A Phase I Archaeological Survey of the Proposed Town of Garfield Park Expansion, Polk County, Wisconsin.

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Report of Investigations No. 106

Black River Archaeology, LLC.

April 2006

Management Summary

In early April of 2006 archaeologists from Black River Archaeology, LLC (*Black River*), under contract with Stevens Engineering and the Town of Garfield conducted a Phase I archaeological survey in advance of the proposed park and boat landing expansion project on the western shore of Lake Wapogasset. This Phase I survey located a small (0.4 acre) prehistoric archaeological site within the proposed 7.8 acre project area. This site was designated as the Garfield Spillway Site (47Pk193).

Prehistoric artifacts including a projectile point, waste-flakes and prehistoric ceramics were recovered from a cluster of ten positive shovel tests and associated brackets within the Garfield Spillway Site area, focused on a high knob along the SE corner of project area. Based on the sample of diagnostic artifacts recovered from the site, the Garfield Spillway Site appears to contain multiple prehistoric archaeological components ranging in age from 2500 B.P to 500 B.P. Artifacts were recovered relatively high in the soil column (5-30cmbs) and soil profiles within the site area suggest none or only minimal soil disturbance has taken place at the site historically. Two additional isolated finds of prehistoric ceramics were also recovered from two disparate shovel tests within the project area, but these finds appear to come from disturbed fill soils and their relationship to the 47Pk193 site deposit cannot be determined.

Based on the artifact density and diversity recovered, the apparent multiple-component nature of the site's archaeological deposit, and the generally excellent level of site integrity observed at the site, Black River Archaeology recommends that the Garfield Spillway site (47Pk193) be considered potentially-significant and that the site be considered potentially-eligible for inclusion in the National Register of Historic Places (NRHP).

Based on these findings, Black River Archaeology therefore recommends that the site area be avoided during construction by project redesign if possible. If avoidance by redesign is not possible or feasible, a Phase II test excavation should be conducted on the site area to determine if the 47Pk193 site is indeed eligible for inclusion in the National Register of Historic Places (NRHP). Such a Phase II excavation should focus on determining the age, nature and extent of the Garfield Spillway site's archaeological deposit.

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Introduction

In April of 2006 archaeologists from Black River Archaeology, LLC (*Black River*), under contract with Stevens Engineering and the Town of Garfield conducted a Phase I archaeological survey in advance of the proposed park and boat landing expansion project on the western shore of Lake Wapogasset in south-central Polk County, Wisconsin (**Figure 1, Figure 2**). The existing park site is located along CTH F in Section 26, Township 33 North, Range 17 West within the Town of Garfield.

The property consists of Lots 1-8, Block 5 and Lots 5 and A, Block 7 within the Plat of Wapogasset Beach, all properties belonging to the Town of Garfield. The total area of the existing park is approximately 7.8 acres. The existing park includes a gravel entrance road from CTH F, a gravel parking lot and one gravel/sand boat landing. The proposed improvements to the park include new roads, a relocated entrance, improved and expanded parking and restroom facilities, site lighting, picnic shelters and a new boat ramp (**Figure 3**).

The park expansion project will be funded in part by using Federal Sports Fisheries Restoration (SFR) funding administered by the Wisconsin Department of Natural Resources (WDNR). As part of the WDNR funding/permitting application the Town of Garfield sponsored an archaeological survey of the proposed project area.

The land-use history of the Lake Wapogasset Park area notes that the park been a public park and lake-access area since the 1930's and has never seen agricultural use. Several local historical markers are present within the park area, including markers for a 19th century saw-mill and a marker for "Dr. James Wallace". Local residents informed field personnel that, according to local tradition, there had been historic early 20th/late 19th century structures present within the project area at one time. According to this oral history these structures had mainly been bar/taverns and other recreational-related structures associated with the lake access.

No archaeological evidence for any historical structure or even a significant 19th century presence in the area was recovered from shovel testing near both markers and throughout the current park area, suggesting the markers are commemorative and do not mark the actual location of former historic properties. Inquiries with the local Polk County Historical Society confirmed that the markers refer to structures and owners of the properties that were located near the current lake spillway (Hallquist, per.comm.)



