Locke Bottom

Wetland Mitigation Bank

<u>Addendum No. 2</u> to the

WFI-B Umbrella Mitigation Banking Instrument

ABPP-LB-2021-001

WFI HOLDINGS-B LLC

248 Southwoods Center
Columbia, IL 62236

October 2, 2021

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AQUATIC AND FORESTED WETLAND

INTRODUCTION

Pursuant to its WFI-B Umbrella Mitigation Banking Program Instrument (**UMBI**), WFI-B is establishing mitigation bank sites in multiple watersheds throughout the USACE St. Louis District of Illinois. The proposed Locke Bottom Wetland Mitigation Bank (hereinafter, **LBWMB** or the **Bank Site**), which complies with the approved UMBI, is located in an unprotected floodplain of the Mississippi River in Monroe County, Illinois. The Bank Site is a total of 93.0 (+/-) acres situated on a 100.0 (+/-) acre parcel of land that consists of prior converted cropland and river channel.

The wetland mitigation bank plan will result in the restoration of emergent, scrub shrub, and forested wetlands.

The Bank Site property was selected by WFI Holdings-B LLC (the **Sponsor**) because of its potential for beneficial water quality and wildlife habitat improvements to the watershed. Some of the attractive qualities of the Bank Site as a mitigation parcel include the low lying existing agricultural fields and the ability to increase habitat diversity in an agricultural environment through the development of the mitigation bank.

The Bank Site is ecologically suitable for forested and emergent wetland restoration. It lies on both sides of a perennial stream (Fults Creek Ditch) that has no riparian buffer. It is capable of supporting wetlands because there is sufficient hydrology that flows across the site which consists primarily of hydric soils. As a result, the Bank Site has great potential for increasing wetland habitat along the stream system.

The Bank Site's location along Fults Creek Ditch will create important benefits for the watershed as agricultural and highway runoff will be filtered as it flows across the Bank Site. Additionally, occasional floodwaters from One-mile Race Creek to Fults Creek Ditch will be filtered in the established wetlands, which will also store flood waters and provide substantial wildlife benefits.

The restored wetlands will decrease the amount of nutrients traveling to downstream waters by reducing the amount of sediment moving through the system.

This area can be ecologically improved by managing early successional woody species to stimulate the growth of the existing and more ecologically valuable late successional woody species and by the planting of tree and shrub species to increase species richness. Restoring wetland areas will also increase habitat opportunities for species that require or frequent shallow ephemeral wetlands that include amphibians, reptiles, invertebrates, birds, and mammals.

One of the most important components of the Bank Site is its direct connectivity with Fults Creek Ditch within the Cahokia-Joachim (American Bottoms) watershed, and more specifically, the Cahokia-Joachim Creek, Peruque-Piasa, and the Sny Service Areas. Thus, this meets a need

for sites mitigated in the regional watershed where impacts have been made and natural habitat lost due to human activity.

GUIDELINES AND RESPONSIBILITIES

The following information establishes guidelines and responsibilities for the establishment, use, operation, and maintenance of **LBWMB**. The Bank Site will be used for compensatory mitigation for unavoidable impacts to waters of the United States including wetlands, which result from activities authorized under Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and other Federal, State or local wetland regulatory programs provided such use has met all applicable requirements and is authorized by the appropriate authority.

The Bank Site is proposed on a 93.0-acre (+/-) parcel situated on Fults Creek Ditch in the Cahokia-Joachim watershed, Monroe County, Illinois. Wetlands Forever, Inc. will be the management company and perform the services specified herein for **LBWMB**.

The Bank Site is situated and developed to address the loss of wetland habitat. The Bank Site is compatible with adjacent land use, contributes to important local stream, terrestrial and wooded forest wetland functions, will be ecologically self-sustaining, and will be protected in perpetuity by an approved U.S. Army Corps of Engineers Conservation Easement.

BANK DEVELOPMENT

The majority of the Bank Site consists of hydric soils and lies within the floodplain of the Mississippi River. A wetland site evaluation was conducted by a wetland biologist and determined that the soils were mostly hydric, and the farmed portion is a prior converted cropland area. Historically, this property was and is hydrologically connected over a wide range of storm events to the Mississippi River within the Cahokia-Joachim watershed. The Bank Site will be developed with multiple types of habitat features: hardwood bottomland forest, scrub-shrub habitat, emergent habitat, and hydrologic and water quality wetland functions. The vegetation types will follow elevational gradients that both exist and are to be created. Forrest Keeling Nursery RPM trees will be used to promote a hard-mast producing hardwood bottomland forest. The emergent and scrub-shrub wetland components will consist of shallow basins in selected low elevation areas that will support a variety of herbaceous vegetation throughout the year and may support migratory and endemic wetland species along Mississippi River.

The hydrology of the Bank Site is intended to mirror the existing hydrologic regime. The hydrograph in this area is dictated by both natural and managed water control. The site is open to the Mississippi River up to an elevation with a St. Louis gauge reading of 20.0. Once this site is above the St. Louis gauge reading of 20.0, the sluice gate of the Edgar Lakes Levee District is closed to the Mississippi River. The site is then subject to interior watershed hydrology. This could consist of flooding due to precipitation or high Mississippi River flooding and related relief wells within the levee district. This hydrograph will be managed to affect the depth, duration, and extent of flooding on the Bank Site. Flood entry followed by seasonal drying through the summer and fall will sustain productivity by recycling vegetation and nutrients. The

current plan will result in the re-creation of a diverse wooded, emergent, and scrub-shrub wetland adjacent to Fults Creek Ditch to enhance ecological functions and values for Cahokia-Joachim watershed.

Two-Phase Approach:

The Sponsor proposes a two-phase approach for LBWMB consisting of Phase 1 (63.5 acres) and Phase 2 (29.5 acres) together on one parcel, as detailed in this Addendum No. 2. Phase 1 will be comprised of forested, scrub-shrub, and emergent wetland habitat, while Phase 2 will be comprised of forested and scrub-shrub wetland habitat. Phase 1 will be initiated concurrently with the approval of this document; Phase 2 may or may not be utilized (either simultaneously with Phase 1 or at a later date) due to various ecological and market-based factors.

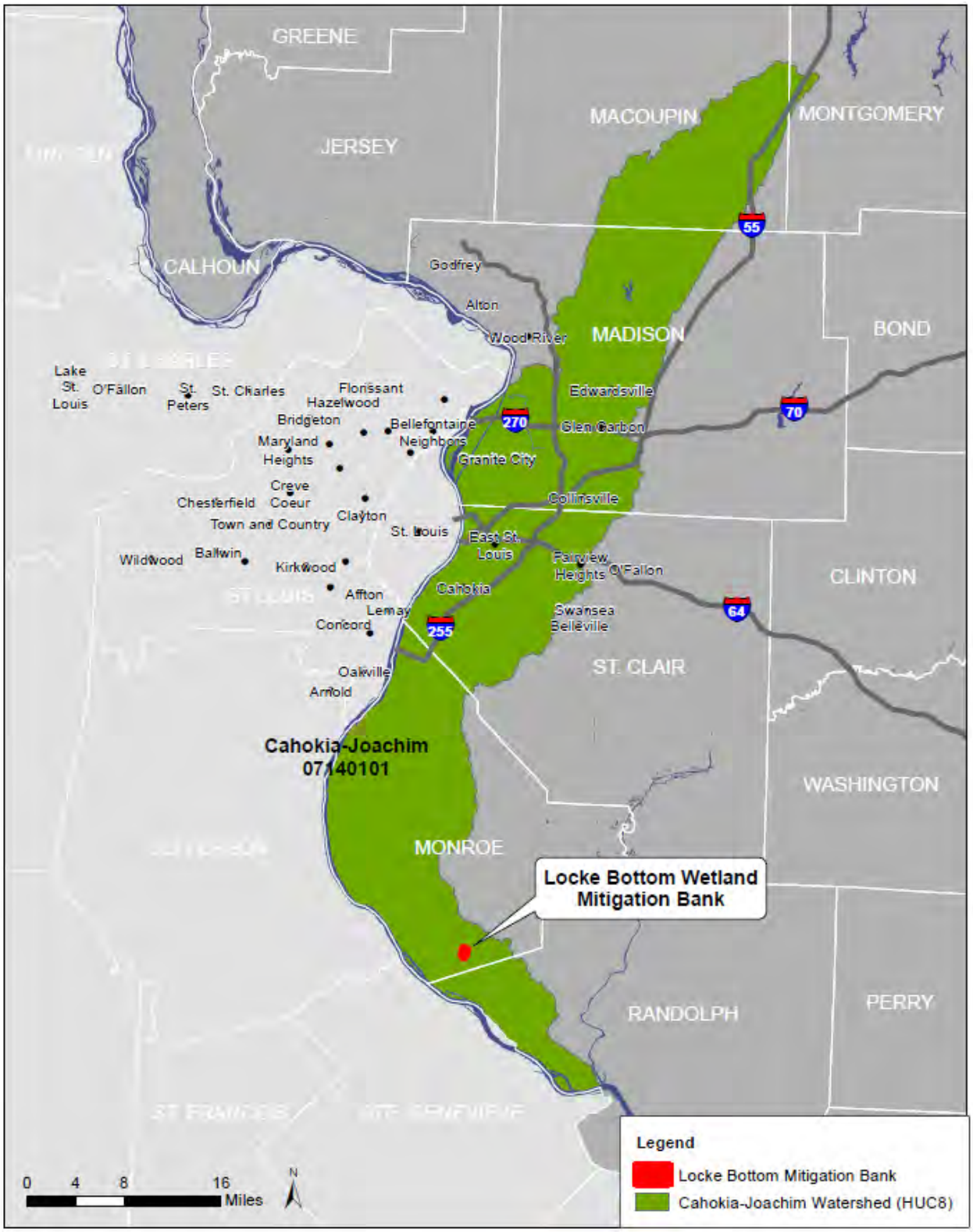
If pursued at a later date, the Sponsor will obtain "activation" of Phase 2 through the submittal of a written request to USACE and the MBRT, along with the placement of a conservation easement and all necessary financial assurances.

This Addendum No. 2 includes all details related to Phase 1 and Phase 2 of LBWMB individually where applicable. Any future modifications to Phase 2 will be detailed in written notice to USACE and the MBRT prior to the activation of Phase 2.

OPERATION AND LONG-TERM MANAGEMENT

LBWMB is considered Private commercial (Entrepreneurial). The ownership requests that LBWMB be State of Illinois certified. The long-term management of LBWMB will be managed by HeartLands Conservancy and is intended to be self-sustaining due to its location and design. The enhancements made to the property will aid in increasing hydrologic connectivity.

Figure 1 – Location in Cahokia-Joachim Watershed



WATERSHED APPROACH TO MITIGATION BANK

Through the utilization of multiple documents from the State of Illinois, the USGS and the EPA, the following review has led to the identification of wetland types and locations for restoration efforts associated with the Cahokia-Joachim watershed for future mitigation impacts.

A. Major Goals of the Watershed

State watershed needs identified wetland quality has likely declined statewide over the course of several decades (Stafford et al. 2010). These declines are not consistent throughout the state and among natural divisions; they are exacerbated by many factors along large rivers (Mills et al. 1966, Bellrose et al. 1979, 1983), but may impact all wetland systems. Thus, these restoration features support a more productive wetland community:

- Manage wetlands to promote native plant communities by removing, reducing or controlling invasive species, especially: Phragmites, purple loosestrife, reed canary-grass, Eurasian water milfoil, water hyacinth, narrow-leaf cattail, and others;

- Increase mast producing hardwoods (i.e., oak, hickory, pecan) within floodplain sites that will support these tree species;

- Reduction of undesirable plant species (river bulrush, cattail, perennial smartweed, etc.) in managed wetlands, manage for desirable seed producing annual plants;

- Increase historically abundant habitats, and duplicate historic habitat complexity and juxtaposition within wetlands (Stafford et al. 2010);

- Reduce sediment inputs into streams, rivers, and wetlands from row crop field through minimum tillage, vegetated waterways, buffers, and wetland restoration; and

- Maintain and increase water control in lakes and wetlands within river floodplains through managed or partial connections which will isolate habitats from growing-season floods yet allow movement of aquatic species when appropriate.

B. Mitigation Site Evaluation

The **LBWMB** consists of 93.0 (+/-) acres that lies within Monroe County, Illinois, reference Appendix 1. The site encompasses Fults Creek Ditch which is a tributary to the Mississippi River.

WFI Holdings-B LLC has the property under contract. Currently, the only type of management on the site is agricultural row cropping (100.0 acres +/-).

This Bank Site is well suited to support forested, scrub-shrub, and emergent wetland function types. This property supports major criteria for wetland functions, they are as follows:

- Property consists of hydric soils;
- Hydrology is present from Fults Creek Ditch;
- Adjacent property (reference site) supports obligate and facultative wet vegetation.

These attributes meet the goals of multiple Federal and State of Illinois watershed documents and will improve overall forested, scrub-shrub, and emergent wetland habitats and water quality attributes within the region.

C. Mitigation Site Threats

The short- and long-term threats of the Bank Site are few due to the site location and planned construction techniques. The major short-term threats (1 to 10 years) to the Bank Site consist of invasive species and poor tree survivability due to potential climate change (specifically drought). The utilization of cover crops and annual maintenance over the next 5+ years will effectively reduce the possibility of invasive vegetative species establishing on the site. The potential threat of climate change, reducing survivability of the forest establishment, is slight due to the quality of the trees being planted and the construction technique of short hydroperiod wetlands being utilized in those plantings.

The mitigation area is within the floodplain of the Mississippi River and the hydraulic regime is the most important factor influencing wetland type or class, including inhabitant plant species and community makeup with the occurrence of cyclical wet and dry periods.

The tree planting may incorporate the construction of mounds that trees will be planted upon. Planting on mounds will increase survivability of container trees by promoting root development due to air space associated with the mounds. Secondly, it may reduce mechanical damage caused by major precipitation events and freezing in the Fall/Winter. Using container trees (app. 4 feet in height) planted on mounds will reduce the frequency and duration of seedlings being overtopping during the growing season.

Long-term threats to the site would be altered forest management and acts of God relating to natural climatic occurrences (flood, drought, fire, tornados). As the Conservation Easement holder, HeartLands Conservancy will be able to identify altered forest management that is a detriment to the mitigation area within one calendar year. Thus, this management would be addressed immediately and should reduce any long-term effects to the forested mitigation area. Through the use of high-quality plant stock and construction techniques, the natural effects of flooding and drought are reduced. The natural effects of fire and tornados are more difficult to address; however, due to natural regeneration, a natural seed source will be present.

Figure 2 – Watershed Map

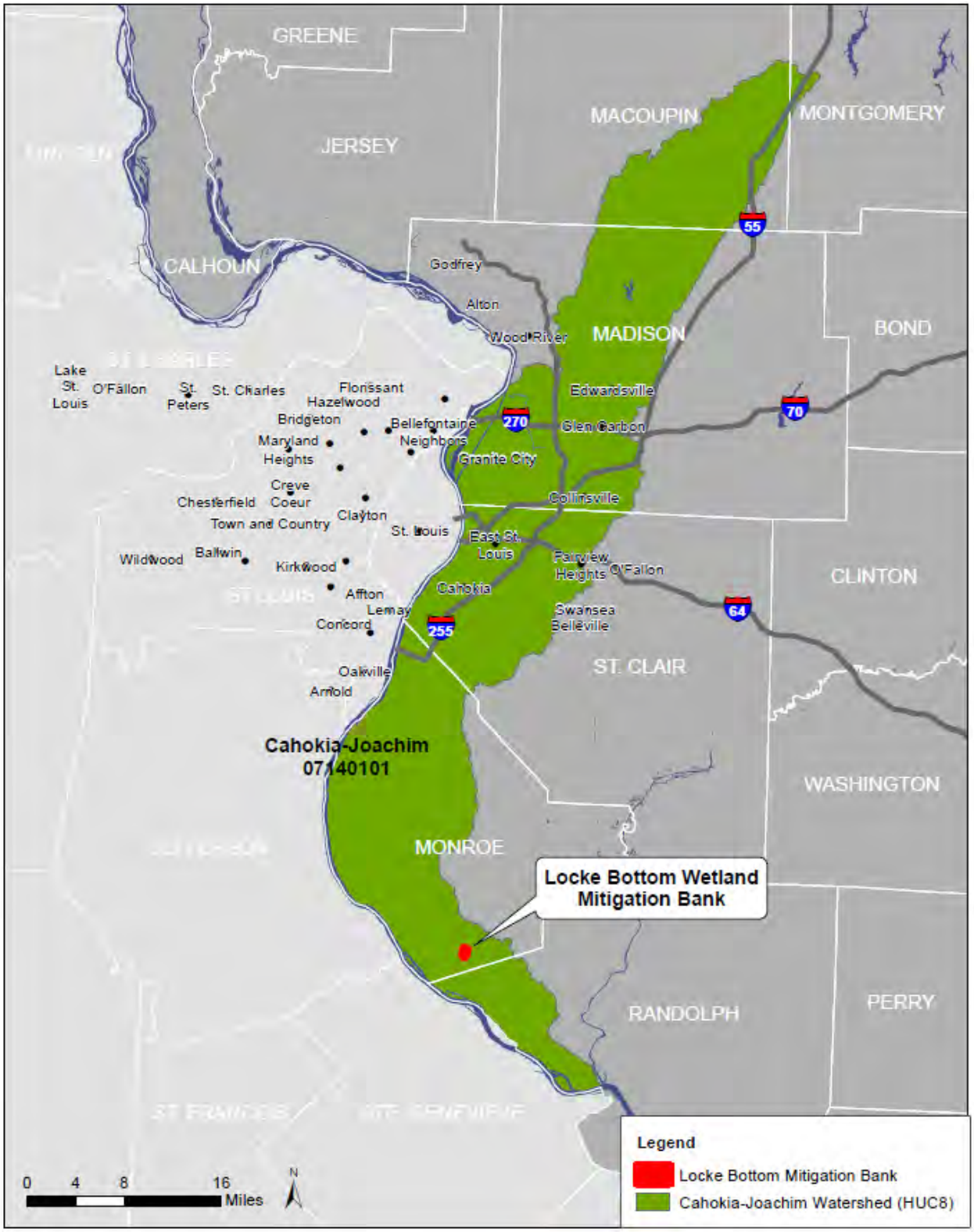
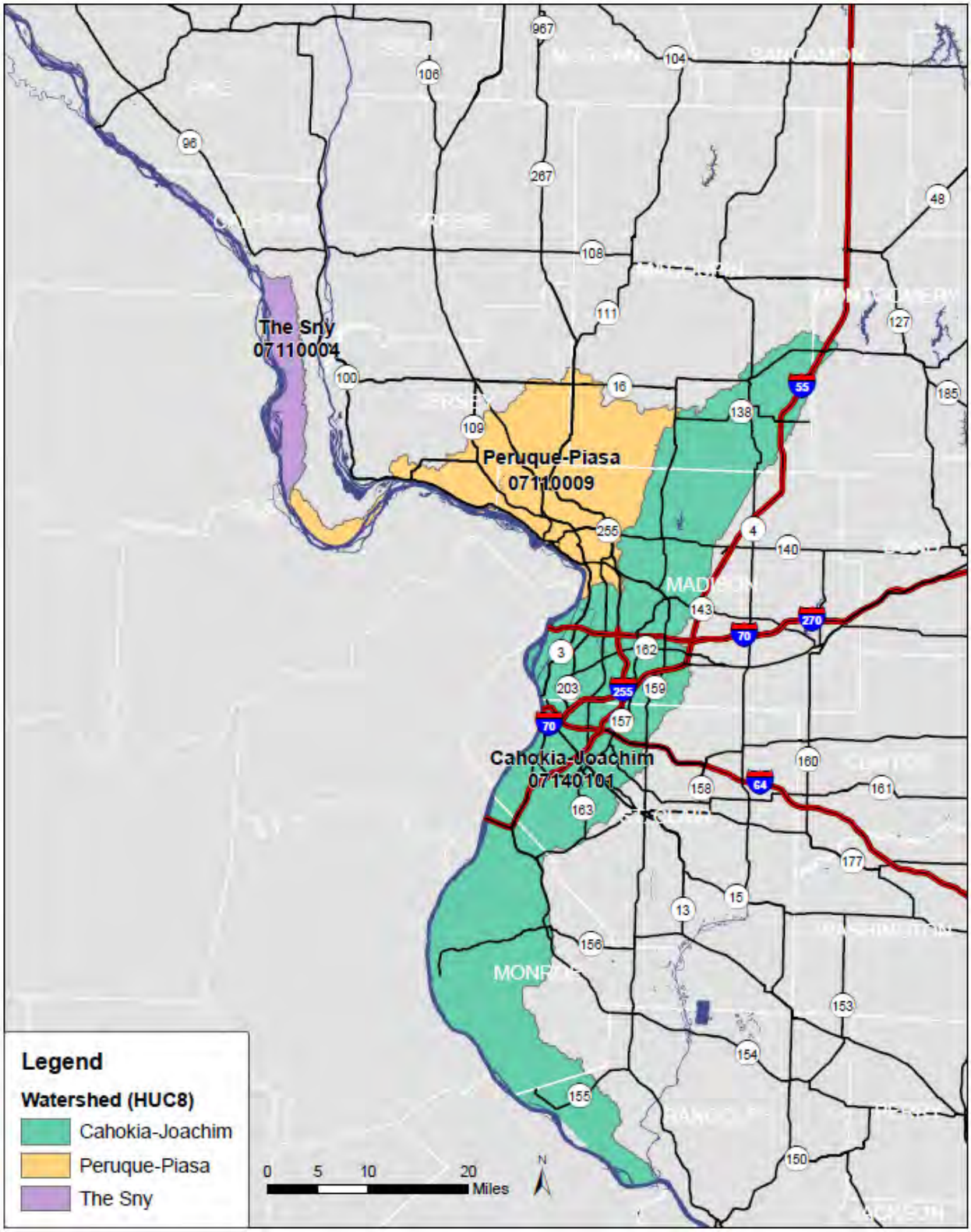


Figure 3 – Service Area



CAHOKIA-JOACHIM / PERUQUE-PIASA / THE SNY AND ASSOCIATED HYDROLOGIC UNIT MAPS FOR ILLINOIS

The Hydrologic River Basin Numbers “07140101”, “07110009”, and “07110004” (where occurring in Illinois, USACE St. Louis District).

Counties:

- Pike
- Calhoun
- Jersey
- Macoupin
- Madison
- St. Clair
- Monroe
- Randolph

MITIGATION PLAN REQUIREMENTS FOR LOCKE BOTTOM SITE

SECTION A – Goals and Objectives

GOAL – Wetland Mitigation Bank

Restore wetland habitat quality and quantity for wetland dependent wildlife and hydrophytic native plant species.

OBJECTIVE

- Increase food, shelter and breeding habitat for wildlife.
- Increase Bottomland Hardwood diversity, quality and hard mast tree dominance.
- Maintain and enhance the wetland hydroperiod to increase wetland functions and values.

GOAL – Wetland Mitigation Bank

Create areas of emergent, scrub-shrub, and forested wetlands.

OBJECTIVE

- Nutrient removal/transformation.
- Reduce nutrient loading and increase nitrate fixation.
- Provide substrate for aquatic invertebrates as well as habitat for amphibians, reptiles, birds and mammals.

GOAL – Wetland Mitigation Bank

Compensatory Mitigation Site for Wetland Areas in the Cahokia-Joachim, Peruque-Piasa, and the Sny Watersheds.

OBJECTIVE

- An appropriate form of compensation where no feasible on-site mitigation opportunity exists.
- Where it can be clearly demonstrated that off-site mitigation would be more environmentally beneficial.
- Projects with minor impacts, and linear projects, which when considered cumulatively, would result in more than minimal impact.

GOAL – Wetland Mitigation Bank

Develop a wetland mitigation site to create and improve habitat conditions favorable for area sensitive, rare, threatened and endangered species endemic to the Service Area that increase the overall site floristic quality index (FQI).

OBJECTIVE

- Restore, enhance and preserve areas on each side of Fults Creek Ditch and its tributaries that are connected to the flood pulse of the Mississippi River.
- Restore woody and herbaceous vegetation to create a continuum of plant species that increase the overall site floristic quality index (FQI).

SECTION B – Site Selection

The LBWMB has been sited on a 100.0-acre (+/-) parcel situated on Fults Creek Ditch in the Cahokia-Joachim watershed, Monroe County, Illinois; of these 100.0 acres, approximately 7.0 acres will be excluded from the Bank Site to allow the Fort Chatres & Ivy Landing Drainage and Levee District proper access to perform maintenance on Fults Creek Ditch (reference Figure 10). Therefore, the Bank Site will consist of 93.0 (+/-) acres. The Bank Site lies west of Prairie Du Rocher, Illinois. The general layout of the site consists of an area located east of Kaskaskia Road running through Monroe County, Illinois, along Fults Creek Ditch. Adjacent land uses include WRP, farmland, and a railroad track.

The Bank Site is situated and developed to address the loss of palustrine forested, scrub-shrub, and emergent wetland habitat. The Bank Site is compatible with adjacent land use; contributes to important local stream, terrestrial and wooded forest functions; will be ecologically self-sustaining; and will be protected in perpetuity by an approved U.S. Army Corps of Engineers Conservation Easement.

The majority of the property consists of hydric soils and lies within the floodplain of the Mississippi River. Historically, this property was and is hydrologically connected over a wide range of events to Fults Creek Ditch. The Fults Creek Ditch is an interior levee watershed and is also tied to the main stem Mississippi River watershed. The site will be developed with multiple types of habitat features: hardwood bottomland forested wetlands, scrub shrub, and emergent wetlands. The vegetation types will follow very gentle grades that both exist and are to be created. The hard-mast producing hardwood bottomland forest will focus on establishing a forested component in a highly agricultural setting and linking scrub shrub and emergent wetland habitats to other adjacent wetland habitats. Scrub-shrub and emergent wetlands will be created and will consist of a higher hydrologic regime over the year and may support migratory and endemic wetland species during the fall and spring migrations during timely hydrologic events in the Middle Mississippi River watershed.

The hydrology of the Bank Site is intended to mirror the existing hydrologic regime and utilizing mounds and a berm to increase the duration of saturation and inundation over across the Bank Site. The depth, duration, and extent of flooding in the restored wetland will be driven primarily by hydrograph of Fults Creek Ditch and the management of the Edgar Lake Levee District structures located south of Ft. De Chartres Historical Site within the Levee District. Interior hydrology will provide managed flooding within the Levee District through seasonal events. The current plan will result in the re-establishment of a diverse forested, scrub shrub, and emergent

wetland adjacent to a creek corridor to enhance ecological functions and values for the Middle Mississippi River watershed.

The Bank Site will be developed to restore habitat that will support sustainability within the existing site and link adjacent habitat types for an increase in habitat function and connectivity.

The siting of the LBWMB will support aquatic habitat diversity, habitat connectivity, the existence of threatened or endangered species related to prior habitat loss, and other landscape scale functions.

SITE SOIL TYPES

The property consists of hydric soil in the floodplain of Mississippi River, between St. Louis, MO and Chester, IL. The Bank Site consists of five major hydric soil types- Booker clay Series (1457A and 8457L), Ambraw Silty Clay Loam (8302A), Wakeland Silt Loam (8333A), and Fults Silty Clay (8591A).

Booker Clay Series consists of very poorly drained soils formed in slackwater sediments. Slopes range from 0-2%. Depth to the water table is 0-12 inches. This soil type is occasionally flooded. This soil meets hydric criteria (mapping units 1457A and 8457L).

Ambraw Silty Clay Loam consists primarily of poorly drained soils formed in loamy alluvium. Slopes range from 0-2%. Depth to the water table is about 0-12 inches. This is occasionally flooded. This soil type meets hydric criteria (mapping units 8302A).

Wakeland Silt Loam consists primarily of somewhat poorly drained soils in silty alluvium. Slopes are 0-2%. The depth to the water table is 6-24 inches. This is occasionally flooded. This soil type does not meet hydric criteria (mapping unit 8333A), however, site visits indicate hydric soil primary indicators.

Fults Silty Clay consists primarily of poorly drained soils formed in slackwater sediments and the underlying stratified loamy or sandy alluvium. Slopes are 0-2%. The depth to the water table is 0-12 inches. This is occasionally flooded. This soil type meets hydric criteria (mapping unit 8591A).

