ST. LOUIS DISTRICT HISTORIC PROPERTIES MANAGEMENT REPORT NO. 40

A PHASE I ARCHAELOGICAL SURVEY FOR HISTORIC PROPERTIES WITHIN THE CARLYLE LAKE WILDLIFE MANAGEMENT AREA, HABITAT RESTORATION PROJECT, SECTION 1135, CARLYLE LAKE, KASKASKIA RIVER, FAYETTE COUNTY, ILLINOIS

CONTRACT NUMBER DACW-43-92-D-0501, DELIVERY ORDER #4

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This report describes the results of a Phase I archaeological survey of approximately 9.2 miles of levee construction corridors within the sub-impoundment area at the north end of the Carlyle Lake Wildlife Management Area on the Kaskaskia River in Fayette County, Illinois. Pedestrian survey and screened shovel tests found no evidence of prehistoric or historic archaeological sites within the project area. Clearance of this project in regard to cultural resources is recommended. The survey was conducted in August 1993 by American Resources Group, Ltd., for the U.S. Army Corps of Engineers, St. Louis District on lands managed as a wildlife refuge by the Illinois Department of Conservation. The project is planned under Section 1135 of the Water Resources Development Act with the object of modifying or improving existing water resources projects.

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St. Louis District Historic Properties
Management Report No. 40

A Phase 1 Archaeological Survey for Historic Properties Within the Carlyle Lake Wildlife Management Project, Habitat Restoration Project, Section 1135, Carlyle Lake, Kaskaskia River, Fayette County, Illinois

Contract No. DACW43-92-D-0501
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This report describes the results of a Phase I archaeological survey of approximately 9.2 miles of levee construction corridors within the sub-impoundment area at the north end of the Carlyle Lake Wildlife Management Area in Fayette County, Illinois. Pedestrian survey and screened shovel tests found no evidence of prehistoric or historic archaeological sites within the project area. Clearance of this project in regard to cultural resources is recommended.

ACKNOWLEDGMENTS

The authors wish to thank the personnel of the Carlyle Lake Wildlife Management Area, particularly Mr. Carlos Hammond, for their assistance in the completion of this project. Mark J. Wagner directed the field investigations. The hard work put in by the archaeological field crew members--Jim Burrow, Gordon Howe, Todd Ogier, and Jim Snyder--under adverse conditions is acknowledged. James Balsitis prepared the figures and photographs contained in this report.

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CHAPTER I. INTRODUCTION

Mark J. Wagner

This report describes the results of a Phase I investigation of approximately 9.2 miles of levee construction corridors within the Carlyle Lake Management Area, Fayette County, Illinois (Figures 1 and 2). This research was funded by the U.S. Army Corps of Engineers and administered by the St. Louis District, St. Louis, Missouri, as part of contract No. DACW43-92-D-0501.

The study performed herein by the Contractor for the U.S. Army Corps of Engineers is called for in the National Historic Preservation Act of 1966 (PL-89-665) as amended. Accomplishment of this work provides documentation evidencing compliance with Executive Order 11593, "Protection and Enhancement of the Cultural Environment," dated 13 May, 1971, and Section 110 of the National Historic Preservation Office.

The primary objectives of the investigations were: (1) the identification and recording through Phase I pedestrian survey and shovel/soil core subsurface survey of all potential NRHP eligible historic properties within the project area; (2) documentation through archival research, subsurface testing, and visual assessment of project impacts; (3) the preparation of a scientific report of the study that meets Illinois Historic Preservation Agency (IHPA) guidelines for such studies; (4) recommendations regarding the necessity for Phase II investigations to determine NRHP eligibility (Appendix A). All work conformed to professional standards and guidelines set forth in the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic preservation (Federal Register, 1983).

The natural environment of the project area is briefly summarized in Chapter II. The research design of the project, including the field and laboratory methods employed in the study, are presented in detail in Chapter III. Previous archaeological research in the project area and a historical overview of Fayette County that provide a cultural context for the archaeological survey are presented in Chapter IV. The results of the field investigations are presented in Chapter V. Conclusions regarding the potential impact of the habitat restoration project on cultural resources are presented in Chapter VI. The project scope of work, geomorphological assessment of soil borings from the project, and review comments are presented in Appendices A-C.

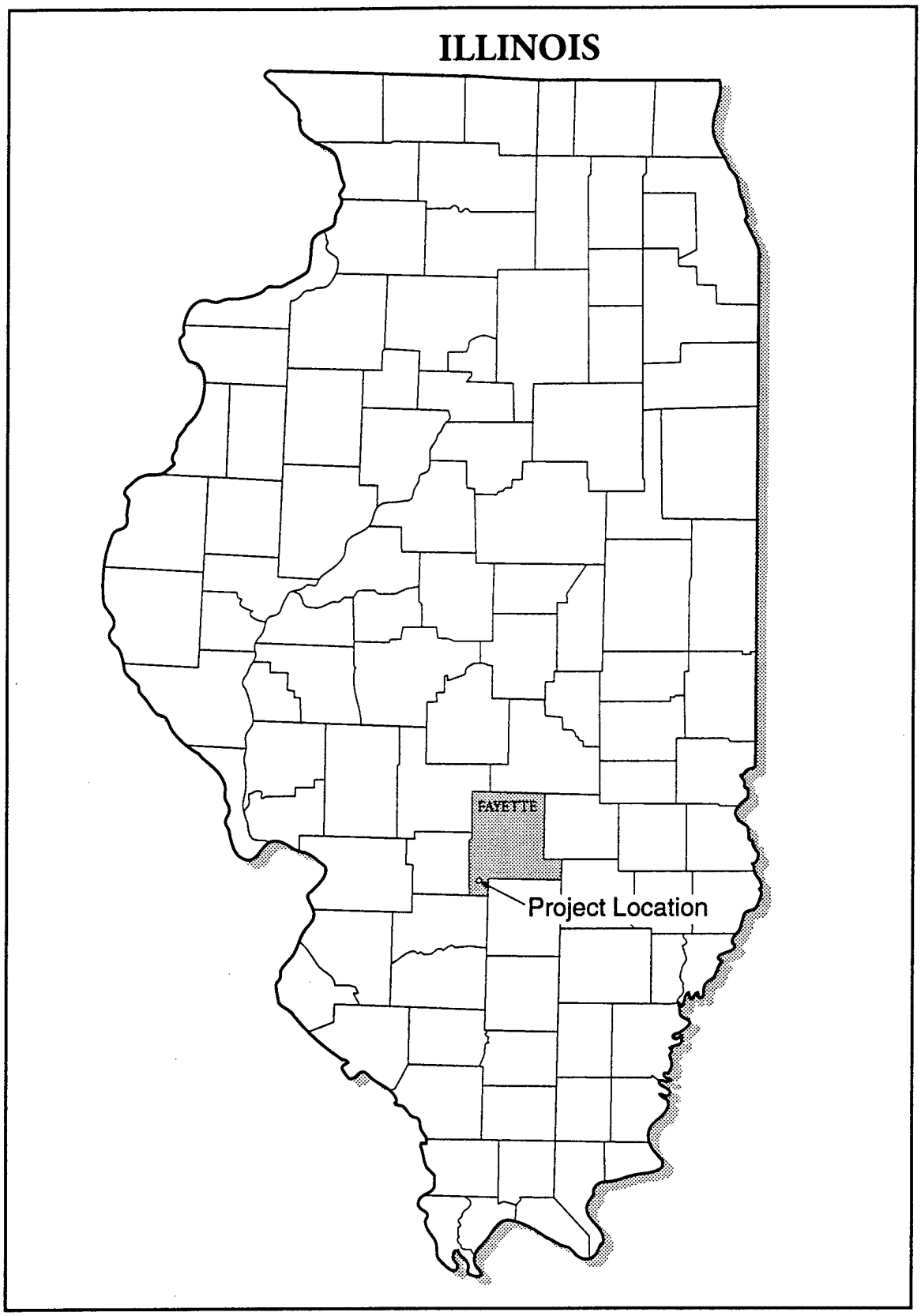

Figure 1. Location of project area.

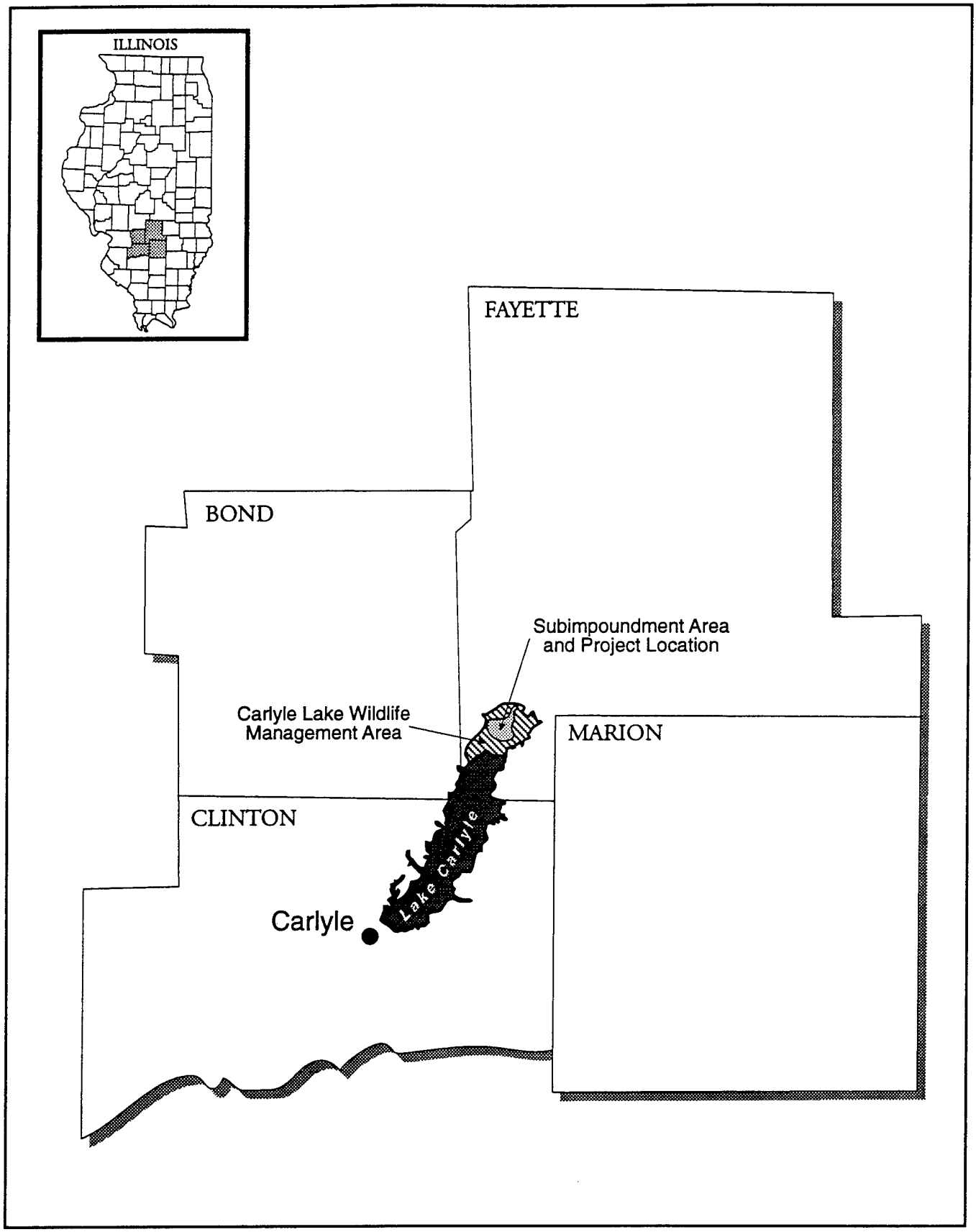

Figure 2. Map of Carlyle Lake showing project location.

CHAPTER II: ENVIRONMENTAL SETTING

Mark J. Wagner

Introduction

The project area is contained within the Carlyle Lake Wildlife Management Area within the Kaskaskia River Valley in southwestern Illinois (Figures 1 and 2). Comprising approximately 2,299 acres of public land, the management area includes portions of Bond, Clinton, and Fayette Counties, Illinois.

Regional Setting

The Carlyle Lake Wildlife Management Area is contained within the glaciated Southern Till Plains Division of the Central Lowlands Physiographic Province, an area of low relief with general upland elevations ranging between 420-450 ASL (Schwegman 1975). The Till Plains consist of two sections, the relatively flat Effingham Plain and the hilly to rolling Mt. Vernon Hill Country, only the former of which is represented in Fayette County (Schwegman 1975:22).

Fayette County is underlain by the Bond Formation of the Pennsylvanian System of bedrock (Willman et al. 1975). This formation is typically composed of alternating layers of limestone, shale, sandstone, coal, and underclay (Weller and Bell 1937). Isolated outcrops of limestone occur along the creeks of the county.

