Atlas of Ohio*. Ohio State Archaeological and Historical  
Society, Columbus.
- Nelson, Christopher  
2015a *Cultural Historic Investigations and Assessment of Effects for the Proposed 35  
ha (86.5 ac) South Field Energy Facility in Yellow Creek Townships, Columbiana  
County, Ohio*. Weller & Associates. Submitted to Tetra Tech, Inc. Copy available for  
review from the Ohio History Connect.
- 2015b *Cultural Historic Investigations and Assessment of Effects for the Proposed  
South Field Energy Facility Addition in Yellow Creek Townships, Columbiana County,  
Ohio*. Weller & Associates. Submitted to Tetra Tech, Inc. Copy available for review  
from the Ohio History Connect.
- Ohio Historic Preservation Office  
1994 *Archaeological Guidelines*. Ohio Historic Preservation Office and Ohio  
Historical Society, Columbus.
- Pacheco, P.  
1996 "Ohio Hopewell Regional Settlement Patterns." In: *A View From The Core: A  
Synthesis of Ohio Hopewell Archaeology*, edited by P. Pacheco, pp. 16-35. The Ohio  
Archaeological Council, Columbus.
- Pavey, R.R., R.P. Goldthwait, C.S. Brockman, D.N. Huyll, E. MacSwinford, and R.G.  
Van Horn  
1999 *Quaternary Geology of Ohio*. Ohio Division of Geological Survey Map No. 2.  
The Ohio Department of Natural Resources, Division of Geological Survey,  
Columbus.

- Potter, M. A.  
1966 "Cole Ceramics: A Study of Late Woodland Pottery." Unpublished M.A. thesis on file at the Ohio Historical Society, Department of Archaeology, Columbus.
- Pratt, G. M., and D. R. Bush  
1981 *Archaeological Resource Management in Ohio: A State Plan for Archaeology (Draft)*. Copy available for review at the Ohio Historic Preservation Office, Columbus.
- Prufer, O. H., D. A. Long, and D. J. Metzger  
1989 "Krill Cave: A Stratified Rockshelter in Summit County, Ohio." In: *Kent State Research Papers in Archaeology No. 8*. Kent State University Press, Kent, Ohio.
- Prufer, O. H., and D. A. Long  
1986 "The Archaic of Northeastern Ohio." In: *Kent Research Papers in Archaeology, No. 6*, Kent State University Press, Kent, Ohio.
- Richner, J. and W. Volf  
2000 "Front Yard Archeology: Hopewellian Occupation at the Szalay Site." In: *The Newsletter of Hopewell Archaeology in the Ohio River Valley Volume 4, Number 1, June 2000*. U.S. Department of the Interior National Park Service, Midwest Archaeological Center, Lincoln, Nebraska.
- Ritchie, W. A.  
1965 *The Archaeology of New York State*. Natural History Press, Garden City, New York.
- Seeman, M. F., G. Summers, E. Dowd, and L. Morris  
1994 "Fluted Point Characteristics at Three Large Sites: The Implication for Modeling Early Paleoindian Settlement Patterns in Ohio." In: *The First Discovery of America: Archaeological Evidence of the Early Inhabitants of the Ohio Area*, edited by W. S. Dancey, pp. 77-93. The Ohio Archaeological Council, Columbus, Ohio.
- Shane, L.  
1987 "Late-glacial Vegetational and Climatic History of the Allegheny Plateau and the Till Plains of Ohio and Indiana, U.S.A." In: *Boreas* 16:1-20. The Boreas Collegium, Blackwell Publishing Ltd., Edinburgh.
- Shane, O. C., III  
1975 "The Mixter Site: A Multicomponent Locality in Erie County, Ohio." In: *Studies in Ohio Archaeology* (rev. ed.), edited by O.H. Prufer and D. M. McKenzie, Kent State University Press, Kent, Ohio.
- Sheaffer, C., and M. A. Rose  
1998 *The Native Plants of Ohio, Bulletin 865*. The Ohio State University Extension

(College of Food, Agricultural & Environmental Sciences) Department of Horticulture. Electronic document, [http://ohioline.osu.edu/b865/b865\\_01.html](http://ohioline.osu.edu/b865/b865_01.html), accessed November 28, 2005.

Stafford, R.