SOIL SURVEY MONROE COUNTY, ILLINOIS – MITIGATION AREA WEB SOIL SURVEY - See Figure 4, Soil Survey Map

Figure 4 – Soil Survey Map

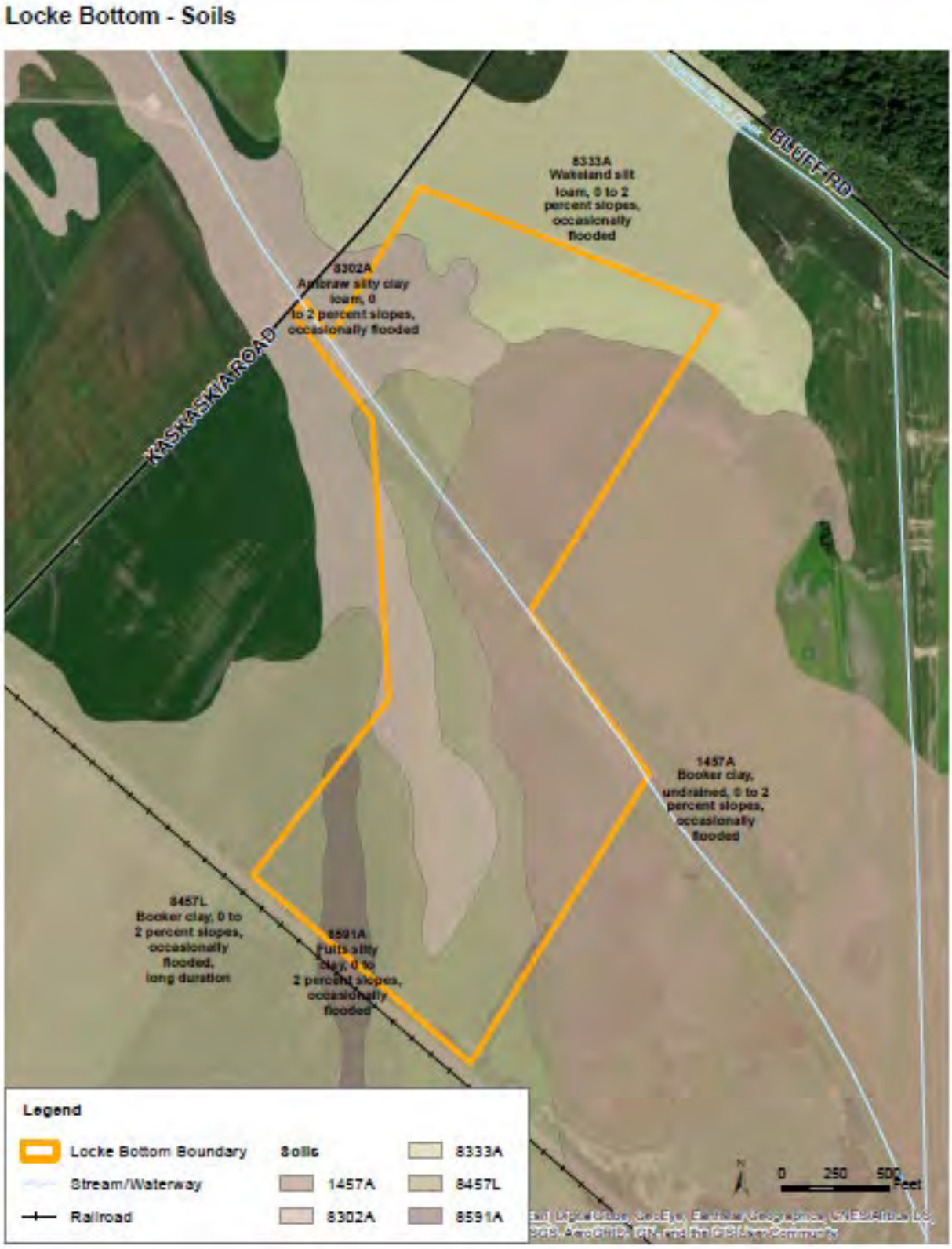


Figure 5 – Aerial of Mitigation Bank Site

SECTION C – Site Protection Instrument

Whereas, WFI Holdings-B LLC has under contract 100.0 (+/-) acres parcel of land which is situated in Monroe County, Illinois. A title commitment identifying ownership and easements related to the property is located in Appendix 2.

This tract of land is located in and being a part of fractional Section 1, Township 5 South, Range 10 West of the Third Principal Meridian, Monroe County, Illinois.

The Bank Site totals 93.0 (+/-) acres made up of Prior Converted Cropland that will be restricted property in perpetuity.

WFI Holdings-B LLC proposes to execute a conservation easement that has been modeled on the Corps of Engineers, Office of Counsel Approved Conservation Easement document (Appendix 3).

A signed and notarized copy of the conservation easement and associated exhibits will be sent to the St. Louis District, Corps of Engineers Regulatory Branch for review prior to commencement of any permitted work or within 60 days of the issuance of this permit, whichever occurs first. The recordation record will be sent to the Corps of Engineers, St. Louis District, Regulatory Branch and to the conservation easement grantee (Third Party) – HeartLands Conservancy, Belleville, Illinois, along with a copy of the executed easement mailed to the Corps' St. Louis District Regulatory Office.

Per the COE Approved Conservation Easement, Item 3 for Permitted Activities – Reference Long Term Management Plan for specific land use management activities that are permitted.

Signage will be posted around the perimeter of the Conservation Easement with adequate frequency, visibility, and proper height for viewing. Signage will be constructed of suitable materials to withstand climatic conditions. Signs will include the following language:

WETLAND MITIGATION AREA
DO NOT DISTURB
PERMIT NO. CE MVS-XXXX-XXX

SECTION D – Baseline Information

OVERVIEW

The Bank Site is classified as agricultural row cropping.

Project Description: The LBWMB will lie within a 100.00 (+/-)-acre site. The Bank Site will have a cumulative acreage of 93.0 acres (+/-) of restricted property in perpetuity. The proposed mitigation bank will consist of two phases: Phase 1 (63.5 acres), comprised of forested, scrub-shrub, and emergent wetlands; and Phase 2 (29.5 acres), comprised of forested and scrub-shrub wetlands; both phases being in the prior converted agricultural fields, reference Mitigation Bank Aerial, Figure 5.

The LBWMB will utilize the Kidd Lake Complex managed by the Illinois Department of Natural Resources as a reference. Kidd Lake is historically tied to this site; reference Section E for a map outlining its proximity (less than 2 miles) to LBWMB. Additionally, the Booker Clay Series (1457A) soil is the same for both sites and historic hydrology will be similar.

The wetland and waterbody delineation determined that the Bank Site's soils were hydric throughout the majority of the site. The soils consisted of five main classifications as identified in the USDA Soil Survey (all hydric): Booker clay Series (1457A and 8457L), Ambraw Silty Clay Loam (8302A), Wakeland Silt Loam (8333A), and Fults Silty Clay (8591A). Due to the agricultural activities associated with the site, there was little to no vegetation observed, resulting in an FQI for the Bank Site of less than 5 for 75% of the calendar year. However, in adjacent wetland habitats, hydrophytic vegetation was present, specifically prairie cord grass that was located along Kaskaskia Road. This same prairie cord grass will be utilized in the re-establishment of this Bank Site. Sufficient hydrology was observed within the site, but the hydrology is altered by agricultural management actions consisting of ditching and linking areas together for the purpose of draining the tillable acres of the Bank Site. Secondly, the Bank Site lies within a managed Levee District (Edgar Lakes District) and has additional management of a Sluice Gate and Fults Creek Ditch hydrologic characteristics.

Agricultural row cropping is taking place on all of the farm ground within the property, located in Monroe County, Illinois. The entire site is prior converted farm ground contain a majority of hydric soils (93 out of 100 acres). The surface area within the LBWMB boundaries is relatively flat and low lying with an Elevation 376.0 to 381.00 (+/-), reference Figure 6 for topographic map.

The wetland delineation report identifies approximately 23.71 acres of PEM, however, these acres are predominantly farmed during typical calendar years.

This site will be re-established to bottomland hardwood forest, scrub-shrub, and emergent wetland habitats. Reference Appendix 7 for the Wetland Delineation. The wetland determinations will identify the area that will be mapped, reference Map Figure 4.

Environmental Site Assessment:

Based on the findings of the Phase I Environmental Site Assessment performed by ProGEA, Inc. on June 25, 2021, there are no recognized environmental conditions (RECs), as defined by ASTM in connection with the Bank Site.

Phase 1 Cultural Resource Survey:

A Phase 1 Cultural Resource Survey was performed by SCI Engineering in June 2021 and located multiple cultural resource sites. Site 11MO1138 was considered potentially significant; it comprises approximately 0.5 acres of the Bank Site and is being proposed as buffer credit only on the basis of removing it from agricultural production, protecting it with a permanent conservation easement, and planting it with a native seed mix beneficial to the overall Bank Site. Sites 11MO1139 and 11MO1140 were considered not significant. SCI believes further investigations of the remaining sites within project area are unwarranted and recommends clearance of the project area.

RIAM Evaluation System:

The site evaluation will conduct a RIAM evaluation system used for large scale dynamics attributes and anticipated ecological lift, as detailed below.

Easements:

See Appendix 2, Summary of Title Work.

The Sponsor has coordinated with the Fort Chatres & Ivy Landing Drainage and Levee District; at their request, the Sponsor is excluding a 50-foot area on each side of Fults Creek Ditch from the Bank Site.

Figure 6 – Topographical Map of Mitigation Site

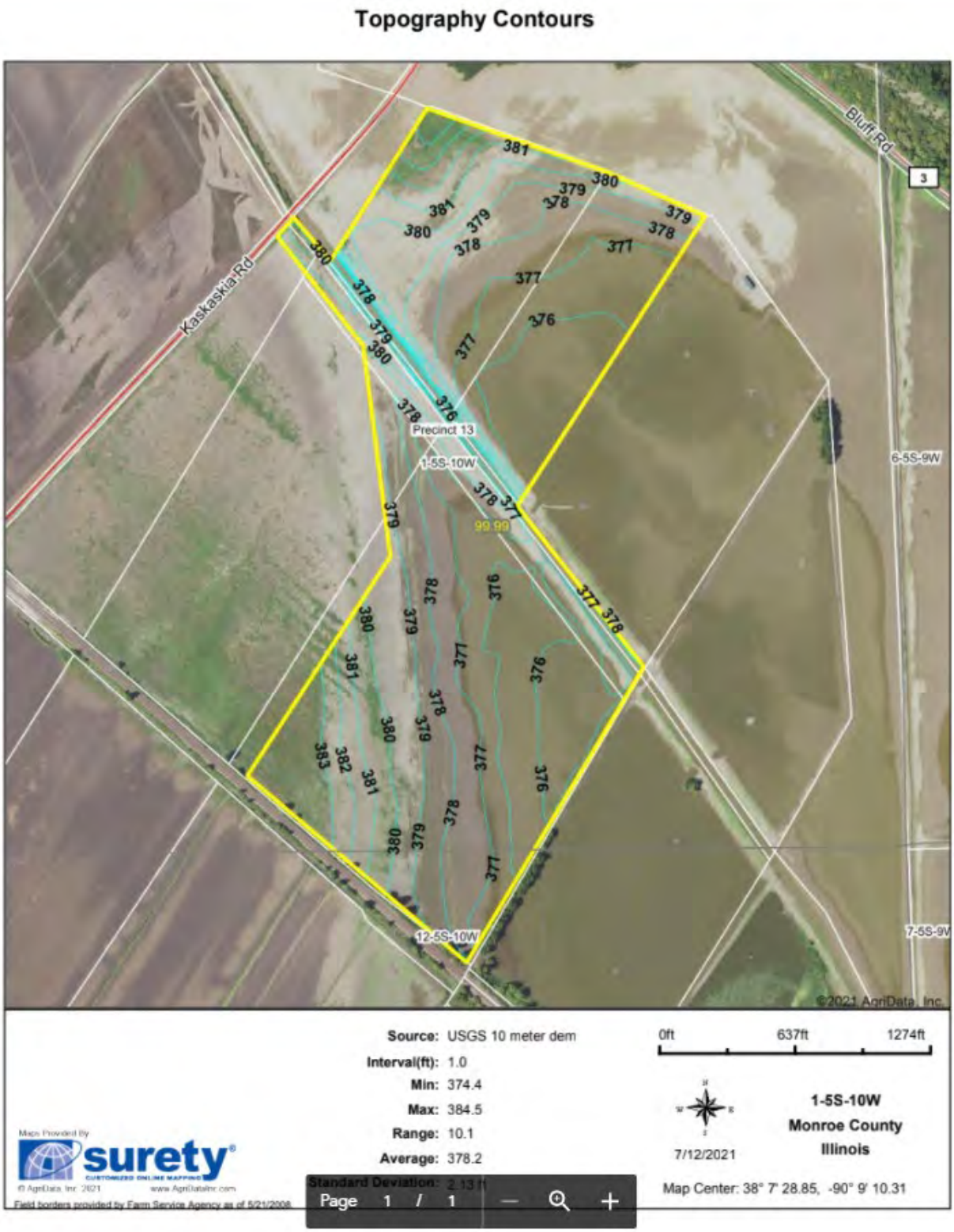


Figure 7 – Wetland Determination Sample Locations

BASELINE CONDITIONS EVALUATION PROCEDURE

The baseline conditions were evaluated using the Rapid Impact Assessment Method (RIAM) (Stein and Ambrose 1998). This functional assessment technique was selected because impacts to aquatic resources are assessed in a manner that is scientifically defensible, yet easy to implement by regulators, planners, and resource managers.

The six important ecological characteristics evaluated were endangered species habitat, structural diversity of habitat, spatial diversity of habitat, open space habitat, linear contiguity of habitat and adjacent habitats. The underlying goal of this ecological functional assessment technique is to evaluate the capacity of a habitat to perform a particular ecological function, such as provision of foraging or breeding habitat for birds or retention of suspended particulate matter. The goal of the impact assessment is to evaluate how a given activity has altered an ecosystem's capability to perform those functions. Impact assessment is integral to the U.S. Army Corps of Engineers regulatory program under Section 404 of the Clean Water Act of the United States. If the USACE used this Rapid Impact Assessment Method to assess the impacts of projects permitted under Section 404 it would be easy to determine if mitigation to the LBWMB was a desirable alternative for the permittee.

Six criteria were used in evaluating existing habitat of a wetland to perform major functions to a given activity at the project site (Stein and Ambrose 1998) and given a pre- and post-project rating of A, B, C, D, or E for each evaluation criterion, with A representing site conditions similar to a reference standard and E representing the most degraded condition. The reference standards were based on conditions typically found at local unimpacted sites. Pre-project ratings were based on aerial photographs, site visits, site descriptions and biological assessments. Post project rating was based on the assumption of the result obtained, when a given activity occurred, by best professional judgment of simple indices and current site conditions. For each criterion, the pre-project ratings were compared to the post-project rating to obtain an *impact score,* which reflected the impacts of the project on that criterion. This score was obtained by counting the change in the number of indicator levels after the project was completed. Impact scores could range from negative 4 for most severe degradation to positive 4 for the most extreme enhancement. Impact scores of zero reflected site conditions that were the same following implementation of the permitted activity as they were prior to the project being done. Although a rating of A represents a higher functional level than a rating of B, the significance of this difference may be difficult to establish. To address this question of resolution, the -3 and -4 columns were combined into a *Substantial Adverse Impact* column, the -2 and -1 columns into an *Adverse Impact* column and 0 into a *Minimal Impact* column. The +1 and +2 columns are grouped into *Enhancement* column, and +3 and +4 columns into *Substantial Enhancement* column.

This example is the impact evaluation, for a 404 permit of a project, for construction of a four-lane road across a creek and installation of two 3-m by 4.3-m concrete box culverts within the creek impacting 0.6 ha of waters of the United States. Prior to construction of the road crossing, the creek consisted of well-developed riparian habitat, surrounding freshwater marsh, supported by run off from an upland source. Once installed, the culverts provided only 0.3 to 0.6 vertical clearances between the streambed and the bottom of the bridge, eliminating most riparian

vegetation from the site. The habitat that was eliminated was suitable for the federally endangered King Rail *(Rallus elegans)* and Decurrent False Aster *(Boltonia decurrens).*

EXAMPLE

Criterion	Pre Project Rank	Post Project Rank	Impact Score
Endangered species habitat	C	E	-2
Structural diversity of habitats	A	D	-3
Spatial diversity of habitats	A	E	-4
Open space habitat	A	E	-4
Adjacent habitats	B	B	0
Linear contiguity of Habitats	A	E	-4

LOCKE BOTTOM WETLAND MITIGATION BANK (LBWMB)

The following evaluation is the LBWMB site using the Rapid Impact Assessment Method (RIAM). Current conditions (Pre Project Rank) were based on aerial photographs, site visits and biological assessment and the Post Project Rating was based on the assumption of the results obtained when a given activity occurred, by best professional judgment.

LOCKE BOTTOM WETLAND MITIGATION BANK

FORESTED, SCRUB-SHRUB, AND EMERGENT WETLANDS

	Pre-Project Rank	**Post-Project Rank**	**Impact Score**	
Criterion				
Endangered species habitat	E	D	+1	ENHANCEMENT
Structural diversity of habitats	D	A	+3	SUBSTANTIAL ENHANCEMENT
Spatial diversity of habitats	D	A	+3	SUBSTANTIAL ENHANCEMENT
Open space habitat	D	A	+3	SUBSTANTIAL ENHANCEMENT
Adjacent habitats	D	B	+2	ENHANCEMENT
Linear contiguity of habitat	D	B	+2	ENHANCEMENT

INDICATOR LEVELS FOR EACH EVALUATION CRITERION

Criterion: Endangered Species Habitat

A: At least one endangered species observed or known to use the area for breeding.

B: Multiple endangered species observed or known to use/forage in area.

C: Suitable habitat type for multiple endangered species OR one endangered species observed or known to use area.

D: Suitable habitat type for one endangered species, but no endangered species observed or currently known to use area.

E: No endangered species habitat.

Criterion: Structural Diversity of Habitats

A: Exemplary structural diversity in all vegetated areas. Riparian areas composed of three distinct strata: ground and shrub cover, understory, and canopy. Dense stands of mature willow, silver maple, green ash, oaks, and/or cottonwood, interspersed with understory and herbaceous shrubs. Little to no exotic plant species present.

B: Two distinct strata in all vegetated areas. Dominated by wetland-type understory interspersed with herbaceous shrubs. May include interspersed, isolated willows, cottonwoods, and etc. OR Grasses and shrubs with patches of structurally diverse riparian vegetation (i.e., three distinct strata). No more than 15% of the vegetated area dominated by exotic plant species.

C: Grasses and shrubs interspersed with isolated patches of wetland-type understory or interspersed with isolated willows and/or cottonwoods. OR Monoculture of willow and/or cottonwoods with no associated understory. No more that 35% of the vegetated areas dominated by exotic plant species.

D: Mainly one stratum of grasses and herbaceous shrubs interspersed with common hydrophytic vegetation, such as cattails. Up to 60% coverage with exotic plant species.

E: No existing habitat value (e.g., concrete, developed, fully infested with exotic species or artificially landscaped).

Criterion: Spatial Diversity and Coverage of Habitats

A: Diverse riparian vegetation (e.g., at least 3 different genera of riparian vegetation present) covering between 75% and 100% of the site.

B: Diverse riparian vegetation covering between 30% and 75% of the site (e.g., strips or islands of riparian habitat interspersed in open space).

C: Diverse riparian vegetation covering up to 30% of the site AND/OR greater than 50% of the site covered with a monoculture of riparian vegetation.

D: Monoculture of riparian vegetation covering up to 50% of the site, interspersed among grasses, exotics, or bare ground.

E: No existing riparian vegetation (e.g., covered with upland grasses and scrub, bare ground, infested with exotics).

Criterion: Undeveloped Open Space Habitat

A: 80%-100% open space habitat of any quality

B: 60%-80% open space habitat of any quality

C: 40%-60% open space of any quality

D: 20%-40% open space of any quality

E: 0%-20% open space. Fully urbanized, concrete, developed residential or commercial cut.

Criterion: Adjacent Habitat (Floodplain Land-Use)

A: Completely surrounded by transitional upland habitat.

B: Adjacent to transitional upland habitat on one side and grassland, agriculture, or low quality open space on other side.

C: Adjacent to transitional upland habitat on one side and urban setting on the other side.

D: Surrounded by degraded grassland, agriculture, or other low-quality open space on at least

one side.

E: Completely surrounded by urban setting.

Criterion: Linear Contiguity of Habitats

A: Completely contiguous with comparable habitat on both ends of the site.

B: Contiguous with comparable habitat on one end of the site and adjacent to a different type of open space habitat on the other end of the site.

C: Contiguous with comparable habitat on one end of the site, but adjacent to urban setting on the other end of the site.

D: Isolated within a different type of open space habitat.

E: Completely isolated within an urban setting or completely urbanized site.

PARAMETERS USED TO DEVELOP EVALUATION CRITERIA

Endangered Species Habitat. Species richness and abundance is a common measure of habitat health (Harris). Fauna use of an area is often measured by surveying for presence or indications of presence (*e.g., tracks*, burrows). However, project files seldom contained comprehensive pre-project species surveys, and surveying for existing species richness was not practical due to time constraints and temporal variability in fauna site occupation. Review of Section 404 permits requires evaluation of the potential for a project to adversely affect a federally listed or proposed endangered or threatened species or their critical habitat. Therefore, information regarding the presence of endangered species or their habitat was readily available in project files. **Most federally listed species are endangered due to loss of specialized habitat that they require; therefore, assessing the presence of endangered species or their habitat can provide a useful indicator of the demise of regionally significant ecosystem (Eng. 1984). In addition, impacts to endangered species habitat may indicate that similar impacts are occurring to other habitat specialists that use comparable areas.**

Structural Diversity of Habitats. The stratification of vegetation into layers, including shrub cover, understory, and canopy, provides a variety of different habitats. This allows a diversity of organisms representing different trophic levels to coexist in a single site, thereby supporting a more complex and resilient food web (Warner and Hendrix). For example, diverse ground cover provides habitat for many insects that form the base of the food web, allowing higher trophic level organisms to use understory and canopy habitat that may be present (Erman). Gosselink et al. report that structural diversity within a site has been correlated with faunal diversity, especially for birds. Warner reports that the presence of a floristic structure consisting of three strata indicates that appropriate soil, moisture, and topographic conditions exist to support a "healthy" riparian system. Structural diversity of the vegetated portions of the project site was used as surrogate for general habitat suitability for an assortment of common species. Conversely, exotic species such as *Arundo donax* (Hickman) and *Tamarix* spp. have minimal habitat value and prohibit natural vegetation from establishing on a site (Meents et al.). **Therefore, presence of exotics was assumed to provide limited habitat value for both the structural and spatial diversity criteria. Because riparian habitats are typically patchy (Faber and Holland), the ratings for this criterion were based on only the vegetated portions of each site.**

Spatial Diversity and Coverage of Habitats. Riparian habitats are typically patchy, with an interspersion of different ecotones (Faber and Holland. This interspersion allows the activities of animals in dry sites to be more closely coupled to those in wet sites. A mosaic of habitat types provides a richer, more continuous food source for mobile fauna than that of a homogeneous habitat. For example, Doyle found a strong correlation between the extent of herbaceous and deciduous shrub cover in riparian habitats and the abundance and diversity of small mammals. Habitat mosaics also allow animals to fulfill several life functions at a single site (*e.g.*, foraging, escape, reproduction) (Warner and Hendrix, Gosselink et al.). Alpha diversity (diversity within a site) has been correlated to the ability of a patch to support a complex food web and allow interior

species, with specific habitat requirements, to thrive in the face of competition from generalist (Harris, Klopatek). **Assessment of changes to the spatial diversity of a project site provided information about impacts to a site's capability to support a variety of different faunal species.**

Undeveloped Open Space Habitat. The structure of a landscape mosaic influences the ability of organisms to move between discontinuous habitat patches (Wiens et al.). Movement may be more difficult through certain types of landscape, thus limiting accessibility to neighboring patches. Urban land uses, such as roads, housing or commercial development, act as barriers to movement and decrease the overall regional availability of habitat (Klopatek, Harris). **Therefore, project sites that contain appreciable open space habitat can provide areas for performance of life functions may be present regardless of the site's spatial or structural diversity. In addition, the portion of a project site that remains open space habitat can provide a metric for the conversion of natural landscape to urban landscape.**

Adjacent Habitat (Floodplain Land-Use). The ecological value of riparian habitats depends on their integration as units within the surrounding landscape (Gosselink et al.). Many organisms have complex life histories in which different stages required distinct habitats within a regional landscape to meet their life requirements (Harris). Therefore, continuity between riparian and upland habitat increases use by fauna and provides safe passage between riparian areas and adjacent upland (Gosselink et al.). Furthermore, the greater the edge area between riparian habitat and developed areas, the greater the potential negative impact from adjacent upland land-use (Warner and Hendrix). Additionally, many riparian plants require adjacent uplands as a floodplain for establishment of their propagules during flooding events (Scott et al). These floodplains also provide refuge for fauna during flooding (Gosselink et al.). **Therefore, changes to adjacent land-use are an important consideration for impacts to the quality of riparian habitat.**

Linear Contiguity of Habitats. Fragmentation and habitat loss are dominant causes of the decrease in biotic diversity of wetland species (Harris). Theories of island biogeography assert that disjunct patches connected by strips of protected habitat are preferable to isolated patches, and these corridors facilitate movement between patches (Diamond, Noss). This theory has been supported by the observation that many animals have a home range that exceeds the size of an individual habitat patch and require a means to move unmolested from one habitat patch to another. Without a system of travel corridors that allows these animals passage from one refuge to another, they will probably not occur in future landscapes (Harris). Even if partially disturbed, riparian corridors are vital to the successful migration of neotropical birds and other organisms (Croonquist and Brooks). In addition, habitat connectivity helps small populations (such as endangered species) maintain demographic and genetic integrity in the face of the isolation caused by habitat fragmentation (Frankel and Soule). Changes to linear contiguity affect not only corridors but also contribute to overall habitat fragmentation and decreases in patch size. This can be detrimental for resident as well as migrant species (Harris). **Therefore, impacts to linear contiguity are key parameters when assessing the impacts of permitted projects.**

SITE HYDROLOGY

The hydrology of the Bank Site is intended to mirror the existing hydrologic regime. The hydrograph in this area is dictated by both natural and managed water control. The site is open to the Mississippi River up to an elevation with a St. Louis gauge reading of 20.0. Once this site is above the St. Louis gauge reading of 20.0, the sluice gate of the Edgar Lakes Levee District is closed to the Mississippi River. The site then is subject to interior watershed hydrology. This could consist of flooding due to precipitation or high Mississippi River flooding and related relief wells within the levee district. This hydrograph will be managed to affect the depth, duration, and extent of flooding on the Bank Site. There is also potential for subsurface influence on hydrology during Mississippi River flood events. The interior drainage could be extended due to soil types with high clay content within the Bank Site; forested areas will be planted on mounds / berms in recognition that the thick clay soil types will “pond” water during periods of increased hydrology.

Soil properties, observations of flooding, drainage patterns, soil saturation and hydrophytic plant species all indicate that the area has the required hydrology to support a wetland community.

Though the Bank Site has hydrologic conditions available, the current management is designed to increase agricultural production. Existing drain ditches utilized during agricultural production will be either removed or abandoned to assist in restoring hydrology within the Bank Site.

SECTION E - Determination of Credits

One of the goals of the WFI-B Umbrella Mitigation Banking Instrument is to restore ecological integrity to Bank Sites using designs that re-establish natural / historic functions to former wetlands and restore / re-establish original physical attributes to accommodate watershed effects. For the Locke Bottom Bank site specifically, this objective is informed by a historical atlas which identifies the majority of the site as an oxbow lake feature in the mid 1800's, a survey in 1842 timeframe. The Locke Bottom Wetland Mitigation Bank will strive to re-establish an existing emergent and scrub-shrub habitat by using the Kidd Lake complex as a reference site. This reference site, Kidd Lake, was also part of the same historic lake as the LBWMB Bank Site and serves as a replica for the Locke Bottom site re-establishment. Locke Bottom was likely located within a ridge and swale geomorphic system associated with the Mississippi River and its floodplains. This survey identifies the Bank Site along the high bank of the oxbow lake off the main stem of the Mississippi River channel. The lake was connected to the river at high flows. This site likely had varied habitats associated with the hydrologic regime of the system, that being both scrub-shrub and emergent habitats associated with the high bank of the system.

Thus, the Sponsor proposes utilizing the process of re-establishment through positively manipulating the affected soils, vegetation, and hydrology on the Bank Site. These actions will improve the physical, chemical, and biological traits of the Bank Site. This site has experienced greater than 175 years of soil elevations being flattened or leveled; elimination of native vegetation (scrub-shrub and emergent wetland species) diversity; and reductions to or elimination of duration of hydrology through ditching and channelizing of Fults Creek Ditch for the sole purpose of manipulating the site for improved agricultural yields. This site currently generates an FQI of less than 10 for the majority of the year due to agricultural operations. Our plan is to re-establish this site into a functioning bottomland hardwood mast producing forest with supporting habitats such as scrub-shrub, emergent, and riparian corridors (though not directly adjacent to Fults Creek) to increase diversity and FQI at the Bank Site.

The same methodology will be used to assess both credits and debits. We determined that an appropriate functional assessment methodology is impractical to employ, thus acreage will be used as a surrogate for measuring function for the wetland habitats.

The number of credits (acres/credits) reflect the difference between site conditions under the with- and without-bank scenarios.

LBWMB will generate 92.63 wetland credits in two phases: 63.50 credits in Phase 1 and 29.13 credits in Phase 2. Reference Figure 8.