The level to rolling topography of the county has been shaped to a large extent as a result of glaciation. During the Illinoian stage of the Pleistocene glaciation a glacial lobe entered the state, covering Fayette County and extending as far south as the Shawnee Hills (Willman and Frye 1972:37). Illinoian till of the Glasford Formation completely covers the area, decreasing in thickness from north to south (Schwegman 1973:21-22). Drainage within the county is provided by the the Kaskaskia River which flows through the county in a southwestern direction, ultimately discharging into the Mississippi River. A series of smaller streams including the North Fork of the Kaskaskia River, Flat Creek, and Hickory Creek flow in a general southwest direction, eventually draining into the Kaskaskia River. The western edge of the

county is drained by Hurricane Creek which flows in a southern direction before draining into the Kaskaskia River.

Floodplain soils within the project area are part of the Martinsville-Scioto soil association (Fehrenbacher et al. 1984:47-48). These are light colored soils that formed in thin silty or loamy materials on sandy Wisconsinan outwash under forest. Upland soils in the till Plains developed from a thin loess and till under forest and prairie vegetation. These are light colored, strongly developed soils which are poorly drained (Schwegman 1975:31). The Kaskaskia River Valley is flanked by large areas of Ava-Bluford-Wynoose soils that formerly would have supported deciduous forest. The level upland areas of the county contain Hoyleton-Cisne-Huey soils that formed under prairie grass (Fehrenbacher et al. 1984:18).

Prior to clearing for agriculture the Kaskaskia River floodplain would have supported an extensive bottomland forest dominated by silver maple, willows, sycamore, and American elm (Schwegman 1975:22). Pin oak occasionally grows in nearly pure strands in some areas of the floodplain. Other species include shingle oak, white oak, red oak, hickory, black walnut, river birch, and cottonwood. Areas of pin oak, white oak, hickory, ash, hackberry, and honey locust also occur on heavier soils away from the stream margins (Schwegman 1973:22).

At least four distinct vegetation zones were present within Fayette County in the late nineteenth century (Broadhead 1875:135-136). These were: (1) bottomland forests containing red birch, sycamore, bur oak, coffee tree, linden, buckeye, white walnut, hornbeam, ash, red mulberry, hickory, sassafras, hackberry, red bud, elm, shell bark, pig nut hickory, hazel, gum, sycamore, wild allspice, grape vines. Pin oak stands similar to those described by Schwegman (1973) also were present; (2) white oak communities located on the slopes between the bottomland and uplands; (3) post oak and white oak flats that contained post oaks, black oaks, black jack and black hickory; (4) upland prairies. Common prairie plant species that would have been present on these prairies include big bluestem (Andropogen gerardic) with Indian grass (Sorghastrum nutrans), wild rye (Elymus canadensis), switch grass (Panicum veriqatum), and slough grass (Spatine pectinate) as secondary grass species (Voigt and Mohlenbrock 1964:150).

The bottomland would have contained a wide range of mammalian, avian, and aquatic fauna prior to Euro-American settlement. Semiaquatic fauna that prefer a bottomland environment that would have been found in the Kaskaskia River floodplain prior to American settlement include the mink (Mustela vison), beaver (Castor canadensis), raccoon (Procyon lotor), and muskrat (Onoodatra zibethica). Other animals that would have been available in both the bottomland as well as the uplands include the opossum (Didelphia virginia), gray fox (Urocyon cineoargentus), eastern gray squirrel (Sciurius carolinesis), fox squirrel (S. niger) and southern flying squirrel (Glaucomys volans), striped skunk (Mephitis mephitis), groundhog (Marmota momax), and white-tailed deer (Odocoileus

virginianus) Shelford 1963). Animal species now extirpated from the project area that would have represented potential food resources include the American elk (Cervus canadensis), black bear (Ursus americanus), and passenger pigeon (Ectopoistes migratorius).

Amphibians and reptiles that prefer a bottomland environment include black racer snakes, the eastern box turtle (Terrapene carolina carolina), and the midland painted turtle (Chrysemys pictamarginata). Common avian species would have included turkey and bobwhite. Various species of geese, ducks, herons and other waterfowl would have been seasonally available.

Local Environmental Setting

The project area is contained entirely within the Kaskaskia River floodplain. Elevation within this virtually level area ranges from 445 to 450 AMSL. The Kaskaskia River flows along the eastern edge of the survey area. Shallow ponds and lakes located within the survey area include Halfmile, Grass, Hem, and Otter ponds. Vegetation within the survey area consisted of bottomland forest, corn fields, and weed-covered mud flats. Wild life observed during the course of the survey included beavers, water turtles, deer, egrets, and great blue herons.

CHAPTER III. RESEARCH DESIGN AND METHODOLOGY

Mark J. Wagner

Introduction

The following research design is guided by the rather diverse yet interrelated variables which are inherent to the practice of cultural resources management. These variables include the contract requirements as stated in the scope of work, topographic and vegetational conditions in the study area, and the level of proposed effort.

Research Design

The research design for the current project was based on the contract requirements as specified in the project scope of work (Appendix A) and topographic and vegetational conditions in the study area. In keeping with the primary objectives as specified in the scope of work, this research effort focused on the location and assessment of cultural resources within the project area.

Prehistoric Sites

For the purposes of the project, a site was defined as a "spatial cluster of cultural features, items, or both" (Binford 1972:46). This definition applies to both prehistoric and historic archaeological sites. Archaeological context may be defined by including any of the following: soil staining, associated fire-cracked rock, ceramics, features, or a concentration of materials within a reasonably definable spatial boundary. Localities designated as sites may be differentiated further into site types. The following prehistoric site type model (after Binford 1980:8-10) will be used for site discussions and interpretation within the project area.

Habitation Sites. Habitation sites contain cultural deposits related to seasonal occupation and may include subsurface features. Organic staining indicative of residential structures and task-specific activities may be represented. Site size is moderate to extensive. Density of cultural debris and diversity of artifact classes are moderate to large. Two kinds of habitation sites may be defined.

Residential Base or Village. These are the hub of subsistence activities, the locus out of which foraging parties originate and where most processing, manufacturing, and maintenance activities take place (Binford 1980:9). Residential base camps may be manifested in the archaeological record as large sites with a high artifact density and a wide diversity of tools and other artifacts. Cultural features are usually present.

Field Camp. A temporary operational center for a task group which maintains itself while away from the residential base and may be expected to be further differentiated according to the nature of the resources to be procured (Binford 1980:10). The task groups may function to procure resources for social groups much larger than themselves; sites may vary considerably, depending upon the size of the group and the nature of tasks to be performed. Subsurface features may be present.

Limited Activity Sites. These sites contain no subsurface features or structures or cultural deposits of substantial integrity related to seasonal occupation on the site. Organic staining is absent. Site size is generally small and the are occupied for only a short period of time. Density of cultural debris and diversity of artifact classes are limited severely due to the extractive nature of the limited activity.

Historic Sites

Historic archaeological sites were treated similar to prehistoric sites. Based on previous investigations in southern Illinois (McCorvie 1987a; McCorvie 1989) and the historic background of the region, three types of historic sites potentially were located within the project area.

Farmstead Complex. This type of site consists of a house and associated outbuildings. House structures were either log or frame. The foundation was generally made of sandstone, limestone, or brick and was either a pier or full perimeter foundation. Outbuildings and facilities that surrounded the house structure within a 15 m radius included the smokehouse, cellar, well, cistern, and privy.

Farmsteads often contain a separate barnyard area located within a 200 m radius of the domestic area. Structures and facilities in this area included the barn, corn crib, paddocks, gardens, and fruit orchards (McCorvie et al. 1989). Located at an even greater distance from the domestic area are the fields, pastures, hog lots, and other agricultural facilities of the farmstead.

Artifacts which are present on farmsteads included nails and other construction materials; brick; sandstone; limestone; earthenware; stoneware; window glass; bottles; canning jars; pressed glass containers; metal objects; toys such as marbles, slate pencils and

boards; pipes; buttons; and various domestic items. Ceramics usually represent a sizable percentage of the total number of artifacts with a larger ratio of earthenware to stoneware. A relatively high percentage of earthenware is generally a good indicator of a habitation site. The quantity and quality of artifacts reflect the economic status of the site.

Dump or Discard Locations. These sites originate strictly for the purpose of depositing refuse from other sites. Dump areas generally consist of larger objects such as worn-out machinery parts, portions of demolished outbuildings, and large household items. Gullies, ravines, or steep slopes are likely places for dumps. Smaller items such as broken ceramics are often discarded closer to the activity area.

Methodology

The research methodology was designed to meet a series of specific tasks including records search and literature reviews, archaeological field investigations, geomorphological investigations, laboratory analyses, report preparation, and curation of recovered materials.

Geomorphological Assessment

Existing maps and soil boring data compiled by the St. Louis District Corps of Engineers were examined by a qualified geomorphologist, Mr. Jeff Anderson. The results of this assessment are presented in Appendix B.

Records and Literature Review

A records and literature review of the project area was conducted prior to the start of field work. The objectives of the prefield research were to determine if known archaeological sites existed within the project area. Information provided by the Illinois Historic Preservation Agency to the Corps of Engineers, St. Louis District, was consulted to obtain information regarding previously recorded archaeological sites in the project area. This revealed that no sites had been previously recorded in the project area. Review of reports of past archaeological investigations in or near the project area also provided no information regarding previously recorded sites within the project area (Hassan and Schroeder 1987). The National Register of Historic Places was studied, and it was determined that for the survey area no sites were currently on the Register nor were there any sites pending nomination for the Register.

Original land purchase records complied by the Illinois State Archives were examined to assess the potential of the survey area to contain early historic period sites. Published sources consulted as part of the review of historic settlement in the project area included

nineteenth century county histories (Brink, McDonough, and Company 1878) and atlases (Warner and Beers 1876).

Pre-Field Meeting

A pre-field meeting was held at the Illinois Department of Conservation (IDOC) lake management office on August 3, 1993. Participants consisted of Andrea Pickard (USACOE Park Ranger), Mark Wagner (ARG), Suzanne Harris (USACOE), and Carlos Hammond (IDOC). It was agreed at this meeting that: (1) a single shovel transect would be located adjacent to the eight existing levees to be raised using borrow from excavation of adjacent ditches; (2) that two parallel shovel test transects would be excavated along the paths of the two new interior levees (2B2N and 2C2N) and the 600' addition to the west end of 1ES; (3) that one shovel test transect would be excavated in the proposed construction areas located west and east of the main ditch.

It also was noted that the locations of the two new interior levees--2B2N and 2C2N--have not been precisely determined; the locations shown on the USACOE levee/pool map are only general locations (Figure 3). It was agreed that: (1) lake personnel would mark the ends of the new levee locations for the surveyors; (2) that ARG would survey the approximate route of the new levees with the understanding that the actual locations of the levees might be different.

Field Investigations

The archaeological survey was conducted for a period of two days between August 2 and 3, 1993. The survey area consisted of 20 proposed construction areas within a single tract located in Sections 3-5 and 8-10 in Township 4N, R1W, and in Sections 33 and 34, T5N, R1W (Figure 3). The topography of the survey areas was similar, consisting of low-lying sections of floodplain.

Survey conditions within the project area varied widely (Figures 4-6). Four basic situations were encountered: (1) second-growth bottomland forest consisting of maples, willows, and other trees. In many cases, weeds and other types of ground cover were absent within these woods and surface visibility approached 100%; (2) cultivated fields containing approximate 6" high corn plants. Surface visibility was 100%; (3) weeds and brush-covered areas that varied from relatively dry weed-covered fields to marshy areas of scrub vegetation consisting of sawgrass, willow trees, and head-high horse weeds. Surface visibility within these areas was 0%; (4) flooded fields located adjacent to levees 1FW and old borrow pits located next to 1BE and 1EE. These areas were deleted from survey.