1994 "Structural Changes in Archaic Landscape Use in the Dissected Uplands of Southwestern Indiana." In: *American Antiquity*, 59:219-237. The Society for American Archaeology, Washington, DC.

Stothers, D. M., J. R. Graves, and B. G. Redmond

1984 "The Sandusky and Western Basin Traditions: A Comparative Analysis of Settlement-Subsistence Systems." In: *Toledo Area Aboriginal Research Society Bulletin* 7 (1&2): 1-73. Toledo Area Aboriginal Research Society, Toledo, Ohio.

Tankersley, K.

1989 *Late Pleistocene Lithic Exploitation and Human Settlement Patterns in the Midwestern United States*. Unpublished Ph.D. dissertation, Department of Anthropology, Indiana University, Bloomington.

1994 "Was Clovis a Colonizing Population in Eastern North America?" In: *The First Discovery of America: Archaeological Evidence of the Early Ohio Area*, edited by W. S. Dancey, pp. 95-116. The Ohio Archaeological Council, Columbus.

Tanner, H.

1987 *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman.

Trautman, M. B.

1981 *The Fishes of Ohio*. The Ohio State University Press, Columbus.

United States Department of Agriculture, Soil Conservation Service

2011 *Soil Survey of Columbiana County, Ohio*. The Ohio Department of Natural Resources, Division of Soil and Water Conservation, Columbus and the Ohio Agricultural Research and Development Center, Washington D. C.

Webb, W. S., and R. S. Baby

1963 *The Adena People No. 2*. The Ohio Historical Society, The Ohio State University Press, Columbus.

Weller, R. J.

2005 *Data Recovery at the Haven Site (33DL1448) Located in Liberty Township, Delaware County, Ohio*. Weller & Associates, Inc. Submitted to the Delaware County Sanitary Engineer's Office. Copy available for review at the Ohio Historic Preservation Office.

2015 *Phase I Archaeological Investigations for Proposed 35 ha (86.5 ac) South Field Energy Facility in Yellow Creek Township, Columbiana County, Ohio*. Weller & Associates. Submitted to Tetra Tech, Inc. Copy available for review at the Ohio Historic Preservation Office.

Zakucia, J.

1964 "The Middle Woodland period in the Beaver Valley." In: *Eastern States Archaeological Federation*, Bulletin No. 23. Eastern States Archeological Federation, Bethlehem, Connecticut.

## Figures





Figure 1. Political map of Ohio showing the approximate location of the Project Area.