BREAKDOWN OF CREDIT RATIOS:

FORESTED

Phase 1: Re-establishment (100%): 33.00 acres = 33.00 credits
Phase 2: Re-establishment (100%): 18.00 acres = 18.00 credits

Total: 51.00 Credits

Justification: The credit justification is based on the agricultural acreage being removed from row cropping, planted at a greater than 51% of the area with bottomland hardwoods and modifications to increase hydrologic conditions at the site. Hydrology will be modified through berms and mounds that provide added elevation thus modifying hydrology as it is associated with forested restoration. Secondly, hydrology will be modified through both eradication of agricultural ditches and addition of raised berms/mounds that will provide longer inundation and microhabitat on the Bank Site. This planting increases the FQI of the acres and reduces forest fragmentation along Mississippi River. When complete, this activity will result in a net gain in aquatic resource area and function.

SCRUB-SHRUB

Phase 1: Re-establishment (100%): 12.50 acres = 12.50 credits
Phase 2: Re-establishment (100%): 11.00 acres = 11.00 credits

Total: 23.50 Credits

Justification: The credit justification is based on the agricultural acreage being removed from row cropping. The scrub-shrub areas will consist of 23.5 acres converted to scrub-shrub wetlands and removed from agricultural row cropping. Hydrology will be modified through installation of a berm along the southern boundary of the Bank Site. Raised mounds will provide longer inundation and microhabitat on the Bank Site. This planting increases watershed acres for scrub shrub habitat missing from the landscape and increases the FQI of the site.

EMERGENT

Phase 1: Re-establishment (100%): 18.00 acres = 18.00 credits
Phase 2: Re-establishment (100%): 0.00 acres = 0.00 credits

Total: 18.00 Credits

Justification: The credit justification is based on the agricultural acreage being removed from row cropping. The emergent areas will be planted to higher quality habitat and the FQI will be raised by more than approximately 25 points. When complete, this activity will result in a net gain in aquatic resource area and function.

BUFFER

Phase 1: Buffer (25%): 0.00 acres = 0.00 credits
Phase 2: Buffer (25%): 0.50 acres = 0.13 credits

Total: 0.13 Credits

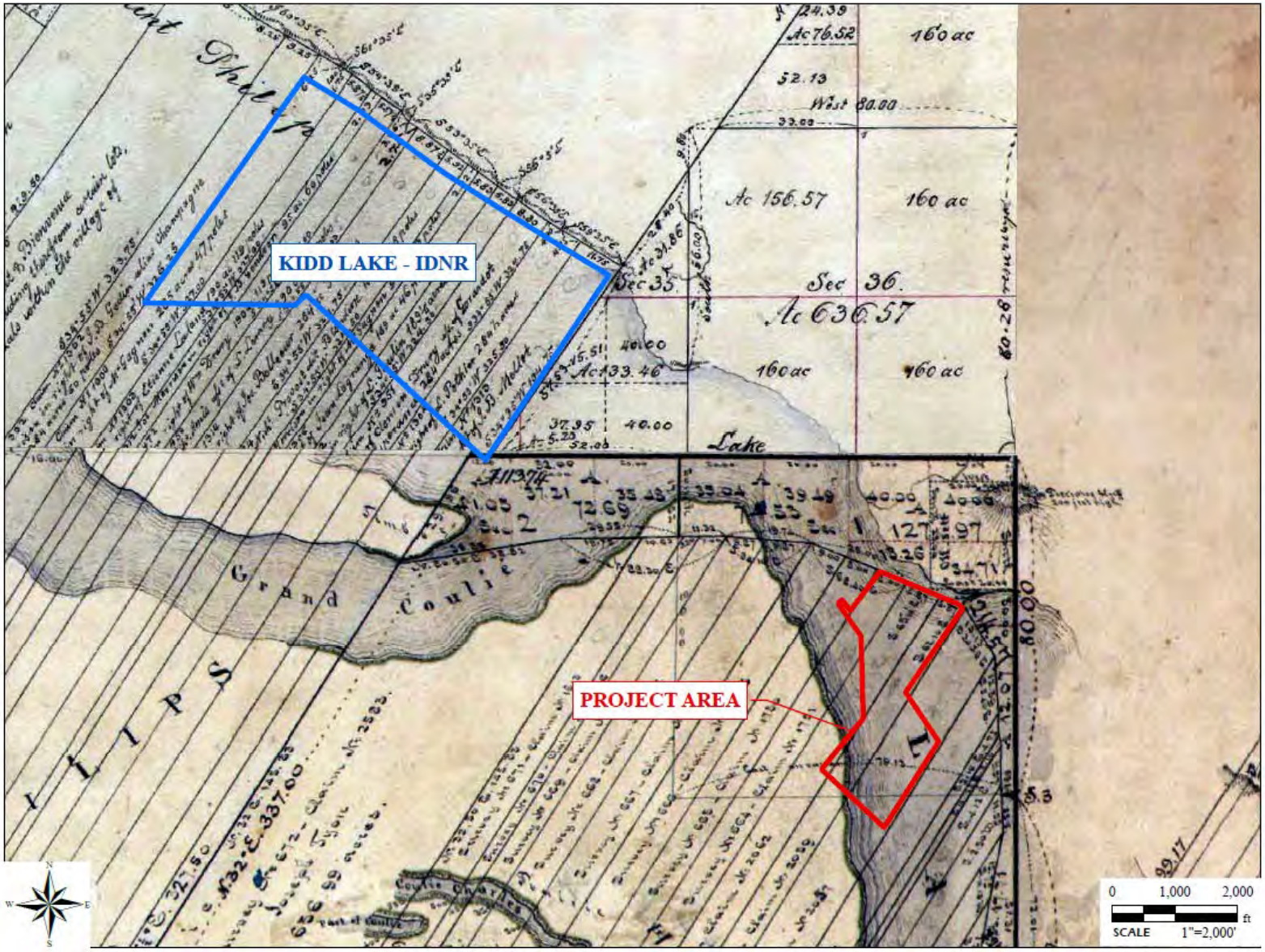
Justification: The credit justification is based on the area identified as a potentially significant cultural resource being removed from agricultural production and protected with a permanent conservation easement. The buffer area will be planted to higher quality habitat and managed and maintained with the rest of the Bank Site.

TOTAL CREDITS GENERATED FOR LBWMB:

Wetland Credits: 92.63

	Phase 1	**Phase 2**	**Total**
Forested (PFO)	33.00	18.00	51.00
Scrub-Shrub (PSS)	12.50	11.00	23.50
Emergent (PEM)	18.00	0.00	18.00
Buffer	0.00	0.13	0.00
Wetland: Total	**63.50**	**29.13**	**92.63**

1840's Map Showing Kidd Lake and Locke Bottom within the Same Oxbow Lake Feature



SECTION F – Mitigation Work Plan

Project Description: LBWMB will lie within a 100.0-acre (+/-) site made up of prior converted cropland. Of these 100.0 (+/-) acres, approximately 7.0 acres will be excluded from the Bank Site to allow the Fort Chatres & Ivy Landing Drainage and Levee District proper access to perform maintenance on Fults Creek Ditch (reference Figure 10). The Bank Site will consist of a cumulative acreage of 93.0 (+/-) acres of restricted property in perpetuity comprised of two phases: Phase 1 (63.5 acres) and Phase 2 (29.5 acres).

Whereas, under this Banking Instrument, the Sponsor will establish and/or maintain two phases of up to 93.0 (+/-) acres of wetland habitat in accordance with the provisions of this Banking Instrument and the Bank Mitigation Work Plan and shall then maintain the Bank in such condition for a minimum of 7 years in accordance with the Bank Closure Procedures. Phase 1 is 63.5 (+/-) acres made up of 33.0 acres of forested wetlands, 12.5 acres of scrub shrub wetland, and 18.0 acres of emergent wetlands. Phase 2 is 29.5 (+/-) acres, made up of 18.0 acres of forested wetlands, 11.0 acres of scrub-shrub wetlands, and 0.50 acres of buffer. The Sponsor will execute Phase 1 and may choose to execute Phase 2 (if ecological and market conditions warrant).

In Appendix 4 there are various construction maps and features for this project.

FORESTED WETLANDS

To prepare for unpredictable flooding and duration the plan calls for a mix of vegetation that can tolerate a wide range of water levels. The proposed plan for improving hydrology across the Bank Site is to establish a berm at the southern boundary of the site to improve hydrology for emergent and scrub-shrub species, and to establish a series of berms throughout the forested and scrub-shrub components of the Bank Site (higher elevations) to create microtopography features for hydrology storage from the capture of surface water.

Secondly, the construction of mounds in the forested wetland planting will support less flood-tolerant species' ability to survive and regenerate. The mounds will be constructed using a rice levee plow that will till the soil into a mound/berm approximately seven (7) feet wide, forty-five (45) feet long, and eight (8) inches tall. The berms will be spaced approximately forty (40) feet apart to allow for flood flowage in and around the forested planting. Other features in managing hydrology may consist of removing agricultural drainage ditches; the construction of rock weirs to manage water depth in emergent areas; and notching of the high bank of Fults Creek Ditch, if required. Spring and fall rainfall plus annual flooding will provide soil saturations to support hydrophytic vegetation without mechanical means or intervention by the Sponsor. These actions focus on providing a streamlined approach to reach a climax forest status in a shorter timeframe than the typical 180 years (+) normal successional model. The total forested wetland footprint on the site will be approximately 33.0 acres in Phase 1 and 18.0 acres in Phase 2.

SCRUB-SHRUB WETLANDS

The Scrub-Shrub Wetlands component of the plan will consist of an area designed to mimic the typical flood pulse of the site as it relates to elevation in historical low areas around the Bank Site. These areas will be converted to scrub-shrub wetlands through constructed rice levee berms/mounds within their boundaries, which will provide a forested and shrub habitat component that will strive for successional model towards a bottomland hardwood forest. The total scrub-shrub footprint on the site will be approximately 12.5 acres in Phase 1 and 11.0 acres in Phase 2.

EMERGENT WETLANDS

The Emergent Wetlands component of the plan will consist of a new feature to extend saturation and standing water in historical low areas around the Bank Site. The first feature will be created through improving hydrology across the site; the establishment of a berm along the southern boundary will generate an emergent wetland feature due to extending duration. This berm will have an overflow section for simple hydrology management at EL 376.50. This elevation is consistent on both phases. The total emergent footprint on the site will be approximately 18.0 acres in Phase 1 only..

BUFFER

The Buffer component of the plan will consist of a small area in Phase 2 that has been identified as a potentially significant cultural resource area. Including this area within the boundary of the mitigation bank will ensure protection with the permanent conservation easement, as well as allow for proper vegetative management on the surface. The area will be planted to a wet-to-mesic prairie seed mix. The total buffer footprint on the site will be approximately 0.5 acres in Phase 2 only.

PHASE CONSTRUCTION – PHASES 1 AND 2

Phase 1 will include a berm along the southern boundary to support hydrologic conditions for emergent and scrub-shrub habitats. In addition, all forested components will utilize a mound system on 40.0 feet centers for hard mast tree plantings.

Phase 2 will include a berm along the southern boundary of the phase to support hydrology conditions of the scrub shrub habitat. In addition, all forested components in this phase will utilize a mound system on 40 foot centers for hard mast tree plantings.

MITIGATION PLAN

Bottomland Hardwood Forest

Carya illinoinensis (Northern Pecan), Carya aquata (Water Hickory), Quercus bicolor (Swamp White Oak), Quercus palustris (Pin Oak), Quercus nuttallii (Nuttall Oak), Quercus lyrata (Overcup Oak), Crataegus viridis (Green Hawthorne), Platanus occidentalis (Sycamore), Celtis laevigata (Sugar Berry), Cephalanthus occidentalis (Button Bush), Forestoiera acuminata (Swamp Privit), Quercus phellos (Willow Oak), Diospyros virginiana (Persimmon), Nyssa aquatica (Water Tupelo), Taxodium distichum (Bald Cypress), Gymnocladus dioicus (Kentucky Coffee), etc.

Scrub-Shrub Wetland

Amorpha fruticose (False Indigo), Cephalanthus occidentalis (Button Bush), Forestiera acuminata (Swamp Privet), Quercus lyrate (Overcup Oak), Spartina pectinate (Cord Grass), Taxodium distichum (Bald Cypress), etc.

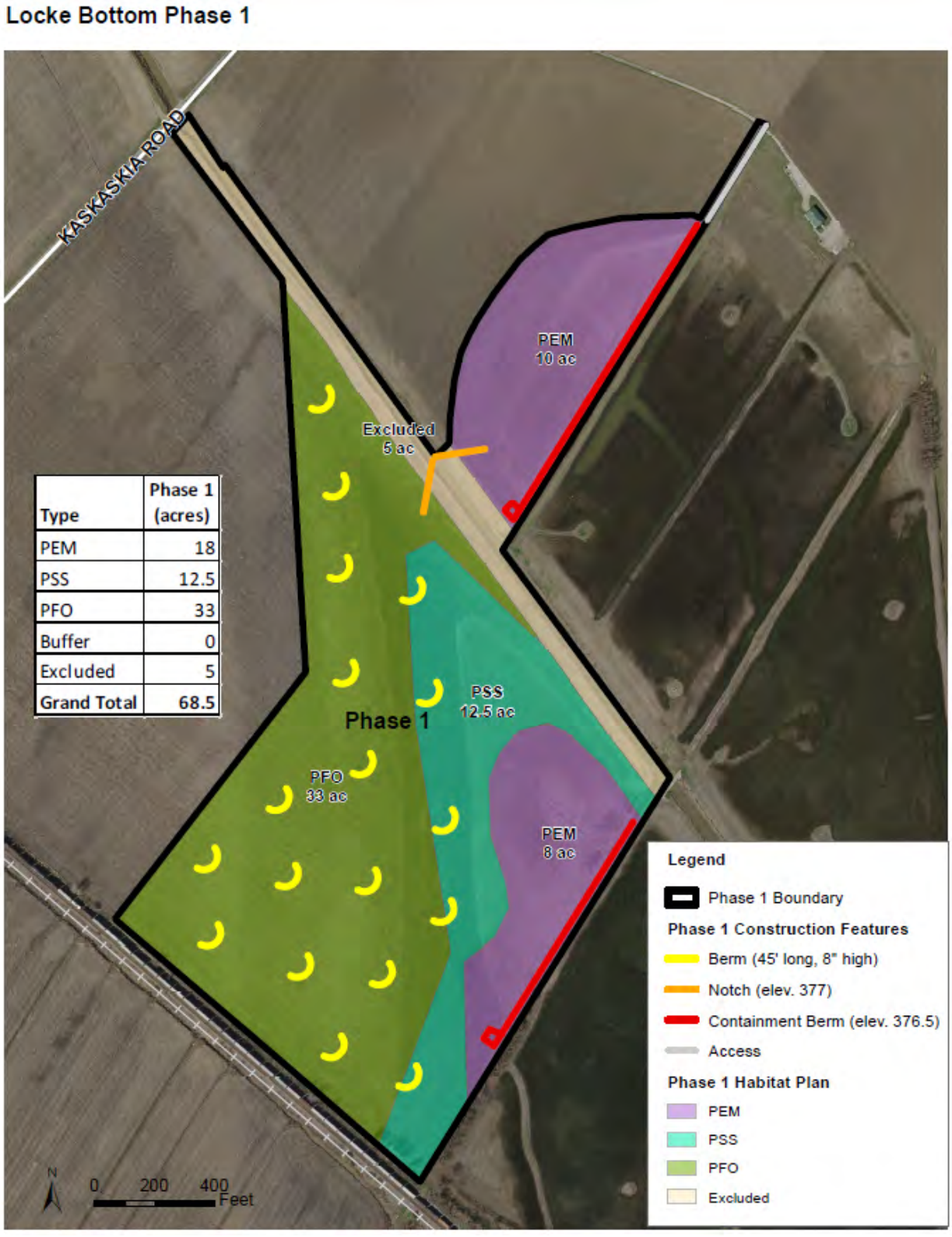
Emergent Wetland

Botanical Name	Common Name	PLS Oz/Acre
Permanent Grasses/Sedges		
Bolboschoenus fluviatilis	River Bulrush	1.00
Carex comosa	Bristly Sedge	2.50
Carex lacustris	Common Lake Sedge	0.50
Carex lurida	Bottlebrush Sedge	4.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	2.00
Eleocharis palustris	Great Spike Rush	1.00
Juncus effusus	Common Rush	1.00
Leersia oryzoides	Rice Cut Grass	3.00
Schoenoplectus acutus	Hard-Stemmed Bulrush	2.50
Schoenoplectus pungens	Chairmaker's Rush	1.50
Schoenoplectus tabernaemontani	Great Bulrush	6.00
	Total	26.00
Temporary Cover		
Avena sativa	Common Oat	512.00
	Total	512.00
Forbs/Shrubs		
Acorus americanus	Sweet Flag	1.00
Alisma subcordatum	Common Water Plantain	2.00
Asclepias incarnata	Swamp Milkweed	1.00
Boehmeria cylindrica	False Nettle	1.00
Cephalanthus occidentalis	Buttonbush	6.00
Decodon verticillatus	Swamp Loosestrife	0.50
Eutrochium maculatum	Spotted Joe-Pye Weed	0.50
Hibiscus spp.	Rose Mallow Species	4.00
Iris virginica v. shrevei	Blue Flag	6.00
Lobelia cardinalis	Cardinal Flower	0.25
Lobelia siphilitica	Great Blue Lobelia	0.25
Lycopus americanus	Common Water Horehound	1.00
Mimulus ringens	Monkey Flower	1.00
Peltandra virginica	Arrow Arum	16.00
Penthorum sedoides	Ditch Stonecrop	0.50
Persicaria spp.	Pinkweed Species	2.00
Pontederia cordata	Pickerel Weed	4.00
Sagittaria latifolia	Common Arrowhead	2.00
Sparganium eurycarpum	Common Bur Reed	6.00
Verbena hastata	Blue Vervain	1.00
	Total	56.00

Buffer

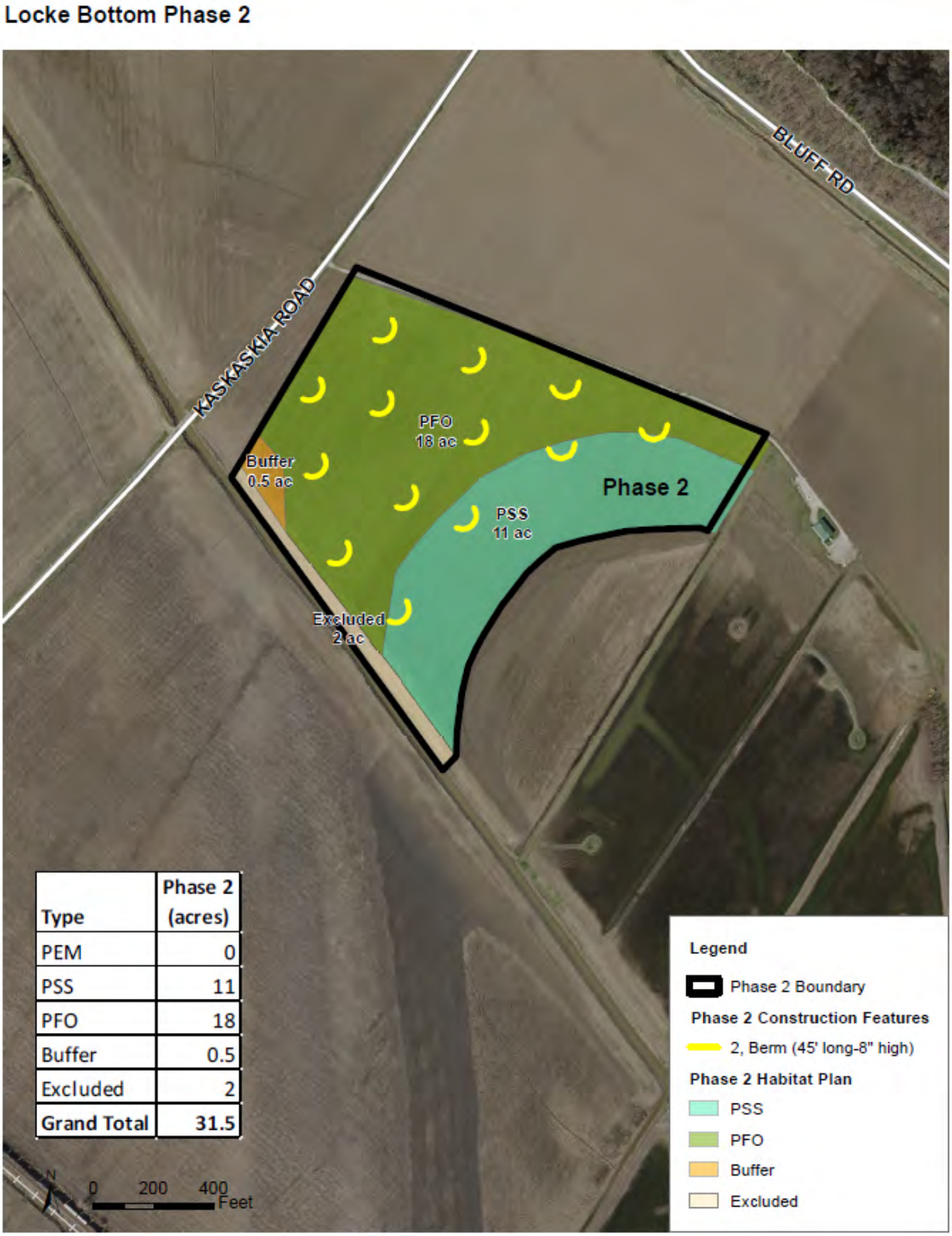
Botanical Name	Common Name	PLS Oz/Acre
Permanent Grasses/Sedges		
Andropogon gerardii	Big Bluestem	16.00
Calamagrostis canadensis	Bluejoint Grass	1.00
Carex lurida	Bottlebrush Sedge	3.00
Carex stricta	Common Tussock Sedge	1.00
Carex vulpinoidea	Brown Fox Sedge	1.00
Elymus virginicus	Virginia Wild Rye	24.00
Juncus canadensis	Canadian Rush	0.50
Panicum virgatum	Switch Grass	2.00
Scirpus cyperinus	Wool Grass	0.50
Sorghastrum nutans	Indian Grass	8.00
Spartina pectinata	Prairie Cord Grass	3.00
	Total	**60.00**
Temporary Cover		
Avena sativa	Common Oat	512.00
	Total	**512.00**
Forbs		
Asclepias syriaca	Common Milkweed	2.00
Baptisia alba	White Wild Indigo	1.00
Chamaecrista fasciculata	Partridge Pea	10.00
Coreopsis lanceolata	Sand Coreopsis	4.00
Coreopsis tripteris	Tall Coreopsis	2.00
Desmodium illinoense	Illinois Tick Trefoil	0.50
Doellingeria umbellata	Flat-Top Aster	0.50
Echinacea purpurea	Broad-Leaved Purple Coneflower	4.00
Eryngium yuccifolium	Rattlesnake Master	2.00
Helenium autumnale	Sneezeweed	2.00
Helianthus grosseserratus	Sawtooth Sunflower	0.50
Lespedeza capitata	Round-Headed Bush Clover	1.50
Liatris spicata	Marsh Blazing Star	1.00
Monarda fistulosa	Wild Bergamot	1.00
Oligoneuron rigidum	Stiff Goldenrod	1.00
Parthenium integrifolium	Wild Quinine	1.00
Physostegia virginiana	Obedient Plant	0.25
Pycnanthemum virginianum	Common Mountain Mint	0.50
Ratibida pinnata	Yellow Coneflower	4.00
Rudbeckia hirta	Black-Eyed Susan	4.00
Rudbeckia laciniata	Wild Golden Glow	1.00
Rudbeckia subtomentosa	Sweet Black-Eyed Susan	0.50
Senna hebecarpa	Wild Senna	2.25
Silphium integrifolium	Rosin Weed	1.00
Silphium laciniatum	Compass Plant	2.00
Silphium perfoliatum	Cup Plant	2.00
Silphium terebinthinaceum	Prairie Dock	3.00
Solidago juncea	Early Goldenrod	0.25
Solidago rugosa	Rough Goldenrod	0.25
Symphyotrichum novae-angliae	New England Aster	0.50
Tradescantia ohiensis	Common Spiderwort	1.25
Vernonia fasciculata	Common Ironweed	3.00
Veronicastrum virginicum	Culver's Root	0.25
Zizia aurea	Golden Alexanders	1.00
	Total	**59.00**

Figure 8: Mitigation Plan Map – Phase 1



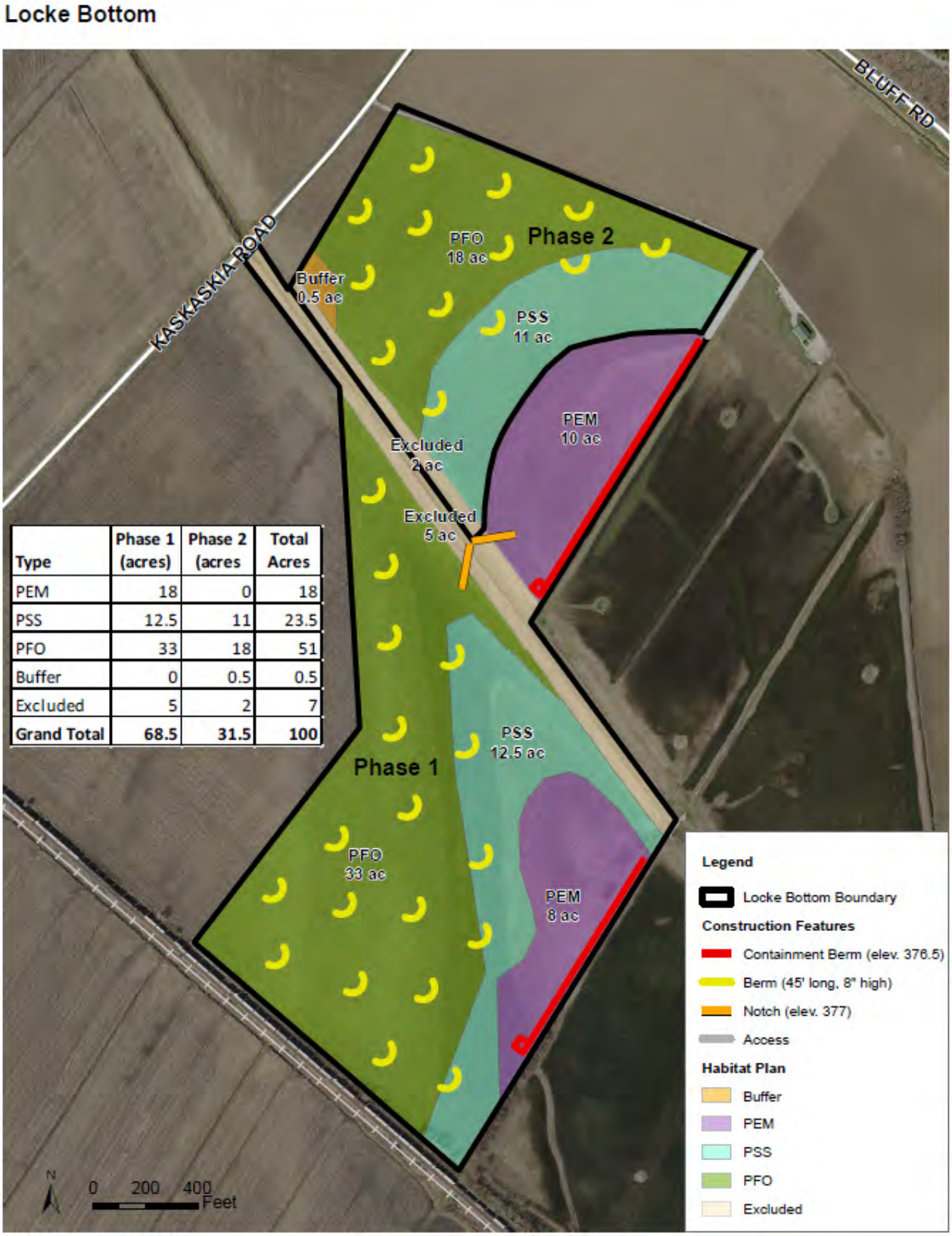
Note: berms not drawn to scale

Figure 9: Mitigation Plan Map – Phase 2



Note: berms not drawn to scale

Figure 10: Mitigation Plan Map – Phases 1 and 2 Combined



Type	Phase 1 (acres)	Phase 2 (acres	Total Acres
PEM	18	0	18
PSS	12.5	11	23.5
PFO	33	18	51
Buffer	0	0.5	0.5
Excluded	5	2	7
Grand Total	**68.5**	**31.5**	**100**

Note: berms not drawn to scale

Tree Plantings

MAST BOTTOMLAND HARDWOOD PLANTINGS

This area will follow all recommendations outlined in the WFI-B Umbrella Mitigation Banking Instrument (**UMBI**) for tree planting requirements. The forested planting equates to twenty-foot by twenty foot (20 ft x 20 ft) spacing equaling 109 trees/acre.

Phase 1: Forested Wetland = 33.0-acres x 109 trees/acre = 3,597 trees (+/-)

Phase 2: Forested Wetland = 18.0-acres x 109 trees/acre = 1,962 trees (+/-)

SCRUB-SHRUB PLANTINGS

This area will follow all recommendations outlined in the WFI-B **UMBI** for planting requirements. The scrub-shrub planting equates to 109 plants/acre with each species planted in specific locations based on hydrology.