Complete survey coverage was accomplished by a field party of 5 persons. Survey techniques were implemented in accordance with sections 4.1-1.4 of the project scope of work (Appendix A). These included both systematic shovel testing and pedestrian survey. Pedestrian survey was

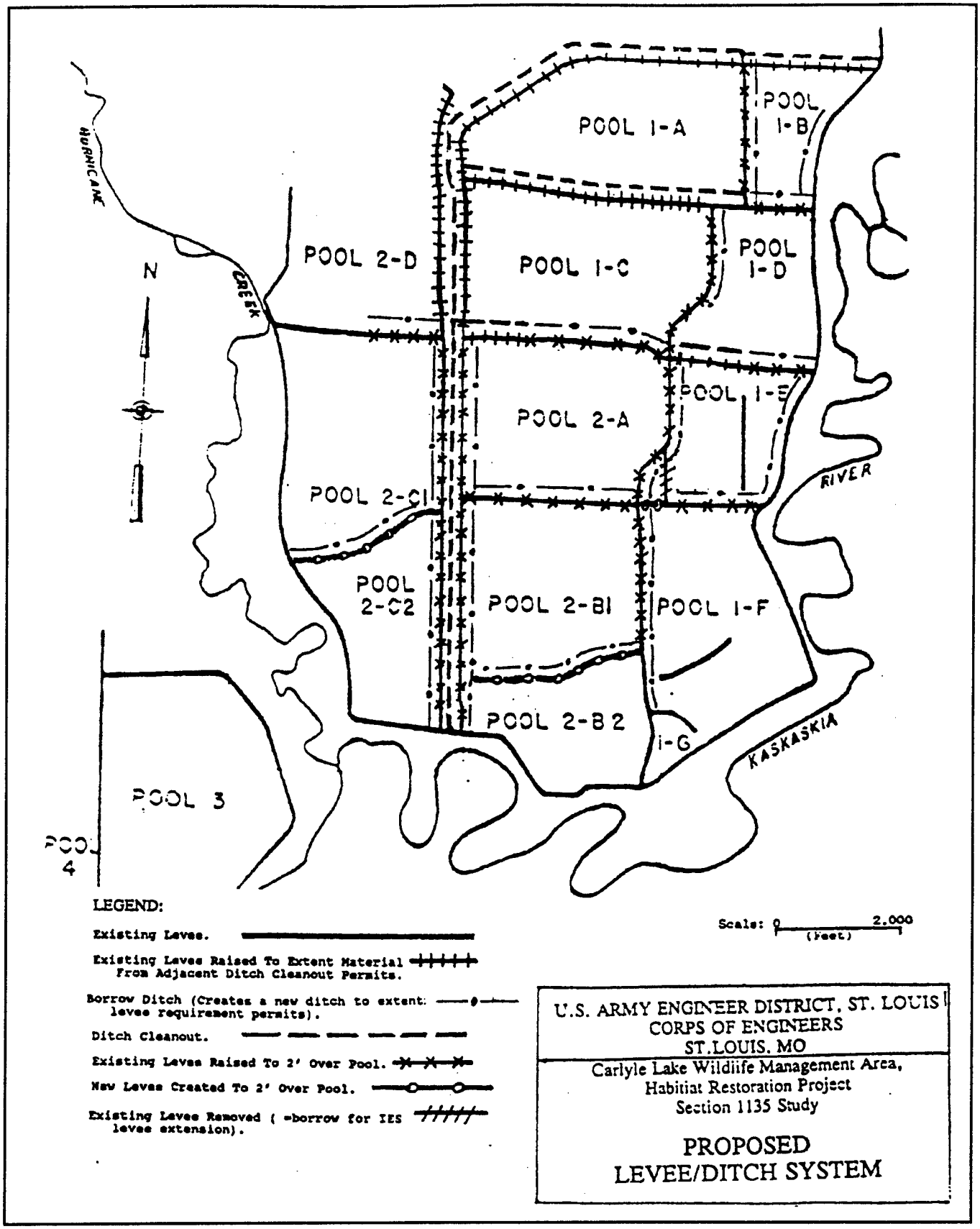

Figure 3. Locations of proposed levee/ditch construction.

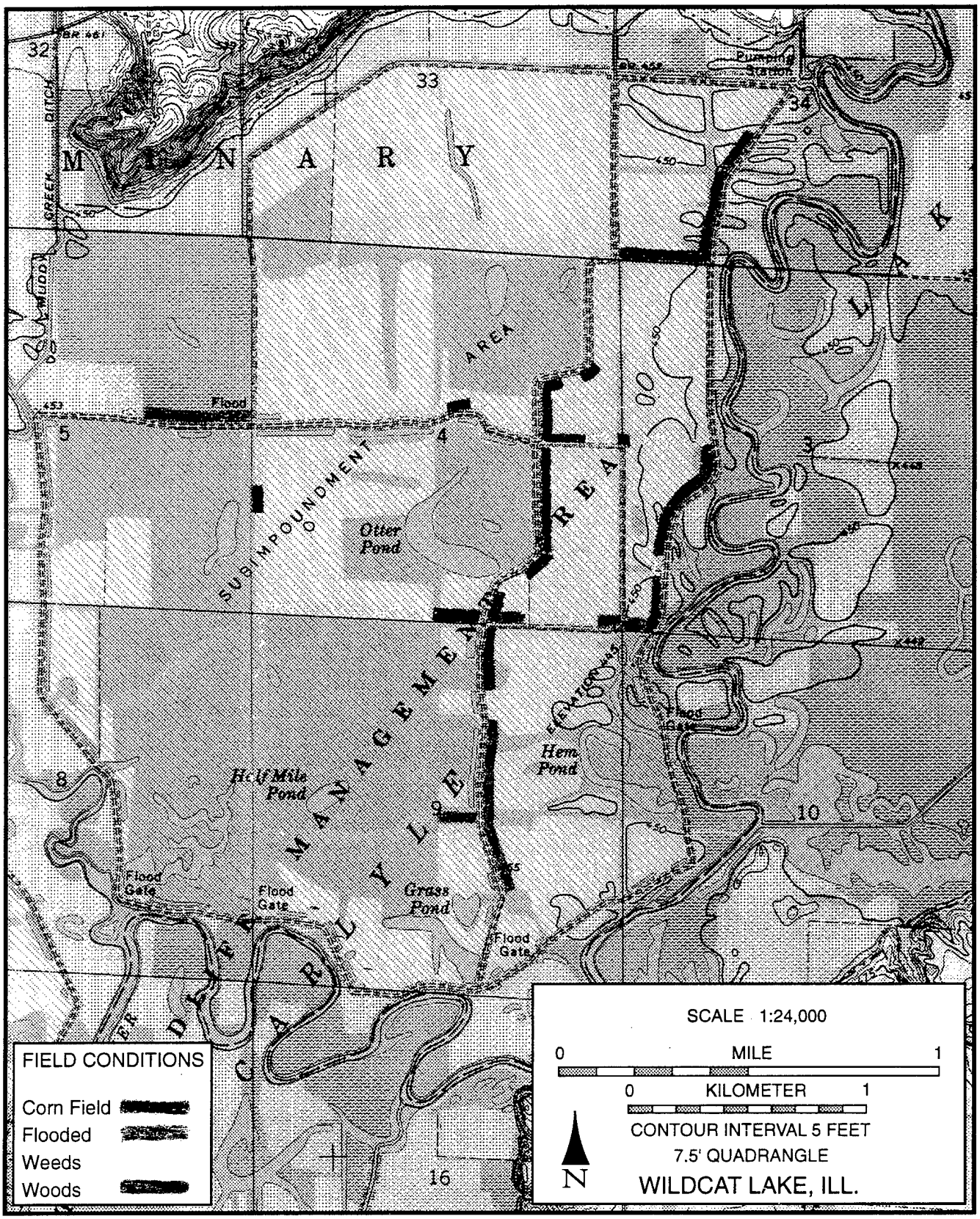

Figure 4. Survey conditions within project area.

Figure 5A. Pool 1F looking north.

Figure 5B. Pool 1D looking north.

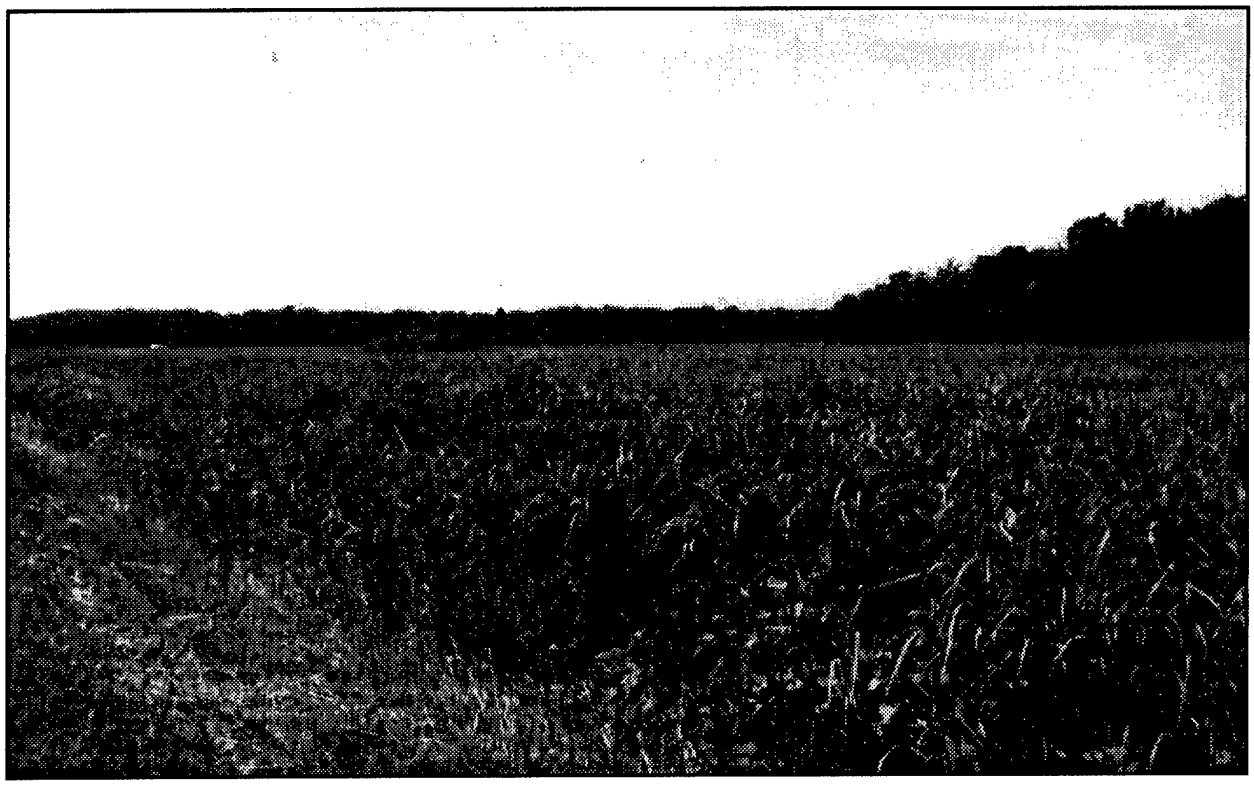

Figure 6A. Pool 1C looking west.

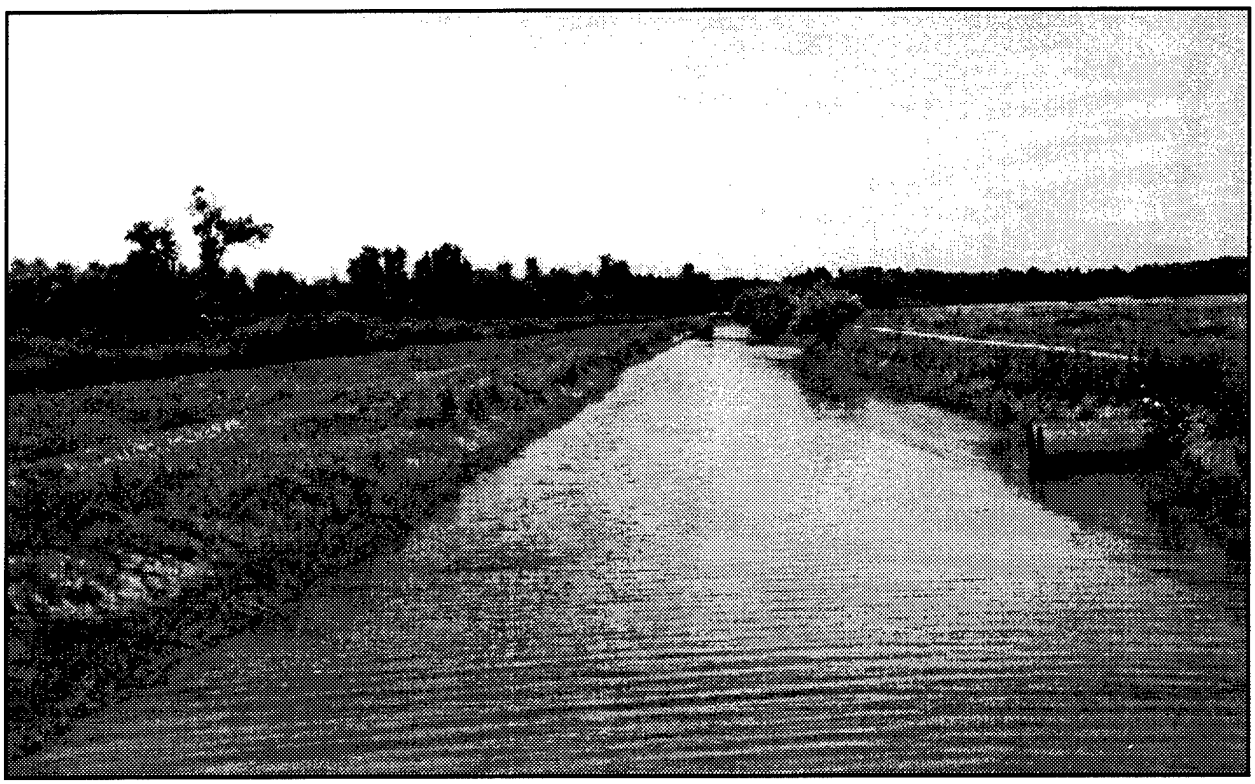

Figure 6B. Main ditch looking south.

substituted for shovel tests in areas with greater than 25% surface visibility. These areas included freshly disked fields, old wildlife plots, and eroded areas. All sections of the project area were surveyed with the exception of the flooded corn fields. As noted in the discussion of the pre-field meeting, either single or double transects of shovel tests were excavated at 20 m intervals in the various project areas. Shovel tests consisted of holes dug approximately 35 cm - 45 cm in diameter to a depth sufficient to observe culturally undisturbed soils or a soil break. Contents of each shovel test were screened through 1/4 " mesh to recover cultural debris. In some cases due to extremely wet soils screening of the shovel test contents was not possible. Instead, the soil from the shovel test was carefully shovel sorted. Each shovel test was back filled after inspection of its content was completed. Pacing was used to control the intervals between transects and shovel tests. Notes on the number of shovel tests and soil conditions within each of the project areas were kept in the field.