Figure 1. Project Location Within the State of Wisconsin

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Figure 2. Project Location – Wapogasset Lake USGS Quadrangle



Figure 3. Initial Project Design Schematic

Environmental Setting and Overview

The Polk County-St. Croix region is contained within the Central Plains geographical province of Wisconsin (Martin 1965:33). The Central Plains province is a crescentric band of outwash plains and gradual sloping glacial drift overlying eroded bedrock of Cambrian sandstone and limestone. Extensive areas of kettle and knob topography associated with end moraines occur in the north. Numerous lakes and bogs are associated with this topography. Vegetation originally consists of a mixture of southern oak forest, prairie and northern mixed hardwood, and coniferous forest (Finley 1976, Hoffman 2002). For the most part, this region is lightly populated and less developed than southern portions of the state of Wisconsin. Much of the region is forested ("the Northwoods") and many natural lakes and wetlands are present throughout the region (Martin 1965:32-35). Recent settlement, primarily focused on the resort and summer home locations along the rivers and lakeshores, has begun to increase the impacts of modern human settlement upon the general landscape and on the archaeological resources of the region over the last several decades.

The hydrology of the area is primarily focused on the many large pitted outwash and pothole lakes that occur in the area due to the recent Wisconsin-age glaciations of the area. The area is contained within the St. Croix watershed which encompasses about 11,550 km² (1.7 million ha). The St. Croix River drains about 7,233 km² in Wisconsin and 4,317 km² in Minnesota (Lindholm et al. 1974). Ther five major streams or watersheds that are tributary to the St. Croix in Wisconsin include the Namekagon, Clam, Apple, Willow, and Kinnickinnic rivers (Waters 1977). The Apple River drains much of southern Polk County and is the primary drainage, along with the northern Balsam Branch Creek, of Lake Wapogassett.

The geology of the project area consists primarily of deeply buried limestone and sandstone deposits, primarily Cambrian in age, capped by thick deposits of glacial drift. The entire region was repeatedly scoured by glacier advances, including the most recent Superior Lobe, during the Late Wisconsin epoch. Two primary glacial drift deposits, the Cary/Young Red and the Mankato/Young Gray, are responsible for most of the soil formation and surface topography of the region today (Kissinger 1979:4). The region is dominated by broken glacial moraines of the St. Croix Moraine (Dott and Attig 2004), sand and gravel deposits from pitted outwash lakes and silt and loam deposits deposited by sedimentation from glacial pothole lakes. Much of the region consists of so-called "Pine Barrens", or large sandy outwash plains. Soils within the project area are complex, reflecting the terminal moraine and outwash nature of their development. However, most of the soils within the area are part of the Rosholt-Cromwell-Menahga Series (Kissinger 1979:59). These soils consist of nearly level to very hilly, well-drained loamy and sandy soils that occur on pitted outwash plains and stream terraces. Soil development is generally weak and the majority of soil columns have only 20-30 inches (50-75cm) of surface and subsoils overlying extensive coarse sand and gravel deposits.

Historical and Cultural Overview

Native American occupation of northern Wisconsin began around the beginning of the Holocene epoch, when groups of hunter-gatherers moved into the region after the retreat of the last glacial advance. Archaeologists have currently established the basic broad chronology of Native American cultural traditions in the region as follows (Moffat 1999).

> Paleoindian Tradition, ca. 8,000-5,000 B.C. Archaic Tradition, ca. 5,000-1,000 B.C. Woodland Tradition, ca. 1,000 B.C.- A.D. 1200 Oneota Tradition, ca. A.D. 1200- A.D. 1650 Historic Period, ca. A.D. 1650-Present

The archaeological chronology for northern Wisconsin is less well developed than that of southern Wisconsin, reflecting the relatively limited amount of archaeological investigations conducted in the region. The primary cultural sequence for the area remains that developed by Dr. Robert Salzer during the 1960's Beloit College North Lakes Project (Salzer 1969, 1974). This basic sequence has been modified by information gained from more recent studies and synthesis, a majority of which were sponsored by Federal Energy Regulatory Commission (FERC) relicensing studies of the large hydropower reservoirs conducted on behalf of the Wisconsin Valley Improvement Company (WVIC) (Brazeau et al. 1990, Moffat et al. 1991, 1993, Moffat 1999).

Paleoindian Tradition (ca. 8,000-5,000 B.C.)