Phase 1: Scrub-Shrub Wetland = 12.5-acres x 109 plants/acre = 1,363 plants (+/-)

Phase 2: Scrub-Shrub Wetland = 11.0-acres x 109 plants/acre = 1,199 plants (+/-)

Locke Bottom Forested Wetland Tree Planting

***Tree Varieties**	*Trees per Acre*	**Phase 1:**		**Phase 2:**	
		Acres Planted	***Total Trees***	*Acres Planted*	***Total Trees***
Pin Oak (Quercus palustris)	15	33	**495**	18	**270**
Sycamore (Platanus occidentalis)	5	33	**165**	18	**90**
Willow Oak (Quercus phellos)	5	33	**165**	18	**90**
Northern Pecan (Carya Illinoensis)	10	33	**330**	18	**180**
Swamp White Oak (Quercus bicolor)	5	33	**165**	18	**90**
Green Hawthorne (Crataegus viridis.)	5	33	**165**	18	**90**
Shellbark Hickory (Carya laciniosa)	5	33	**165**	18	**90**
Button Bush (Cephalanthus occidentalis)	10	33	**330**	18	**180**
Persimmon (Diospyros virginiana)	4	33	**132**	18	**72**
Overcup Oak (Quercus lyrata)	10	33	**330**	18	**180**
Water hickory (Carya aquatic)	4	33	**132**	18	**72**
Sugarberry (Celtis laevigata)	4	33	**132**	18	**72**
Nuttall Oak (Quercus nuttallii)	10	33	**330**	18	**180**
Swamp Privit (Forestiera acuminate)	4	33	**132**	18	**72**
Bald Cypress (Taxodium distichum)	5	33	**165**	18	**90**
Water tupelo (Nyssa aquatic)	4	33	**132**	18	**72**
Kentucky coffee (Gymnocladus dioicus)	4	33	**132**	18	**72**
Totals	**109**		**3,597**		**1,962**

***Hardmast trees for berm planting**

Locke Bottom Scrub-Shrub Planting

***Tree Varieties**	*Plants per Acre*	**Phase 1:**		**Phase 2:**	
		Acres Planted	***Total Plants***	*Acres Planted*	***Total Plants***
Button Bush (Cephalanthus occidentalis)	20	12.5	**250**	11	**220**
Overcup Oak (Quercus lyrata)	5	12.5	**63**	11	**55**
Swamp Privet (Forestiera acuminate)	5	12.5	**63**	11	**55**
Bald Cypress (Taxodium distichum)	5	12.5	**62**	11	**55**
Cord Grass (Spartina Pectinata)	69	12.5	**863**	11	**759**
False Indigo (Amorpha fruticose)	5	12.5	**62**	11	**55**
Totals	**109**		**1,363**		**1,199**

***Hardmast trees for berm planting**

EXCAVATION DEVELOPMENT PLAN

The use of mounds or unconnected berms in other areas of the forested plantings will be utilized to extend durations of interior surface water in the forested planting area. The construction method for mound/berm will be a tractor pulled rice levee plow or excavator to manage the in-situ material into unconnected mounds/berms in tree planting areas.

Reference Appendix 4 for maps and features to be constructed.

Berm Construction: Closure and Mounds

Closure:

The closure berms along the southern boundary of Phase 1 and Phase 2 will consist of soil removed from an adjacent area and placed with a tractor and scraper operation. The general dimensions of the berms will be an eight-foot top, with a 4-foot side slope on each side. This generates a 16-foot-wide cross section for the berm. This berm will have an overflow section for simple hydrology management at elevation 376.50.

Mounds:

Should they require beds (berms/mounds), the trees shall be planted in raised planting beds (berms), constructed of existing soil materials, 8 to 10 inches in height after being compacted with a roller or a two gang roller of which has a minimum combined weight of 200 pounds per foot of ground contact length (e.g., 8 foot of working width double gang rolling seeder must weigh a minimum of 1600 lbs.). The base of the raised bed (berm) shall have an approximate minimum width of 7 feet with a flat crown being approximately 3 feet in width, and an approximate length of 45 feet. The berms shall be constructed in such a manner that restriction of the natural drainage of the site or impound water during high rainfall periods of flooding does not occur.

SECTION G – Operation and Maintenance Plan

The LBWMB restoration area is designed to be self-sustaining once the mitigation work plan is complete. The LBWMB's Operation and Maintenance will reflect the approved UMBI plans for the WFI-B UMBI.

WFI Holdings-B LLC will be responsible for maintenance activities until wetland performance standards are determined to be met.

Typical Maintenance Operations to include the following:

- Mowing
- Invasive species control utilizing herbicide spraying
- Minor dirt moving for cross sectional areas on berms

SECTION H – Ecological Performance Standards

The LBWMB's Ecological Performance Standards will reflect the approved UMBI plans for the WFI-B UMBI.

The performance standards listed below will be used to measure or assess whether the Bank Site is developing into the desired resource type and providing the expected functions. These performance standards will be applied to determine the success of this compensatory mitigation activity.

The Bank Site should meet the standards for vegetative cover and hydrology outlined in Table 1 below. Please note that Table 1 details the performance standards for multiple resource types as approved in the UMB. Those resource types specific to this Bank Site are highlighted in blue.

Table 1. Performance Standards

Target	1-3-year Performance Standards	4-7 (further) -year Performance Standards
Vegetative Success for Wetland Areas: Emergent (PEM)	At least 75% of the vegetative cover consists of native hydrophytic vegetation suitable for the proposed areas water regime and site potential. No single occurrence of invasive species shall exceed 0.25 contiguous acre in area even if the overall abundance of invasive species is less than 25%. **Hydrology:** No more than 5% of the wetland shall consist of a contiguous "unvegetated open water" area measured no later than September 15th of each monitoring year.	At least 75% of the vegetative cover consists of native hydrophytic vegetation suitable for the proposed areas water regime and site potential. Minimum of 10 hydrophytic plant species per acre. The 10 species must also be native perennial species. In addition, no single occurrence of invasive species shall exceed 0.10 contiguous acre in area even if the overall abundance of invasive species is less than 10%. **Hydrology:** No more than 5% of the wetland shall consist of a contiguous "unvegetated open water" area measured no later than September 15th of each monitoring year
Vegetative Success for Wetland Areas: Scrub-Shrub (PSS)	Performance standards for this habitat type will be proposed on a site-by-site basis and will generally mirror either the Emergent or Forested, depending upon site-specific parameters. No single occurrence of invasive species shall exceed 0.10 contiguous acre in area even if the overall abundance of invasive species is less than 10%.	
Vegetative Success for Wetland Areas: Forested (PFO)	Sponsor will comply with the St. Louis District Mitigation Tree Planting Guidance, Estimated Guidance from 2017. Note that only 20% of the surviving trees after monitoring may be from natural recruitment. In addition, trees re-planted within the previous two years will not count towards the survivability metric. No single occurrence of invasive species shall exceed 0.10 contiguous acre in area even if the overall abundance of invasive species is less than 10%. **Hydrology:** No more than 5% of the wetland shall consist of a contiguous "unvegetated open water" area measured no later than September 15th of each monitoring year	
Stream- In-Stream	Monitoring will include the establishment of eight fixed photo stations (pins) along the bank, 2 per reach. These pins will be measured in relationship to the current position of the bank toe or top of bank, which will show any erosion or deposition. Monitoring reports will note the presence of toe undercutting, lateral bank movement, and overall rock structure stability. Due to the method of stabilization and the existing bank conditions, some changes in bank conditions may continue to occur as the bank establishes a stable slope. The stabilization will be determined successful if the rock structures remain functionally in place following high flow events, and the bank line does not move beyond what would reasonably be expected for normal stream dynamics and morphology. To assess the performance of the grade control structures, a channel cross section will be taken at each photo station, when stream conditions allow, to monitor any changes in the shape of the stream channel.	Performance for the stream structures will be evaluated by the stability of the structures. Sites deemed not to create any instability for the stream channel shall the considered to meet performance standards for stream stability. A Rapid Bioassessment Protocol (RBP) determination will be utilized to determine overall ecologic lift for the in stream reaches. The RBP will be performed every year and be compared to the baseline RBP for the project. The RBP will be the main criteria for ecological performance. Specific stream performance standards beyond what are proposed in this document may be developed on a site-by-site basis as bank sites are proposed. A macroinvertebrates analysis may be conducted for each project, a baseline and at year 4 analysis can be evaluated for overall lift of macroinvertebrates.

Target	1-3-year Performance Standards	4-7 (further) -year Performance Standards
Stream- Riparian Area	Sponsor will comply with the St. Louis District Mitigation Tree Planting Guidance, Estimated Guidance from 2017. Note that only 20% of the surviving trees after monitoring may be from natural recruitment. In addition, trees re-planted within the previous two years will not count towards the survivability metric. No single occurrence of invasive species shall exceed 0.10 contiguous acre in area even if the overall abundance of invasive species is less than 10%.	
Buffer Areas	No single occurrence of invasive species shall exceed 0.10 contiguous acre in area even if the overall abundance of invasive species is less than 10%. Additional buffer performance standards may be added on a site by site basis depending upon site-specific parameters.	
RIAM	Between years five to seven, verify if pre-project assessment in Section D meets post project ranking as determined by best professional judgment.	

PLANTING PERFORMANCE STANDARDS

The LBWMB's Planting Performance Standards will reflect the approved UMBI plans for the WFI-B UMBI.

SECTION I – Monitoring Requirements

The LBWMB's Monitoring Requirements will reflect the approved UMBI plans for the WFI-B UMBI.

A seven (7) year monitoring program will be initiated after installation of the planting material for each phase. The WFI Holdings-B LLC Environmental Scientist shall conduct all monitoring.

SECTION J – Long-Term Management Plan

The LBWMB's Long-Term Management Plan will reflect the approved UMBI plans for the WFI-B UMBI.

The Bank Site will have a long-term management plan that focuses on the survival and success of the forested, scrub shrub, and emergent wetlands being restored. Long-term management will be implemented after the performance standards are met.

Landowner: WFI Holdings-B LLC

Long Term Steward for LBWMB: HeartLands Conservancy

Conservation Easement Holder for USACE: HeartLands Conservancy

STRUCTURE OF LONG-TERM FINANCING

Long-term financing for HeartLands Conservancy's services is referenced in Appendix 6. Endowments in the amounts of $31,000 (for Phase1 only) or $38,500 (if Phase 2 is included) will be used for any maintenance requirements once the performance standards have been met after submittal of the closeout report for each phase. Based upon financing and anticipated forested management action, the non-diminishing endowments will have financial stability in perpetuity.

PROVISIONS FOR LONG-TERM MANAGEMENT AND MAINTENANCE
LONG-TERM CARE

The Bank Site has been designed to be self-sustaining, therefore, long-term care is deemed to be minimal once the project has met the specified performance standards. However, a management and maintenance plan is located in Appendix 5 to address the minimal management requirements of the project.

SECTION K – Adaptive Management Plan

The LBWMB's Adaptive Management Plan will reflect the approved UMBI plans for the St. Louis WFI-B UMBI.

SECTION L – Financial Assurances

The LBWMB's Financial Assurances will reflect the approved UMBI plans for the WFI-B UMBI.

The Bank Site will have a plan of financial assurances and long-term management that focuses on the survival and success of the forested, scrub shrub, and emergent wetlands being restored. Financial Assurances will support the project during construction and monitoring while long-term management will be implemented after the performance standards are met.

CONSTRUCTION FINANCIAL ASSURANCES

The Sponsor agrees to provide the following financial assurances for the work described in the Banking Instrument and in Appendix 6, Financial Assurances.

The Sponsor will be the responsible party for the financial assurances of the Bank Site. These assurances will be of sufficient substance to ensure the proposed compensatory mitigation will be successfully completed in a manner consistent with the performance standards agreed upon by the MBRT and the Sponsor. Any financial instrument will be in place prior to commencement of any permitted activity associated with the Bank Site.

As seen in Appendix 6, the total construction and monitoring cost of the Bank Site through the monitoring period is anticipated to be $155,000 for Phase 1 and $105,000 for Phase 2, which includes forested, scrub-shrub, and emergent wetland construction expenses and yearly monitoring. To provide financial assurance protection for these costs, the Sponsor will purchase a casualty insurance policy to protect the Bank Site in the event of non-compliance. This policy will ensure sufficient funds are available to a third party should the Bank Site be deemed non-compliant and declared in default by the USACE. Funds would be made available to a third party to restore the Bank Site's compliance once a claim has been filed by the USACE. Upon execution of the MBI, the Sponsor will purchase this policy through Conservation United to meet the short-term financial assurance requirements. A draft policy of this insurance can be found in Appendix 6.

STRUCTURE OF LONG-TERM FINANCING ENDOWMENT

HeartLands Conservancy has been identified as the long-term manager/steward.

An endowment in the amount of Thirty-One Thousand Dollars ($31,000) for Phase 1 will be completely funded to an interest accruing account at Project Close-out of LBWMB. If Phase 2 is pursued, this endowment amount will be increased to Thirty-Eight Thousand Five Hundred Dollars ($38,500). Based upon financing and anticipated forested management action, the non-diminishing endowment will have financial stability in perpetuity.

Long-term financing for HeartLands Conservancy's services is outlined above and referenced in Appendix 5.

- An Endowment will be established along with Financial Assurances component of the project;
- The Total Endowment funding at Project Close-Out will be $31,000 (Phase 1 only), or $38,500 (Phase 2 included); at an estimated return rate of 6% which generates $24,500/ten years (Phase 1 only) or $30,500/ten years (Phase 2 included).
- WFI Holdings-B LLC recommends a stepped funding strategy for this project's Endowment. The strategy will consist of two major activities; 1) A Fixed Annual Payment and 2) A Final Endowment Funding at Project Close-Out.
- Fixed Annual Payments in the amount of $2,000 per year
    - Timing of Annual Payment: within 90 days of beginning of calendar year for prior calendar year (example: annual payment for 2023 to be made by end of March 2024).
- Final Endowment Funding action to fund the remainder of Endowment
    - Timing of Final Endowment: Project Close-Out
    - Amount: equal to an amount to bring the endowment to a total of $31,000 if Phase 1 only, or $38,500 if Phase 2 is included.
        - Total Endowment Funding, less sum of Fixed Annual Payments, less sum of interest earned
        - Shall not exceed a maximum of Total Endowment Funding ($31,000 if Phase 1 only, or $38,500 if Phase 2 is included) less sum of Fixed Annual Payments

- Total Endowment funding at time of Project Close-Out: $31,000 if Phase 1 only; $38,500 if Phase 2 is included;
- WFI Holdings-B LLC will fund a TSI/Pruning Management action at Close-out.

PROVISIONS FOR LONG-TERM MANAGEMENT AND MAINTENANCE
LONG-TERM CARE

The Bank Site has been designed to be self-sustaining, therefore, long-term care is deemed to be minimal once the Bank Site has met the specified performance standards. However, a management and maintenance plan is located in Appendix 5 to address the minimal management requirements.

SECTION M – Credit Release Schedule for the Bank Site

The LBWMB's Credit Release Schedule will reflect the approved UMBI plans for the WFI-B UMBI. The LBWMB generates 63.50 wetland credits in Phase 1 and 29.13 wetland credits in Phase 2.

Wetland Credits:

Description	**Release %**	**Phase 1**	**Phase 2**
Bank Approval	15%	9.53	4.37
Construction Complete	25%	15.87	7.28
Hydrology Confirmation	15%	9.53	4.37
Year 3 Performance Standards	15%	9.53	4.37
Year 4 Performance Standards	15%	9.52	4.37
Year 5-7 Performance Standards	15%	9.52	4.37
Total	**100%**	**63.50**	**29.13**

The Sponsor shall submit a statement to the Corps St. Louis District each time credits are debited, or additional credits are approved. If requested, the Corps will distribute the statement to other members of the MBRT. At a minimum, the Sponsor shall submit an annual ledger to the Corps for distribution to all members of the MBRT, showing all transactions at the LBWMB for the previous year.

Please see below for example tracking logs.

Locke Bottom Wetland Mitigation Bank

Managed By: WFI Holdings-B LLC

INDIVIDUAL CREDIT DEBIT LOG

USACE Permit Number: CE-MVS-2021-xxxx

WFI Holdings-B LLC Tracking Code: ABPP-LOCKE BOTTOM(LB)-2021-01

Type	Approved Credits	Debits this Transaction	Total Debits to Date	Balance of Credits
Wetland – Ph 1	63.50	0.0	0.0	63.50
Wetland – Ph 2	29.13	0.0	0.0	29.13
Total	**92.63**	**0.0**	**0.0**	**92.63**

Locke Bottom Wetland Mitigation Bank

Managed By: WFI Holdings-B LLC

WETLAND CREDITS YEARLY BALANCE LOG

Credits Yearly Balance	**Name of Debitor and DA Permit Number**	**Wetland Credits Debited**	**WFI Holdings-B Tracking Code**
2021	Company ABC	2.1	ABPP-SB-2021-001
2021	Company XYZ	0.3	ABPP-SB-2021-001
2022	Company 123	1.1	ABPP-SB-2022-001
2022			
2023			
2024			

Cahokia-Joachim, Peruque-Piasa, and the Sny Service Area

Managed By: WFI Holdings-B LLC

WETLAND AND STREAM CREDITS YEARLY BALANCE LOG

Credits Yearly Balance	Name of Debitor and DA Permit Number	Wetland Credits Debited	Stream Credits Debited	WFI Holdings-B Tracking Code
2021	Company ABC	2.1	0.0	ABPP-LB-2021-001
2021	Company XYZ	0.0	150	ABPP-??-2021-002
2021	Company Bravo	2.2	0.0	ABPP-??-2021-001
2022	Company 123	1.1	1,250	ABPP-LB-2021-001
2022				
2023				
2024				

WFI-B UMBI

Managed By: WFI Holdings-B LLC

WETLAND AND STREAM CREDITS YEARLY BALANCE LOG

Credits Yearly Balance	Name of Debitor and DA Permit Number	Wetland Credits Debited	Stream Credits Debited	WFI Holdings-B Tracking Code
2021	Company ABC	2.1	0.0	ABPP-LB-2021-001
2021	Company XYZ	0.0	150	ABPP-??-2021-002
2021	Company Bravo	1.2	0.0	ABPP-??-2021-001
2021	Company Charlie	0.0	2.8	BM-??-2021-001
2022	Company 123	1.1	1,250	ABPP-LB-2021-001
2022				
2023				
2024				

SECTION N – Default and Closure Provisions

The LBWMB's Default and Closure Provisions will reflect the approved UMBI plans for the WFI-B UMBI.

SECTION O – FORCE MAJEURE

The LBWMB's Force Majeure will reflect the approved UMBI plans for the WFI-B UMBI.

Appendix 1

Survey – Plat

[survey currently in-progress; will insert when complete before approval]

Appendix 2

Title Commitment and Chain of Title

CHICAGO TITLE
INSURANCE COMPANY

File No: 210563

COMMITMENT FOR TITLE INSURANCE
ISSUED BY
Chicago Title Insurance Company
NOTICE

IMPORTANT-READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and the Commitment Conditions, Chicago Title Insurance Company, a Florida Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I-Requirements have not been met within 180 Days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Issued By:
MOCOTICO, LLC d/b/a Monroe County Title Co.
P.O. Box 188
231 South Main Street
Waterloo, IL 62298-0188
Tel. (618) 939-8292
Fax (618) 939-3931

Authorized Signatory

CHICAGO TITLE INSURANCE COMPANY

By:

ATTEST President

Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

CHICAGO TITLE
INSURANCE COMPANY

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I-Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I - Requirements;
(f) Schedule B, Part II - Exceptions; and
(g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
  (i) comply with the Schedule B, Part I - Requirements;
  (ii) eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or
  (iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.

(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.

(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.

(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

CHICAGO TITLE INSURANCE COMPANY

Transaction Identification Data for reference only:
Issuing Agent: MOCOTICO, LLC d/b/a Monroe County Title Co.
Issuing Office: P.O. Box 188
231 South Main Street, Waterloo, IL 62298-0188
Issuing Office File Number: 210563
Property Address: Farmland - Kaskaskia Road Prairie du Rocher, IL 62277

SCHEDULE A

1. Commitment Date: **July 15, 2021**
2. Policy to be issued:

   (a) 2006 ALTA® Owner's Policy
   Proposed Insured: **Columbia Acquisitions, LLC.**
   Proposed Policy Amount: **$15,000.00**

3. The estate or interest in the Land described or referred to in this Commitment is

   Fee Simple

4. The Title is, at the Commitment Date, vested in:

   Steven P. Brinkmann.

5. The Land is described as follows:

   SEE ATTACHED EXHIBIT "A"

MOCOTICO, LLC d/b/a Monroe County Title Co.

By: [signature]
Authorized Signatory

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; and Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.
72C276B

CHICAGO TITLE INSURANCE COMPANY

File No.: 210563

Exhibit A

A strip off of the Southeasterly side of Survey 665, Claim 1750, being 1.96 chains wide on the River End and 1.62 chains wide on the Bluff End, and being in the Fort Chartres Common Fields, Monroe County, Illinois, except that part thereof lying North of the Main Ditch, and being situated in Township 5 South, Range 10 West of the Third Principal Meridian.

ALSO:

Tax Lot No. 2, in Survey 353, Claim 2057, as shown by Official Plat Record "A" on Page 51, Monroe County, Illinois, being all of Survey lying Northeast of the Main Ditch; all of Survey 354, Claim 2059; all of Survey 355, Claim 2062; all of Survey 664, Claim 1751; excepting land sold to St. Louis Valley Railway for right of way, as shown by Deed Record No. 36, on Page 76; and also excepting land sold to School District for school land for Liddy School, as shown by Deed Record No. 46, on Page 33, all in Township 5 South, Range 10 West of the Third Principal Meridian.

ALSO:

All that part of the following described tract which lies Southeasterly of the Grand Pass County Road, and being part of Tax Lot 6 of Survey 666, Claim 2346 and Tax Lot 5 of Survey 665, Claim 1750, in Township 5 South, Range 10 West of the Third Principal Meridian, and as shown on Page 51 of Surveyor's Official Plat Record "A" of Monroe County, Illinois records, described as follows, to-wit: Beginning at the Northwesterly corner of Survey 667, Claim 2347; thence South 84 degrees 10 minutes East 9.87 chains along Base Line to Main Ditch; thence along brim of Main Ditch South 28 degrees East 14.25 chains to the West side of County Road; thence South 32-1/2 degrees East 4.32 chains to post on Southesterly line of Survey No. 665, Claim No. 1750; thence South 34 degrees West along said Claim line 31.40 chains to the right of way of the Missouri Pacific Railroad; thence North 47 degrees West 5.86 chains to Southerly corner of One acre lot; thence North 43 degrees East 3.16 chains; thence North 47 degrees WEst 3.16 chains to Southerly line of County Road; thence South 43 degrees West 3.16 chains to railway right of way; thence North 47 degrees West 16.38 chains along railroad right of way to post on the Northwesterly line of Survey No. 667, Claim 2347; thence North 34 degrees East along said Claim line 32.60 chains to the place of beginning; lying Southeasterly of the Grand Pass County Road and lying Northwesterly of the County Road and being all of Surveys No. 665, 666, 667, Claims 1750, 2346, and 2347 lying between the railway right of way and the Main Ditch, all in Township 5 South, Range 10 West of the Third Principal Meridian.

ALSO:

One acre square of land described as follows: Beginning at the intersection of the South line of the said Grand Pass County Road and the East line of the right of way of said St. Louis Valley Railway; thence running South along the East line of said right of way 208 feet to a point; thence running East at right angles with said line 208 feet to a point; thence North 208 feet to the South line of said Grand Pass County Road; thence West 208 feet to the place of beginning, also known and described as Lot No. 1 of Survey 665, Claim 1750 in Township 5 South, Range 10 West of the Third Principal Meridian.

ALSO:

157 acres and .38 of an acre off the Southwesterly end of Survey 353, Claim 2057, Township 5 South, Range 10 West of the Third Principal Meridian, being all of said Survey and Claim lying Southwesterly of the Main Ditch, and being also known and described as Tax Lot No. 1 of said Survey and Claim as shown by Page 51 of Surveyor's Official Plat Record "A" of Monroe County, Illinois; except that portion conveyed to the St. Louis Valley Railway as shown by Deeds of Record: one dated August 7, 1901 and recorded in Deed Record 36, Page 76; one dated August 7, 1901 and recorded in Deed Record 36, Page 77; and one dated October 2, 1901 and recorded in Deed Record 36, Page 169; and except that portion conveyed to Missouri Pacific Railway Company, as shown by Deed dated August 1, 1974 and recorded in Deed Record 115, on Page 451; and except therefrom the school house building and property included as follows: Commencing at the East side of the Upper Bottom, St. Louis and Kaskaskia Road, on the Northwest line of Claim No. 2062, Survey No. 355, running along said road in a Southeasterly direction130 feet; thence Northeast 72 feet; thence Northwest 130 feet; thence Southwest 72 feet to the point of beginning.

EXCEPTING FROM THE ABOVE DESCRIBED LANDS, that tract heretofore conveyed to Thelma B. Stewart by deed dated Janaury 28, 1989, and recorded February 3, 1989, in Deed Record 161 at page 203, and being described as follows:

Part of Surveys 353, 354 and 355, Claims 2057, 2059 and 2062, all in Township 5 South, Range 10 West of the 3rd P.M., Monroe County, Illinois and more particularly described as follows:

All that portion of the above surveys and claims which lies Southwesterly of the public roadway known as Stringtown Road and which lies Southeasterly of the public roadway known as Ragtown Road and containing in said tract 16 acres, more or less.

ALSO:

Part of Surveys 354 and 355, Claims 2059 and 2062, all in Township 5 South, Range 10 West of the 3rd P.M., Monroe County, Illinois, and more particularly described as follows:

Beginning at a point at the intersection of the Northeasterly right-of-way line of the public road known as Stringtown Road and the centerline of a public roadway known as Ragtown Road in said Survey 355; thence Southeasterly 200 feet along the said Easterly right-of-way line of the Stringtown Road to a point; thence Northeasterly at right angles to said road right-of-way line a distance of 300 feet to a point; thence Northwesterly 580 feet along a line parallel to the said Easterly right-of-way line of said Stringtown Road to a point; thence Southwesterly 300 feet along a line at right angles to the said Stringtown Road right-of-way to a point on the said Easterly right-of-way of said Stringtown Road; thence Southeasterly a distance of 380 feet along said right-of-way line to the place of beginning, containing 4 acres, more or less.

EXCEPTING FROM THE ABOVE DESCRIBED LANDS, that tract heretofore conveyed by deed dated September 3, 2002, and recorded January 5, 2004, as Document No. 283575, and being described as follows:

Tax Lot #2 of Survey #353, Claim #2057, as shown on Page #51 of the Surveyor's Official Plat Record "A", on file in the Monroe County, Illinois Recorder's Office and described as follows:

Beginning at an old iron marking the most northerly corner of Tax Lot #2 of Survey #353, Claim #2057, said Tax Lot and Survey shown on page #51 in the Surveyor's Official Plat Record "A" in the Monroe County Recorder's office; thence on assumed bearing and along the northeasterly line of said Tax Lot #2, South 34 Degrees, 56 Minutes, 15 Second East, a distance of 936.2 feet to an old iron marking the southeasterly corner of Tax Lot #2 of said Survey; thence along the southeasterly line of said Tax Lot #2, South 34 Degrees, 00 Minutes, 00 Seconds West, a distance of 1678.62 feet to the southwesterly corner thereof, said point being in the centerline of the 'Main Ditch' and also shown on Page #51 of the Surveyor's Official Plat Record "A"; thence along the southwesterly line of Tax Lot #2, along the centerline of the said 'Main Ditch', North 34 degrees, 14 Minutes, 02 Seconds West, a distance of 940.71 feet to a point; thence leaving the 'Main Ditch', along a line parallel with the southeasterly line of Survey #353, Claim #2057, North 34 Degrees 00 Minutes, 00 Seconds East, a distance of 1666.23 feet and to the Point of Beginning, containing 33.54 acres, more or less.

TOGETHER WITH an Easement for roadway purposes over that certain 0.04 acre parcel shown on Exhibit C in Easement Agreement dated August 29, 2002, and recorded Septebmer 4, 2002, in Deed Record 242 at pages 543-547 in the Recorder's Office of Monroe County, Illinois, said parcel described as follows:

An easement to be used for private ingress and egress along and across an agricultural field road as it presently exists in July of 2002, and described as: All that part of a strip of land, 15 feet in width, measured in a southwest direction from, and perpendicular to, the northeasterly line of Survey 665, Claim 1750, which lies southeasterly of the souherly R-O-W line of a public road known as "Kaskaskia" road, being approximately 0.04 acres in the Northeast quarter of Section 1, Township 5 South, Range 10 West of the Third Principal Meridian, Monroe County, Illinois.