Laboratory Analysis

This task typically consists of the comprehensive analysis of the artifacts and other site data. Recovered materials are washed, sorted, and identified according to material, manufacture, and function. As artifacts of any type were not recovered by the investigations within the project area, however, this task was not undertaken.

Report Preparation

The descriptions of field work and analysis presented in this report area consistent in content and format with the requirements of the project RFP (Appendix A). Preparation of the introductory sections of the draft report including the environmental, culture history, previous investigations, and methodology sections were carried out prior to and following the field investigations. A progress report containing a synopsis of investigations and preliminary recommendations was submitted to the USACOE on August 10, 1993. The field investigations section of this report contains a description of the individual survey tracts, field conditions, and soil descriptions. The final section of the report interprets the results of the investigations presents specific recommendations regarding the proposed project.

Curation

American Resources Group, Ltd., has a curation agreement with the Illinois State Museum. All project notes, photographs, and other data generated during the performance of these contract services have been forwarded to that institution for curation.

CHAPTER IV: ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Mark J. Wagner

Prehistoric Overview

Archaeologists have developed a broad cultural/historical classificatory scheme to organize and describe the prehistory of the midwestern United States that has been adapted to categorize the prehistoric occupation of the Carlyle Lake area (Penny et al. 1989:176-207). The cultural periods are: Paleo-Indian (12,000-8000 B.C.); Dalton (8000-7000 B.C.); Early Archaic (7000-5000 B.C.); Middle Archaic (5000-3000 B.C.); Late Archaic (3000-600 B.C.); Early Woodland (600-200 B.C.); Middle Woodland (200 B.C.-A.D. 200-400); Late Woodland (A.D. 400-900); and Mississippian (A.D. 900-1500).

This long period of prehistory was characterized by an increase in cultural complexity, beginning with small hunting and gathering societies which evolved into more complex societies. Subsistence activities began with the collecting of wild plant and animal foods and culminated with the domestication of the three major New World crops--corn, beans and squash--during the final Mississippian period. Increases in human population and trends toward urbanization were evident and reached their highest levels during the Mississippian period. These cultural periods will be briefly summarized as they are represented in the survey area.

The Paleo-Indian period is best known from the western United States where numerous archaeological sites have produced cultural material in association with a late Pleistocene megafauna. These are the well-known Clovis and Folsom cultures associated with extinct mammoth and bison, respectively. Evidence from Kimmswick, Missouri (Graham et al. 1981) presents a picture of a varied subsistence base for Clovis culture utilizing mammals ranging from squirrels to mastodons. Major Paleo-Indian sites are also known from the eastern United States. However, in the Carlyle Lake vicinity only one site that produced a single Paleo-Indian artifact has been reported (Penny et al. 1989:176).

The Early Archaic period in the Carlyle Lake area is represented by the recovery of Hardin, LeCroy, Thebes, St. Charles, and Kirk projectile

point types from six sites with mixed components. Additional Early Archaic period artifacts that were not identified as such at the time of excavation are suspected to be contained within assemblages from other sites in the lake area as well (Penny et al. 1989:179). Early Archaic settlement and subsistence patterns are suggested to have involved the utilization of seasonally occupied camps for hunting and gathering (Penny et al 1989:178).

The Middle Archaic period witnessed a trend toward broad spectrum resource utilization and toward more efficient adaptation to forested environments (Caldwell 1958; Fowler 1959). In most parts of eastern North America, this trend is shown by the diversification of tool kits and the appearance of more ground stone artifacts, including full grooved axes (Griffin 1968). Other new artifact types include stone pendants, bannerstones, and various bone tools, such as awls, antler projectile points, atlatls, bone fish hooks, tortoise shell cups, and necklaces of mammal teeth (Griffin 1968:133). The Middle Archaic period in the Carlyle Lake area is poorly understood although diagnostic projectile points have been recovered from 15 sites (Penny et al 1989:179-182).

The Late Archaic period was marked by a considerable growth in population, distinct regional adaptations, and interregional exchange systems. A more sedentary way of life was characteristic of these times, but some seasonal movements were still necessary. Because of larger population densities, these movements became more restricted in spatial extent. Archaeological data point to a marked increase in the exploitation of plant resources. This broad spectrum resource utilization is thought to be an important preadaptation to the development of agriculture in eastern North America (Brown 1977:168; Yarnell 1976). Evidence for the use of tropical cultigens at a few Late Archaic sites in the Midwest, such as Phillips Spring in western Missouri, has recently been reported (Kay et al. 1980). As with the Early and Middle Archaic periods, the Late Archaic period in the Carlyle Lake area is poorly understood. Although Late Archaic artifacts have been recovered from 11 sites, Late Archaic settlements or features have yet to be excavated or analyzed.

Continuity between the Archaic and Woodland periods is manifested in a wide range of stone tool types that occur in both periods. The appearance of crude ceramic vessels at the beginning of the Early Woodland era is a traditionally accepted horizon marker separating the two periods. Six sites in the Carlyle Lake area have produced Marion Thick ceramics, a ceramic type that appears in central Illinois to the north as early as 550 B.C. Three sites also have yielded Black Sand ceramics (500-300 B.C.), an early Woodland ceramic type first defined in the Illinois River Valley. Although Butler and Jefferies (1986) also indicate that Early Woodland Crab Orchard materials from southern Illinois also occur in the southern Kaskaskia River valley, Penny et al. (1989:188) state that no Crab Orchard ceramics have been recovered from the lake area. Penny et al. (1989:188) suggest that this indicates that

prehistoric occupations in the lake area are suggested to have been more closely associated with complexes in central and western rather than southern Illinois during the Early Woodland period

The Middle Woodland period is the time when the Hopewellian Interaction Sphere (Struever 1964) connected distant Middle Woodland groups by a highly developed socioreligious organization. Large regional centers which exhibit groups of conical shaped burial mounds were the focal points for Hopewellian activities during this time period. Four ceramic types associated with early Middle Woodland occupations in the Illinois River Valley including Fettie Incised, Sisters Creek Punctate, Havana Zoned, and Neteler Stamped have been recovered from sites in the lake area (Penny et al. 1989:192). Early Middle Woodland ceramic types from southern Illinois including Sugar Hill Cordmarked and unnoded Crab Orchard Fabricmarked ceramics also have been recovered at seven sites at Carlyle Lake. Havana and Havana Hopewell (A.D. 1-200) ceramics have been recovered from 29 and 8 sites in the lake area, respectively. Middle Woodland Havana pit features and a possible post structure were identified by Rackerby (1968) at the Boulder site. Participation of Middle Woodland groups in the Carlyle Lake area in the Hopewell Interaction Sphere is reflected in the presence of non-local "exotic" materials such as galena, copper, and Cobden/Dongola chert at sites from this time period. A probable Middle Woodland ceremonial center--the North site--with an associated mortuary site that produced exotic materials including obsidian, mica, copper and artifacts was located down stream from Carlyle Lake (Penny et al. 1989:194).

Information regarding Middle Woodland settlement patterns within the Carlyle Lake area suggests that sites from this time period potentially could be located within the current project area. A number of Middle Woodland sites have been documented on sand ridges within the river floodplain in the lower part of the lake (Penny et al. 1989:195).

The end of the Middle Woodland (Hopewell) period at approximately A.D. 500 was marked by a reduction in interregional trade, a decrease in the complexity of ceremonial/mortuary practices, and a reduction in the elaborateness of ceramic decoration. Late Woodland was characterized by an intensive exploitation of local resources, supplemented by a variety of cultigens, including corn and squash (Ford 1974:403) and some Late Woodland sites were quite large.

Late Woodland sites are identified by the presence of thin walled, well made, cordmarked, grit-tempered ceramic vessels. Stone tools included flared base projectile points, stemless points, and small corner-notched arrow points such as the Jamestown point type (Wagner 1986a-b) of southern Illinois. Fifty four Late Woodland components have been identified in the Carlyle Lake area.

Kuttruff (1974) used the data from his and other investigations in his doctoral dissertation to create a settlement-subsistence model for

the Late Woodland period within the Kaskaskia River Valley. Using ceramic data and radiocarbon dates he defined two Late Woodland phases--Okaw (A.D. 400-650) and Kaskaskia (A.D. 650-1,000). Kuttruff recognized an extreme amount of variation within the ceramic assemblage associated with the Okaw phase, noting that it exhibited affiliations with Weaver Ware of the Illinois Valley, the Embarrass series of the Wabash Valley, the Early Bluff ceramics of the American Bottom, and possibly Raymond Cordmarked of the Carbondale area. Other characteristics of this phase consisted of oval to circular houses and the Lowe Flared Base projectile point type. The ceramic affiliations of the succeeding Kaskaskia Phase were suggested to be with the Early Bluff materials of the American Bottom, the Embarrass Series of the Wabash, Raymond Cordmarked, Lewis Ceramics and possibly Dillinger Cordmarked. Houses consisted of rectangular post structures while projectile point styles were described as being analogous to the Koster, Wanda, and Roxana projectile point types (Kuttruff 1991:55).

Kuttruff (1974; 1991:47-68) hypothesized that the Late Woodland settlement within the Kaskaskia Valley was characterized by clusters of relatively autonomous sites occupied on a year round basis. These sites were located between the upland and bottomland ecotones, a situation that allowed the site inhabitants to exploit a broad spectrum of naturally occurring faunal and floral resources. Sites were distributed unequally across the landscape in clusters with a typical cluster consisting of several large components surrounded by smaller ones. Following Trigger (1968), Kuttruff used settlement pattern and excavation data to draw inferences regarding Late Woodland social and political organization within the Kaskaskia River Valley. Kuttruff (1974, 1991) proposed that there were three distinct levels of Late Woodland social organization within his study area: (1) the individual structure; (2) the single community; and (3) site clusters.

Kuttruff (1991) has revised his model in light of more recent information recovered by researchers working in the Kaskaskia River Valley as well as the American Bottom to the west. These revisions include the modification of the subsistence part of the model to include intensive agricultural production of native plant species as an essential part of Late Woodland subsistence activities with the Kaskaskia Valley; revision of the settlement aspect of the model to allow for the possible existence of short-term or specialized Late Woodland sites within the Kaskaskia River Valley; and the abandonment of the Okaw and Kaskaskia phases. Instead, Kuttruff (1991) now views the Late Woodland period occupations within the Kaskaskia River Valley as exhibiting "similar ceramic types, projectile point, other items in the artifact assemblage, structural features, village patterning, and faunal and floral remains with the American Bottom". Kuttruff (1991:56) now believes that there is a precise correlation between the Late Woodland sequences of the American Bottom (Kelly et al. 1984) and those of the Kaskaskia River Valley. In addition, he notes that direct correlations also "could be made [between the Kaskaskia Valley Late Woodland materials] and Late Woodland materials to the south and east in southern

Illinois and parts of the adjacent Mississippi and Ohio River Valleys" (Kuttruff 1991:56).

Mississippian culture (A.D. 1000-1600) represented the culmination of social, economic, political, and technological trends begun in the Late Woodland period. This period was characterized by an increased dependency upon agriculture as a subsistence base and increased social stratification and complexity. Settlement patterns were characterized by large regional population centers surrounded by a radiating network of agricultural and special purpose sites. Large ceremonial centers contained flat-topped temple mounds, plazas, and fortifications. These sites are thought to have functioned as central places with respect to economic as well as ceremonial activities. While burials are often found in Mississippian mounds, stone box grave cemeteries, which may not be associated with mounds, are common near Mississippian sites in southern Illinois and adjacent states (Griffin 1968).

Diagnostic Mississippian artifacts include shell-tempered pottery, finely-made arrow points, and farming implements, including bifacial chipped stone hoes. The chert hoes often became heavily polished through use and small chips with polished surfaces (hoe chips) that were struck from the hoes as a result of reworking or sharpening them are commonly found at Mississippian habitation sites. The presence of hoe chips is often interpreted as evidence of agricultural activity. Small artifact scatters containing shell-tempered pottery and hoe chips are frequently characterized as "farmsteads" or "homesteads" (Milner et al. 1984; Muller 1978; Wagner 1986c). The carbonized remains of cultivated plants, including corn, squash, sunflowers, various starchy and oily seeds, and more rarely, beans, are found at Mississippian habitation sites (Milner et al. 1984).

Mississippian occupations in the Carlyle Lake area have been suggested to date to A.D. 900-1500 (Penny et al. 1989:202). Most of the information regarding this period was obtained as the result of pre-impoundment investigations conducted during the 1950s and 1960s. Fifty one sites with Mississippian components have been identified. Both habitation sites with wall trench structures and mortuary sites have been identified. Mississippian ceramics from the lake area generally were interpreted as similar to those from the American Bottom to the west (Morrell 1965; Salzer 1963) although some researchers disagreed (Rackerby 1968). Moffat (1985) also has suggested that Mississippian ceramics in the Carlyle Lake area are distinct from those of the Cahokia ceramic sequence; rather, he believes they show affinities to Mississippian ceramics recovered from sites at Lake Shelbyville in the upper Kaskaskia River valley.