Paleoindian peoples are the earliest known inhabitants of the northern Wisconsin region. Paleoindian groups are generally believed to have entered the state from the south and southwest in small numbers, gradually migrating to the north and east in pursuit of the retreating glacial ice (Mason 1997:80). Paleoindians are thought to have lived in small, highly mobile bands who hunted and gathered across a wide territory, adapting to a range of changing environments within a climate that was somewhat colder than today's. In southern Wisconsin the Paleoindian tradition is subdivided into Early and Late Stages.

The Early Paleoindian Stage (ca. 10,000-8,000 B.C.) in southern Wisconsin is characterized by the presence of "fluted" projectile points styles such as Clovis, Gainey and Folsom (Stoltman 1991:260). These projectile points are lanceolate in shape, centrally fluted and often laterally and basally ground. Fluted points are presumably hunting tools and have been recovered in association with mastadon, mammoth and extinct bison species on the Great Plains and western states.

Early Paleoindian sites, marked by the presence of fluted lanceolate points have not been found in the Highland Lakes District of Wisconsin. The lateness of deglaciation in this region may have restricted Early Paleoindian occupation of the area (Mason 1986:187). The lack of Early Paleoindian sites in the area may also represent sampling bias, as the sites would reflect small, highly mobile groups of people moving into a recently deglaciated region substantially different than the modern landscape and would be difficult to locate in limited surveys (Moffat 1999:15)

The Late Paleoindian Stage (ca. 8,000-6,000 B.C.) in southern Wisconsin is characterized by a series of non-fluted projectile points that correlate with types such as Agate Basin, Scottsbluff-Eden and Plainview (Nienow and Boszhardt 1997:14-15) that are commonly found in the western Plains states. These projectile points are often stemmed or lanceolate forms, and while lacking fluting, continue the pattern of basal and lateral grinding seen in earlier Paleoindian styles.

Two Late Paleoindian phases were proposal by Salzer in the initial North Lake sequence (Salzer 1974:43-45). The Flambeau Phase, was never dated by radiocarbon assay but was estimated to date to approximately 7,000 B.C. The Flambeau Phase was defined based on assemblages contain projectile points similar to the Agate Basin type. A later Minocqua Phase was also assigned to Late Paleoindian Stage, based on the recovery of projectile points similar to the Scottbluff type. The Minocqua Phase was estimated to date to between 5,000 to 6,000 B.C.

Archaic Tradition (ca. 5,000-1,000 B.C)

The Archaic Tradition is characterized by a broad trend toward technological, cultural and ideological diversification in the period following the earlier Paleoindian Tradition. The Archaic Tradition is marked by an increasingly diversified exploitation of the environment, the development of plant processing technologies and a broader-based spectrum diet dependent on hunting, fishing and gathering. The development of large corporate cemeteries, often placed on natural knolls and or terraces may indicate developments in the social organization of Archaic Tradition peoples. New technologies such as the extensive use of ground-stone tools and native copper manufacture also are first identified during this period.

The Archaic Tradition is divided into three stages in southern Wisconsin. The Early Archaic Stage (ca. 7000-5000 B.C.) is characterized by the appearance of bevel resharpened and bifurcated projectile points such as the Hardin Barbed, St. Charles, Thebes and Bifurcate Base-types (Goldstein and Osborne 1988:23-27).

The Middle Archaic Stage (ca. 5,000-3,000 B.C.) is characterized by a continuation of the general trends toward subsistence diversification and regionalization. The stage is marked by an increased projectile point diversity featuring side-notched varieties such as the Raddatz, Osceola and Madison Side-Notched types. Technological developments dated to this period include such innovations as the use of the atlatl or spear thrower, raw-copper manufacture and the use of specialized groundstone woodworking tools including axes and adzes. The Old Copper Complex (Martin 1999:156-161), a wide-spread mortuary complex featuring large communal cemeteries and extensive use of native copper for tool making also developed during this period.