ALSO TOGETHER WITH an Easement for roadway purposes as reserved in deed dated September 3, 2002, and recorded January 5, 2004, as Document No. 283575 in the Recorder's Office of Monroe County, Illinois, said Easement described as follows:

The right of private ingress and egress along, across, and over the established agricultural field road as it presently meanders along the northeasterly and southeasterly lines of the following described tract:

Tax Lot #2 of Survey #353, Claim #2057, as shown on Page #51 of the Surveyor's Official Plat Record "A", on file in the Monroe County, Illinois Recorder's Office and described as follows:

Beginning at an old iron marking the most northerly corner of Tax Lot #2 of Survey #353, Claim #2057, said Tax Lot and Survey shown on page #51 in the Surveyor's Official Plat Record "A" in the Monroe County Recorder's office; thence on assumed bearing and along the northeasterly line of said Tax Lot #2, South 34 Degrees, 56 Minutes, 15 Second East, a distance of 936.2 feet to an old iron marking the southeasterly corner of Tax Lot #2 of said Survey; thence along the southeasterly line of said Tax Lot #2, South 34 Degrees, 00 Minutes, 00 Seconds West, a distance of 1678.62 feet to the southwesterly corner thereof, said point being in the centerline of the 'Main Ditch' and also shown on Page #51 of the Surveyor's Official Plat Record "A"; thence along the southwesterly line of Tax Lot #2, along the centerline of the said 'Main Ditch', North 34 degrees, 14 Minutes, 02 Seconds West, a distance of 940.71 feet to a point; thence leaving the 'Main Ditch', along a line parallel with the southeasterly line of Survey #353, Claim #2057, North 34 Degrees 00 Minutes, 00 Seconds East, a distance of 1666.23 feet and to the Point of Beginning, containing 33.54 acres, more or less.

CHICAGO TITLE
INSURANCE COMPANY

File No.: 210563

SCHEDULE B, PART I
Requirements

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
5. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.
6. The "Good Funds" section of the Title Insurance Act (215 ILCS 155/26) is effective January 1, 2010. This Act places limitations upon our ability to accept certain types of deposits into escrow. Please contact your local Title office regarding the application of this new law to your transaction.
7. Effective June 1, 2009, pursuant to Public Act 95-988, satisfactory evidence of identification must be presented for the notarization of any and all documents notarized by an Illinois notary public. Satisfactory identification documents are documents that are valid at the time of the notarial act; are issued by a state or federal government agency; bear the photographic image of the individual's face; and bear the individual's signature.
8. The Proposed Policy Amount(s) must be increased to the full value of the estate or interest being insured, and any additional premium must be paid at that time. An Owner's policy should reflect the purchase price or full value of the Land. A Loan Policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.
9. IN THE EVENT ANY PARTY TO THE TRANSACTION CONTEMPLATES THE USE OF A POWER OF ATTORNEY. THE COMPANY REQUIRES SUBMISSION OF THE POWER OF ATTORNEY FOR APPROVAL NO LESS THAN THREE DAYS PRIOR TO CLOSING
10. THE COMPANY REQUIRES RECEIPT OF FINAL LOAN FIGURES NO LESS THAN 24 HOURS PRIOR TO CLOSING
11. We should be provided with our standard form of indemnity (GAP Indemnity) for defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the Commitment Date but prior to the date of recording of the instruments under which the Proposed Insured acquires the estate or interest or mortgage covered by this commitment. Note: Due to office closures related to covid-19 we may be temporarily unable to record documents in the normal course of business.

CHICAGO TITLE
INSURANCE COMPANY

File No.: 210563

SCHEDULE B, PART II
Exceptions

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met.
2. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land.
3. Easements, or claims of easements, not shown by the Public Records.
4. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.
5. Taxes or special assessments which are not shown as existing liens by the Public Records.
6. We should be furnished a properly executed ALTA statement and, unless the land insured is a condominium unit, a survey if available. Matters disclosed by the above documentation will be shown specifically.
7. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I -Requirements are met.

8. Taxes for the years 2020 and 2021 which are not now due and payable.

NOTE: Taxed in 2019 as the following:

Tract 17-01-400-001 and $2,277.70 paid.
Tract 17-12-100-002 and $2,040.52 paid.
Tract 17-11-400-002 and $1,555.54 paid.

9. Rights of the public, the State of Illinois and the municipality in and to any part of the land taken or used for roadway purposes.

10. Rights of public or quasi-public utility companies in and to any portion of the premises used for utility purposes.

11. Rights of way for drainage tiles, ditches, feeders, laterals and underground pipes.

12. Rights of others in and to any portion of the land lying within the right-of-way lines of any public roadways.

13. Easement granted March 17, 1951, to Illinois Power Company, as shown by document recorded March 31, 1951, in Deed Record 69 at page 376 in the Recorder's Office of Monroe County, Illinois.

14. Right, title and interest of Fort Chartres & Ivy Landing Drainage and Levee District, in and to any drainage tiles, ditches, feeders, laterals, underground pipes and levees.

15. Easement Agreement dated August 29, 2002, and recorded September 4, 2002, in Deed Record 242 at page 543 in the Recorder's Office of Monroe County, Illinois.

16. Easement for ingress and egress along and across an established agricultural road, 15 feet in width, as conveyed in deed dated September 3, 2002, and recorded January 5, 2004, as Document No. 283575 in the Recorder's Office of Monroe County, Illinois.

17. Rights of adjoining owner or owners in and to the concurrent use of the easements set out in Schedule A hereof.

18. This Commitment does not insure the accuracy of any description in Schedule A which describes or excepts land by acreage.

19. Upon any conveyance of the land, or a portion of the land, necessary easements for ingress and egress should be reserved by the grantor, to allow for access to any remaining property still owned by said grantor.

20. We should be furnished (A) certification from the Illinois Secretary of State that Columbia Acquisitions, L.L.C. has properly filed its articles of organization, (B) a copy of the articles of organization, together with any amendments thereto, (C) a copy of the operating agreement, if any, together with any amendments thereto, (D) a list of incumbent managers or of incumbent members if managers have not been appointed, and (E) certification that no event of dissolution has occurred.

21. Information should be furnished establishing the present value of the land and improvements thereon. If such value is greater than the amount of insurance requested, the application should be amended to request an amount equivalent to the full value of the property, and in default thereof, the right is reserved to insert in the owner's policy the Company's usual coinsurance endorsement.

22. Consequences of the failure to include the marital status of the grantor(s) on the deed of conveyance, or the mortgage to be insured.

23. **NOTE FOR INFORMATION: The "Good Funds" section of the Title Insurance Act (215 ILCS 155/26) is effective January 1, 2010. This Act places limitations upon our ability to accept certain types of deposits into escrow. *Any deposit which exceeds $50,000.00 must be presented in the form of wire transfer.* Please contact Monroe County Title Co. regarding the application of this new law to your transaction.**

24. **NOTE FOR INFORMATION: The recording of any deed hereunder is contingent upon approval by the Department of Mapping and Platting of Monroe County as to compliance with the Plat Act, Chapter 109 Illinois Revised Statutes, and County Board Ordinances No. 89-07 and the Conveyances Act, Chapter 30 Illinois Revised Statutes, all as may be amended. This Commitment should not be construed as insuring the conformity of the legal description herein with any of the aforementioned provisions.**

25. **NOTE FOR INFORMATION: The recording of any documents hereunder will be subject to recording fees pursuant to the Public Act 87-1121, Chapter 55 ILCS 5/3-6018. The Recorder shall charge an additional fee, in an amount equal to the fee otherwise provided by law, for recording any documents that do not conform to the standards.**

End of Schedule B.

Effective Date: 1/1/2013

MONROE COUNTY TITLE CO.
Privacy Statement

Monroe County Title Co. ("MCTC") respect the privacy and security of your non-public personal information ("Personal Information") and protecting your Personal Information is one of our top priorities. This Privacy Statement explains MCTC's privacy practices, including how we use the Personal Information we receive from you and from other specified sources, and to whom it may be disclosed. M C T C follows the privacy practices described in this Privacy Statement and, depending on the business performed, MCTC Company may share information as described herein.

Personal Information Collected

We may collect Personal Information about you from the following sources:

- Information we receive from you on applications or other forms, such as your name, address, social security number, tax identification number, asset information, and income information;
- Information we receive from you through our Internet websites, such as your name, address, email address, Internet Protocol address, the website links you used to get to our websites, and your activity while using or reviewing our websites;
- Information about your transactions with or services performed by us, our affiliates, or others, such as information concerning your policy, premiums, payment history, information about your home or other real property, information from lenders and other third parties involved in such transaction, account balances, and credit card information; and
- Information we receive from consumer or other reporting agencies and publicly recorded documents.

Disclosure of Personal Information

We may provide your Personal Information (excluding information we receive from consumer or other credit reporting agencies) to various individuals and companies, as permitted by law, without obtaining your prior authorization. Such laws do not allow consumers to restrict these disclosures. Disclosures may include, without limitation, the following:

- To insurance companies, agents, brokers, representatives, support organizations, or others to provide you with services you have requested, and to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure in connection with an insurance transaction;
- To third-party contractors or service providers for the purpose of determining your eligibility for an insurance benefit or payment and/or providing you with services you have requested;
- To an insurance regulatory authority, or a law enforcement or other governmental authority, in a civil action, in connection with a subpoena or a governmental investigation;
- To companies that perform marketing services on our behalf or to other financial institutions with which we have joint marketing agreements and/or
- To lenders, lien holders, judgment creditors, or other parties claiming an encumbrance or an interest in title whose claim or interest must be determined, settled, paid or released prior to a title or escrow closing.

We may also disclose your Personal Information to others when we believe, in good faith, that such disclosure is reasonably necessary to comply with the law or to protect the safety of our customers, employees, or property and/or to comply with a judicial proceeding, court order or legal process.

Disclosure to Affiliated Companies – We are permitted by law to share your name, address and facts about your transaction with other MCTC companies, such as insurance companies, agents, and other real estate service providers to provide you with services you have requested, for marketing or product development research, or to market products or services to you. We do not, however, disclose information we collect from consumer or credit reporting agencies with our affiliates or others without your consent, in conformity with applicable law, unless such disclosure is otherwise permitted by law.

Disclosure to Nonaffiliated Third Parties – We do not disclose Personal Information about our customers or former customers to nonaffiliated third parties, except as outlined herein or as otherwise permitted by law.

Confidentiality and Security of Personal Information

We restrict access to Personal Information about you to those employees who need to know that information to provide products or services to you. We maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard Personal Information.

Access to Personal Information/
Requests for Correction, Amendment, or Deletion of Personal Information

As required by applicable law, we will afford you the right to access your Personal Information, under certain circumstances to find out who your Personal Information has been disclosed to, and request correction or deletion of your Personal Information. However, MCTC's current policy is to maintain customers' Personal Information for no less than your state's required record retention requirements for the purpose of handling future coverage claims.

For your protection, all requests made under this section must be in writing and must include your notarized signature to establish your identity. Where permitted by law, we may charge a reasonable fee to cover the costs incurred in responding to such requests. Please send requests to:

Monroe County Title
Attn: Privacy Compliance
P.O. Box 188
Waterloo, IL 62298

Changes to this Privacy Statement

This Privacy Statement may be amended from time to time consistent with applicable privacy laws. When we amend this Privacy Statement, we will post a notice of such changes on our website. The effective date of this Privacy Statement, as stated above, indicates the last time this Privacy Statement was revised or materially changed.

MONROE COUNTY TITLE COMPANY
231 SOUTH MAIN STREET
WATERLOO, ILLINOIS 62298

TELEPHONE: (618) 939-8292
FACSIMILE: (618) 939-3931

August 11, 2021

CHAIN OF TITLE REPORT
1950 – 2021
BRINKMANN FARM

Amy Bourne
MIH Management Services LLC
248 Southwoods Centre
Columbia, IL 62236

RE: Chain of Title – Brinkmann Farm

Dear Amy: Per your request, we have performed a Chain of Title search for deed documents in the chain of title, going backwards from present day to 1950.

The deed documents found were all e-mailed to you, and are listed as follows (going backwards in time):

1. Document No. 283575 - Not relevant to our purchase. Deed from Brinkmann to Henke, for 33.54 acre parcel to the East.
2. Book 242 Page 548 - Not relevant to our purchase. Brinkmann to Henke installment sales agreement for 33.54 acre parcel to the East
3. Book 242 Page 543 - Not relevant. This is an easement, not a deed. This is the easement that serves the 33.54 ac. parcel to the East.
4. Book 161 Page 203 - Not relevant. Deed from Brinkmann to Stewart for 20 ac. (I think this for land way to the south, by Stringtown Rd.)
5. Book 158 Page 649 - Judicial Deed from Monroe County to Brinkmann dated June 20, 1988. No reference to mineral reservations.
6. Book 158 Page 643 - Certificate of Sale dated June 20, 1988. No reference to mineral reservations.
7. Book 156 Page 562 - Notice of Foreclosure (Lis Pendens) dated Dec. 3, 1987. No reference to mineral reservations.
8. Book 131 Page 487 - Sheriff's Deed from Monroe Co. to Henerfauth dated December 3, 1979. No reference to mineral reservations.
9. Book 126 Page 626 - Lis Pendens Notice dated May 11, 1978. No reference to mineral reservations.
10. Book 121 Page 376 - Warranty Deed, Feldmeier to Henerfauth dated Aug. 24, 1976 for 0.2 ac. "school house". No ref. to minerals.
11. Book 120 Page 189 - Warranty Deed, Feldmier to Henerfauth, dated Mar. 30, 1976. No reference to mineral reservations.
12. Book 116 Page 451 - Not relevant to our purchase. Feldmeier to Missouri Pacific RR. This is a L&E from the Brinkmann legal desc.
13. Book 78 Page 547 - Quit Claim Deed, School Board to Feldmeier, dated June 11, 1957 for 0.2 ac "school house". No ref. to minerals.
14. Book 75 Page 205 - Warranty Deed, Church to Feldmeier, dated Aug. 19, 1953. No reference to mineral reservations.
15. Book 73 Page 153 - Quit Claim Deed, Cullen et al. to Feldmeier, dated Aug. 1, 1924 for 26.10 ac. No reference to mineral reservations.

No other deed documents found of record from the time period of January 1, 1950 to present day.

Please call should you have any questions.

Very truly yours,

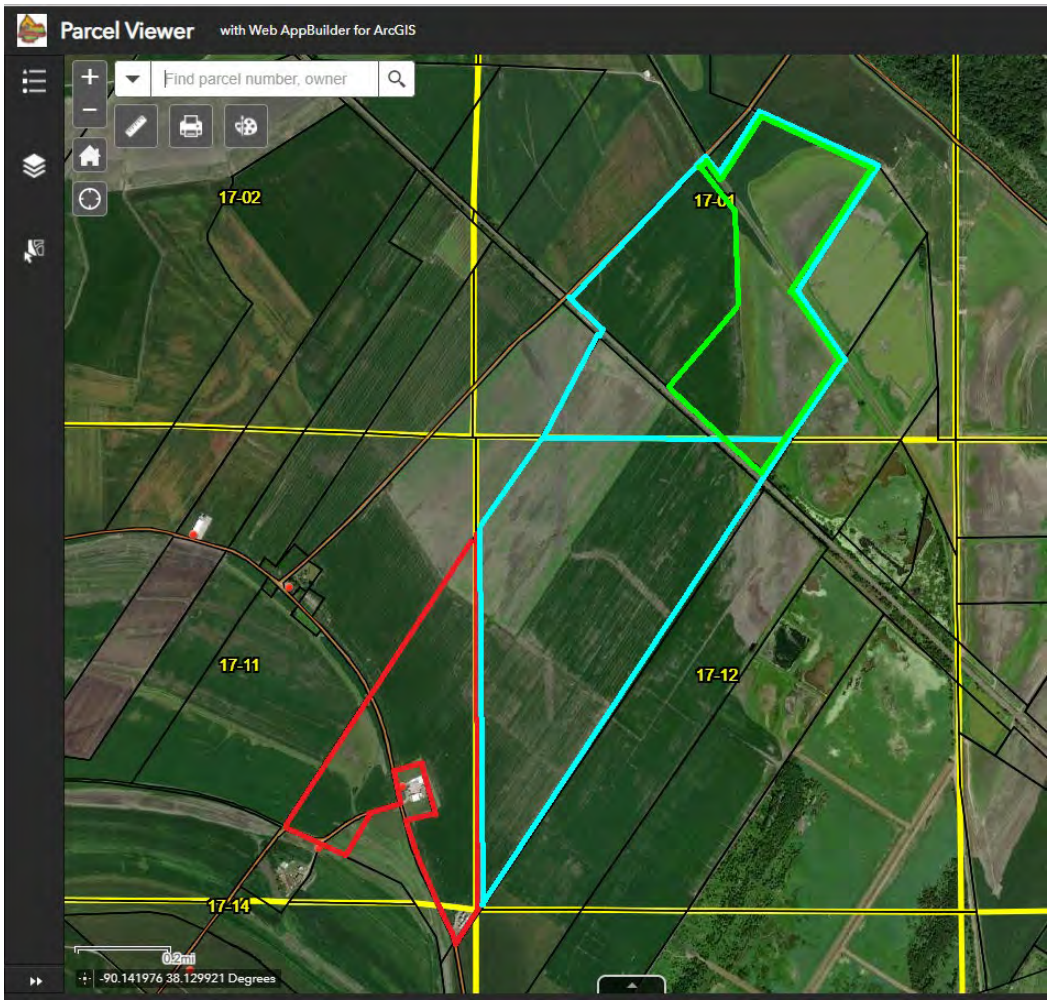
Ronald S. Kaiping
President

Summary of Title Work

Below is a summary of the title and encumbrances on three tax parcels (nos. 17-01-400-001, 17-12-100-002, and 17-11-400-002 owned by Steven P. Brinkmann ("Brinkmann Farm") as of July 15, 2021, which is the effective date of the title commitment prepared by Monroe County Title Company.

The area on which we intend to build a mitigation bank, is approximately 100 acres and will be surveyed out of tax parcels 17-01-400-001 and 17-12-100-002. Tax parcels 17-01-400-001 and 17-12-100-002 total approximately 383.46 acres. However, the title commitment covers three tax parcels and approximately 471.56 acres. The title agent explained that the record legal description was not conducive to allowing for a legal description of just the two parcels that our Project will affect, so the commitment contains more land than what was requested.

Tax parcels 17-01-400-001 and 17-12-100-002 are shown in blue on the map below. The parcel shown in red on the map below is included in the title commitment but will not be part of the Project. The proposed "Project Area" is shown in green.



OWNERSHIP

The Brinkmann Farm is owned in fee simple by Steven P. Brinkmann, pursuant to a Judicial Deed recorded in Monroe County, Illinois on June 20, 1988, in Book 158, Page 649. Columbia Acquisitions LLC, an affiliate of WFI Holdings-B LLC, entered into an Agreement of Purchase and Sale with Steven P. Brinkman, to purchase the Project Area.

MINERAL RIGHTS

Monroe County Title Company provided a Chain of Title Report dated August 11, 2021 listing the deeds affecting the Brinkmann Farm from 1950-2021 No mineral reservations appear on any of the deeds in that time frame.

1. Document No. 283575 - *Not relevant* to our project. This is a deed from Brinkmann to Henke, for the 33.54 acre parcel to the East.
2. Book 242 Page 548 - *Not relevant* to our project. Brinkmann to Henke installment sales agreement for 33.54 acre parcel to the East.
3. Book 242 Page 543 - *Not relevant* to our project. This is an easement, not a deed. This is the easement that serves the 33.54 ac. parcel to the East. See Exception 15 below.
4. Book 161 Page 203 - *Not relevant* to our project. This is a deed from Brinkmann to Stewart for 20 ac. which appears to now be Tax ID 17-11-400-003-000 and is located south of the Brinkmann farm, off of Stringtown Road.
5. Book 158 Page 649 - Judicial Deed from Monroe County Circuit Court Judge to Steven P. Brinkmann dated June 20, 1988. *No reference to mineral reservations*.
6. Book 158 Page 643 - Certificate of Sale, Monroe County Circuit Court Case No. 87-CH-21, The Federal Land Bank of St. Louis v. Earl R. Henerfauth, Georgiann Henerfauth, et al., dated June 20, 1988. *No reference to mineral reservations*.
7. Book 156 Page 562 - Notice of Foreclosure (Lis Pendens), Monroe County Circuit Court Case No. 87-CH-21, The Federal Land Bank of St. Louis v. Earl R. Henerfauth, Georgiann Henerfauth, et al., dated Dec. 3, 1987. *No reference to mineral reservations*.
8. Book 131 Page 487 - Sheriff's Deed from Monroe County Sherriff to Earl R. Henerfauth and Georgiann Henerfauth dated December 3, 1979. *No reference to mineral reservations*.
9. Book 126 Page·626 - Lis Pendens Notice for Partition, Monroe County Circuit Court Case No. 78-CH-___, Louis L. Henerfauth and Charlotte Henerfauth v. Earl R. Henerfauth, Gerorgiann Henerfauth, and The Federal Land Bank Association, dated May 11, 1978. *No reference to mineral reservations*.
10. Book 121 Page 376 - Warranty Deed from Philip W. Feldmeier to Earl R. Henerfauth and Georgiann Henerfauth dated August 24, 1976 for a 0.2 acre "school house" parcel on the East side of Kaskaskia Road. *No reference to mineral reservations*.
11. Book 120 Page 189 - Warranty Deed from Phillip W. Feldmeier and Elise Feldmeier to Earl R. Henerfauth, Gerorgiann Henerfauth, Louis L. Henerfauth, and Charlotte Henerfauth, dated March 30, 1976. *No reference to mineral reservations*.
12. Book 116 Page 451 - *Not relevant to our project*. Warranty Deed from Philip W. Feldmeier and Elsie Feldmeier to Missouri Pacific Railroad. This deed is mentioned as being a 'less and except' from the Brinkmann Farm legal description.

13. Book 78 Page 547 - Quit Claim Deed from the County Board of School Trustees to Philip W. Feldmeier and Minnie A. Feldmeier, dated June 11, 1957 for a 0.2 acre "school house" parcel on the East side of Kaskaskia Road. *No reference to mineral reservations*.
14. Book 75 Page 205 - Warranty Deed from Harmon Beare Church and Letty Church to Philip W. Feldmeier and Minnie A. Feldmeier, dated Aug. 19, 1953. *No reference to mineral reservations*.
15. Book 73 Page 153 - Quit Claim Deed from D.D. Cullen et al. to Philip W. Feldmeier and Minnie A. Feldmeier, dated August 1, 1924 for 26.10 acres. *No reference to mineral reservations*.

EXISTING EASEMENTS AND ENCUMBRANCES

The title commitment lists the following easements and encumbrances affecting the Brinkmann Farm. The numbering below corresponds to the Exception Numbers on the July 15, 2021 title commitment prepared by Monroe County Title Company.

8. Taxes for the years 2020 and 2021 which are not now due and payable.
NOTE: Taxed in 2019 as the following:
Tract 17-01-400-001 and $2,277.70 paid.
Tract 17-12-100-002 and $2,040.52 paid.
Tract 17-11-400-002 and $1,555.54 paid.

Title company provided copies of tax documentation on 8/6/2021.
Tract 17-11-400-002 is not relevant to our project.

9. Rights of the public, the State of Illinois and the municipality in and to any part of the land taken or used for roadway purposes.

Kaskaskia Road runs along the Northwestern boundary of the Project Area.

10. Rights of public or quasi-public utility companies in and to any portion of the premises used for utility purposes.

On 8/6/21, the title company confirmed that this exception will be deleted upon review of the survey and replaced with a specific exception for any relevant items shown on the survey.

11. Rights of way for drainage tiles, ditches, feeders, laterals and underground pipes.

On 8/6/21, the title company confirmed that this exception will be deleted upon review of the survey and replaced with a specific exception for any relevant items shown on the survey.

12. Rights of others in and to any portion of the land lying within the right-of-way lines of any public roadways.

On 8/6/21, the title company confirmed that this exception will be deleted upon review of the survey and replaced with a specific exception for any relevant items shown on the survey.

13. Easement granted March 17, 1951, to Illinois Power Company, as shown by document recorded March 31, 1951, in Deed Record 69 at page 376 in the Recorder's Office of Monroe County, Illinois.

This is a 1951 easement allowing Illinois Power Company, its successors and assigns, to construct, operate, repair, maintain, patrol, remove, relocate and reconstruct electric transmission and distribution lines.

There are power lines located along Kaskaskia Road but not inside the Project Area.

14. Right, title and interest of Fort Chartres & Ivy Landing Drainage and Levee District, in and to any drainage tiles, ditches, feeders, laterals, underground pipes and levees.

Presumably this is for the ditch bisecting the Project Area. On August 13, 2021, our representative attended the Fort Chartres & Ivy Landing Drainage and Levee District's board meeting and was told that the District's ROW is 50 ft wide. The Project will be designed to avoid the Right of Way area.

15. Easement Agreement dated August 29, 2002, and recorded September 4, 2002, in Deed Record 242 at page 543 in the Recorder's Office of Monroe County, Illinois.

This is an access easement between Cletus O. Eschmann and Steven P. Brinkmann, located on the northern edge of our Project Area, approximately as shown by the yellow line on the map below.
We will design the Project so that this access easement does not interfere with the project.

16. Easement for ingress and egress along and across an established agricultural road, 15 feet in width, as conveyed in deed dated September 3, 2002, and recorded January 5, 2004, as Document No. 283575 in the Recorder's Office of Monroe County, Illinois.

This is an easement granted from Steven Brinkmann to Curtis and Mary Ann Henke, contained within a deed for a 33.54 acre parcel of land located east of the Project Area. This easement is located approximately in the area shown by the yellow line in the map pertaining to Exception 15 above.
We will design the Project so that this access easement does not interfere with the project.

17. Rights of adjoining owner or owners in and to the concurrent use of the easements set out in Schedule A hereof.

On 8/6/2021, the title company explained that this exception is included because they included a couple of easements in the legal description. When that occurs, they raise an exception as it relates to the rights of the adjoining owners to the concurrent use of the easements.

19. Upon any conveyance of the land, or a portion of the land, necessary easements for ingress and egress should be reserved by the grantor, to allow for access to any remaining property still owned by said grantor.

On 8/6/2021, the title company confirmed that this exception will not appear on any final policy.

Appendix 3

Conservation Easement

CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this_____ day of _____, 202__, (“Effective Date”) by **WFI Holdings-B LLC**, having an address of **248 Southwoods Center, Columbia, IL 62236** ("Grantor") to **HeartLands Conservancy**, an Illinois non-profit corporation, having an address of **3 High Street, Belleville, IL 62220** ("Grantee"). As used herein, the term "Grantor" shall include any and all heirs, successors, or assigns of the Grantor, and all subsequent owners of the Property (as hereinafter defined), and the term "Grantee" shall include any successor or assignee of Grantee.

WITNESSETH:

WHEREAS, Grantor is the sole owner in fee simple title of certain lands situated in Monroe County, ILLINOIS, more particularly described in Exhibit A attached hereto and incorporated herein ("Property"), and

WHEREAS, Department Permit No. [MVS-xxxx-xxx] of the U.S. Army Corps of Engineers ("Corps") (hereinafter referred to as the "Permit") authorizes certain activities which affect waters of the United States; and

WHEREAS, the permits require that Grantor preserve, enhance, restore, or mitigate wetlands or uplands located on the Property and under the jurisdiction of the Corps; and

WHEREAS, Grantor, in consideration of the issuance of the permits to construct and operate the permitted activity, and as an inducement to Grantee and the Corps to issue the Permits, is willing to grant a perpetual Conservation Easement over the Property.

NOW THEREFORE, in consideration of the above and mutual covenants, terms conditions, and restrictions contained herein, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby voluntarily grants and conveys a perpetual Conservation Easement for and in favor of Grantee upon the property, which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this Conservation Easement shall be as follows:

1. **Purpose:** The purpose of this Conservation Easement is to retain and maintain land or water areas on the Property in their natural, vegetative, hydrologic, scenic, open, agricultural, or wooded condition and to retain such areas as suitable habitat for fish, plants, or wildlife. Those wetland or upland areas that are to be restored, enhanced, or created pursuant to the Permit shall be retained and maintained in the restored, enhanced, or created condition required by the Permit.

2. **Rights of Grantee:** The following rights are conveyed to Grantee and the Corps by this easement:

a. The right to take action to preserve and protect the environmental value of the Property;

b. The right to prevent any activity on or use of the Property that is inconsistent with the purpose of this Conservation Easement, and to require the restoration of areas or features of the Property that may be damaged by any inconsistent activity or use;

c. The right to enter upon and inspect the Property in a reasonable manner and at reasonable times to determine if Grantor is complying with the covenants and prohibitions contained in this Conservation Easement; and

d. The right to proceed at law or in equity to enforce the provisions of this Conservation Easement, and to prevent the occurrence of any of the prohibited activities hereinafter set forth.