Historic Overview

Early land records for southern Illinois indicate that from 1800 to 1830, the majority of the pioneer settlers were from the Upland South

cultural area of the United States. Originating in the Upper south during the eighteenth and nineteenth centuries, the Upland South cultural tradition spread into southern Illinois with the arrival of immigrants from the Carolinas, Georgia, Kentucky and other parts of the Upper South during the early nineteenth century. The main characteristics of this tradition have been described as a reliance upon a diversified farming complex, a wood-oriented technology, the importance of the family as a cooperative unit, and an oligarchic political system with slaves as the lowest class (Mason 1984:91).

The early agricultural development of southern Illinois was tied to subsistence agriculture. In 1818, 99% of the men in southern Illinois were farmers, including those who raised produce only from home consumption (Buck 1967). These were mainly subsistence farmers who raised grain (generally corn) for both human and livestock consumption supplemented by the hunting and gathering of wild foods, the collection of raw materials, and trade. Early settlers traveled to commercial centers with deer skins, honey, and beeswax to exchange for other goods. Later, these articles of trade were supplemented by cash crops such as tobacco, wheat, and livestock which were in turn transported to the nearest market and traded in a barter economy. Throughout areas such as Fayette County where the Upland South culture prevailed, the primary reliance was upon hogs and corn. Hogs were relied upon for both domestic consumption and profit and during the nineteenth century comprised the largest portion of meat consumed in the southern and western parts of the country (Hilliard 1972:90; Martin 1942:57, 61). Cattle, sheep, and poultry were also present on southern Illinois farms but were second in importance to hogs.

From 1830 to 1850, Ohio River traffic brought setters from New England, Ohio, and Indiana. From 1850 to 1890, immigrants from Europe, particularly Germans, comprised a significant proportion of the population of southern Illinois. By 1870, Germans comprised almost 80% of the foreign born population in some southern Illinois counties (Hill et al. 1987:50).

Fayette County

Fayette County was established in 1821 from sections of Bond, Clark, and Crawford Counties. As originally configured, Fayette County took the form of a long rectangle that extended from the northern part of present-day Marion County to the Illinois. Included within the borders of this very large county were parts or all of 18 modern-day Illinois counties. The borders of Fayette County remained unchanged until 1827 when the county was reduced in size to only modern-day Effingham and Fayette counties. The county assumed it's modern-day shape following the creation of Effingham County in 1831.

Similar to the rest of southern Illinois, the majority of the early settlers were from the Upland South region of the southeastern United

States. The first Euro-American settler was Guy Beck, a blacksmith from Kentucky who settled in Bowling Green Township in 1815. Additional settlers from Kentucky and Tennessee including the Haley, Luster, Beal, Wakefield, and Thompson families arrived in 1819 and 1820. Removal of the state capital from Kaskaskia in Randolph County to Vandalia in Fayette County in 1820, however, attracted settlers from the eastern United States and foreign countries to Fayette County. Among these were the Lee family from New York and a colony of German settlers under the leadership of Ferdinand Ernst (Brink and McDonough and Company 1878:27-28).

Pope Township

The survey area is contained within Pope Township in the southwestern corner of Fayette County. The first land entries within this township took place in 1816. Many pre-1820 land entries in Illinois, however, are the result of land speculation and may not be indicative of actual settlement (Wagner 1991:39-74; Wagner and McCorvie 1992:293-312). The first recorded settler within the township was William Farmer (date unknown) who settled in the eastern part of the township. The first church was not erected until 1860, suggesting that settlement within the township was relatively light during the first part of the nineteenth century. Agricultural products of the township during the late nineteenth century included wheat, rye, oats, and timothy grass. The Kaskaskia River Valley was described as "heavily timbered" in 1878 (Brink, McDonough, and Company 1878:89).

Original Land Entries

Original land entry records compiled by the Illinois State Archives totaling 2,400 acres were examined to asses the potential of the survey area for containing historical archaeological sites (Table 2). This revealed that 29.2% (700 acres) of the survey area was patented prior to 1820. These sales took place under the credit system of land purchase as authorized by Congress in 1796 and amended in 1804. Under this system a land tract could be gradually purchased through a series of installment payments. Tracts consisting of a minimum of 160 acres were initially offered at public auction at the district land office. The price of land was set at the relatively high price of $2 an acre to deter speculation A successful bidder was required to pay an initial deposit of %5 at the time of initial purchase. If a 160 acre tract was purchased for the minimum price of $2 an acre, the required down payment was only $16 (Wagner and McCorvie 1992:296).

Of the six pre-1820 tracts in the survey area, all were purchased by men from outside the county. With the exception of the tract purchased by Abraham Prickett which includes a small upland section, these tracts consist of low-lying areas on the Kaskaskia River floodplain that would have represented economically undesirable land during the early nineteenth century. This, together with the residence of the purchasers outside of what would have been Fayette County in 1816, suggests that

Table 1

Original Land Purchase Data,
Carlyle Lake Survey Area

Legal Description	Purchaser	Acres	Price Per Acre	Amt. ($)	Date	State or County of Purchaser
T5NR1W						
SE1/4 Sec 33	Harrison, Jillson	160	2.50	400	7/2/1857	
W1/2 SW1/4 Sec 34	Jones, Charles	80	----	W*	1/8/1853	
T4NR1W						
SW1/4 Sec 3	Todd, William	160	----	W*	7/6/1860	D.C.**
NW1/4 Sec 3	Todd, William	160	----	W*	7/13/1860	D.C.**
SW1/4 SE1/4 Sec 4	Cook, George	40	6.30	252	10/13/1894	
E1/2 SW1/4 Sec 4	Jeffries, Zaralah	40	9.00	360	4/28/1899	
SW1/4 SW1/4 Sec 4	Jeffries, Zaralah	20	9.00	180	4/28/1899	
NW1/4 SW1/4 Sec 4	Jeffries, Zaralah	20	9.00	180	4/28/1899	
NW1/4 SE1/4 Sec 4	McKean, Adonijah	40	7.00	280	11/10/1897	
SW1/4 SW1/4 Sec 4	Snowdin, William	20	9.00	180	4/28/1899	
E1/2 SW1/4 Sec 4	Snowdin, William	40	9.00	360	4/28/1899	
'W1/4 SW1/4 Sec 4	Snowdin, William	20	9.00	180	4/28/1899	
E1/2 NE1/4 Sec 4	Hogan, M.E	80	5.00	400	4/20/1895	
NW1/4 NE1/4 Sec 4	Jeffries, Zaralah	20	9.00	180	4/28/1899	
SW1/4 NE1/4 Sec 4	McKean, Adonijah	40	8.00	320	4/18/1898	
NW1/4 NE1/4 Sec 4	Snowdin, William	20	9.00	180	4/28/1899	
SE1/4 Sec 5	Mason, James	160	2.00	320	3/17/1818	St. Louis
NW1/4 Sec 8	Prickett, Abraham	160	2.00	320	3/12/1817	Madison
SE1/4 Sec 8	Hempstead, Thomas	160	2.00	320	5/13/1818	St. Louis
SW1/4 SE1/4 Sec 8	Briggs, William	20	3.69	74	11/7/1890	
SE1/4 SE1/4 Sec 8	McNeill, Horace	20	3.60	72	1/26/1892	
N1/2 SE1/4 Sec 8	McNeill, William	40	3.60	144	1/26/1892	
N1/2 SE1/4 Sec 8	McNeill, William	40	3.60	144	1/26/1892	
SE1/4 SE1/4 Sec 8	McNeill, William	20	3.60	72	1/26/1892	
SW1/4 SE1/4 Sec 8	Robinson, Emil	20	3.69	74	11/7/1890	
SW1/4 Sec 9	Mason, James	160	2.00	320	3/17/1818	St. Louis
NE1/4 Sec 9	Dent, Henry	160	2.50	400	8/15/1857	
SE1/4 Sec 9	Messenger, John	160	2.00	320	12/28/1816	St. Clair
E1/2 NW1/4 Sec 10	Chriss, Sanford	80	5.50	440	2/5/1897	
W1/2 NW1/4 Sec 10	Chriss, Sanford	80	5.50	440	1/28/1899	
SW1/2 Sec 10	Mason, James	160	2.00	320	3/2/1818	St. Louis

* Warrant
** District of Columbia

the tracts may have been purchased site unseen as land speculations.

No additional land within the survey area was entered until the early 1850s. The absence of 1830s entries is particularly striking as this was an intense era of land speculation throughout Illinois and the eastern United States. The lack of land entries from this time period again suggests that the Kaskaskia River floodplain was perceived as being of very little economic value during the early nineteenth century.

Four hundred acres of the survey area were purchased using military warrants in the 1850s and early 1860s (Table 1). Between 1847 and 1855 Congress authorized the issuance of warrants, each good for 160 acres, to soldiers who participated in the Mexican War and Indian Engagements. These warrants were legally assignable and could be bought at county seats (Howard 1972:257). Speculators often bought the warrants from the veterans from whom they had been issued for very small amounts. As such, the presence of military warrant lands within the survey area may not be indicative of actual settlement.

Jillson Harrison purchased 160 acres of the survey area in 1857 for $400 (Table 1). Original land purchase records indicate that Harrison also purchased other lands in the river bottom outside the survey area during this same time. Although Harrison may have settled on his 160 acre tract in section 33, it is equally possible that he lived on one of his other holdings.

The remaining 720 acres of the survey area was purchased between 1890 and 1899 for sums that varied from $3.60 to $9.00 an acre (Table 1). These sales may be associated with late-nineteenth century drainage of wetlands that made formerly unusable river bottom lands into productive farmland.

In sum, it would appear that the majority of the land within the study area represented undesirable land during the early and mid-nineteenth century. The swampy low-lying terrain may have acted to discourage settlers, as little agricultural use could be found for such lands.

Previous Archaeological Investigations

The history of previous archaeological investigations in the Carlyle Lake area has been presented in great detail by Penny et al. (1989). A brief summary of these investigations is presented below.

The first professional archaeological research within the Carlyle Lake area occurred in 1939 as part of a Works Progress Administration (WPA) project conducted by the University of Chicago (Penny et al. 1989:30). Ceramic material recovered by these investigations was later analyzed by Elaine Bluhm for her M.A. thesis at the same university.

A number of federally sponsored archaeological projects were conducted in the 1950s and 1960s prior to the impoundment of the lake. Although the large scale federal make-work projects of the New Deal era such as the WPA ended with World War II, a massive public works project that involved the construction of dams and reservoirs throughout the United States was implemented throughout the United States following the end of the war. Similar to the federal dam projects of the 1930s, this construction boom resulted in large-scale federally funded archaeological investigations at thousands of threatened sites. Known as the "River Basins Surveys" or "River Basin Salvage Program" these investigations took place over an almost 25 year period from 1943 to 1969.

The River Basins Surveys archaeological program resulted in archaeological investigations in over 500 reservoirs throughout the country that located over 20,000 archaeological sites. A number of archaeologists who were affiliated with Southern Illinois University at Carbondale in the 1950s and 1960s, either as faculty or graduate students, including Karl Kuttruff, Lewis Binford, Melvin Fowler, L. Ross Morrell, Frank Rackerby, and Howard Winters conducted investigations at various sites with Middle and Late Woodland and Mississippian components within the proposed Carlyle Lake Reservoir (Binford et al 1970; Fowler 1960a-b, 1961; Kuttruff 1969, 1972; Morrell 1965; Rackerby 1966, 1968; Salzer 1963). Although aspects of this research appear dated by today's standards, important information regarding Middle Woodland through Mississippian occupations within the Till Plains was gathered as the result of this work. More significant was Binford's work at the Hatchery West site where for the first time the plan of an entire Late Woodland period site was exposed. A major problem with this work, however, is that although the results of the field investigations appeared as a Society for American Archaeology memoir (Binford et al. 1970) the results of the ceramic, lithic, and other artifact analyses have never appeared in print. As such, crucial information is lacking for what is the most systematically and completely excavated site in the Kaskaskia River Valley.

Additional archaeological investigations have been conducted within the Carlyle Lake area since the impoundment of the reservoir (Denny 1979; Hassen et al. 1984a-b; Schroeder 1992; Sirico 1986). Included among these cultural resource investigations have been shoreline surveys (Denny 1979; Hassen et al 1984b; Sirico 1986), test investigations (Sirico 1986), and salvage excavations (Hassen et al. 1984a).

Large scale archaeological investigations also were conducted at several sites within the lower Kaskaskia River Valley that lay outside of the Carlyle Lake area in the 1980s. Among these was the Kingfish site, a Late Woodland site that was excavated by SIU-Carbondale in the early 1980s (Lopinot et al. 1982). The data from these investigations, although limited, essentially supported the major elements of Kuttruff's (1974, 1991) Late Woodland settlement-subsistence model. The Kingfish site was interpreted as a "multiseasonal, if not year-round,

habitation...ideally situated to take advantage primarily of floodplain resources" (Lopinot et al. 1982:166, 195). Subsistence activities involved the utilization of a wide range of locally available natural foods including nut resources and the cultivation of three starchy seed annuals--maygrass, erect knotweed, and chenopod. Faunal procurement patterns were similar to those defined by Kuttruff (1974) with deer, fish, and mussels appearing to have been of particular importance within a broad based strategy that involved the exploitation of a variety of species (Lopinot et al. 1982:185).