The Late Archaic Stage (ca. 3,000-1,000 B.C.) saw the termination of the Altithermal Climatic Episode. Cooler, moister conditions again prevailed and Late Archaic populations continued to increase in size and cultural complexity. Expanding regional exchange networksintroduced marine shell, copper and exotic stone tools and objects which are often recovered from burials of the period. The Red Ochre Complex, a mortuary complex characterized by the use of powdered hematite (red ochre) and the inclusion of diverse burial goods, often fashioned from exotic or high value materials with the dead begins during this stage and continues in some areas into the following Early Woodland Period (Ritzenthaler and Quimby 1962). The Late Archaic Stage is also characterized by a shift from side-notched projectile point forms to stemmed and corner-notched forms. The Archaic Tradition occupations of northern Wisconsin are poorly understood. Limited evidence suggests that Late Paleoindian cultures may have continued into the Early Archaic period with only limited cultural modification (Meinholz and Kuehn 1996). Salzer proposed two Archiac phases in the original North Lakes chronology (Salzer 1974). The Squirrel River Phase was based on the recovery of small, shallowly corner-notched points and Raddatz Side-Notched points from a single component at the Squirrel Dam Site (47On21). Salzer estimated its age to be between 6,000 to 5,000 B.C., based on artifact comparisons.

The Burnt-Rollways Phase is the second Archaic phase for the northern lakes region. The collections assigned to this phase include a number of small, corner-notched points, expanding stemmed points, side-notched forms and a well-developed copper industry. Salzer estimated the age of the phase to between 2,000 to 1,000 B.C. based on the recovery of copper artifacts. Moffat (1999:25) re-examined the original Burnt-Rollways Phase material and concluded that the materials were similar to those of the Preston Phase (ca. 1500-1000 B.C) in southern Wisconsin and the Riverton Culture of the same general age in Illinois and Indiana.

More recent excavations at site on the Rainbow Reservoir at sites 47On179 and 47On180 (Moffat and Speth 1999) produced radiocarbon dated features dating to the second millennium B.C. in association with copper working, Raddatz Side-Notched points and small notched dart points. This evidence tends to confirm the usefulness of the Burnt-Rollways Phase as a temporal taxon, the Squirrel River Phase has not been supported by recent research.

Woodland Tradition (ca. 1000 B.C.- A.D. 1200)

The Woodland Tradition is marked by a series of important sociological, economical and technological innovations (Stevenson et al. 1997). This period saw the first development of ceramic technology, burial of the dead in earthen mounds and an increased reliance on plant cultivation and horticulture, supplemented by continued hunting and gathering of wild foods. The Woodland Period also witnessed the introduction of the bow and arrow, a development that greatly impacted methods of warfare and hunting techniques (McElrath, Emerson and Fortier 2000:12).

Settlement pattern changes associated with the Woodland Tradition include a general pattern of greater geographic and topographic diversity in site location and resource use. A trend toward decreased settlement mobility and an associated increase in sedentary or semi-sedentary life-ways linked to population growth and increased reliance on domesticated crops is also typical of the period (Green 1986). The Woodland Tradition is also conventionally divided into a series of Early, Middle and Late stages in the Midwest.

However, in northern Wisconsin archaeologists have found the traditional three stage framework difficult to apply (Moffat 1999:34) and have instead argued for the use of a two stage system consisting of an Initial Woodland and Terminal Woodland Stage originally developed for the Ontario region (Wright 1972). Salzer proposed two Woodland phases in the original North Lakes chronology (Salzer 1974). The Nokomis Phase, a Middle Woodland/Initial Woodland phase, consisted of grit-tempered ceramics typed as Lake Nokomis Trailed, along with contracting to straight stemmed projectile points and evidence for copper working. Salzer proposed a date range of A.D 1 to A.D 200 based on the presence of ceramics similar to Middle Woodland types from southern Wisconsin and Illinois.

Research now suggests that the Nokomis Phase taxon describes Initial Woodland components with relationships to several different traditions including the northern Laurel Cultures and the Havana and Black Sand Cultures of Illinois. Ceramic assemblages dating to the phase are highly variable and include ceramics similar to types such as Dane Incised and Little Eau Pleine Punctated. Lithic artifacts now associated with Nokomis Phase occupations are also variable and include such stemmed types as Fox Valley Stemmed, Kramer Stemmed and Waubesa Contracting Stem. Recent uncalibrated radiocarbon dates from Nokomis Phase sites from northern Wisconsin (Meinholz and Kuehn 1996, Bruhy et al 1990, Moffat et al 1993) range between 600 B.C. to 700 A.D. suggesting that some of the variation seen in Nokomis Phase components may be the result of temporal change over a long time period. Given the temporal and artifact assemblage variability now recovered from Nokomis Phase sites, Moffat (1999:42) has proposed redefining the Nokomis taxon as a "complex" rather than a phase until greater chronological refinement is possible.