3. **Prohibited Uses:** Except for restoration, creation, enhancement, maintenance, and monitoring activities, or surface water management improvements, which are permitted or required by the Permit, the following activities are prohibited on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground, or the construction or placing of structures below the ground that may impact the surface of the Property;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except as may be permitted by the Permit, and except for the removal of invasive, nuisance, exotic, or non-native vegetation in accordance with a maintenance plan approved by Grantee;

d. Planting of invasive, nuisance, exotic, or non-native plants as listed by the State of ILLINOIS;

e. Exploration for, or extraction of, oil or gas in such a manner as to affect the surface, or excavation, dredging, or removal of coal, loam, peat, gravel, soil, rock, or other material substance, except as may be permitted or required by the Permit;

f. Use of motorized and non-motorized vehicles, the keeping or riding of horses, grazing, livestock confinement, or other surface use that may affect the natural condition of the Property, except for vehicle use for purposes of maintenance and upkeep, or as otherwise may be permitted or required by the Permit; provided, however, vehicle use as necessary to remove wild game harvested from the Property is not prohibited;

g. Tilling, plowing, planting of crops, digging, mining, or other activities that are or may be detrimental to drainage, flood control, water conservation, water quality, erosion control, soil conservation, or fish and wildlife habitat preservation, including but not limited to ditching, diking, and fencing, except as permitted or required by the Permit;

h. The extraction of water from the Property or adjacent properties owned by Grantor, or the impoundment of water on the Property or on adjacent properties owned by Grantor, so as to affect the hydrology of the Property;

i. Acts or uses detrimental to the aforementioned retention and maintenance of land or water areas;

j. Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance; and

k. The subdivision of the Property.

4. **Reserved Rights:** Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and that are not inconsistent with any Corps rule, criteria, permit, or the intent and purposes of this Conservation Easement.

5. **Taxes:** Grantor shall pay any and all applicable real property taxes and assessments levied by competent taxing authority on the Property.

6. **Maintenance:** Grantee shall, at Grantee's sole expense, operate, maintain and keep up the Property consistent with the purpose of this Conservation Easement. Grantee shall remove from the Property any invasive, nuisance, exotic, or non-native plants as listed by the State of ILLINOIS and shall maintain the hydrology of the Property as it currently exists or as otherwise required by the Permit.

7. **Hazardous Waste:** Grantor covenants that as of the Effective Date it has not received written notice of any hazardous substances or toxic waste that exists or has been generated, treated, stored, used, disposed of, or deposited in or on the Property, nor has Grantor received written notice of any underground storage tanks on the Property. Grantor shall be responsible for any and all necessary costs of remediation of any hazardous materials on the Property of which Grantor has received written notice as of the Effective Date.

8. **Public Access:** No right of access by the general public to any portion of the Property is conveyed by this Conservation Easement, and Grantor further covenants not to hold any portion of the Property open to general use by the public except with the written permission of the Corps and Grantee.

9. **Liability:** Grantor shall continue to retain all liability for any injury or damage to the person or property of third parties that may occur on the Property arising from ownership of the Property. Neither Grantor, nor any person claiming by or through Grantor, shall hold Grantee or the Corps liable for any damage or injury that may occur on the Property.

10. **Recording Requirements:** Grantor shall record this Conservation Easement in the official records of Monroe County, ILLINOIS, and shall re-record it at any time Grantee or the Corps may require to preserve their rights. Grantor shall pay all recording costs, fees and taxes necessary at any time to record this Conservation Easement in the public records. Grantor shall

thereafter insert the terms and restrictions of this Conservation Easement in any subsequent deed or other legal instrument by which Grantor divests himself/herself/itself of any interest in the Property, and shall provide a photocopy of the recorded Conservation Easement to the new owner(s).

11. **Enforcement:** The terms and conditions of this Conservation Easement may be enforced in an action at law or equity by the Grantee or the Corps against the Grantor or any other party violating or attempting to violate the restrictions set forth herein. Enforcement of this Conservation Easement shall be at the reasonable discretion of the Grantee or the Corps, and any forbearance on behalf of Grantee or the Corps to exercise its or their rights hereunder in the event of any breach by Grantor shall not be deemed or construed to be a waiver of rights. Any costs incurred in enforcing, judicially or otherwise, the terms, provisions, and restrictions of this Conservation Easement, including without limitation, the costs of suit, and attorney's fees, shall be borne by and recoverable against the non-prevailing party in such proceedings, except that such costs shall not be recoverable against the Corps. In addition, if the Grantee or the Corps shall prevail in an enforcement action, such party shall also be entitled to recover that party's cost of restoring the land to the natural vegetative and hydrologic condition existing at the time of execution of the restrictions contained herein or to the vegetative and hydrologic condition required by the Permits.

12. **Assignment of Rights:** Grantee shall hold this Conservation Easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this Conservation Easement, except to another legal entity qualified to hold such interests under applicable state and federal laws and committed to holding this Conservation Easement exclusively for the purposes stated herein. Grantee shall notify the Corps in writing of any intention to reassign this Conservation Easement to a new grantee at least sixty (60) days in advance thereof, and the Corps must accept the assignment in writing. The new grantee shall then deliver a written acceptance to the Corps. The assignment instrument must then be recorded and indexed in the same manner as any other instrument affecting title to real property and a copy of the assignment instrument shall be furnished to the Corps. Failure to comply with the assignment procedure herein stated shall result in invalidity of the assignment. In the event of dissolution of the Grantee or any successor, or failure for sixty (60) days or more to execute the obligations of this Conservation Easement, the Grantee shall transfer this Conservation Easement to a qualified and willing grantee. Upon failure of the Grantee or any successor to so transfer the Conservation Easement, the Corps shall have the right to sue to force such an assignment to a grantee to be identified by the Court.

13. **Successors:** The covenants, terms, conditions, and restrictions of this Conservation Easement shall be binding upon, and inure to the benefit of the parties hereto and their respective personal representatives, heirs, successors, and assigns, and shall continue as a servitude running in perpetuity with the Property.

14. **Notices:** All notices, consents, approvals, or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

15. **Severability:** If any provision of this Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this

Conservation Easement shall not be affected thereby, as long as the purpose of the Conservation Easement is preserved.

16. **Alteration or Revocation:** This Conservation Easement may be amended, altered, released, canceled, or revoked only by written agreement between the parties hereto or their heirs, assigns, or successors in interest, which shall be filed in the public records of Monroe County, ILLINOIS. No action shall be taken, however, without advance written approval thereof by the Corps. Corps approval shall be by letter attached as an exhibit to the document amending, altering, canceling, or revoking the Conservation Easement, and said letter shall be informal and shall not require notarization. It is understood and agreed that Corps approval requires a minimum of sixty (60) days written notice, and that the Corps may require substitute or additional mitigation, a separate conservation easement or alternate deed restrictions, or other requirements as a condition of approval. Any amendment, alteration, release, cancellation, or revocation together with written Corps approval thereof shall then be filed in the public records of Monroe County, ILLINOIS, within thirty (30) days thereafter.

17. **Controlling Law:** The interpretation and performance of this Conservation Easement shall be governed by the laws of the State of ILLINOIS.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions, and purpose imposed with this Conservation Easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the property.

GRANTOR FURTHER COVENANTS that Grantor is lawfully seised of said Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms of this Conservation Easement and that no mortgages or other liens exist; that Grantor has good right and lawful authority to convey this Conservation Easement, and that it hereby fully warrants and defends the title to the Conservation Easement hereby conveyed against the lawful claims of all persons whomsoever. Notwithstanding this last paragraph of the Conservation Easement, Grantor shall have the right to mortgage the Property so long as any such mortgage is subordinated to the Conservation Easement.

IN WITNESS WHEREOF, the Grantor has executed this Conservation Easement this ____ day of _____, 20___.

Signed in the presence of:

_____

Print Witness Name: _____

_____

Print Witness Name: _____

GRANTOR:

WFI Holdings-B LLC
a Delaware limited liability company

By: _____
Print: _____
Title: _____

STATE OF ILLINOIS)
) ss
COUNTY OF MONROE)

I, the undersigned, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that _____ as _____ of WFI HOLDINGS-B LLC, a Delaware limited liability company, personally known to me or sufficiently proven to me, to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal, this ____ day of _____, 202__.

_____

Print Name: _____

NOTARY PUBLIC, STATE OF ILLINOIS

My Commission: _____

IN WITNESS WHEREOF, the Grantee has executed this Conservation Easement this ___ day of _____, 20___.

GRANTEE:

HEARTLANDS CONSERVANCY
an Illinois non-profit corporation

By: _____
Print: _____
Title: _____

STATE OF ILLINOIS)
) ss
COUNTY OF _____)

I, the undersigned, a Notary Public in and for said County and State aforesaid, DO HEREBY CERTIFY that _____ as _____ OF HEARTLANDS CONSERVANCY, an Illinois non-profit corporation, personally known to me or sufficiently proven to me, to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and Notarial Seal, this ____ day of _____, 202__.

_____

Print Name: _____

NOTARY PUBLIC, STATE OF ILLINOIS

My Commission: _____

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

[Insert legal description of Conservation Easement Area(s)]

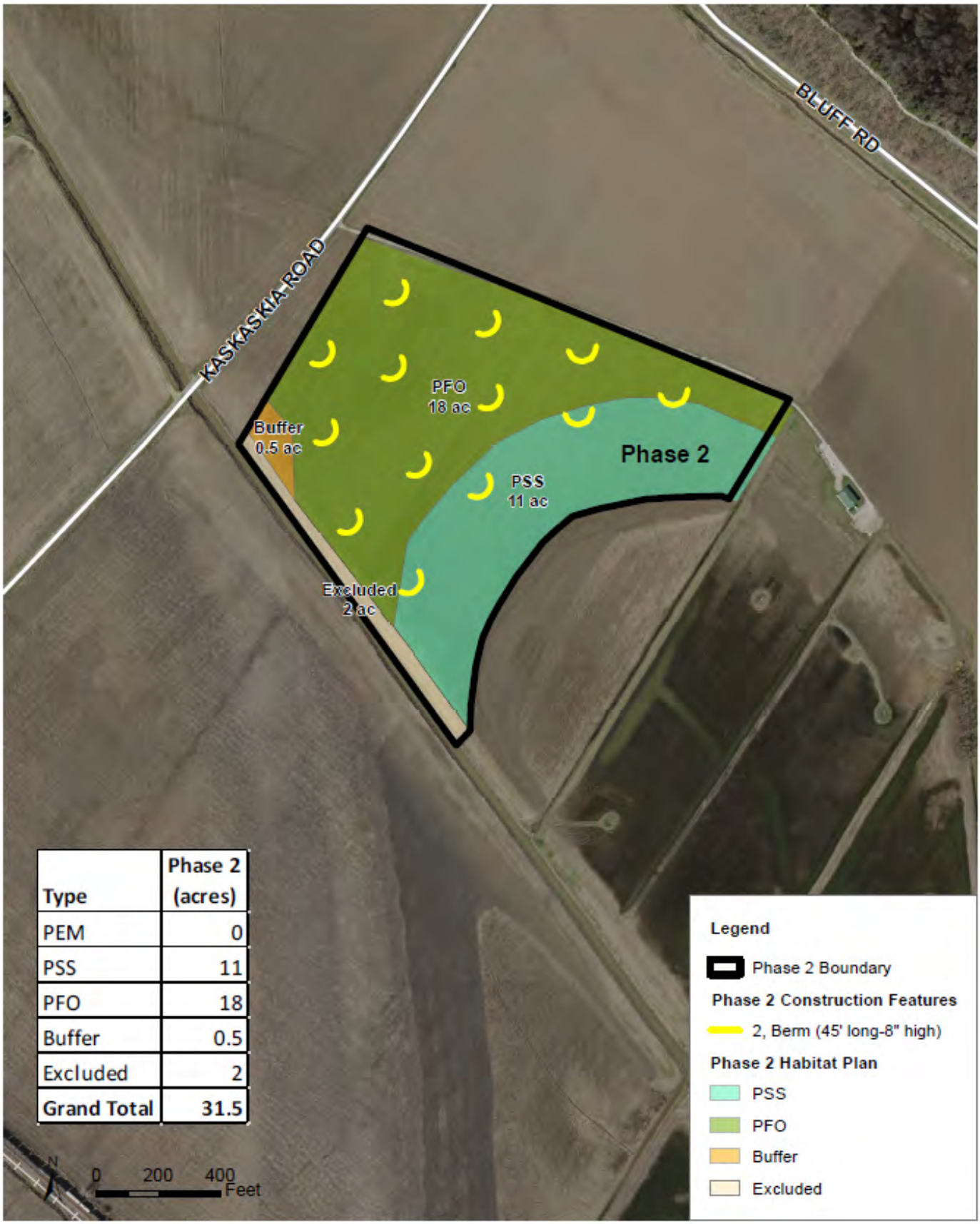
Appendix 4

Mitigation Work Plan Drawings

Locke Bottom Phase 1

Type	Phase 1 (acres)
PEM	18
PSS	12.5
PFO	33
Buffer	0
Excluded	5
Grand Total	68.5

Locke Bottom Phase 2



Type	Phase 2 (acres)
PEM	0
PSS	11
PFO	18
Buffer	0.5
Excluded	2
Grand Total	**31.5**

Locke Bottom

Type	Phase 1 (acres)	Phase 2 (acres	Total Acres
PEM	18	0	18
PSS	12.5	11	23.5
PFO	33	18	51
Buffer	0	0.5	0.5
Excluded	5	2	7
Grand Total	**68.5**	**31.5**	**100**

Appendix 5

Long-Term Management and Maintenance Plan Agreement

LONG-TERM MANAGEMENT AND MAINTENANCE PLAN AGREEMENT

LOCKE BOTTOM WETLAND MITIGATION BANK

This Plan will guide the long-term management of the Locke Bottom Wetland Mitigation Bank, sponsored by WFI Holdings-B LLC. in Monroe County, Illinois. The property ownership is held by WFI Holdings-B LLC.

The Plan takes effect when the performance standards have been met and the Project Close-out Report is approved by the USACE – St. Louis District Regulatory Branch. Initial estimate for when the Long-Term Management Plan is scheduled to begin is 2027. WFI Holdings-B LLC established an endowment (reference Financial Assurances Appendix 6) to fund long-term management at the Mitigation Site by the Long-Term Steward (Heartlands Conservancy - Steward). Following transfer of management responsibilities upon Mitigation Bank closure, WFI Holdings-B LLC to the Steward, authority and responsibility for implementing the long-term management plan will reside with the Steward.

LONG-TERM MANAGEMENT GOALS AND OBJECTIVES

The Mitigation Bank possesses wetland habitat and wildlife values important to the Steward, the people of the State of Illinois, and the people of the United States. The Mitigation Bank provides high quality restored, enhanced and preserved wetlands and contains jurisdictional waters of the United States and the State of Illinois. Individually and collectively, these habitat and wildlife values comprise the “Conservation Values” of the Mitigation Bank.

The goal of long-term management is to ensure that the Conservation Values of the Mitigation Site are managed, monitored and maintained over the long term by transferring management responsibilities to a qualified long-term Steward upon Mitigation Bank closure. Long-term management is intended to be adaptive, as defined in the federal mitigation rule (U.S. Army Corps of Engineers 2008) cited below:

Adaptive management means the development of a management strategy that anticipates likely challenges associated with compensatory mitigation projects and provides for the

implementation of actions to address those challenges, as well as unforeseen changes to those projects. It requires consideration of the risk, uncertainty, and dynamic nature of compensatory mitigation projects and guides modification of those projects to optimize performance. It includes the selection of appropriate measures that will ensure that the aquatic resource functions are provided and involves analysis of monitoring results to identify potential problems of a compensatory mitigation project and the identification and implementation of measures to rectify those problems.

The wetlands at the Mitigation Bank will not be altered without obtaining all appropriate permits and clearances from regulatory agencies.

Long-term management is intended to promote the long-term functionality of forested wetlands.

Long-term management objectives for the Mitigation Bank are as follows:

- Maintain diverse forested wetland communities dominated by native species;
- Establishment of a Climax Bottomland Hardwood Forest;
- Maintain improved habitat conditions for wildlife.

Limits of Responsibility

The Steward will not be responsible for Mitigation Bank failure attributed to natural catastrophes such as flood, drought, disease, regional pest infestation, and others that are beyond their reasonable control. Active management is not expected for ecological change that comes about as a result of processes such as climate change, fluctuating river levels, and sedimentation due to overbank flood deposits that may affect the wetlands. Over time, natural successional processes will occur that may reduce wetland functioning or reduce wetland area.

LONG-TERM MANAGEMENT AND MAINTENANCE

The Plan describes long-term management needs, roles and responsibilities of the Steward. The Steward will retain qualified staff and/or contractors with adequate ecological and biological qualifications to manage the Mitigation Bank. Prior to taking over management of the Mitigation Bank, the Steward will have ample time to work with WFI Holdings-B LLC while the Mitigation Bank remains under WFI Holdings-B LLC's management responsibility in order for the Steward to become comfortable with the tasks associated with long term Mitigation Bank management. Permits necessary to implement management actions on the Mitigation Bank will be held by the Steward in the form of the Conservation Easement. The Steward will be compensated by WFI Holdings-B LLC through an Endowment for management, maintenance and monitoring period associated with the conservation easement. The management and maintenance endowment will provide financial support of long-term operations and maintenance associated with a forested wetland, riparian corridor. However, the Steward, at their discretion, may provide a higher level of monitoring and operation and maintenance than is described in this plan.

The Conservation Easement (CE) holder (HeartLands Conservancy) and the Long-Term Steward (HeartLands Conservancy) will be responsible for the management of the site for various activities. Specifically, these include encroachment enforcement such as signage, dumping, trespassing activities according to the CE and other prohibited actions. The general condition of the site will be addressed by HeartLands Conservancy as the Steward of the ecological condition of the site for operations and maintenance of the site.

The restoration site's long-term management should reflect activities that are associated with long-term timberland management. The bank sponsor employed a Consulting Forester, Mr. Matt Thompson, Bartelso, IL to develop a long-term management plan for the site, specifically Item 6 - Planned Management Activity Schedule for Forestry Practices, attached.

MONITORING

General Monitoring Protocol

Long-term monitoring will employ adaptive management of the Mitigation Bank. Since the wetlands are intended to be self-sustaining, performance standards are purposefully less rigorous than those identified and used during Mitigation Bank establishment and operational period. Unless otherwise noted, monitoring will occur annually during the growing season in order to trigger necessary management activities that will protect wetland functions and to maintain a consistent annual record of wetland conditions. More frequent monitoring visits, such as a spring, mid-summer, and fall visit, are recommended in order to manage the site. Reports will be submitted to the USACE – St. Louis District Regulatory Branch for a period of five (5) years following the close-out report. There will be no requirement to submit monitoring reports to the regulatory agencies after the five years of submissions. The Steward will have access to the monitoring reports prepared by WFI Holdings-B LLC during the (pre-close out) 7-year performance monitoring period.

Hydrology Monitoring

The primary source of hydrology for the Bank Site is via surface water runoff from adjacent property, and from One-Mile Race Creek. Monitoring of wetland hydrology in the general region of the Mitigation Bank wetlands will ensure that wetland hydrology continues to be present on the site, a requirement for the persistence of the wetlands. To determine whether a stable hydrologic condition exist between the site and the One-Mile Race Creek, the Steward will collect data utilizing the USACE Wetland Determination Data Forms. Surficial observations and soil samples will be taken annually and entered into the Data Forms. The site will be photo-documented annually in late spring or early summer, capturing indicators of hydrologic function, hydrophytic vegetation, saturated soils, standing water, macroinvertebrates, stressed upland vegetation, and sediment deposits.

Vegetation Monitoring

The cover of native herbaceous wetland plants is expected to be self-sustaining by Mitigation Bank Closure and the end of the performance standard monitoring and will not be monitored over the long-term. However, the cover of invasive non-native plants, and estimated stem counts of native woody plants along the edges of the wetlands will be monitored over the long-term.

Non-native Invasive Species

The establishment and spread of invasive non-native species is one of the greatest long-term threats to the functioning of the Mitigation Bank. The Steward will monitor the Mitigation Site as necessary to meet the intent of the Illinois Department of Natural Resources for its Noxious Weed Policy as identified in the Conservation Easement. Any non-regulated weed control activities, such as non-chemical weed removal, will commence without regulatory input. During Mitigation Bank establishment, invasive weed control will be conducted. New infestations of noxious weed species should be identified during the annual inspection and a management strategy employed to eliminate the invasive species.

LONG-TERM MANAGEMENT AND MAINTENANCE PLAN AGREEMENT

LOCKE BOTTOM WETLAND MITIGATION BANK

HEARTLANDS CONSERVANCY

By:_____

PROJECT MANAGER, REGULATORY

BRANCH, U.S. ARMY CORPS OF

ENGINEERS

By:_____

WFI HOLDINGS-B LLC

MITIGATION BANK SPONSOR

By:_____

Heartlands Conservancy LTMF Calculation:

Phase 1 Only

Land Management and Maintenance Costs

NOTE: Enter values in blue-shaded cells. Click on individual Tasks and Descriptions for additional guidance.

Management and Maintenance Tasks	Description	Regular Staff (hours)	Short-term Staff (hours)	Quantity	Unit	Unit Cost	Extended Cost	Recurrence Interval (years)	Annual Cost	Subtotal
Infrastructure Maintenance and Replacement										$ 122.63
Travel expenses recurring annually	Number of trips annually			1	# trips					
	Overnight stays for annual site visit(s)			0	# nights	$ 44.08	$ 44.08	5	$ 8.82	
	Allowance for meals (# of days) for annual site visit(s)			0	# days					
Travel expenses (non-annual trips)	Number of trips			1	# trips					
	Overnight stays for site visit(s)			0	# nights	$ 44.08	$ 44.08	5	$ 8.82	
	Allowance for meals (# of days) for site visit(s)			0	# days					
Site visit	Inspect boundaries, signs, other infrastructure. Include prep time, travel time and time on-site.	0	0		hours		$ -	1	$ -	
Remove trash and rectify trespass, vandalism	Trash removal and addressing trespass, vandalism	0	1.5		hours		$ 97.50	1.5	$ 65.00	
Replace fence	Materials or Contract Amount				linear ft	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Replace signs	Material (add description)			1	ea	$ 200.00	$ 200.00	5	$ 40.00	
	Labor (may be included in annual site visit)				hours		$ -		$ -	
Other (select from drop-down)	Materials or Contract Amount				ea	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Equipment daily use rate	Vehicle (add description)				day	$ -	$ -	1	$ -	
	Other (select from drop-down list)				day	$ -	$ -	1	$ -	
Equipment replacement	Vehicle (add description)				ea	$ -	$ -	1	$ -	
	Other (select from drop-down list)				ea	$ -	$ -	1	$ -	
Ecological Management										$ 943.03
Travel expenses	Number of trips annually			0	# trips					
	Overnight stays for annual site visit(s)			0	# nights	$ -	$ -	1	$ -	
	Allowance for meals (# of days) for annual site visit(s)			0	# days					
Travel expenses (non-annual trips)	Number of trips			1	# trips					
	Overnight stays for site visit(s)			0	# nights	$ 44.08	$ 44.08	3	$ 14.69	
	Allowance for meals (# of days) for site visit(s)			0	# days					
Update management plan	Review and update management plan	5	1		hours		$ 465.00	5	$ 93.00	
Ecological monitoring	Monitoring T&E species, inventories, reporting	0.5	4		hours		$ 300.00	1	$ 300.00	
	Supplies			20	ea	$ 0.60	$ 12.00		$ 12.00	
Invasive species control (plants)	Materials or Contract Amount			1	ea	$ 200.00	$ 200.00	3	$ 66.67	
	Labor or Staff Oversight	1	6		hours		$ 470.00		$ 156.67	
Nuisance wildlife control	Materials or Contract Amount			1	ea	$ 200.00	$ 200.00	5	$ 40.00	
	Labor or Staff Oversight	0	1		hours		$ 65.00		$ 13.00	
Prescribed fire	Cost of burn (burn plan, implementation of burn, follow-up monitoring)			0	ea	$ -	$ -	1	$ -	
	Staff oversight of contract	0	0		hours		$ -		$ -	
	Annual training and recertification costs			0	ea	$ -	$ -	1	$ -	
Vegetation management	Materials or Contract Amount			1	ea	$ 1,000.00	$ 1,000.00	5	$ 200.00	
	Labor or Staff Oversight	0.5	3		hours		$ 235.00		$ 47.00	
Supplies	Small equipment & supplies				ea	$ -	$ -	1	$ -	
Other (add description)	Materials or Contract Amount				ea	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Occupancy										$ 200.00
Property taxes	Taxes, drainage assessments, other fees			1	ea	$ -	$ -	1	$ -	
Insurance				1	ea	$ 200.00	$ 200.00	1	$ 200.00	
Other fees	eg. utilities, water rights			1	ea	$ -	$ -	1	$ -	
								ANNUAL COST SUBTOTAL:		$ 1,265.66

Heartlands Conservancy LTMF Calculation:

Phases 1 and 2 Combined

Land Management and Maintenance Costs

NOTE: Enter values in blue-shaded cells. Click on individual Tasks and Descriptions for additional guidance.

Management and Maintenance Tasks	Description	Regular Staff (hours)	Short-term Staff (hours)	Quantity	Unit	Unit Cost	Extended Cost	Recurrence Interval (years)	Annual Cost	Subtotal
Infrastructure Maintenance and Replacement										$ 144.30
Travel expenses recurring annually	Number of trips annually			1	# trips					
	Overnight stays for annual site visit(s)			0	# nights	$ 44.08	$ 44.08	5	$ 8.82	
	Allowance for meals (# of days) for annual site visit(s)			0	# days					
Travel expenses (non-annual trips)	Number of trips			1	# trips					
	Overnight stays for site visit(s)			0	# nights	$ 44.08	$ 44.08	5	$ 8.82	
	Allowance for meals (# of days) for site visit(s)			0	# days					
Site visit	Inspect boundaries, signs, other infrastructure. Include prep time, travel time and time on-site.	0	0		hours		$ -	1	$ -	
Remove trash and rectify trespass, vandalism	Trash removal and addressing trespass, vandalism	0	2		hours		$ 130.00	1.5	$ 86.67	
Replace fence	Materials or Contract Amount				linear ft	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Replace signs	Material (add description)			1	ea	$ 200.00	$ 200.00	5	$ 40.00	
	Labor (may be included in annual site visit)				hours		$ -		$ -	
Other (select from drop-down)	Materials or Contract Amount				ea	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Equipment daily use rate	Vehicle (add description)				day	$ -	$ -	1	$ -	
	Other (select from drop-down list)				day	$ -	$ -	1	$ -	
Equipment replacement	Vehicle (add description)				ea	$ -	$ -	1	$ -	
	Other (select from drop-down list)				ea	$ -	$ -	1	$ -	
Ecological Management										$ 1,223.03
Travel expenses	Number of trips annually			0	# trips					
	Overnight stays for annual site visit(s)			0	# nights	$ -	$ -	1	$ -	
	Allowance for meals (# of days) for annual site visit(s)			0	# days					
Travel expenses (non-annual trips)	Number of trips			1	# trips					
	Overnight stays for site visit(s)			0	# nights	$ 44.08	$ 44.08	3	$ 14.69	
	Allowance for meals (# of days) for site visit(s)			0	# days					
Update management plan	Review and update management plan	5	1		hours		$ 465.00	5	$ 93.00	
Ecological monitoring	Monitoring T&E species, inventories, reporting	1	6		hours		$ 470.00	1	$ 470.00	
	Supplies			30	ea	$ 0.60	$ 18.00		$ 18.00	
Invasive species control (plants)	Materials or Contract Amount			1	ea	$ 200.00	$ 200.00	3	$ 66.67	
	Labor or Staff Oversight	2	8		hours		$ 680.00		$ 226.67	
Nuisance wildlife control	Materials or Contract Amount			1	ea	$ 200.00	$ 200.00	5	$ 40.00	
	Labor or Staff Oversight	0	2		hours		$ 130.00		$ 26.00	
Prescribed fire	Cost of burn (burn plan, implementation of burn, follow-up monitoring)			0	ea	$ -	$ -	1	$ -	
	Staff oversight of contract	0	0		hours		$ -		$ -	
	Annual training and recertification costs			0	ea	$ -	$ -	1	$ -	
Vegetation management	Materials or Contract Amount			1	ea	$ 1,000.00	$ 1,000.00	5	$ 200.00	
	Labor or Staff Oversight	1	4		hours		$ 340.00		$ 68.00	
Supplies	Small equipment & supplies				ea	$ -	$ -	1	$ -	
Other (add description)	Materials or Contract Amount				ea	$ -	$ -	1	$ -	
	Labor or Staff Oversight				hours		$ -		$ -	
Occupancy										$ 200.00
Property taxes	Taxes, drainage assessments, other fees			1	ea	$ -	$ -	1	$ -	
Insurance				1	ea	$ 200.00	$ 200.00	1	$ 200.00	
Other fees	eg. utilities, water rights			1	ea	$ -	$ -	1	$ -	
									ANNUAL COST SUBTOTAL:	$ 1,567.33

Forest Management Plan
For:

Locke Bottom Wetland Mitigation Bank
WFI Holdings-B LLC
c/o Michael Thompson
P.O Box 6
Bartelso, Illinois 62218
(618) 204-0199

Prepared by:

Thompson Resource Management, LLC
P.O Box 5
Bartelso, Illinois 62218
(618) 335-3066

July 14, 2021

Stand 1: Forested Acres: 51.0
Stand 2: Emergent Acres: 18.0
Stand 3: Scrub-Shrub Acres: 23.5

Forest Management Plan for: Locke Bottom Wetland Mitigation Bank, WFI Holdings-B LLC., c/o Michael Thompson

1. Goals and Resource Concerns:

A. Long-term care and maintenance of established RPM (Root Production Method) trees is needed to ensure the success and survival of the tree planting. The goal is to use existing forest practices to maintain the trees for continued health and growth into biological maturity.