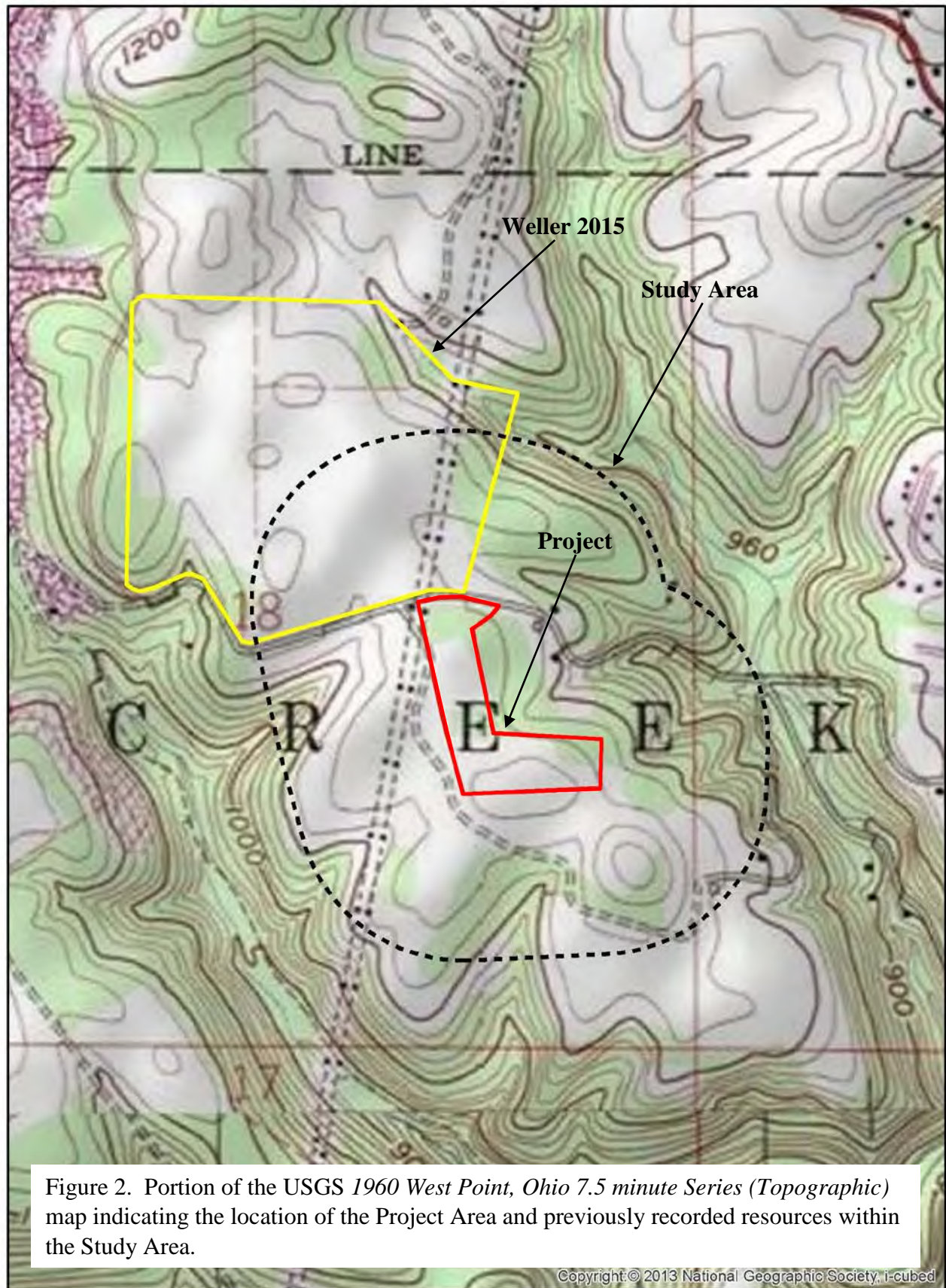
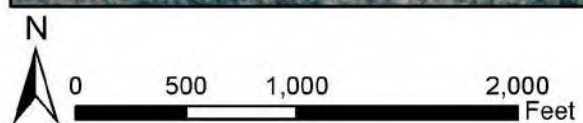
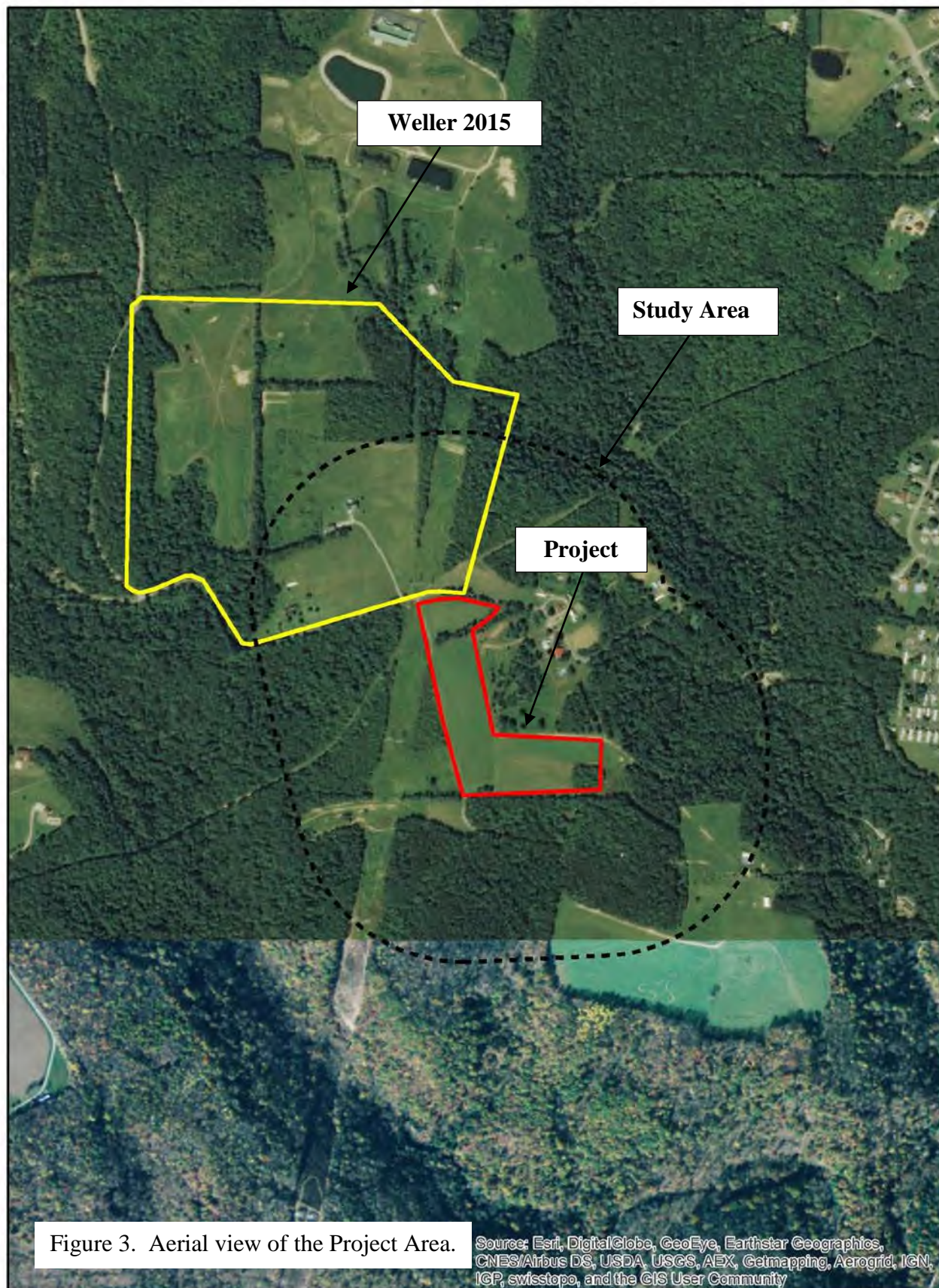