The Terminal Woodland Stage in the Highland Lake District was originally represented by Salzer's Lakes Phase (1974). The Lakes Phase was defined on the basis of small, triangular projectile points, ceramics similar to Madison, Heins Creek and Clam River wares, and burial sites that included mound groups and open cemeteries. As originally defined, the Lakes Phase included earlier Late Woodland occupations and a later stage that included the addition of collared, grit-tempered vessels and the arrival of shell-tempered ceramics via trade from the Oneota or Mississippian populations from the south. Salzer estimated the age of the Lakes Phase to be between A.D. 600 to A.D. 1400. More recent excavations of Terminal Woodland sites in the district (Moffat et al 1992) have demonstrated that prehistoric components comparable to the Lakes Phase are present in high density within Oneida County. These new Lake Phase sites have generally been radiocarbon dated to between A.D. 500- A.D.1200, and have produced primarily Madison Ware grit-tempered ceramics with Madison Triangular projectile points. The Lake Phase sites have also produced carbonized wild rice and maize remains from pit features indicating the use of both crops during this period.

Oneota Tradition (ca. A.D. 1200- A.D. 1650)

The Oneota Tradition represents the post-Woodland period that saw the development of nucleated agricultural villages that contained increasingly larger populations, used shell-tempered ceramics and were dependent upon maize agriculture. Oneota sites are typically sedentary nucleated villages focused on the use of maize agriculture supplemented by hunting and gathering. However, Oneota villages typically lack evidence for social ranking and pyramidal or platform mounds. Oneota ceramics are typically globular, shell-tempered vessels decorated with a combination of punctates, chevrons, finger and tool-trailed designs. Like the Late Woodland people who proceeded them, Oneota peoples used small, un-notched triangular arrow-points such as the Madison Triangular type.

Limited evidence for an Oneota Tradition occupation of the Highland Lakes District is found in the recovery of shell-tempered ceramics and grit-tempered ceramics with characteristic Oneota tradition decorations from several sites within the Wisconsin River Headwaters. A majority of these recoveries have been from sites with dominant Lakes Phase components, suggesting that their may have been exchange or cultural influence between Oneota populations to the south and resident Lakes Phase groups.

Bruhy (Bruhy et al 1990, Bruhy 2001) has proposed a provisional Zarling Lake Phase to represent Late Prehistoric occupations in north-central Wisconsin dating between A.D. 1400-1650. Zarling Lake Phase ceramics are typically shell or grit tempered with plain, smoothed exteriors with some Oneota-like decorative traits and sites assigned to the phase have not produced European trade goods. However, the dating and cultural affiliations of the Zarling Lake Phase remain problematic pending further research.

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Historic Native American Period (A.D. 1650-Present)

Northern Wisconsin has been continually occupied by various Native American nations throughout the Early and Late Historic Periods up until the present day. Notable Native American nations that maintained a presence in northern Wisconsin during the historic period include the Eastern Dakota, Ho-Chunk (Winnebago), Menominee, Huron, Petun, Ottawa, and Ojibwe and Potawatomi (Tanner 1987). Due to the flexibility of Native American political boundaries, the general paucity of written records from the period and the general political and economic turbulence of the historic-fur trade period it is nearly impossible to accurately distinguish the territories controlled by each of the tribes during specific dates during this period or to detail exactly which tribes were located in which areas during the early historical period.

However, 17th-century European historic sources do indicate that at the time of European contact much of northern and northwestern Wisconsin was occupied and controlled by the Eastern Dakota, or Santee Sioux (Hickerson 1970:65-67). During the 1650-1660's small groups of lower Great Lakes tribes including the Ottawa, Huron and Petun formed a multi-tribal refugee village on Chequamegon Bay that was later relocated to Green Bay in 1670 in the face of pressure from the Dakota (Bieder 1995). By the late 1600's historical documents suggest that the Ojibwa (Chippewa) had become the dominant Native American nations in northern Wisconsin. Periodic intertribal warfare and raiding between the Dakota and Ojibwa continued into the 1740's and left the Ojibwa in control of northern Wisconsin and northeastern Minnesota. The Ojibwa nations are the primary modern Native American populations in the region today (Loew 2001) , with the St. Croix Ojibwe Band being the closest modern Native community focused on the villages of Hertel and Turtle Lake.