B. Completing the practices will allow more stable vegetative cover, protection from soil erosion, and produce hard mast forests that provide for wildlife habitat, timber production, recreation, and aesthetics.

2. Location and Description of Property:

A. Section 1, Township 5 South- Range 10 West, and part of Section 12, T5S-R10W, 13 Township, Monroe County, Illinois. Total acreage is 92.5 acres. The forested acreage planted in RPM trees is 51.0 acres (37.0 in Phase 1, 14.0 in Phase 2); 18.0 acres in emergent wetlands (8.0 acres in Phase 1, 10.0 acres in Phase 2); and 23.5 acres in scrub-shrub wetlands (12.5 acres in Phase 1, 11.0 acres in Phase 2).

B. Access: From Fults, head southeast on Bluff Road to Kaskaskia Road. Take Kaskaskia Road southwest for about 0.5 miles to the bridge going over Fults Creek Ditch. The site is located on the southeast side of the road.

C. Surrounding land use is agricultural row crop production (field) and Wetland Reserve Program (WRP).

D. The property has been owned / under control since 2021 by WFI Holdings-B LLC. The property has been in row crop production until now.

E. Boundaries are surveyed and known.

F. There is an easement along Fults Creek Ditch that the county can clear sediment from the Ditch.

3. Detailed Stand Descriptions and Analysis

A. Existing Forestland

1. Stand 1: All 100.0 acres were in row crop production prior to being converted to a wetland site.
2. Bottomlands. No Aspect. 0-5% slopes
3. Soils:
   a. 8333A- Wakeland Silt Loam, 0-2% slopes, occasionally flooded
   b. 1457A and 8457L- Booker Clay Loam, 0-2% slopes, occasionally flooded
   c. 8302A- Ambraw Silty Clay Loam, 0-2% slopes, occasionally flooded
   d. 8591A- Fults Silty Clay Loam, 0-2% slopes, occasionally flooded
4. Forest cover type: Oak-Hickory Bottomland Hardwood.
5. Stand Age Class: Even-aged
6. Size Class, Canopy – Sapling timber
7. Invasive and/or exotic species:

a. Some Reed Canary Grass has been found along Kaskaskia Road. Will have to keep an eye on wetland site because reed canary grass has the ability to spread quickly.

8. Advance regeneration and understory conditions:
    a. Cottonwood and willow species are growing in close proximity to this site. These species will most likely grow rapidly in the wetland site due to their ability to grow in soil with low oxygen levels.
9. Forest Inventory Data:
    a. Trees/acre: 109
    b. Basal Area/acre: Approx. 20-30 square feet per acre
    c. Volume/acre: <10 board feet (Doyle Scale)
    d. Average Diameter: 1 inch (DBH)
    e. Stocking Level: Fully stocked (Gringich)
    f. Percent Stocking: <100%

10. Species Level Summary:

*Tree Varieties	*Trees per Acre*	Phase 1:		Phase 2:	
		Acres Planted	***Total Trees***	*Acres Planted*	***Total Trees***
Pin Oak (Quercus palustris)	15	33	**495**	18	**270**
Sycamore (Platanus occidentalis)	5	33	**165**	18	**90**
Willow Oak (Quercus phellos)	5	33	**165**	18	**90**
Northern Pecan (Carya Illinoensis)	10	33	**330**	18	**180**
Swamp White Oak (Quercus bicolor)	5	33	**165**	18	**90**
Green Hawthorne (Crataegus viridis.)	5	33	**165**	18	**90**
Shellbark Hickory (Carya laciniosa)	5	33	**165**	18	**90**
Button Bush (Cephalanthus occidentalis)	10	33	**330**	18	**180**
Persimmon (Diospyros virginiana)	4	33	**132**	18	**72**
Overcup Oak (Quercus lyrata)	10	33	**330**	18	**180**
Water hickory (Carya aquatic)	4	33	**132**	18	**72**
Sugarberry (Celtis laevigata)	4	33	**132**	18	**72**
Nuttall Oak (Quercus nuttallii)	10	33	**330**	18	**180**
Swamp Privit (Forestiera acuminate)	4	33	**132**	18	**72**
Bald Cypress (Taxodium distichum)	5	33	**165**	18	**90**
Water tupelo (Nyssa aquatic)	4	33	**132**	18	**72**
Kentucky coffee (Gymnocladus dioicus)	4	33	**132**	18	**72**
Totals	**109**		**3,597**		**1,962**

11. Timber Quality and Timber Production Assessment: The stand has overall good timber quality and production is acceptable.
12. Timber Harvest or Forest Practices Assessment: This property is being managed to restore natural wetland functions. A timber harvest is not part of this management plan.
13. Active Conservation Practices or Projects: No active projects or erosion problems on the property.

B. Afforestation or Reforestation: No afforestation or reforestation needed

4. Detailed Stand Recommendations:

A. Stand Specific Objectives:

1. Increase Oak and Hickory growth and production.

2. Description of Silvicultural Treatments:
    a. Tree Pruning: Tree pruning of the healthy crop trees, such as oak, hickory, and pecan is needed to maintain apical dominance (growing straight) and keeping the trees from bushing out. Guidelines for pruning should include not cutting for than 1/3 of the limbs at one time and not cutting any branches larger than 1/3 of the main stem. Larger limbs should be "headed off" at a branch or connection. Cuts should be made to the callous tissue on the stem. Wound dressing is not necessary. Pruning will help the health and quality of the trees, as well as increase upward growth. Pruning should be competed between 7.5 and 10 years.

    b. Invasive Species Control: **Always read and follow herbicide directions.**
        i. **Reed Canary Grass**: To control, mow late in mid-September, followed by the application of 5% glyphosate in October (after big bluestem is dormant) can help to control reed canary grass. Because reed canary grass productivity is reduced by shade, planting native shrubs or wetland trees in areas of chemically-treated grass may be effective.

    c. Timber Stand Improvement (TSI) is needed to improve the forest. TSI includes removing poor quality trees such as elm, crooked hickories, and hackberry, and thinning overcrowded trees while encouraging the production and growth of swamp white oak, pin oak, bur oak, Shumard's oak, and other desirable straight trees, such as pecan and shellbark hickory. Emphasis should be on removing poorer quality trees around crop trees, such as oak and hickory to help the trees in natural reseeding by providing for sun light to the forest floor. Remove unwanted trees at least past the dripline or that are interfering with the crown branches. Undesirable trees should be removed at least 15 feet from the trunk of the oaks and desirable trees. Grapevines also need to be removed when too numerous and choking trees. Some of the larger, older cull trees can be left for wildlife or utilized for firewood. TSI can start at 20 years and become completed every fifteen years until age 50 for the stand.

        i. Timber Stand Improvement Objectives:
            - Release approximately 60 trees in forested wetland area of various bottomland hardwood species, preferably RPM planted oak species, hickories, and pecans.
            - Remove undesirable species to promote apical dominance in RPM planted crop trees.
            - Retain 80 square feet of basal area per acre over the course of the next 50 years.

    d. Invasive species can quickly overtake and out-compete native vegetation in a forest. Special attention needs to be made so as to control the invasive species become predominate. Species that can become nuisances include bush honeysuckle, autumn olive, multiflora rose, winter creeper, and Japanese honeysuckle.

    e. Prescribed fire may be considered as an option to maintain diversity.

3. Appropriate quantified treatment targets based upon stand objectives, silviculture, and desired future conditions:
    a. Stocking or Density:
        i. Retain approximately 80 square feet of Basal Area per acre.
        ii. Desired Species Composition: Oak/Hickory Bottomland forest
    b. Desired Stocking Percent: 65%, or above B-Level Stocking
    c. Under Planting Specifications: No under planting is needed at this time, unless stocking falls below 109 trees per acre.

5. Conservation Opportunities, Constraints, and Concerns:

A. Recreation and Aesthetics: Planting and maintaining the trees will increase recreation and aesthetic opportunities, such as hiking and hunting.

B. Air, Soil, and Water Quality Conservation:
    1. No prominent issues exist.
    2. No site-specific Illinois Forestry Best Management Practices are necessary to conserve soil and water quality.

C. Wetland Protection: This property is a functioning wetland mitigation bank. Care should be taken when driving ATV's and other equipment through these areas, so as not to cause ruts or surface erosion. Rodeo (roundup labeled for waterways), should be used around the wetter areas in the stands.

D. Fish, Wildlife, and Biodiversity:
    1. Increasing the wildlife habitat and diversity will be accomplished by TSI and will help the wildlife by creating brushy areas and promoting mast trees such as oak and hickory.

E. Forest Health and Protection:
    1. Detection and/or Management of Existing and Imminent Insects and Diseases: No insects or diseases are known in the Stand.
    2. No other physical or environmental aspects are known.

F. Threatened and Endangered Species:
    1. No threatened or endangered species, nor nature preserves, land or water reserves or Illinois Natural Inventory Areas (INAI) occur on the property according to the IDNR ECOCAT (Ecological Compliance Assessment Tool) website.
    2. For more information on Illinois Natural Area Inventory Sites, contact Debbie Newman, Illinois Nature Preserves Biologist (618) 684-3840. For more information on Endangered and Threatened species, contact Mark Phipps, District Heritage Biologist at mark.phipps@illinois.gov .

6. Planned Management Activity Schedule for Forestry Practices

A. **Stand 1**- Forested Wetland

Stand	Description	Year	Acres (Phase 1)	Acres (Phase 2)	Cost/Ac. ($)	Comments
1	Pruning/TSI	10.0	33.0	18.0	N/A	Capture at Close-Out
1	TSI	20.0	33.0	18.0	100.00	TSI with Plan Update
1	TSI	35.0	33.0	18.0	N/A	TSI thinning generates revenue
1	TSI	50.0	33.0	18.0	N/A	TSI thinning generates revenue

7. Long Term Objectives for Mitigation Bank

- Maintain diverse forested wetland communities dominated by hard-mast native species;
- Establishment of a healthy Bottomland Hardwood Forest;
- Maintain buffer habitat that supports overall site functionality for wetland habitats;
- Maintain improved habitat conditions for wildlife.

8. Glossary of Forestry Terms:

- **Basal Area (BA)**- The cross-sectional area in square feet of tree trunk, when measured 4.5 feet above ground. This measurement is used to estimate stocking of trees per acre.
- **Board Foot (BF)**- A unit of wood measuring one inch thick by 12 inches by 12 inches (144 cubic inches)
- **Canopy**- The entire layer of tree crowns within a stand of trees. Canopies can be subdivided into over story (the dominant upper tree crowns) and under story (the lower, sub level tree crowns).
- **Competition**- The struggle among trees and other vegetation for sunlight, energy, water, nutrients, growing space, and other site resources.
- **Cord**- A stack of round or split wood containing 128 cubic feet of wood, bark, and air space. A standard cord measures 4 feet high x 4 feet wide x 8 feet long.
- **Crop Tree**- A tree of desirable higher value species whose crown is within or just below the overstory. A crop tree should be well formed and free from defects, insects, or disease.
- **Crown**- All the branches, limbs, needles, or leaves of an individual tree. All of the crowns in a stand of trees comprise the canopy.
- **Cull**- A tree or log that has a defect that makes it unusable for its original intended purpose. Defects can include crooked trunks, rotten wood, and hollowed/forked trunks.
- **Diameter at Breast Height (DBH)**- The standard measure used in forestry for measuring tree diameter, 4.5 feet above the ground.
- **Merchantable**- Term used to describe some aspect of how valuable a tree is. A non-merchantable tree has no commercial value.
- **Mixed Stand**- A stand of trees where less than 80% of trees in the overstory canopy are of one species.
- **Overstory**- The highest layer of tree canopy within a stand of trees.
- **Reforestation**- A specific method of regenerating a forest by the planting of individual trees or seeds.

- **Reproduction**- Young trees which can grow to become the primary component of the next stand of trees.
- **Residual Stand**- The crop trees or cull tree left standing after a cutting.
- **Site Index**- A relative measure if a sites productivity potential based upon tree height at a specific based age, usually 25-50 years. A site index of 45 is considered poor and a site index of 105 is considered very good for a tree species.
- **Stand**- A manageable group of trees that occupies a specific area and often is of uniform age, species, and condition.
- **Stocking**- A relative number of trees or volume per acre. Stands can be under stocked, fully stocked, or over stocked.
- **Timber Stand Improvement (TSI)**- Actions taken to improve the health, quality, and vigor of a stand of trees. Examples may include improvement cutting, prescribed burning, crop tree release, control of competition, or other forestry practices as warranted by the site conditions and owner's goals.
- **Understory**- The sub layer of a tree canopy that exists beneath the overstory.

Illinois Nature Preserves Invasive Species List*	
Invasive Species Common Name	**Latin Name**
Autumn olive	*Elaeagnus umbellata*
Black locust	*Robinia pseudoacacia*
Exotic Buckthorns: Common, Glossy, Dahurian, Japanese, and Chinese Buckthorn	*Rhamnus cathartica, R. frangula, R. davurica, R. japonica, and R. utilis*
Bush Honeysuckles: Tartarian, Morrow's, Belle, and Amur Honeysuckle	*Lonicera tatarica , L. morrowii, L. x bella Zabel, and L. maackii*
Canada thistle	*Cirsium arvense*
Crown vetch	*Coronilla varia*
Fescue	*Festuca pratensis*
Garlic mustard	*Alliaria petiolata*
Japanese honeysuckle	*Lonicera japonica*
Johnson grass	*Sorghum halepense*
Leafy spurge	*Euphorbia esula*
Moneywort	*Lysimachia nummularia*
Multiflora rose	*Rosa multiflora*
Osage orange	*Maclura pomifera*
Purple loosestrife	*Lythrum salicaria*
Quaking aspen	*Populus tremuloides*
Reed canary grass	*Phalaris arundinacea*
Round-leaved bittersweet	*Celastrus orbiculatus*
Siberian elm	*Ulmus pumila*
Smooth sumac	*Rhus glabra*
Sweet clover (white and yellow)	*Melilotus alba and Melilotus officinalis*
Cut-leaved and common teasel	*Dipsacus laciniatus and Dipsacus sylvestris*
White poplar	*Populus alba*
Wild parsnip	*Pastinaca sativa*
Wintercreeper (climbing euonymus)	*Euonymus fortunei*
Kentucky bluegrass	*Poa pratensis*
Smooth brome	*Bromus inermis*
Honey locust	*Gleditsia triacanthos*
White mulberry	*Morus alba*
Kudzu	*Pueraria lobata*
Sericea lespedeza	*Lespedeza cuneata*
Gray dogwood	*Cornus racemosa*
Tree-of-heaven	*Ailanthus altissima*
Chinese yam	*Dioscorea oppositifolia*
Spotted knapweed	*Centaurea maculosa*
Phragmites	*Phragmites australis*
Japanese Stilt Grass	*Microstegium vimineum*
Japanese Hops	*Humulus japonicus*
Musk Thistle	*Carduus nutans*
Dame's Rocket	*Hesperis matronalis*
* https://www2.illinois.gov/dnr/INPC/Pages/INPCManagementGuidelines.aspx	

Appendix 6

Third Party Agreement, Draft Casualty Insurance Policy, and Construction Estimate

THIRD-PARTY RESPONSIBILITY AGREEMENT

THIRD-PARTY RESPONSIBILITY AGREEMENT

WHEREAS, HeartLands Conservancy is not-for-profit corporation organized under the laws of the State of Illinois and,

WHEREAS, HeartLands Conservancy has obtained approval of their Board of Directors for their participation and execution of this Agreement, and

WHEREAS, WFI Holdings-B LLC, hereinafter referred to as the "Sponsor" has drafted and executed a Mitigation Bank Instrument/Plan for the purpose of establishing a Wetland Mitigation Bank on real estate located in Monroe County, Illinois, and

WHEREAS, the said Locke Bottom Wetland Mitigation Bank, hereinafter referred to as the Mitigation Bank, requires the sponsor to undertake certain activities and sets certain performance standards relative to the real estate upon which the mitigation site project is located and further authorized the U. S. Army Corps of Engineers (USACE) to monitor the activity and performance of the sponsor concerning those requirements, and

WHEREAS, the USACE and the Mitigation Bank Instrument required financial assurances from the sponsor for the performance of their obligations there under.

THEREFORE IT IS STIPULATED AND AGREED TO BY AND BETWEEN THE PARTIES AS FOLLOWS:

1. The Sponsor shall obtain a casualty insurance policy from Conservation United payable to HeartLands Conservancy in the form and content agreeable to the Sponsor, HeartLands Conservancy and the USACE.

2. The insurance policy shall be conditioned on the Sponsor performing its obligations under the Mitigation Site Plan.

3. If payment of all or any portion of the proceeds of the insurance policy is received by HeartLands Conservancy, then HeartLands Conservancy shall apply said funds toward the completion of the obligations of the Mitigation Site Plan.

HeartLands Conservancy

By:_____

PROJECT MANAGER,
REGULATORY BRANCH, U.S.
ARMY CORPS OF
ENGINEERS

By:_____

WFI HOLDINGS-B LLC,
MITIGATION BANK SPONSOR
MANAGER

By:_____

DRAFT CASUALTY INSURANCE POLICY

COMPENSATORY MITIGATION INSURANCE

THIS FORM PROVIDES CLAIMS MADE AND REPORTED COVERAGE. PLEASE READ THE ENTIRE FORM CAREFULLY.

Various provisions in this policy restrict coverage. Read the entire policy carefully to determine rights, duties, and what is and is not covered.

Throughout this policy the words "you" and "your" refer to the **Named Insured** shown in the Declarations, and any other person or organization qualifying as an **Insured** under this policy. The words "we", "us", and "our" refer to the Company providing this insurance. "You" and "your" do not refer to the **Authorizing Agency.** Other than headings, words and phrases that appear in bold have special meaning. Refer to **SECTION II - DEFINITIONS**.

This policy provides Claims Made and Reported Coverage and has **Claim** reporting requirements. Coverage provided herein only applies to a **Claim** first made against the **Named Insured** during the **Policy Period,** and reported to us in writing during the **Effective Coverage Period** in which the **Claim** is made. This policy does not include a duty to defend or to pay defense costs. Notice of a **Default** or **Deficiency Notice** is not a **Claim** and does not trigger coverage under the policy.

The application, filed and approved **Mitigation Plan**, **Mitigation Instrument**, supplemental materials, and information submitted therewith, are the basis of this policy and are incorporated into and constitute a part of this policy. Any materials and information received in application for the policy will be maintained on file with the Company and shall be deemed to be attached to the policy as if physically attached. As a condition precedent to coverage, it is agreed by all **Insureds** that the statements made in the application and supplemental materials are representations made on behalf of all **Insureds**, that they are material, and that this policy is issued by the Company in reliance upon the truth of such representations.

In consideration of the payment of the premium and the undertaking of the **Insured(s)** to pay the Indemnification Obligation in the Indemnification Endorsement attached to this policy, and subject to the Limits of Insurance set out in **SECTION IV – LIMITS OF INSURANCE** and the Declarations, and the exclusions, conditions, and other terms of this policy, the Company agrees with the **Insured(s)** as follows:

SECTION I – INSURING AGREEMENT

To pay on behalf of the **Named Insured** the amount of **Financial Assurances** for which the **Named Insured** becomes legally obligated to pay as a result of a **Claim** first made against it during the **Policy Period,** by reason of a **Default** under a **Mitigation Instrument**, to which this insurance applies, provided that, as a condition precedent to coverage, the **Claim** is reported, in writing, to the Company by the **Named Insured** or by the **Authorizing Agency** on the **Named Insured's** behalf during the **Effective Coverage Period** in which the **Claim** is first made against the **Named Insured**.

We will have the right to adjust, pay or settle any **Claim** seeking **Financial Assurances** as described in **SECTION V – REPORTING, ADJUSTMENT & SETTLEMENT**; and

We may at our discretion investigate any **Default** and settle any **Claim** that may result. But:

1. The amount we will pay for **Financial Assurances** under this policy is limited as described in **SECTION IV – LIMITS OF INSURANCE;** and
2. Our obligation to adjust, pay or settle any **Claim** under an **Effective Coverage Period** ends when we have paid the limit of insurance applicable to that **Effective Coverage Period,** in the payment or settlement of **Financial Assurances**.

SECTION II - DEFINITIONS

1. **Adaptive Management Plan** means the development of a management strategy that results in a written plan as defined in 33 CFR 332.4(c)(12) or Applicable State Regulation scheduled in the Declarations to the policy, that anticipates likely challenges associated with **Compensatory Mitigation Projects** and provides for the implementation of actions to address those challenges, as well as unforeseen changes to those projects.
2. **Authorizing Agency** means the Department of the Army, the U.S. Army Corps of Engineers, the District Engineer, or other person, entity or agency designated by the Department of the Army, that retains the sole and final authority under 33 CFR 332 or any state agency that retains sole and final authority under Applicable State Regulations

scheduled in the Declarations to the policy, to negotiate, determine, approve and enforce the terms of the **Mitigation Instrument**, and any other documents established thereunder.

3. **Claim** means a written demand received by the **Named Insured** from the **Authorizing Agency**, or from the **Authorizing Agency** on the **Named Insured's** behalf seeking payment of **Financial Assurances** as a result of a **Default** under the **Mitigation Instrument**.

4. **Compensatory Mitigation** as defined in 33 CFR 332.2 or Applicable State Regulation scheduled in the Declarations to the policy, means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

5. **Compensatory Mitigation Project** means the site or sites scheduled in the Declarations to the policy at which the **Named Insured** is implementing a **Mitigation Plan** approved by the **Authorizing Agency** under 33 CFR 332 or Applicable State Regulation scheduled in the Declarations to the policy.

6. **Default** means a written and final determination made by the **Authorizing Agency** that the **Named Insured** has failed to successfully complete construction activities and/or has failed to achieve the **Performance Standards**, as applicable, in accordance with the **Mitigation Plan**, at a **Compensatory Mitigation Project** site scheduled in the Declarations to the policy, but only if such determination is made following:

   (1) a period of time as determined by the **Authorizing Agency** in accordance with applicable **Compensatory Mitigation** regulations after the **Authorizing Agency** has issued a **Deficiency Notice** for that **Mitigation Plan** or **Compensatory Mitigation Project** site, and

   (2) the **Named Insured's** best efforts to mitigate any deficiencies identified by the **Authorizing Agency** in any prior **Deficiency Notice** for that **Mitigation Plan** or **Compensatory Mitigation Project** site for the purpose of preventing the **Default**.

   Default shall not include any determination by the **Authorizing Agency** that the **Named Insured** has failed to comply with, or breached, any other term or condition of the **Mitigation Instrument** or other document thereunder, other than the construction activities and/or **Performance Standards,** as applicable, in a **Mitigation Plan** for a **Compensatory Mitigation Project** site scheduled in the Declarations to the policy, or any resultant suspension or termination of the **Mitigation Instrument** as a result of such non-compliance or breach.

7. **Deficiency Notice** means a written notice issued by the **Authorizing Agency** to the **Named Insured**:

   (1) advising that it is not progressing towards, or on track to, successfully complete construction and/or meeting the **Performance Standards** in accordance with the **Mitigation Plan** for a **Compensatory Mitigation Project** site; and

   (2) requesting that the **Named Insured** implement measures to correct the deficiencies, including but not limited to implementation of an **Adaptive Management Plan**, or modifications to the existing **Mitigation Plan**, and/or

   (3) modifying, decreasing or suspending credit sales of the **Mitigation Site** until the **Named Insured** successfully completes measures to correct deficiencies in the implementation of a **Mitigation Plan** for a **Compensatory Mitigation Project** site.

8. **Effective Coverage Period** means the term set forth in the Declarations to the policy.

9. **Financial Assurances** means the amount of reasonable and necessary costs to remedy a **Default** determination and **Claim** made by the **Authorizing Agency**, which amount shall be determined by the lesser of the following:

   (1) **Mitigation Expenses** required to successfully complete the **Compensatory Mitigation** at the **Compensatory Mitigation Project** site from which the **Default** has been determined; or

   (2) **Mitigation Expenses** required to provide replacement **Compensatory Mitigation** at another site; or

   (3) the actual costs to purchase replacement mitigation credits from another mitigation site and any legal fees associated with the purchase.

   All subject to the Limit of Liability shown on the Declarations to the policy, associated with the **Effective Coverage Period** in effect at the time of the issuance of a **Deficiency Notice** which, despite the **Named Insured's** best efforts, ultimately results in a **Default** determination and **Claim** made by the **Authorizing Agency**.

   Mitigation Expenses under (1) and (2) above means the direct costs of engineers, contractors and subcontractors, to design, plan, engineer, construct, and implement the **Compensatory Mitigation** work at the site, exclusive of profit or markup of any kind by, or in favor of, the **Named Insured**. Direct costs may include reasonable administrative and management costs incurred by such engineers, contractors, and subcontractors, but only to the extent such costs are directly and exclusively allocable to the actual **Compensatory Mitigation** work being performed at the site,

   Mitigation Expenses under (2) above includes the cost to acquire a replacement property and includes legal fees associated with the acquisition.

Mitigation Expenses under (1) and (2) above shall not include: (i) any costs for insurance or bonds, including those costs attendant to securing and reporting in connection with such insurance and bonds; (ii) legal fees of any kind, except those noted in (2) and (3) above; (iii) costs related to reporting and other obligations under this policy, and (iv) any costs, charges or expenses (including salaries, benefits, or fringes) of the **Named Insured**, unless such costs are directly attributable to the implementation of the tasks and activities for the **Compensatory Mitigation** and the Company has approved and consented to the work and costs prior to them being incurred.

10. **Insured** means:
    (1) The **Named Insured** but only with respect to liability incurred from the **Default** of a **Mitigation Instrument** to which this insurance applies;
    (2) The **Named Insured's** current or former members and partners, and their spouses, but only with respect to liability incurred from the **Named Insured's Default** of a **Mitigation Instrument,** to which this insurance applies;
    (3) The **Named Insured's** current or former directors, executive officers, and stockholders, and their spouses, but only with respect to liability incurred from the **Named Insured's Default** of a **Mitigation Instrument,** to which this insurance applies.
11. **Mitigation Site** means the site, or suite of sites, where aquatic resources are being restored, reestablished, established, created, enhanced, and/or preserved as part of the **Compensatory Mitigation Project** governed by the **Mitigation Instrument,** as scheduled in the Declarations to the policy.
12. **Mitigation Instrument** means the legal document scheduled in the Declarations to the policy, provided that such document is prepared, approved, filed, and documented in compliance with applicable law.
13. **Mitigation Plan** means the plan prepared by the **Named Insured** per 33 CFR 332.4 c(2) through c(14), or Applicable State Regulation scheduled in the Declarations to the policy, and approved by the **Authorizing Agency**, for **Compensatory Mitigation** to be performed at each **Compensatory Mitigation Project** site as scheduled in the Declarations to the policy.
14. **Named Insured** means the entity listed in the Declarations to the policy that has executed the approved **Mitigation Instrument**.
15. **Policy Period** means the period set forth in the Declarations to the policy, or any shorter period arising as a result of cancellation or termination of the policy.
16. **Performance Standards** as defined in 33 CFR 332.2 or Applicable State Regulation scheduled in the Declarations to the policy, means observable or measurable physical (including hydrological), chemical and/or biological attributes that are used to determine if a **Compensatory Mitigation Project** meets its objectives. **Performance Standards** also mean the completion of initial construction and planting in accordance with the **Mitigation Plan.**

SECTION III – EXCLUSIONS

This insurance does not apply to **Claims, Defaults,** or **Financial Assurances** based upon, arising out of, or relating to:

1. Force Majeure, or any natural catastrophe or disaster, as defined in the **Mitigation Instrument**;
2. Liability assumed by the **Named Insured** under any contract or agreement, including but not limited to liability for payment of attorney's fees, termination fees, consequential or liquidated damages, or liabilities of another pursuant to any indemnification agreement, except for liability to pay **Financial Assurances** as a result of a **Default** under a **Mitigation Instrument.**
3. Any legal fees, costs, or expenses (including expert or consultant fees) incurred in the defense of any liability or obligation of the **Named Insured** for any reason.
4. Fluctuation in, short fall of, or devaluation of, the monetary value of, or marketability of, mitigation credits (or other equivalent credits), or of any real property, including a site at which **Compensatory Mitigation** is being performed, or is planned to be performed, under the **Mitigation Instrument**.

SECTION IV – LIMITS OF INSURANCE

1. The "Policy Aggregate" Limit of Insurance shown in the Declarations and the rules below fix the most we will pay on behalf of the **Named Insured** for the **Compensatory Mitigation Site** shown in the Declarations and described by the **Mitigation Plan** regardless of the number of **Defaults**, **Claims**, **Financial Assurances**, **Mitigation Plans**, or **Compensatory Mitigation Project** sites.