Figure 2. Portion of the USGS 1960 West Point, Ohio 7.5 minute Series (Topographic) map indicating the location of the Project Area and previously recorded resources within the Study Area.







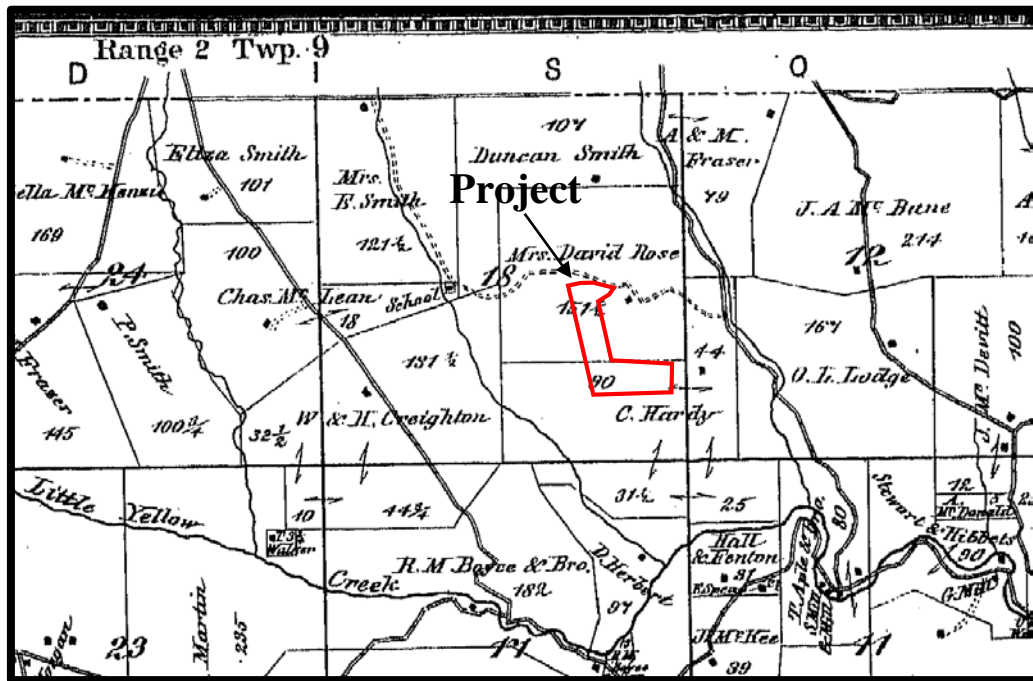


Figure 4. Portion of the *Atlas of Columbiana, Ohio* (Lake 1870) indicating the approximate location of the Project Area.