Further information regarding Late Woodland and Mississippian occupations in the Effingham Section of the Till Plains was obtained through the excavation of the Bridges site in Marion County (Hargrave et al. 1983). This site was located in the upper reaches of Clear Creek, a small tributary of the Kaskaskia River Valley. Late Woodland occupations at this site dated to the latter part (A.D. 750-1,000) of the period and was described as including La Motte, pre-Late Bluff, and Late Bluff components. Mississippian occupation of the site included a number of extensively rebuilt wall trench structures representing at least 40 building episodes dating between ca. A.D. 1000-1500.

Previous Archaeological Investigations Within Project Area

Archaeological investigations have not been previously conducted within the current project area. Information provided by the Illinois State Historic Preservation Office (SHPO) indicated that there are no recorded archaeological sites within the area.

Information contained in Schroeder (1992:303-304) indicates that at least six twentieth century residences (structures 38, 39, 40, 44-46) once were located on the eastern edge of the sub-impoundment area at the north edge of the Carlyle Lake Wildlife Management Area. The locations of these structures were determined based on information contained in the Standard Atlas of Fayette County (Ogle and Company 1915) rather than field survey. All of these structures are located outside of the areas that will be impacted by the proposed habitation restoration project (Schroeder [1992]; Figure 11.15).

CHAPTER V: FIELD INVESTIGATIONS

Mark J. Wagner

Introduction

Twelve separate locations within the Carlyle Lake Wildlife Management Area were inspected for cultural resources as part of the current investigations (Figure 3). The results of these investigations are presented below by project area.

Levee 1BE

Project Area: 1700 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds and bottomland forest, 0-10% visibility; flooded borrow pits.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: This levee is located the closest to the Kaskaskia River of any of the levees examined as part of the current investigations (Figure 4). At both the northern and southern ends of the levee the Kaskaskia River is located approximately 100 m to the east. Vegetation adjacent to the levee consisted of dense second-growth bottomland forest, scrub growth, and water-filled borrow pits associated with the construction of the levee. Much of the low terrain adjacent to the levee was covered by standing water.

Excavation of 18 shovel tests in the higher, primarily wooded, areas identified a single soil horizon consisting of a dark brown to medium dark brown clay/loam that extended to 60 cm below surface (bs). Cultural material was not recovered from the shovel tests in the project area.

Levee 1BW

Project Area: 2600 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weed and grass covered fields, 0% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: This project area predominantly consisted of overgrown agricultural fields that had not been planted this year. Excavation of 40 shovel tests identified a single soil horizon consisting of a

dark grayish brown silty clay that extended to ca. 60 cm bs. Cultural resources were not identified.

Levee 1BS

Project Area: 1200 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: 0.75 to 1 m high corn, 30% surface visibility.
Survey Methods: Pedestrian survey Description: Ground cover within the survey area consisted entirely of corn that had been planted this year. Although visibility was generally 30%, in some areas within the transect the corn had been mowed to the ground and the ground surface obscured. In these areas the knocked down corn was simply moved aside and the surface of the dark grayish brown clay/loam checked for cultural materials. Cultural resources were not identified within this project area.

Levee 1DW

Project Area: 3500 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds, 0-10% visibility; corn fields, 100% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh; pedestrian survey.
Description: This survey area contained a combination of old agricultural fields overgrown with weeds and recently plowed and disked fields (Figures 4 and 5b). Twenty two shovel tests were excavated in the overgrown fields. Soils within these tests consisted of a medium to dark brown clay/loam that extended to 60 cm bs. Cultural material was not recovered. Pedestrian survey of the cultivated fields likewise failed to identify any cultural material.

Levee 1EN (E1/2)

Area: 1200 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds and bottomland forest, 0-10% visibility; corn fields, 100% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh; pedestrian survey.
Description: The western end of this levee was located adjacent to a corn field with 100% visibility. Surface survey of this area located no cultural materials. Twenty two shovel tests were excavated in the woods and weed-covered fields comprising the remainder of the survey area. These identified two soil horizons: (1) dark grayish brown clay, 0 to 17 to 28 cm below the surface; (2) a grayish clay subsoil that originated at the base of zone 1. Cultural material was not recovered in any of the shovel tests.

Levee 1EW

Project Area: 2400 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: scrub vegetation, 0-10% visibility; woods, 100% visibility; cultivated fields, 100% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh; pedestrian survey.
Description: The northern two-thirds of the project area consisted of relatively dry plowed and disked corn fields. The plants were less than six inches in height and surface visibility was excellent. No artifacts were located in this area. The southern one-third of this area consisted of a combination of dry as well as flooded scrub vegetation (i.e., saw grass, weeds, and widely scattered small trees), second-growth woods containing willow and maple trees, and flooded corn fields (Figure 4). Eleven shovel tests were excavated within the woods and scrub grass. All had similar profiles, consisting of a homogenous dark brown clay to 60 cm bs. Artifacts were not recovered. Although the final 200 m of this survey area consisted of a flooded corn field, pedestrian survey of drier sections of the corn field immediately adjacent to the flooded portion located no artifacts.

Levee 1ES

Project Area: 2300 ft x 30 to 120 ft
Elevation: 450' AMSL
Survey Conditions: Weeds and bottomland forest, 0-10% visibility; corn field, 100% surface visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: This area consisted of two sections: (1) a 1700 x 30 m area located adjacent to the existing levee; (2) a 600 x 120 m new levee construction area located at the west end of the existing levee (Appendix A). Ground cover within both sections consisted of a combination of bottomland forest and scrub vegetation. A cultivated field with 100% surface visibility, however, was located immediately south of the 600 ft construction zone. Forty shovel tests were excavated within the two areas. These encountered two general soil horizons: (1) dark grayish brown clay/loam that varied in thickness from 15 to 50 cm; (2) a gray clay that originated at the base of zone 1 and which extended to at least 60 cm bs. Cultural material was not identified. Pedestrian survey of the cultivated field located immediately south of the western end of the survey area also failed to located any artifacts.

Levee 1FW

Project Area: 3500 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds, 0-10% visibility; bottomland forest, 50-75% visibility; corn fields, 100% visibility; flooded corn fields, 0%

visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh; pedestrian survey.
Description: Survey conditions within this area varied widely (Figures 4 and 5a). The northern 200 m of the survey area consisted of a corn field with 100% surface visibility. Survey of this area located no materials.

An approximate 100 m long section of woods was located immediately south of the corn field. Little undergrowth was present in these woods in which the surface visibility varied from 50 to 100%. Five shovel tests within the woods identified two soil horizons: (1) dark brown clay, 0-50 cm bs; (2) yellow brown clay, 50+ cm. Cultural material was not recovered.

Five shovel tests were excavated in a marshy, weed-covered field located south of the woods. Two soil horizons were identified: (1) dark grayish brown to black clay, 0-50 cm bs; (2) brown clay, 50+ cm bs. Cultural material was not present.

A patch of woods located south of the above field was surveyed through a combination of shovel testing and pedestrian survey. The single shovel test excavated within these woods contained identical soil horizons to those of the field to the north. Pedestrian survey of the remainder of the forest floor (50 to 75% surface visibility) located no artifacts.

Survey of a weed-covered field located immediately west of Hem Pond was restricted to the excavation of a single shovel test; the remainder of the field was flooded. Excavation of the shovel test recorded a homogenous dark brown clay that extended to 60 cm bs.

The remainder of the survey area consisted of flooded woods and corn fields located southwest of Hem Pond (Figure 4). Although the sections of the corn fields contained within the proposed construction corridor could not be surveyed due to standing water, survey of drier portions of the corn fields located immediately outside of the construction corridor failed to locate any cultural materials.

Levee 2AN

Project Area: 2500 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds, 0% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: Excavation of 47 shovel tests within this field identified only a single soil horizon of dark brown silty clay that extended to at least 60 cm bs. Cultural materials were not recovered. A small section of the field was covered by standing water (Figure 4) and could not be surveyed.

Levee 2AS

Project Area: 2600 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds and bottomland forest, 0-10% visibility; flooded borrow pits.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: This survey area was covered by a combination of scrub vegetation including small trees (west end) and saw grass (east end). Excavation of 40 shovel tests identified two soil horizons: (1) a dark brown clay loam that extended from the surface to 15 to 50 cm bs; and (2) a dark gray brown clay that originated at the base of the upper zone in all shovel tests. Cultural material was not recovered.

Levees 2AW and 2BW

Project Area: 6500 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds 0% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: The proposed construction associated with the above two levees is located east of the water-filled main ditch (Figures 3, 4, and 6b). Approximately 90% of the survey area consisted of weeds with 0% surface visibility. A small section of corn field with 100% visibility was located in the approximate center of the levee 2AW survey area. Excavation of 97 shovel tests within the construction zone for the two levees identified two general soil horizons: (1) dark grayish brown silty clay, 0 to 24 to 38 cm bs; (2) a grayish clay layer that originated at the base of zone 1 and extended to at least 60 cm bs. Cultural material was not recovered.

Levees 2C1E and 2C2E

Project Area: 6500 ft x 30 ft
Elevation: 450' AMSL
Survey Conditions: Weeds, 0% visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: These levees are located on the west side of the main ditch (Figures 3 and 4). Ground cover at the time of survey consisted of both mown and unmown (ca. 2 m high) weeds. Excavation of 101 shovel tests within the proposed construction zone identified two soil horizons: (1) dark brown gray silty clay, 0 to ca. 60 cm bs; (2) a light gray clay that originated at the base of zone 1. Cultural material was not recovered.

Levee 2C1N

Project Area: 1500 ft x 30 ft
Elevation: 450' AMSL

Survey Conditions: Weeds, 0 visibility.
Survey Methods: Screened shovel tests at 20 m intervals, 1/4" mesh.
Description: This survey area was covered by approximately 1.25 m high weeds. Excavation of 24 shovel tests identified two soil horizons: (1) dark grayish brown clay, 0 to 34-43 cm bs; (2) a gray clay layer that originated at the base of zone 1 in all shovel tests. Cultural materials were not recovered.

Levee 2B2N

Project Area: ca. 4000 ft x 120 ft
Elevation: 450' AMSL
Survey Conditions: Bottomland forest, 0-10% visibility; scrub vegetation, 0% visibility; weeds, 0% visibility.
Survey Methods: Two parallel transects of screened shovel tests at 20 m intervals, 1/4" mesh.
Description: Levee 2B2N is a proposed levee, the final location of which may change from that shown on the project map (Figure 3). At the August 2, 1993, pre-field meeting it was agreed that ARG would survey the general area of the levee as shown on the project map with the understanding that this might not be the final location of the levee.

The eastern end of the survey transects were located in a clump of woods across from a small interior east-west levee contained in Pool 1-F (Figure 4). Shovel tests were excavated from this point at 20 m intervals along two transects in a southwest direction until a clearing containing an underground oil pipeline was reached. At that point, the orientation of the transects was changed to due west. One transect was excavated along the northern edge of the clearing and one transect was excavated within the scrub vegetation bordering the clearing until levee 2B1W was reached. Ninety three shovel tests were excavated with areas of standing water skipped. Soil horizons across this area varied. Two horizons were identified in shovel tests in the woods at the east of the transects: (1) dark grayish brown clay, 0 to 40-50 cm bs; and (2) yellowish brown clay subsoil. A number of the shovel tests in the cleared area, however, had soil profiles consisting of a dark grayish brown clay underlain by a gray clay that began originating at 40 to 50 cm bs. In many of the shovel tests in the cleared area, however, the subsoil was not reached despite excavating to ca. 60 cm bs. Cultural material was not recovered in any of the shovel tests.

Levee 2C2N

Project Area: ca. 4000 ft x 120 ft
Elevation: 450' AMSL
Survey Conditions: Scrub vegetation, 0% visibility; weeds, 0% visibility.
Survey Methods: Two parallel transects of screened shovel tests at 20 m

intervals, 1/4" mesh.

Description: Levee 2C2N is a proposed levee, the final location of which may change from that shown on the project map (Figure 3). Similar to levee 2B2N, it was agreed at the August 2, 1993, pre-field meeting that ARG would survey the general area of the levee as shown on the project map with the understanding that this might not be the final location of the levee.

IDOC lake personnel flagged the eastern end of the proposed levee on August 3, 1993. In addition, they attempted to mark the path of the levee by mowing a swath through the sawgrass and scrub vegetation. The tractors became mired in the mud after only a short distance and the mowing was abandoned.

Two parallel transects containing 90 shovel tests were excavated along the proposed route of the new levee. In addition, areas of exposed ground in the tractor tire ruts also were checked. A single soil horizon consisting of a dark grayish brown clay that extended to at least 60 cm bs was defined in the shovel tests. Cultural material was not recovered.

CHAPTER VI. CONCLUSIONS AND RECOMMENDATIONS

Mark J. Wagner

Introduction

The Scope of Work for the 1993 American Resources Group investigations at the Lake Carlyle Management Area required the location and identification of historic properties within areas to be impacted by levee construction and repair activities associated with the Habitation Restoration Project, Section 1135 (Appendix A). All cultural properties located by the survey were to be evaluated for potential eligibility for the National Register of Historic Places (NRHP). The NRHP criteria are stated in 36CFR Sec 60.6 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and
>
> a) that are associated with events that have made a significant contribution to the broad pattern of our history; or
>
> b) that are associated with the lives of persons significant in our past; or
>
> c) that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d) that have yielded, or may be likely to yield, information important in prehistory or history.