Previous Investigations

No previously known archaeological sites are reported from within the project area. Several prehistoric and historic sites are known in the area surrounding Lake Wapogasset (**See Table 1)(Figure 4)**. However only two (47Pk133)(47Pk132) are known to exist within 1-mile of the project area. Both of these sites are located more than a ¹/₂ mile from the current area of investigations.

While archaeological sites have been reported in the Lake Wapogasset area since the early 1900's (CEB Atlas), only two modern archaeological surveys have been conducted in the area. The first of these was a 1991 survey in advance of a proposed gas pipeline in the Town of Garfield (Van Dyke 1991). The 1991 pipeline survey corridor covered much of the western shoreline of Lake Wapogasset, and bisected the current project area. No artifacts were recovered or sites reported from the corridor of the 1991 CRM survey.

The second major regional archaeological survey was a private surface survey of plowed fields and river benches along the Wapogasset Branch of the Apple River located to the southwest of the current project area (Wendt 1994). Wendt's survey recorded several prehistoric sites ranging from isolated lithic scatters to multiple component Archaic –Woodland campsite/villages (**Table 1**).

Several historical markers are present in the area of the current Lake Wapogasset park , including the marked location of a 19th century sawmill along the SW corner of the project area. Shovel testing in this area did not produce any historical artifacts, suggesting that the marker is commemorative and does not mark an archaeological or historical property.

Site #	Site Name	Site Type	Cultural Affiliation	Reference
47Pk-10	Un-named	Campsite/Village	Unknown Prehistoric	CEB Atlas
47Pk-11	Un-named	Cemetery/Burial Historic Native American		CEB Atlas
47Pk-128	Un-named	Lithic Scatter	Unknown Prehistoric	Wendt 1994
47Pk-129	Un-named	Campsite/Village	Archaic/Woodland	Wendt 1994
47Pk-131	Un-named	Campsite/Village Unknown Prehistoric		Wendt 1994
47Pk-132	Un-named	Lithic Scatter Unknown Prehistoric W		Wendt 1994
47Pk-133	Un-named	Campsite/Village	Archaic/Woodland	Wendt 1994

Table 1. Previously Known Archaeological Sites Located Near the Project Area



Figure 4. Location of Previously Known Archaeological Sites Near Project Area

Methods and Results

The entire 7.8 acre project area was surveyed for archaeological deposits using techniques consistence with the *Guidelines for Public Archaeology in Wisconsin (1997)*. Fieldwork was conducted on April 4-5, 2006 by a crew of four field archaeologists (**Figure 5-conditions at time of survey**). Primary survey methodology consisted of shovel testing at a 15m interval along a N/S grid of transects throughout the project area. Approximately 150 shoveltests and associated brackets were conducted along 15 primary N/S transects.

A small 1-2 acre section along the northern portion of the project area consisted of standing water and marsh land, this area was not shovel tested. Additionally, no tests were conducted in areas that had existing concrete pads or gravel roads. The shoreline and cutbank zones, including areas near the existing and proposed boat landings were surface inspected for eroding or surface exposed artifacts. No artifacts were recovered from the shoreline or landing areas.



Figure 5. Field Conditions at Time of Survey- View East from Park Entrance

All positive finds were bracketed with additional shovel tests at a 5m interval in all four cardinal directions from the initial find spot. Positive shovel tests and site datums were field marked using a handheld Garmin GPS unit with roughly 5-7m accuracy. Of the approximately 150 shovel tests conducted within the project area, 14 shovel tests or brackets were found to be positive for the presence of prehistoric artifacts (**Figure 6-Project Area Map w/finds**).

Two isolated artifact finds of prehistoric ceramic sherds were found throughout the project area (T12, STU 4 and T14, STU 13) (**See Table 2**). However, both of these isolated finds were recovered from disturbed soil profiles, suggesting that the artifacts have been scattered by historic or recent ground disturbance. Both isolated finds were bracket by additional shovel tests at 5m and 10m in each cardinal direction. All brackets were negative.