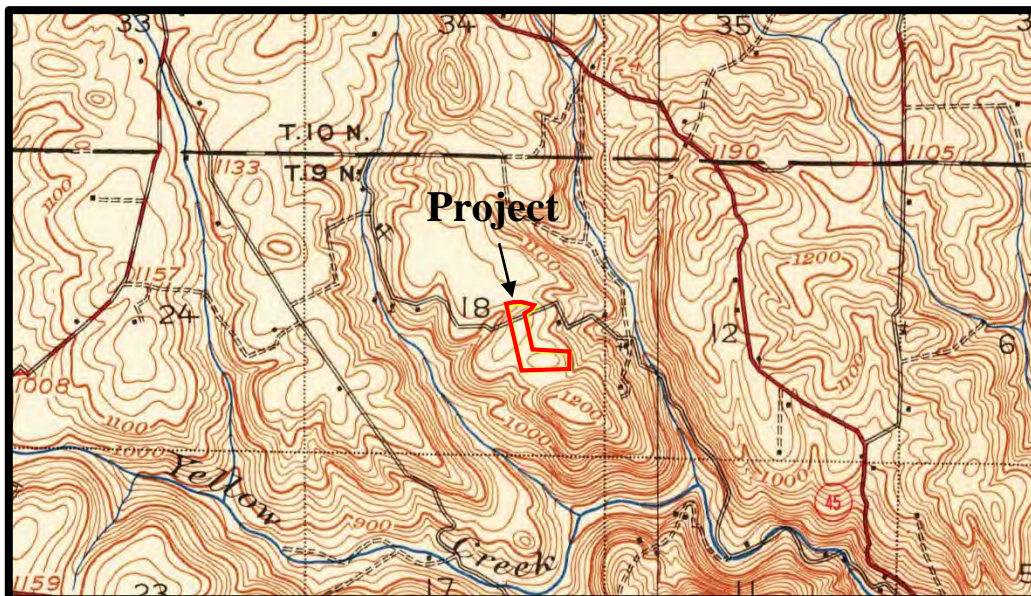


Figure 5. Portion of the USGS 1937 Wellsville, Ohio 7.5 Minute Series (Topographic) map indicating the location of the Project Area.





Figure 6. Fieldwork map of the Project indicating the results of testing and photo orientations.





Figure 7. View of the Project Area looking north.



Figure 8. View of the Project Area looking east.

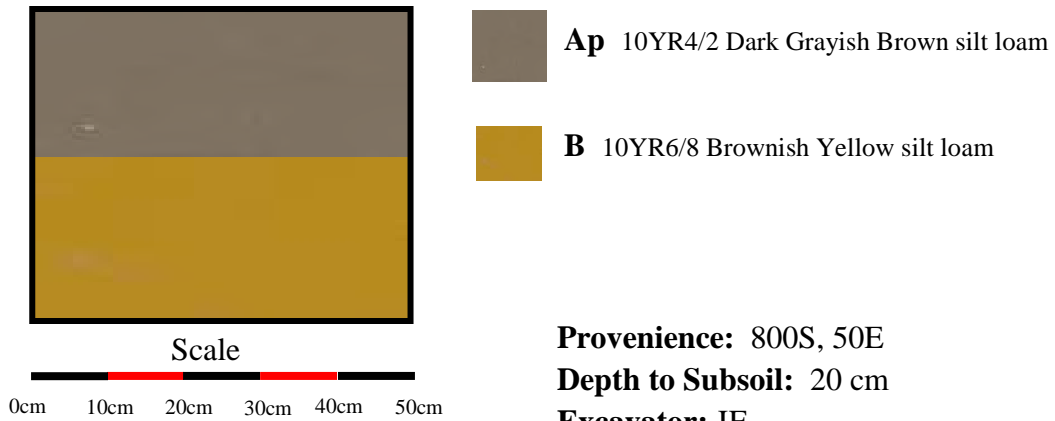


Figure 9. View of the wooded portion of the Project Area looking north.



## Schematic of a Test Unit Profile

Gavers Silt Loam (GaB)



**Provenience:** 800S, 50E

**Depth to Subsoil:** 20 cm

**Excavator:** JE



Figure 10. A typical shovel test unit excavated within the Project.

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