Criteria Considerations: ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible

for the National Register (Federal Register 1976:595).

Tasks to be completed as part of the work order included: (1) Phase I pedestrian and shovel/soil core survey of the project areas; (2) documentation of project impacts through archival research, subsurface testing, and visual assessments; (3) preparation of a report of findings.

The results of the archival and field investigations required by the project scope of work have been presented in Chapters III and V, respectively. The results of the geomorphological review of soil boring logs from the project area are presented in Appendix B. The archival investigations revealed that the low-lying swampy land comprising the project area represented undesirable land throughout the nineteenth century. Although residences were constructed on the floodplain in the sub-impoundment area during the early twentieth century, the recorded locations of these structures are outside of the areas that will be affected by the habitation restoration project. Pedestrian survey of cultivated fields within the current project area failed to locate any cultural materials. Shovel tests excavated to a depth of ca. 60 cm (2 ft) in weed-covered or wooded locations within the project area also failed to locate any cultural materials. The geomorphological review likewise revealed that the levee repair and construction activities proposed as part of the habitat construction project should have no effect on buried archaeological sites (Appendix B).

It is our conclusion that the proposed project will have no effect on cultural resources potentially eligible for inclusion in the National Register of Historic Places. No further archaeological investigations are recommended. The Illinois State Historic Preservation Office (SHPO) has concurred with the above findings and recommendations (Appendix C).

In closing, it should be noted that although every effort was made to locate any archaeological remains within the project area, it is always possible that there are some remains present that escaped detection. If cultural materials are discovered during the course of the levee construction and repair activities, all work should be halted and the Illinois SHPO notified.

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APPENDIX A

SCOPE OF WORK

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

May 21, 1993

REPLY TO
ATTENTION OF:
Contract and Resource
Management Section

SUBJECT: Contract Number DACW43-92-D-0501, Delivery Order No. 4, Archeological Survey at Carlyle Lake

Mr. Michael J. McNerny, President
American Resources Group, Ltd
127 North Washington Street
Carbondale, Illinois 62901

Dear Mr. McNerny:

This letter is to request your proposal for an archeological survey. This is further defined in the enclosed Scope of Work.

Should you have any questions regarding the work or wish to discuss it in detail prior to submitting a proposal, feel free to call me at (314) 331-8307.

Please submit your proposal by June 2, 1993.

Sincerely,

John B. Hallquist III

John B. Hallquist III, P.E.
Authorized Representative
of the Contracting Officer

Enclosure

5/5/93

Delivery Order #4
Phase I Archaeological Survey for
Historic Properties within
the Carlyle Lake Wildlife Management Project
Habitat Restoration Project, Section 1135
Carlyle Lake, Kaskaskia River
Fayette County, Illinois

1. Statement of Work. The purpose of this delivery order is to conduct Phase I archaeological survey for historic properties within the Carlyle Lake Wildlife Management Project, Habitat Restoration Project, Section 1135, located at Carlyle Lake on the Kaskaskia River in Fayette County, Illinois. All work accomplished by the Contractor will be reviewed and approved by the Corps of Engineers, St. Louis District Contracting Officers Representative (COR).

1.2 The main objective of this work order is to locate and identify historic properties present within areas to be impacted by the Carlyle Lake Section 1135 Project.

1.3. The major constituents of the work order are: 1) Phase I pedestrian and shovel/soil core assisted subsurface survey sufficient to determine the location of historic properties potentially eligible for the National Register of Historic Places (NRHP) which may be affected by the enlargement of main ditch levees, construction and/or enlargement of subunit levees including borrow areas; 2) documentation based upon archival sources, subsurface testing and visual assessments sufficient to determine project impacts, 3) preparation of a high quality technical report on the results of the investigations which meets the Corps Scope of Work and the Illinois State Historic Preservation Office Guidelines for Archaeological Reconnaissance Surveys/Reports, and 4) recommendations for any Phase II testing necessary to determine NRHP eligibility.

2. Project Description. The St. Louis District is proposing to construct two new interior levees, enlarge levees using borrow from ditches created adjacent to the levees, enlarging levees using borrow from cleaning out existing ditches adjacent to the levees, enlarging levee 1ES using borrow from removal of lower 1/3 of levee 1EW, install 17 new weirs and 24 gated culverts in new or existing levees, remove 6 existing improperly functioning or obsolete culverts (Maps 1 and 2). The purpose of the project is to restore wildlife (migratory birds) habitat to modern historic conditions (20 years ago). This project is proposed under the authority of Section 1135 of the Water Resources Development Act (WRDA) of 1986. The objective of Section 1135 is to make modifications to the structure and/or operation of existing water resource projects

which are feasible and consistent with the original project purpose to improve the quality of the environment. The proposed project is located on Corps of Engineers fee land managed by the Illinois Department of Conservation (IDOC) under a cooperative agreement with the U. S.Fish and Wildlife Service and the Corps of Engineers.

2.1 The Carlyle Lake Section 1135 project area has been subjected to both artificial and natural flooding since the lake was created. The project area is separated from Hurricane Creek and the Kaskaskia River by an exterior levee system. The interior of the project area is divided by a system of cross-levees which create subunits or pools. Operation of the wildlife management area involves a gradual spring draining and a fall filling with water from Carlyle Lake. This is accomplished through a system of reversible pumps, and gated culverts. Accordingly, the subunits are inundated during the fall and winter, however the Carlyle Section 1135 project will permit better control of that artificial flooding.

The ground level in the interior subunits ranges from about 445.0 in the lower subunits to 447.0-448.0 in the eastern subunits or pools. During the planting and growing season, the normal operating elevation for Carlyle Lake is 445.0, so in the past natural flooding to that elevation has occurred in the project area. Natural flooding has exceeded that elevation about once in 5 years.

2.2 Heavy recent silt deposition is not anticipated in the construction corridors. According to IDOC personnel, silt from seasonal flooding and inundation has accumulated primarily in low areas, i.e. old ditches, borrow pits and creek beds. Silt has not accumulated in the fields of most of the subunits. However, subunits 2B1 and 2B2 may have as much as 6 inches of silt in the fields, but the periodic disking extends below this.

2.3 Areas requiring survey will be as follows:

2.3.1. Eight existing levees will be raised using borrow from excavation of adjacent ditches for a total of about 23,200 feet.

1BW	2600	feet
1BS	1200	
1DW	3500	
1EN (E1/2)	1200	
1EW	2400	
1ES	1700	
1FW (to 1G)	3500	
2AN (E2/3)	2500	
2AS	3100	
2CIN	1500	
TOTAL	23,200	feet

The construction corridor will be 120 feet wide, which is estimated to extend about 30 feet wider than the previous construction limits. The borrow ditches will be excavated to maximum depths of 3 feet, which is expected to be lower than disturbance from the original levee construction.

2.3.2 Two new interior levees (2B2N, 2C2N, totalling about 8000 ft. long) will be constructed also using borrow from new ditches excavated along side the levees. The construction corridor here will also be 120 feet and maximum ditch excavation will be to 3 feet deep.

2.3.3 A new levee segment will extend existing levee 1ES on the west about 600 feet. The construction corridor will be 120 feet. Borrow material will come from removing the southern 1/3 of interior levee 1EW.

2.3.4 The southern 2/3 of the main ditch levees will be raised using borrow from new ditches on each side of the levees (and from cleanout of the main ditch). The east side levees (2AW, 2B1W combined) and the west levees (2C1E, 2C2E combined) each are 6500 feet long; total length is 13,000 feet. The construction corridors will extend 120 feet beyond the existing main ditch on either side which is expected to be about 30 feet beyond the previous construction corridor.

2.3.5 New ditches will be excavated on the west side of exterior levee segments 1BE (1700 feet long) and 1EE (2500 feet long). The construction corridor will extend 60 feet beyond the exterior levee. The fill removed during ditch construction will be used in interior levee raises elsewhere.

2.3.6 Other items proposed for this project will be constructed in areas disturbed by previous construction and will not require archaeological investigation, including levees raised by ditch clean-out, levee removal and removal of 6 inoperable gated culverts. The construction of 17 new weirs and 24 new gated culverts will be confined to areas of previous disturbance or will be included in the construction limits of the present project.

3. Background. No archaeological surveys have been conducted within the Carlyle Lake Section 1135 project area. The St. Louis District does not have any archaeological sites recorded in the project area. Likewise, both the Illinois State Historic Preservation Officer office and the Illinois Department of Conservation Cultural Resources Coordinator indicated in telephone conversations that their files do not show any recorded archaeological sites in the project area. (Survey of agricultural fields in the wildlife management area was included as an item in a contract deliver order in 1983, but that item was canceled due to high lake levels.)

4. Specifications.

4.1 A literature search will be conducted to provide a succinct prehistoric and historic overview pertaining to the immediate area. If applicable, the literature search will include, but not necessarily be confined to, archaeological site reports, plat books, atlases, maps, county histories, soil series maps, and other relative documentation.

4.2 Approximately 72% of the Carlyle Section 1135 project area is open fields and 28% is wooded. It is anticipated that survey of the levee construction corridors (totalling approximately 9.2 miles in length) will require walk over survey using 2 transects of approximately 6.6 miles and shovel testing of approximately 2.6 miles using 2 transects with shovel tests and/or hand held core at 20 m intervals. Each shovel test will be screened through 1/4" mesh and recorded. In conjunction with the pedestrian survey, if (contrary to expectation) areas of silt deposition obscuring the ground surface are encountered in the survey corridors, the Contractor will hand excavate or use a handheld soil corer to investigate beneath the silt to the depth of proposed construction. Examination of existing maps and geomorphological data, including boring information compiled by the St Louis District, should precede the detailed field investigations.

4.3 The Contractor shall provide a sufficient level of investigation (documentary, archaeological, and geomorphological) for the St. Louis District to assess the potential for the proposed construction areas to contain significant archaeological and architectural sites. Both historic and prehistoric sites will be addressed. Complete legal descriptions will be provided. Appropriate site forms will be submitted to the St. Louis District. All sites shall be plotted on U.S.G.S. topographical maps and submitted with the final report.

4.4 The Contractor shall make recommendations for any Phase II testing that may be necessary to determine NRHP eligibility of each resource encountered as well as indicate the condition of the resource and potential impacts. The Contractor shall also indicate those resources that will require no additional investigations. A formal determination of eligibility is not a requirement of this work order. However, any resource which can be clearly evaluated as eligible or not eligible for listing on the NRHP should be evaluated and included in the report recommendations.

4.5 Photographs: Photographs shall be black and white prints and color slides prepared in accordance with the Contract, Section C, 7.2 .5 and 7.2.6. These photographs shall show details of field conditions, features, profiles, artifacts, or other evidence of past cultural activity. The black and white prints included in each copy of the final report shall be selected as specified in paragraph 7.1 below.

4.6 Monumentation and Contour Mapping. The Contractor is responsible for establishing a site datum at each site located using survey monuments provided by the Government.

4.7 Laboratory Procedures. Artifacts collected during survey shall be cleaned, permanently labeled, and catalogued according to the St. Louis District Curation Standards, (Contract, Section C, Part II). The contractor shall analyze the collection by separating the artifacts into appropriate material categories, then subdividing as needed into smaller, functional and stylistic categories. Basic analytical studies include, but are not limited to:

a. Lithic analysis. This shall include a description of morphological, functional, and stylistic attributes, as well as the identification of raw material. Analysis shall also determine intrasite and local relationships.

b. Ceramic analysis. This shall include a description of morphological and stylistic attributes, and shall also identify intrasite and local relationships.

5. Conferences: Conferences shall be held in accordance with the Contract, Section C, 5.

6. Location and Description of the Study Area: A map showing the project location and construction areas shall be furnished to the Contractor by the Government. A Government representative familiar with the project location will accompany the Contractor during the initial project inspection.

7. Reporting:

7.1 Draft Report. The Contractor shall submit a draft report which shall be a complete and accurate representation of the final report. The report shall be a technical report of the results of the survey and geomorphological investigations and also shall include discussion of how the results of the work will contribute to the present understanding of the Kaskaskia River valley culture. The draft (and final) report shall include photographs and/or graphics which shall accurately show: 1) the location and topographic position of any sites recorded; and 2) the details of any features, profiles, artifacts, or any other cultural evidence. The draft report shall be typed and double spaced, and three (3) copies shall be provided to the COR. All pages shall be numbered. The draft shall be completely proofread so that it shall be free of typographic errors and other editorial deficiencies. Drawings, tables and other non-photographic illustrations shall appear in the same quality, size, format, and location in the draft report as they will be in the final report. Photographs shall not be enlarged and reproduced for the draft report. The Contractor shall

submit contact prints with recommendations for those to be included in the final report to the COR. The COR will review these and select those to be included in the final report. The Contractor shall then be responsible for enlargement and reproduction according to the Contract Section C, 7.2.5.

7.2 Final Report. The final report shall be prepared in accordance with the Contract Section C, 7.2. Maps and drawings may be prepared using either mechanical or computer generated lettering and shall be in accordance with good drafting practice.