GRID LOCATION	GPS COORDINATES (UTM)	ARTIFACTS	APPROX. DEPTH	NOTES
T12, STU 4	15T 0544171, 5018651	1 grit-tempered, cord- marked ceramic sherd	Unknown	Disturbed Soil Profile
T14, STU 13	15T 0544102, 5018735	1 grit-tempered, cord- marked ceramic sherd	40cmbs	Disturbed Soil Profile
T1, STU 1	15T 0544278, 5018618	1 quartz shatter	0-20cmbs	
T1, STU 2	-	1 chert shatter	0-20cmbs	
T2, STU 2	15T 0544274, 5018627	2 basalt flakes 1 quartz shatter 1 historic square nail	0-20cmbs	
T2, STU 3	-	4 grit and shell tempered, ceramic sherds	20-30cmbs	
T2, STU 2 + 15m NE	Bracket	1 chert flake	10-20cmbs	
T2, STU 2 + 5m W	Bracket	1 basalt flake 1 grit-tempered cord- marked ceramic sherd	20-40cmbs	
T2, STU 2 + 10m NE	Bracket	1 orthoquartzite stemmed projectile point	10-20cmbs	
T2, STU 2 +10 m SE	Bracket	2 quartz shatter 1 historic square nail	0-20cmbs	
T2, STU 2 +5m east	Bracket	1 quartz shatter	10-20cmbs	
T2, STU 2 +5m SE	Bracket	1 chert flake 1 historic square nail	0-10cmbs	
T2, STU 2 +15m SE	Bracket	1 grit-tempered cord- marked ceramic sherd	30cmbs	

Table 2. Catalogue of Positive Finds in Project Area



Figure 6. Project Area Map with Positive Find Locations (not to scale)

47Pk-193 - The Garfield Spillway Site

The Garfield Spillway Site (47Pk193) was discovered on high ground along the SE corner of the project area (**See Figure 6, Figure 7, Figure 8**). Approximately 40 shovel tests and associated brackets were excavated within this roughly 0.4 acre site area, of which 11 tests were positive for prehistoric artifacts.

The site produced a tight cluster of positive shovel tests and test brackets (**Figure 8**) and appears to be focused on the distinctive high-knoll landform on the point overlooking the outlet from Mud Lake to Lake Wapogassett. All of the positive shovel tests and artifacts recoveries are focused on the southeastern two-thirds of this higher, level ground landform. The southern and eastern boundaries of the site are distinctly formed by the rapidly sloping ground immediately south and east of the positive shovel test cluster that falls off rapidly into the lakeshore.

Defining the northern and western boundaries of the site area are somewhat more problematic based on the limited results of the Phase I investigations at the site. The northernmost positive shovel test was located approximately 80ft north and 50ft west of the historic stone marker used as a field site datum (Wallace monument), suggesting that the extreme northern end of the knoll landform may not contain archaeological deposits. Unfortunately, this northern boundary of the site area was not extensively bracketed by the field crew during the Phase I survey. Only four shovel tests (all negative) were placed in this approximately 4500ft² (20m x 20m) northern portion of the knoll area. The area features contiguous level ground and similar soil types and profiles extending north from the main positive shovel test concentration. There is also a marked absence of any noted disturbed soils in the shovel tests in the northern area. Given these factors it seems probable that the 47Pk193 archaeological deposit may extend into this northern portion of the knoll and may simply not have been detected by the limited series of shovel tests placed in the area. A similar situation concerns the western boundary of the site, where positive shovel tests end some 15-20m from the western slope of the knoll, but the boundary area was not extensively bracketed with negative shovel tests. Additional archaeological testing may be necessary to define the edges of the site deposit in these areas more distinctly.

Based on these findings, it is the principal investigator's opinion that the entire knoll area should be considered part of the 47Pk193 site area, and in so doing anticipate a certain amount of "buffer zone" surrounding the area of positive finds. The planted treeline along the paved roadway on the northern and western edges of the knoll serves as an effective boundary marker for the probable, albeit conservative, boundaries of the site area in these (N, W) directions.

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Figure 7. Garfield Spillway (47Pk193) Site Area (View North from base of slope, Wallace Monument is background-center)

Soils profiles from shovel tests reveal a consistently undisturbed soil column in the site area. A majority of soil profiles from the 47Pk193 site area consist of a 10-20cm loamy A-horizon (7.5YR 2/1), overlying a loamy-sand B-horizon (10YR 4/2-5/2) subsoil. This subsoil frequently continued to 35-45cmbs where a sterile coarse sand/gravel base soil was routinely encountered. This soil column is consistent with the Rosholt Loam soil complex mapped for the site area (Kissinger 1979:58).