8. Government Furnished Information: The Government shall furnish to the Contractor the following items: (1) St. Louis District Report Format Requirements, (2) St. Louis District, Carlyle Lake Wildlife Management Area, Habitat Restoration Project, Final Project Modification Report and Environmental Assessment, , (3) USGS 7.5 minute topographic map showing the project location, (4) Historic Properties Data Synthesis: Compliance Document, Carlyle Lake, Illinois (5) Survey Monuments (as needed). These items shall be forwarded under separate cover.

9. Contractor Capability: It is anticipated that the following personnel types may be required at some point during the completion of the delivery order: (a) Principal Investigator (1), (b) Field Supervisor (1), (c) Lab Supervisor (1), (d) Lab Assistant (1), (e) Field Archaeologist (1), (f) Clerical (1), (g) Data Processing Technician (1), and (h) Draftsman (1).

10. Publicity. Publicity shall be in accordance with the Contract Section C, 11.

11. Right-of-Entry. The land in the contract area is Federally owned. At least one week prior to beginning field work, the Contractor shall notify Mr. Ronald Lindsay, Project Manager for the Carlyle Lake section 1135 project, St. Louis District office at (314) 331-8041. At the same time, the Contractor shall also notify Mr. Carlos Hammond, Manager, IDOC, Carlyle Lake WildLife Management Area office at (618) 425-3533.

12. Schedule of Work:

12.1 Post-Award Meeting. After the issuance of the delivery order, the Contractor (including the field supervisor and the principal investigator) shall meet with the COR and other Government representative(s) as appropriate. This conference will take place within 7 calendar days after issuance of the notice to proceed with the delivery order. At this meeting the COR will name other Government contacts as appropriate. The meeting shall take place in the St. Louis District office.

12.2 Meeting 2: This meeting shall occur at the approximate 50% completion point of field work and shall take place at the Carlyle

Lake Section 1135 project area.

12.3 Meeting 3. This meeting shall occur at the completion of the artifact analysis/processing and prior to transmittal of the artifacts and documents to the Illinois State Museum. This meeting shall take place in the Contractor's office.

12.4 Field Work. All field work shall be completed within 30 days of the issuance of the notice to proceed with the delivery order.

12.5 Preliminary Field Results Letter. A brief letter report detailing the preliminary field results with initial management options for a Phase I no effect or Phase II archaeological testing/mitigation shall be provided to the St. Louis District seven days after completion of the field work.

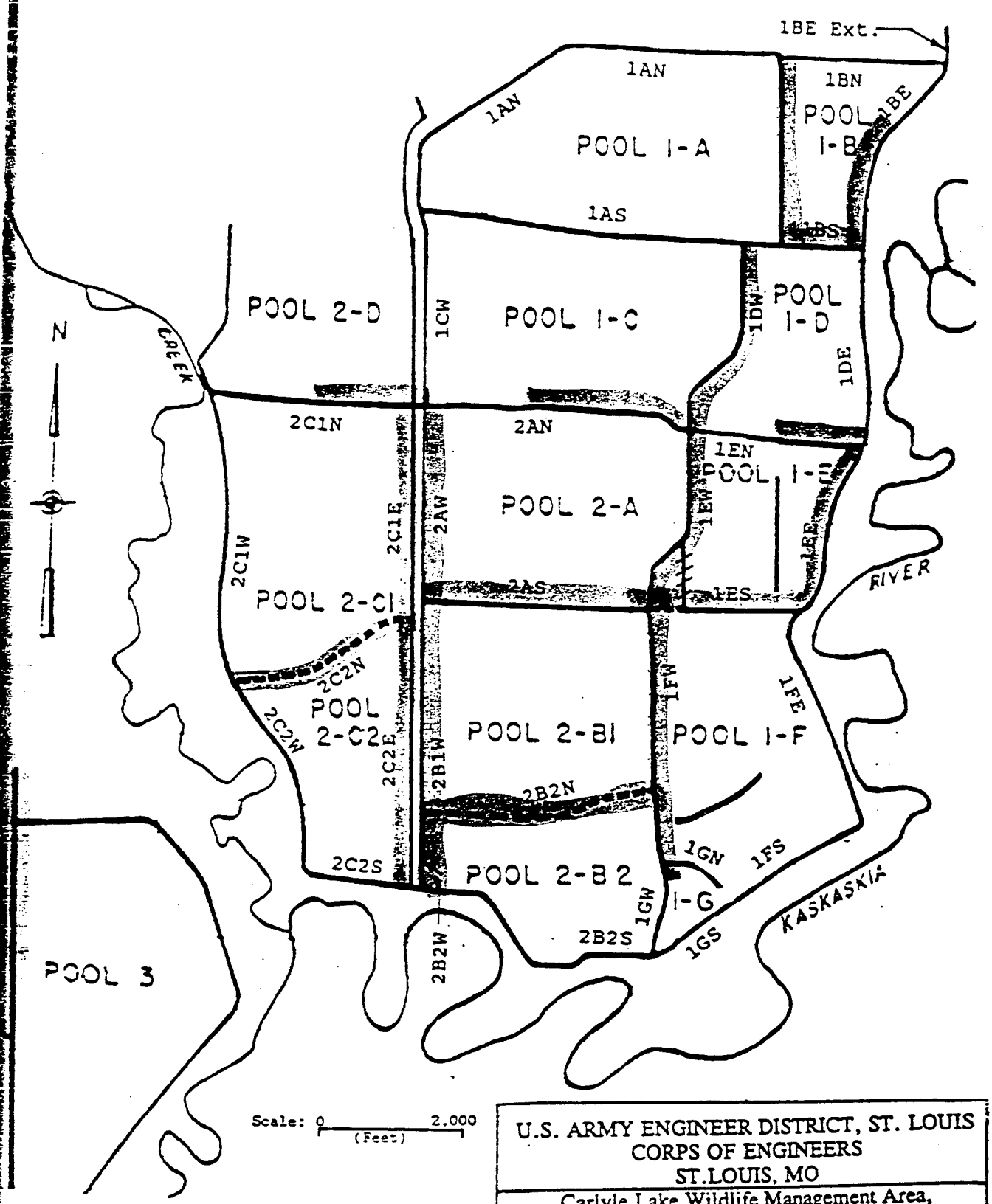
12.6 Analysis and Draft Report. Artifact analysis and draft report preparation shall be completed with 90 calendar days following issuance of the notice to proceed with the delivery order.

12.7 Review. Government review comments will be furnished to the Contractor within 30 calendar days after receipt of the draft report. The Government shall conduct coordination with the Illinois State Historic Preservation Officer and the Illinois Department of Conservation.

12.8 Final Report. The final report shall be submitted to the Government within 30 calendar days following receipt of the review comments.

13. Time Extensions. In the event the schedules in paragraph 12 above are exceeded due to causes beyond the control and without the fault or negligence of the Contractor, the contract will be modified in writing and the contract completion date will be extended one calendar day for each calendar day of delay.

14. Site Backfilling & Revegetation. The Contractor shall backfill all excavation units as soon as they have been recorded, unless specific units need to be left open for further inspection, after which they shall be backfilled.



U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MO

Carlyle Lake Wildlife Management Area,
Habitiat Restoration Project
Section 1135 Study

LEVEE/POOL DESIGNATIONS

LEGEND:

Existing Levee Locations. ——————

Proposed New Levee Locations. - - - - - -

Proposed Levee Removal Locations. ~~~~~~

Survey Areas

Figure 1

APPENDIX B

GEOMORPHOLOGICAL ASSESSMENT

REVIEW OF PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI) BORING LOGS AND PROJECT MAP CARLYLE 1135 PROJECT

A review of geotechnical boring logs for the Carlyle Lake area was conducted in order to provide a geomorphological assessment of deposits in selected levee borrow areas. A project map of the site was also examined. A total of five soil borings were examined and include: B-1, B-2, B-3, B-5, and B-6. It should be noted that geotechnical soil borings investigate different parameters for different purposes compared to geomorphological soil investigations. Therefore, the geotechnical soil descriptions produced by PSI are not described in detail and only provide a very general idea regarding the soils. The stated method of soil boring was augering, perhaps a drill rig flight auger which tends to mix the soil and does not provide accurate soil profiles compared to those seen in shelby tubes, giddings probes, split spoons and sampling tubes.

All five of the borings show a similar soil profile. Most show a brown to dark brown silty clay loam surface unit which extends to a depth of about 2.0 feet, then an underlying unit of grey to grey brown mottled silty clay loam. Only borings B-2 and B-6 may not have the surface brown to dark brown unit, since they indicate a mottled brown and grey unit throughout the 5.0 foot boring.

Additional information from the borings show that the water table is very close to the surface. Clearly, the March soil borings were taken during a time of seasonally high water tables, but the mottled soils and grey colors (gleying) suggest that the soils are poorly drained and indicate possible wetland conditions. The soil boring descriptions are not detailed enough to make an estimate on the presence (if any) of recent historical alluvium capping the surface. Furthermore, the borings were advanced to a depth of 5.0 feet and do not indicate a buried surface. A buried surface would probably not be recognized from an augered soil boring.

Review of the map locating the borings and borrow areas indicates several Kaskaskia River meander scars near the borrow areas. Meander scars very close to the present river channel often indicate a relatively young landscape, for example late to very late Holocene or historical age. In light of the boring descriptions and of the presence of several local meander scars, it is likely that the soils and associated landscapes are of late Holocene age or younger, and they appear to be wetland soils.

APPENDIX C

PROJECT CORRESPONDENCE

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

October 22, 1993

Environmental Planning Section
Environmental and Recreational
Resources Branch
Planning Division

Mr. Mark J. Wagner
American Resources Group, Ltd.
127 N. Washington Street
Carbondale, Illinois 62901

Dear Mr. Wagner:

My staff has completed our review of the draft report "A Phase I Archaeological Survey for Historic Properties within the Carlyle Lake Wildlife Management Area, Habitat Restoration Project, Section 1135, Carlyle Lake, Kaskaskia River, Fayette County, Illinois". Overall, this is a good report and we only request a few changes which are listed below:

Title page	Use format for St. Louis District Historic Properties Management Reports and indicate that this is #40.
p. 6, l. 10	Change Ohio River to Mississippi River.
p. 14, l. 7	Change statement to indicate that no sites had been previously recorded in the project area. Sites have been reported elsewhere in the Wildlife Management Area. Dr. Harold Hassen, Illinois Department of Conservation, expressed concern about this.
p. 14, l. 24	Change Amanda to Andrea.
p. 18	Lighten pictures, these are too dark to tell much.
p. 29, l. 3	Should "a small one" be "small ones"?
p. 35, Table	Indicate that these are 1800's dates.
p. 36, l. 6	The text mentions five pre-1820 tracts in the survey area, however the preceding table shows six such sites. Please reconcile the text and table.

p. 55, l. 5 Delete rest of paragraph beginning with "It should be...". Add wording to indicate that the State Historic Preservation Officer (SHPO) concurred with this determination on 23 September 1993. Also, include copy of SHPO letter as an Appendix.

Appendix A Put request for proposal letter from the St. Louis District at the beginning or end of the scope of work, not in the body of the scope.

Appendix B Be sure to include this. Dr. Hassen also has expressed interest in this information.

Appendix C Add SHPO concurrence letter of 23 September 1993, from Mr. William L. Wheeler, State Historic Preservation Officer to Mr. Owen Dutt, St. Louis District, U.S. Army Corps of Engineers. You should have received a copy of the letter from the SHPO.

We have noted that no contact prints were submitted with this report as specified in the delivery order. While we will not ask for these now, we do wish them to be included in any future delivery orders for which this is specified by the scope of work.

We will be sending you the covers for the final report in about two weeks. After making the above changes, please bind the final report in these covers.

Since no sites or artifacts were located by your survey, Meeting 3 to ensure proper processing of artifacts prior to submission to the Illinois State Museum is unnecessary. We do ask that you transmit documents (copies of final report, field notes and photographs) to the Museum as specified in the contract and that you notify us when you have done so. If you have any questions, please contact Ms. Suzanne Harris of my staff at (314) 331-8467.

Sincerely,

for Owen D. Dutt
Chief, Planning Division

Illinois Historic
Preservation Agency

Old State Capitol • Springfield, Illinois 62701 • (217) 782-4836

FAYETTE COUNTY
Carlyle Wlake Wildlife Management Area
Habitat Restoration Project

September 23, 1993

Mr. Owen Dutt
Chief, Planning Division
Department of the Army
St. Louis District, Corps of Engineers
1222 Spruce Street
St. Louis, Missouri 63103-2833

Dear Mr. Dutt:

We received the draft report titled, "A Phase I Archaeological survey for Historic Properties Within the Carlyle Lake Wildlife Management Area, Habitat Restoration Project, Section 1135, Carlyle Lake, Kaskaskia River, Fayette COunty, Illinois", by Mark J. Wagner. Our comments are required pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR PArt 800: "Protection of Historic Properties".

The Phase I survey appears to be an adequate assessment of the historic properties within the project area. Based on the results of this survey, it is our determination that no significant historic, architectural or archaeological sites are located within the project area.

Please retain a copy of this letter in your files as evidence of compliance with the National Historic Preservation Act of 1966, as amended.

Sincerely,

William L. Wheeler
State Historic Preservation Officer

WLW:pgc

cc: Mark Wagner, ARG, Ltd.