A majority of the prehistoric artifacts recovered from the 47Pk193 site area were recovered from relatively high (0-20cmbs) in the soil column (**See Table 2:pg 16**) suggesting a lack of fill deposits, flooding or rapid soil column generation. The transition from the A-horizon to B-horizon was consistently gradual and mottled, suggesting the lack of a historic plowzone consistent with the known land-use history for the site area.

In addition, a review of the historic topography of the Lake Wapogassett shoreline indicates that the primary Holocene terrace is likely currently submerged by relatively high modern lake levels. This suggests that significant archaeological deposits may be located several feet under water to the south and east of the current shoreline on this submerged primary terrace.



Figure 8. Field Sketch Map of 47Pk193- Garfield Spillway Site

Artifact recoveries from the site included an orthoquartzite stemmed-point, grittempered and grit-shell tempered prehistoric ceramics; chert, quartz and basalt debitage and historic iron nails (**Table 2, Figure 9**). The stemmed projectile point is best classified as a Durst Stemmed (Boszhardt 2003:57), although the validity of this point type in northwestern Wisconsin chronologies is somewhat suspect. In southern Wisconsin or Minnesota, Durst Stemmed points are considered to be diagnostic of the Late Archaic period (Stoltman 1997) and are thought to date to roughly 3,000 B.P (years before present) or 1000 B.C..

The seven prehistoric ceramic sherds from the site area are all relatively undiagnostic small body-sherds. Their presence dates a second, and most likely the primary, chronological component at the site to the general Woodland Period (ca. 2500-500 B.P). However, an analysis of the sherds' paste, temper and general thickness suggest that they most likely date to the Late Prehistoric Period (ca. 1100 B.P.-500 B.P.) or roughly A.D. 900-A.D. 1500. The grit-tempered sherds would fit well into a number of regional Late Woodland series such as Kathio, Clam River, or Madison wares (Benchley et al. 1997:177-179). The four grit and shell mixed-tempered sherds from test (T2, STU 3) suggest affiliation with later Sandy Lake Ware suggesting a third and latest occupation of the site dating to ca. A.D 1200-1650 (Birk 1979:175).



Figure 9. Prehistoric Artifacts and Diagnostics from the 47Pk193 Site Area

Summary and Recommendations

In summary a Phase I survey of the approximate 7.8 acres of the proposed project area was completed in April of 2006. The Phase I survey discovered a small, but substantial prehistoric Native American archaeological site (*Garfield Spillway Site, 47Pk139*) along the SE corner of the project area covering an area of roughly 0.4 acres. Artifacts recovered include stone-tool debris, a stone spear-point and several fragments of prehistoric pottery. Based on artifact recoveries, the site's prehistoric occupation appears to date from roughly ca.1000 B.C- A.D 1500.

Given the intact nature of the soil profiles and archaeological deposits at the Garfield Spillway Site, the site's multi-component nature (multiple time periods of occupation) and the apparent excellent ceramic preservation at the site, it is our considered opinion that the 47Pk193 site is potentially eligible for listing on the *National Register of Historic Places* (NRHP) as detailed in Section 106 of the National Historic Preservation Act (NHPA).

Based on these findings we recommend that, if possible the proposed park layout be redesigned to avoid impact to the Garfield Spillway Site. The original project design (**Figure 3**, **pg.4**) suggests that several construction features are likely to adversely impact the site. Proposed design features such as; (1)Restroom facility (2) 50' x 50' play area (3)Shelter #2 as well as related gravel trail, parking and access features would likely compromise the integrity of the archaeological site deposit. The relatively shallow depth of most artifact recoveries (0-30cm) also suggests that even minor ground disturbance activities such as trail construction and playground facilities (sand pit, pea gravel etc.) may impact the archaeological deposit at the site. However, neither boat landing feature expansion should affect the archaeological site area as presently designed.

If such a redesign is not possible or cost-effective, we would recommend that you conduct an additional Phase II test excavation of the archaeological site in order to determine its full context, nature and extent. Such an investigation should determine if the site is indeed eligible for listing on the *National Register of Historic Places* (NRHP). Such further testing, if required, should primarily focus on determining the exact vertical and horizontal extent of the site area and the effects that any proposed construction may have on the archaeological deposit.

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Appendix 1. Project Correspondence

Appendix 2. Wisconsin State ASI Site Forms

Appendix 3. Wisconsin State B.A.R Forms