2. The "Total All Claims" Limit set forth in the Declarations for each **Effective Coverage Period** is the most we will pay on behalf of the **Named Insured** for **Financial Assurances** as a result of all **Claims** first made against the **Named Insured** during the **Policy Period**, where a **Deficiency Notice** that results in the **Default** and **Claim**, is first issued by the **Authorizing Agency** during the scheduled **Effective Coverage Period**, and is first reported in writing to us, during that same scheduled **Effective Coverage Period.**

3. Subject to item 2 above, the "Per Claim" Limit set forth in the Declarations is the most we will pay on behalf of the **Named Insured** for **Financial Assurances** as a result of any one **Claim** first made against the **Named Insured** during the **Policy Period**, where a **Deficiency Notice** that results in the **Default** and **Claim**, is first issued by the **Authorizing Agency** during the scheduled **Effective Coverage Period,** and is first reported in writing to us, during that same scheduled **Effective Coverage Period.**

4. Subject to items 2 and 3 above, the maximum Limits of Insurance we will pay for any **Claim** made during the **Policy Period** shall be the limits corresponding to the scheduled **Effective Coverage Period** stated in the Declarations, in which the **Deficiency Notice** that results in the **Default** and **Claim** is first made against the **Named Insured** and reported to us in writing during that same scheduled **Effective Coverage Period**.

   At the end of each **Effective Coverage Period**, the Limit of Insurance shall expire and will no longer be available for payment of any new or additional **Claim** resulting from a **Deficiency Notice** not already issued by the **Authorizing Agency** against the **Named Insured** and reported to us in writing before expiration of the **Effective Coverage Period.** If the **Named Insured** resolves the **Deficiency Notice** issued during the **Effective Coverage Period** to the satisfaction of the **Authorizing Agency** in writing, and the **Effective Coverage Period** has expired, the limit of insurance for that **Effective Coverage Period** shall no longer be available for future **Claims**.

   At the end of each **Effective Coverage Period**, the limit of available insurance shall also be replaced by the "Per Claim" Limit and "Total All Claims" Limit scheduled in the subsequent **Effective Coverage Period.**

5. One or more **Claims** made against the **Named Insured,** and reported in writing to the Company, that arise out of the same, interrelated, repeated, or associated **Defaults** in a single **Mitigation Plan**, or at a single **Compensatory Mitigation Project** site, shall be considered a single **Claim**, and the Company's total liability for **Financial Assurance** from that **Claim** shall be subject to the Limits of Insurance corresponding to the "Per Claim" Limit for the **Effective Coverage Period** set forth in the Declarations (or any reduced or modified Limit established by endorsement to this policy) and effective at the time the initial **Deficiency Notice** that results in the **Claim** was first issued by the **Authorizing Agency** against the **Named Insured** and first reported in writing to the Company during that same **Effective Coverage Period**.

SECTION V – REPORTING, ADJUSTMENT & SETTLEMENT

1. **NOTICE OF A DEFICIENCY**

   The **Named Insured** shall provide written notice to the Company as soon as possible of any **Deficiency Notice** received by the **Named Insured** from the **Authorizing Agency.** The **Named Insured** shall forward to the **Company** a copy of the **Deficiency Notice** and any other communication or information related thereto, including the following:

   (1) Details of the **Compensatory Mitigation Project** site and **Mitigation Plan** for which the **Deficiency Notice** was received;

   (2) The **Named Insured's** plan to remedy the deficiencies noted by the **Authorizing Agency,** including any planned modifications to the **Mitigation Plan** and/or its **Adaptive Management Plan** in order to prevent a **Default** under the **Mitigation Instrument**;

   (3) Any other information necessary for the Company to understand the circumstances surrounding the **Deficiency Notice** and/or the **Named Insured's** plan to meet the applicable **Performance Standards** and prevent a **Default** under the **Mitigation Instrument**.

   The **Named Insured** shall have the duty to use its best efforts to mitigate a **Deficiency Notice** in order to prevent a **Default** under the **Mitigation Instrument.** The Company shall have the right to investigate any **Deficiency Notice.** The **Named Insured** shall cooperate with the Company's investigation, and make available upon the Company's request, documents for review and personnel for interview, all without charge to the Company. A **Deficiency Notice** is not a **Claim** and shall not trigger coverage under the policy.

2. NOTICE OF A DEFAULT or CLAIM

The **Named Insured** shall provide immediate written notice to the **Company** of any **Claim** made against the **Named Insured**, or of any determination by the **Authorizing Agency** that the **Named Insured** is in **Default** of the **Mitigation Instrument.** The **Named Insured** shall immediately forward to the Company every demand, notice, or other communication related to the **Claim** or the determination of **Default** as well as the following information:

(1) Details of the **Compensatory Mitigation Project** site and **Mitigation Plan** determined to be in **Default** and for which the **Claim** is being made;

(2) An explanation of the events and circumstances leading to the **Default,** including the specific basis and reasons upon which the **Default** has been determined;

(3) A description of the mitigation efforts undertaken to prevent or cure the **Default** (and the deficiencies leading thereto), including a detailed description of the amount of funds expended and the type of activity conducted;

(4) An estimate of the costs necessary to cure the **Default**;

(5) Any other information necessary for the Company to understand the circumstances surrounding the **Default** or **Claim**.

The Company shall have the right to investigate any **Default** or **Claim** noticed under the policy. The **Named Insured** shall cooperate with the Company's investigation and, upon the Company's request, shall assist in the investigation and settlement of the **Claim**, and make available to the Company, documents for review and personnel for interview, all without charge to the Company. Notice of a **Default** is not a **Claim** and shall not trigger coverage under the policy.

In the event that the **Authorizing Agency** first provides notice of a **Claim** to the Company, the Company may investigate and pay or adjust such claim as provided herein in its sole discretion without any duty to make inquiry of the **Insured** with respect to the **Claim**, and such payment or adjustment shall reduce the Limits of Liability remaining under the policy. The **Insured** shall not be released from any of its obligations to the Company under this policy by virtue of any such payment or adjustment, including its duties to indemnify the Company pursuant to the Indemnification Endorsement attached to this policy.

3. CLAIM ADJUSTMENT AND SETTLEMENT

The **Insured(s)** agree that the Company shall have the right to adjust, pay or settle any **Claim**, to which this insurance applies, at its sole discretion, without the **Insured(s)** consent, subject to the available and remaining Limits of Insurance for the applicable **Effective Coverage Period**, and that such adjustment, payment, or settlement may include, but not be limited to, the following actions:

(1) Payment of reasonable and necessary **Financial Assurances** to a designee or standby trust, as approved by the **Authorizing Agency**, for distribution by such designee or trustee to complete the **Compensatory Mitigation** in accordance with the **Insured's** legal responsibility under the **Mitigation Instrument**, pursuant to the **Authorizing Agency's** authority under the **Mitigation Instrument** and/or 33 CFR 332 or Applicable State Regulation scheduled in the Declarations to the policy; or

(2) Payment of reasonable and necessary **Financial Assurances** to a replacement contractor, as approved by the **Authorizing Agency** or its designee, and subject to the Company's written consent and approval, to either perform replacement **Compensatory Mitigation** at another site or to complete the **Compensatory Mitigation** at the **Compensatory Mitigation Project** site from which the **Default** has been determined, whichever is less.

The Company may make such inquiries and investigations of the **Claim** as it deems expedient, including inquiries to the **Named Insured** or the **Authorizing Agency** regarding the **Claim**, and payment of **Financial Assurances**. The **Insured(s)** agree that no **Claim** or **Financial Assurances** will be paid without the prior written consent and approval of the **Authorizing Agency**, and that the Company shall incur no liability to the **Insured(s)** resulting from such inquiries and/or resulting from the non-payment of any **Claim** or **Financial Assurances** for which the **Authorizing Agency** has not consented and/or approved. The **Insured(s)** shall not admit liability or settle any **Claim** without the Company's consent. The **Insured(s)** shall not be released from any of their duties or obligations to the Company under this policy by virtue of any payment or adjustment of a **Claim** by the Company, including the **Insured(s)** duties to indemnify the Company, according to the Indemnification Endorsement attached to this policy.

SECTION VI – CONDITIONS

1. LEGAL ACTION AGAINST THE COMPANY

No action shall lie against the Company unless, as a condition precedent thereto, there shall have been full compliance with all of terms of this policy, nor until the amount of the **Named Insured's** obligation to pay shall have been finally determined either by judgment against the **Named Insured** after actual trial or by written agreement of the **Named Insured**, the **Authorizing Agency** and the Company. No person or organization shall have any right under

this policy to join the Company as a party to any action against any **Insured** to determine the **Insured's** liability, nor shall the Company be impleaded by any **Insured** or its legal representative.

2. TRANSFER OF POLICY

Your rights and duties under this policy may not be assigned or transferred without our written consent.

3. BANKRUPTCY

Bankruptcy or insolvency of the **Named Insured** will not relieve the Company of its obligations under this policy, nor shall it relieve the **Insured(s)** of their indemnification obligations to the Company.

4. RENEWAL, CANCELLATION AND TERMINATION

(1) The Company may renew this policy at its sole discretion, pursuant to the Company's rates, rules, underwriting guidelines and underwriting decisions in effect as of the expiration date of the **Policy Period**. Renewal of this policy will not be in effect unless the Company issues a written quote and binder outlining the terms of coverage and the **Named Insured** accepts such terms in writing.

(2) The Company may cancel the policy by mailing to the **Named Insured** at the last known address, and the **Authorizing Agency**, written notice of not less than One Hundred and Twenty days (120) before such cancellation shall be effective. The notice shall include the reason for cancellation which may include:

a. The policy is no longer needed;

b. Non-payment of premium;

c. Fraud, material misrepresentation or intentional concealment of information which increases the risk originally insured; or

d. The **Insured**'s failure to comply with the terms and conditions of this policy including the failure to pay any premium when due.

(3) Upon release by the **Authorizing Agency** pursuant to applicable law, the **Insured** may cancel the policy by mailing or delivering written notice to us stating when the cancellation shall be effective.

(4) Termination by other than cancellation:

The policy may terminate without the approval of the **Authorizing Agency** at the earlier of:

a. The expiration date of the policy as shown in the Declarations to the policy;

b. A written acknowledgement, certification or other legally equivalent determination by the **Authorizing Agency** that the **Mitigation Site** has closed after having met the **Performance Standards** set forth in the **Mitigation Instrument**.

(5) The minimum earned premiums due for this policy shall be calculated in accordance with the following:

a. The minimum earned premium due for this policy is the percentage shown on the Declarations to the policy.

b. In the event of cancellation of this policy by the Company for reasons other than nonpayment of premium, the earned premium for this policy shall be computed on a pro-rata basis.

c. Premiums applicable to any subsequent endorsements will be in addition to the minimum premium shown in the Declarations to the policy.

Cancellation or termination of the policy shall be subject to release of the Company by the **Authorizing Agency**. Upon the effective date of such release, all obligations on the part of the Company hereunder shall automatically cease and neither the **Authorizing Agency** nor the **Insured** shall have further recourse against the Company with respect to unpaid **Financial Assurances**, including existing or future liabilities or obligations arising from **Claim(s)** previously reported or pending under the policy.

5. CHANGES

Notice to any agent or knowledge possessed by any agent or by any other person shall not effect a waiver or change in any part of this policy or estop the Company from asserting any right under the terms of this policy; nor shall the terms of this policy be waived or changed, except by endorsement issued by the Company to form a part of this policy with the prior approval of the **Authorizing Agency**.

6. COOPERATION

The **Named Insured** shall cooperate with the Company, and offer all reasonable assistance in the Company's investigations. The Company may require that the **Named Insured** submit to examination under oath, and attend hearings, depositions and trials. In the course of investigation, the Company may require written statements or the **Named Insured**'s attendance at meetings with the Company. The **Insured** must assist the Company in effecting settlement, securing and providing evidence and obtaining the attendance of witnesses.

7. **COVERAGE TERRITORY**

The coverage provided under this policy shall only apply to **Mitigation Sites** located within the United States of America.

8. **AUDIT AND INSPECTION**

(1) We may examine and audit your books and records as they relate to this policy at any time during the policy period and up to three (3) years after the end of the policy period;

(2) We may be permitted but not obligated to, interview persons employed by you; or

(3) We shall be permitted but not obligated to inspect, sample and monitor the **Named Insured's Mitigation Site** during the **Policy Period** or any time thereafter. Neither our right to make inspections, sample and monitor nor the actual undertaking thereof nor any report thereon shall constitute an undertaking, on behalf of the **Named Insured** or others, to determine or warrant that the **Mitigation Site** or operations are safe, healthful, or conform to acceptable engineering practice or are in compliance with any law, rule or regulation. The **Named Insured** agrees to provide appropriate personnel to assist our representatives during any inspection.

9. **OTHER INSURANCE**

(1) This insurance is primary, except when (2) below applies.

(2) This insurance is excess:

a. When stated in the Declarations to apply in excess of, or contingent upon the absence of, other appropriate instruments; or

b. Over any other bonds, reserves, escrows, trust funds, credits, or valid and collectible insurance available to the **Named Insured** to cover **Claims** for **Financial Assurances** under the **Mitigation Instrument**; or

c. Over any other appropriate instruments applicable to cover **Claims** for **Financial Assurances** under the **Mitigation Instrument**.

When this insurance is excess over other valid and collectible appropriate instruments, the Company shall be obligated to pay only its share of the applicable amount and shall not contribute with such instruments.

The **Insured** shall promptly, upon the request of the Company, provide the Company with copies of all such instruments or documentation.

10. **MATERIAL CHANGE IN RISK**

In consideration of the Company's acceptance of this insurance, the **Named Insured** hereby agrees the **Named Insured** must notify the Company, in writing, of any changes in the **Mitigation Instrument**, including changes in the credits release schedule, or any other information that materially changes the risk from that originally assumed by the Company at policy inception.

11. **SOLE AGENT**

The **Named Insured** shown in the Declarations shall act on behalf of, and serve as the sole agent for, all **Insureds** with respect to the return or payment of any premiums, the issuance by the Company of the policy, the receipt or acceptance of any endorsements issued to form a part of the policy, or the receiving of any notices from the Company required by this policy.

12. **SUBROGATION**

In the event of any payment under this policy by the Company, the Company shall be subrogated to all of the rights of recovery that the **Insured(s)** may have against any person or organization and the **Insured(s)** shall execute and deliver instruments and papers and do whatever else is necessary to secure such rights. The **Insured(s)** shall do nothing to prejudice such rights.

Locke Bottom Wetland
Mitigation Bank

Post Construction
Estimate: Phase 1

	Description	Units	Unit Costs	Total Cost
1.00	Construction			
1.10	Construction (Dirt work and trees)	50	$2,000.00	$100,000.00
2.00	Annual Monitoring (8 years)			
2.10	Monitoring (years)	8	$5,000.00	$40,000.00
3.00	Post Construction O&M			
3.10	Operation and Maintenance (yrs)	8	$1,000.00	$8,000.00
4.00	Final Delineation Report			
4.10	Report	1	$7,000.00	$7,000.00
TOTAL				**$155,000.00**

Post Construction
Estimate: Phase 2

	Description	Units	Unit Costs	Total Cost
1.00	Construction			
1.10	Construction (Dirt work and trees)	25	$2,000.00	$50,000.00
2.00	Annual Monitoring (8 years)			
2.10	Monitoring (years)	8	$5,000.00	$40,000.00
3.00	Post Construction O&M			
3.10	Operation and Maintenance (yrs)	8	$1,000.00	$8,000.00
4.00	Final Delineation Report			
4.10	Report	1	$7,000.00	$7,000.00
TOTAL				**$105,000.00**

Appendix 7
Wetland Delineation

SCI ENGINEERING, INC.
650 Pierce Boulevard
O'Fallon, Illinois 62269
618-624-6969
www.sciengineering.com

Wetland and Waterbody Delineation Report

LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK MONROE COUNTY, ILLINOIS

July 7, 2021

Prepared for:

WFI HOLDINGS-B LLC

SCI No. 2021-0626.30

SCI ENGINEERING, INC.
EARTH • SCIENCE • SOLUTIONS
GEOTECHNICAL
ENVIRONMENTAL
NATURAL RESOURCES
CULTURAL RESOURCES
CONSTRUCTION SERVICES

July 7, 2021

Mr. Linden Graber
WFI Holdings-B LLC
248 Southwoods Center
Columbia, Illinois 62236

RE: Wetland and Waterbody Delineation Report
Locke Bottom Wetland and Stream Mitigation Bank
Monroe County, Illinois
SCI No. 2021-0626.30

Dear Mr. Graber:

SCI Engineering, Inc. (SCI) is pleased to submit the following report entitled *Wetland and Waterbody Delineation Report – Locke Bottom Wetland and Stream Mitigation Bank – Monroe County, Illinois*, dated July 2021. The proposed mitigation bank site is located on a 100-acre parcel located approximately 0.3 miles south of the intersection of Bluff Road and Kaskaskia Road in Monroe County, Illinois. SCI understands that the subject site is being considered as an approximately 70-acre Wetland and Stream Mitigation Bank Site to be constructed under the proposed Umbrella Mitigation Banking Instrument (UMBI) that WFI Holdings LLC (WFI) is currently developing with the U.S. Army Corps of Engineers (USACE), St. Louis District. Our Natural Resource services included a review of available resource maps and a reconnaissance survey to document the existing conditions, document on-site wetlands and waterbodies, and to provide a Wetland and Waterbody Delineation Report summarizing our findings.

- SCI conducted a wetland and waterbody delineation of the project area on May 27, 2021. The site was found to contain prior-converted cropland (PCC) and confirmed the presence of Fults Creek Ditch within the proposed project study area.

- Fults Creek Ditch, a perennial tributary, would likely be considered a jurisdictional water of the United States (WOTUS) as identified under the definitions described in Section 328.3 of the *Code of Federal Regulations and the Navigable Waters Protection Rule (NWPR)*. The PCC areas may be categorized as exempt under NWPR: (b)(6)-PCC. However, the USACE has the authority to determine whether the identified wetland areas are under their jurisdiction.

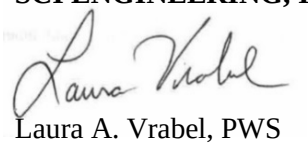
- Based on our review and field reconnaissance, it appears that the site would be suitable for a wetland mitigation creation site and a riparian buffer establishment site. The site appears to receive floodwaters and overland sheet flow from the surrounding landscape and the perennial tributary.

If jurisdictional wetlands or waterbodies will be impacted during site development, the USACE will likely require a Section 404 Permit and a Section 401 Water Quality Certification from the Illinois Environmental Protection Agency (IEPA) would also be required. Overall, it appears that the project site will likely support development as both a stream and wetland mitigation bank.

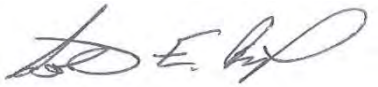
We appreciate the opportunity to provide you with our Natural Resource services. If you have any questions or comments, please do not hesitate to contact us.

Respectfully,

SCI ENGINEERING, INC.



Laura A. Vrabel, PWS
Project Scientist



Scott E. Billings
Senior Project Scientist

LAV/SEB/rah

Enclosure
Wetland and Waterbody Delineation Report

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LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK
MONROE COUNTY, ILLINOIS

1.0 INTRODUCTION

SCI Engineering, Inc. (SCI) was retained by WFI Holdings-B LLC (WFI) to conduct a wetland and waterbody delineation on the site located approximately 0.3 miles south of the intersection of Bluff Road and Kaskaskia Road in Monroe County, Illinois. SCI understands that the subject site is being considered as the proposed Locke Bottom Wetland and Stream Mitigation Bank (LBWSMB) Site, which will be constructed under the proposed Umbrella Mitigation Banking Instrument (UMBI) that WFI is currently developing with the U.S. Army Corps of Engineers (USACE), St. Louis District. Our scope of services included performing site reconnaissance to characterize the soils, vegetation, and hydrology for the delineation of wetlands and waterbodies as well as utilizing the U.S. Environmental Protection Agency (USEPA) Rapid Bioassessment Protocol (RBP) for Use in Streams and Wadable Rivers. The primary purpose of our site visit was to determine the acreage of wetlands and length of tributaries that currently exist within the project limits during due diligence for the development of the site as a proposed wetland and stream mitigation bank. Our services were provided in general accordance with our proposal, dated and accepted on May 26, 2021.

Our site reconnaissance identified two areas identified as prior-converted cropland (PCC) and confirmed the presence of perennial tributary Fults Creek Ditch within the project study area. SCI anticipates that Fults Creek Ditch would likely be considered a jurisdictional water of the United States (WOTUS). The two areas identified as PCC would likely be considered non-jurisdictional features under the Navigable Waters Protection Rule (NWPR). However, the USACE has the authority to determine whether the identified areas are under their jurisdiction. Perennial and intermittent tributaries, abutting and adjacent wetlands, and some lakes and ponds are considered WOTUS as identified under the definitions described in Section 328.3 of the *Code of Federal Regulations (33 CFR)* and under the NWPR. Any impact to a WOTUS, including filling, crossing, piping, relocating, or discharging into, will require a Section 404 Permit from the U.S. Army Corps of Engineers (USACE) and a Section 401 Water Quality Certification from Illinois Environmental Protection Agency (IEPA).

2.0 SITE LOCATION

The subject site consists of a 100-acre agricultural field and perennial ditch located approximately 0.3 miles south of the intersection of Bluff Road and Kaskaskia Road in Monroe County, Illinois (38.127202, -90.153043). The surrounding land use consists mainly of agricultural fields and forested bluffs. The *Vicinity and Topographic Map* depicting the site location is enclosed as Figure 1.

3.0 DESKTOP REVIEW

3.1 United States Geological Survey

The United States Geological Survey (USGS) topographic map depicts a generally flat parcel around elevation 380 above mean sea level. One blue line tributary, identified as Fults Creek Ditch, bisects the project study area from northwest to southeast. The project site appears to drain centrally toward Fults Creek Ditch and then southeast. Additionally, the topographic map illustrates mapped wetlands near the northeastern boundary of the site. The *USGS topographic map* is enclosed as Figure 1.

3.2 National Wetlands Inventory

The *National Wetlands Inventory (NWI) Map* illustrates one mapped palustrine emergent (PEM) wetland along the eastern boundary of the site. The *NWI Map* depicts the western portion of the wetland extending outside the project area. Additionally, Fults Creek Ditch is mapped as a riverine wetland system (R2UBH). The *NWI Map* is enclosed as Figure 2.

3.3 Web Soil Survey

The *Natural Resources Conservation Service (NRCS) Web Soil Survey* (http://websoilsurvey.nrcs.usda.gov) was utilized to determine the mapped soil types and hydric rating of the soils located within the project site. Hydric soils are described as those soils that are sufficiently wet in the upper-part to develop anaerobic conditions during the growing season. Partially hydric and hydric soils mapped within the project study area listed in Table 3.1 below and depicted on Figure 2. The majority of the site includes hydric soils.

Table 3.1. NRCS Mapped Soils

Map Unit Symbol	Map Unit Name	Hydric
1457A	Booker clay, undrained, 0 to 2 percent slopes, occasionally flooded	85%
8302A	Ambraw silty clay loam, 0 to 2 percent slopes, occasionally flooded	95%
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded	5%
8457L	Booker clay, 0 to 2 percent slopes, occasionally flooded, long duration	90%
8591A	Fults silty clay, 0 to 2 percent slopes, occasionally flooded	85%

3.4 Federal Emergency Management Agency Flood Insurance Rate Map

Review of the *Flood Insurance Rate Map* panel map 1705090200D (Effective date: May 15, 1986 and revised March 17, 2003) depicts the entire site within the special flood hazard area Zone A and the 100-year floodplain of the Mississippi River. The *Federal Emergency Management Agency (FEMA) Flood Map* is included as Figure 3.

3.5 Aerial Review

Available aerial photographs of the project study area have been reviewed back to 1940. The aerials indicate that the site has been in agricultural production since at least 1940. Fults Creek Ditch has also been in the same location since that time. In general, there have been limited modifications to the property since 1940. The aerial photographs show that the agricultural fields are typically farmed in dry years and generally left fallow in wet years. A large wetland complex is situated adjacent to the southern boundary of the study area. Additionally, saturation signatures are visible within the agricultural fields and it appears that significant flooding occurred in 1985, 1993, 2010, 2011, 2015, and 2016. Our review also identified two areas that appeared to possess noticeable saturation and surface water through the decades. These two areas are located within the northeast and southeast portions of the study area. However, even these areas are farmed in dry years and left fallow in wet years. Based on our historical aerial review from the areas that are mapped as NWI wetlands, they would likely be considered PCC and have not been left fallow for more than five years at a time.

3.6 Antecedent Precipitation Evaluation

SCI utilized the antecedent precipitation tool (APT) from the USACE in order to assess typical precipitation conditions of the project area. The APT calculation compares the Antecedent Precipitation vs. Normal Range based on NOAA's Daily Global Historical Climatology Network. The APT results indicate that the project area was drier than normal in the last three months prior to the wetland and waterbody delineation. Additionally, the APT tool indicated that the drought index for Monroe County was experiencing mild wetness. The APT results are included in *Appendix A – Antecedent Precipitation Tool*.

4.0 SITE RECONNAISSANCE

On May 27, 2021 an SCI Professional Wetland Scientist conducted a field exploration to delineate the extent of wetlands and waterbodies that may exist within the project study area. Suspect areas that were identified during the desktop review were explored for wetland and waterbody characteristics utilizing methods as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0).

The proposed mitigation bank site is located within an undeveloped tract of land that exists as an active agricultural field. It was observed that the entire study area and fields were plowed and planted with soybeans during the current growing season. Very little herbaceous vegetation was growing in the fields at the time of our site visit. The natural flow of water across the project study area drains centrally toward Fults Creek Ditch, which drains through the central portion of the site from northwest to southeast. Herbaceous vegetation within the project study area included soybeans, curly dock (*Rumex crispus*), spotted smartweed (*Persicaria lapthafolia*), barnyard grass (*Eleocharis crus-galli*), and cheatgrass (*Bromus tectorum*). There is no riparian corridor along Fults Creek Ditch.

5.0 CONDITION SUMMARY

Our wetland and waterbody delineation identified two areas considered PCC and confirmed the presence of perennial tributary Fults Creek Ditch. The PCC areas were given the Feature IDs of PCC A and B. Both of the PCC areas were recently plowed and planted with soybeans. There was little evidence of recent hydrology, as the soils were generally dry. A photographic summary of the representative site conditions and identified features is included as Appendix B. Detailed information about wetland hydrology, soils, and hydrophytic vegetation are included on the *Wetland Determination Data Forms*, enclosed as Appendix C. In addition, the features identified are illustrated on the *Wetland Delineation & Aerial Photograph*, enclosed as Figure 4. Table 5.1 provides a summary of the wetlands and waterbody identified on site.

Table 5.1 Wetlands and Waterbody Summary

Feature ID	Type[1]	NWPR Category[2]	Size	WOTUS[3] or Exempt
PCC A	PCC	(b)(6) PCC	12.61 acres	Potentially Exempt
PCC B	PCC	(b)(6) PCC	11.10 acres	Potentially Exempt
		Total:	23.71 acres	
Silver Creek	Perennial	(a)(2) Tributary	2,375 linear feet	WOTUS

[1]PCC - Prior Converted Cropland
[2]NWPR - Navigable Waters Protection Rule
[3]WOTUS - Waters of the U.S.

6.0 RAPID BIOASSESSMENT

The U.S. Environmental Protection Agency (USEPA) *Rapid Bioassessment Protocols (RBP) for Use in Streams and Wadable Rivers* was utilized in order to determine the current condition of Fults Creek Ditch within the project limits. Data was collected along Fults Creek Ditch at two locations and included on one RBP data form enclosed in Appendix D. Data collected includes physical characteristics, water quality,

and a visual-based habitat assessment. The data is similar along the entire reach, as the characteristics along the tributary do not change while on site. The total score as determined by the *Habitat Assessment Field Data Sheet – Low Gradient Streams* averaged a 36. All of the condition categories were in the poor to marginal range for habitat. As there was no woody debris, leaf mat, or rocks, there was a lack of benthic macroinvertebrates observed. There were a few snail shells and mussel on the streambanks and minnows and frogs were observed in the channel. Fults Creek Ditch appears to have been channelized historically according to our review of historic aerial imagery from 1940 and the tributary has been impacted by agricultural practices. The tributary does have a low berm along both banks. However, the berm and banks are plowed and planted up the top of the banks of the channel. The channel bed is approximately 2 feet below the top of bank. Due to agricultural production surrounding the feature and the lack of a natural vegetation riparian corridor, sedimentation is occurring within the channel and there is active bank erosion. Water was observed to be turbid during the site visit. The bank slopes do have some weedy vegetation growth. The top of bank width averages 45 feet wide, the ordinary high-water mark (OHWM) averages 15 feet in width, bank heights average 3 to 4 feet, and water depth is between 6 and 8 inches. Fults Creek Ditch would potentially benefit from riparian corridor creation via mitigation bank development and it would likely uplift the quality of the stream, habitat, and the surrounding ecosystem.

7.0 CONCLUSION

Our review of the proposed mitigation bank site identified two areas potentially classified as PCC and confirmed the presence of perennial tributary Fults Creek Ditch. The mitigation site would likely improve existing adjacent wetland habitats and move them out of agricultural production, thus benefitting the local ecosystem and water quality of the Fults Creek Ditch watershed and ultimately the Mississippi River basin. PCC Areas A and B may be categorized as exempt under the NWPR: (b)(6) Prior Converted Cropland. Fults Creek Ditch, a perennial tributary, would be considered a jurisdictional WOTUS. It should be noted that the USACE has the sole discretion to determine what wetland and waterbody features are under their jurisdiction. Overall, it appears that the project site will likely support wetland creation and riparian buffer establishment as part of the proposed mitigation bank.

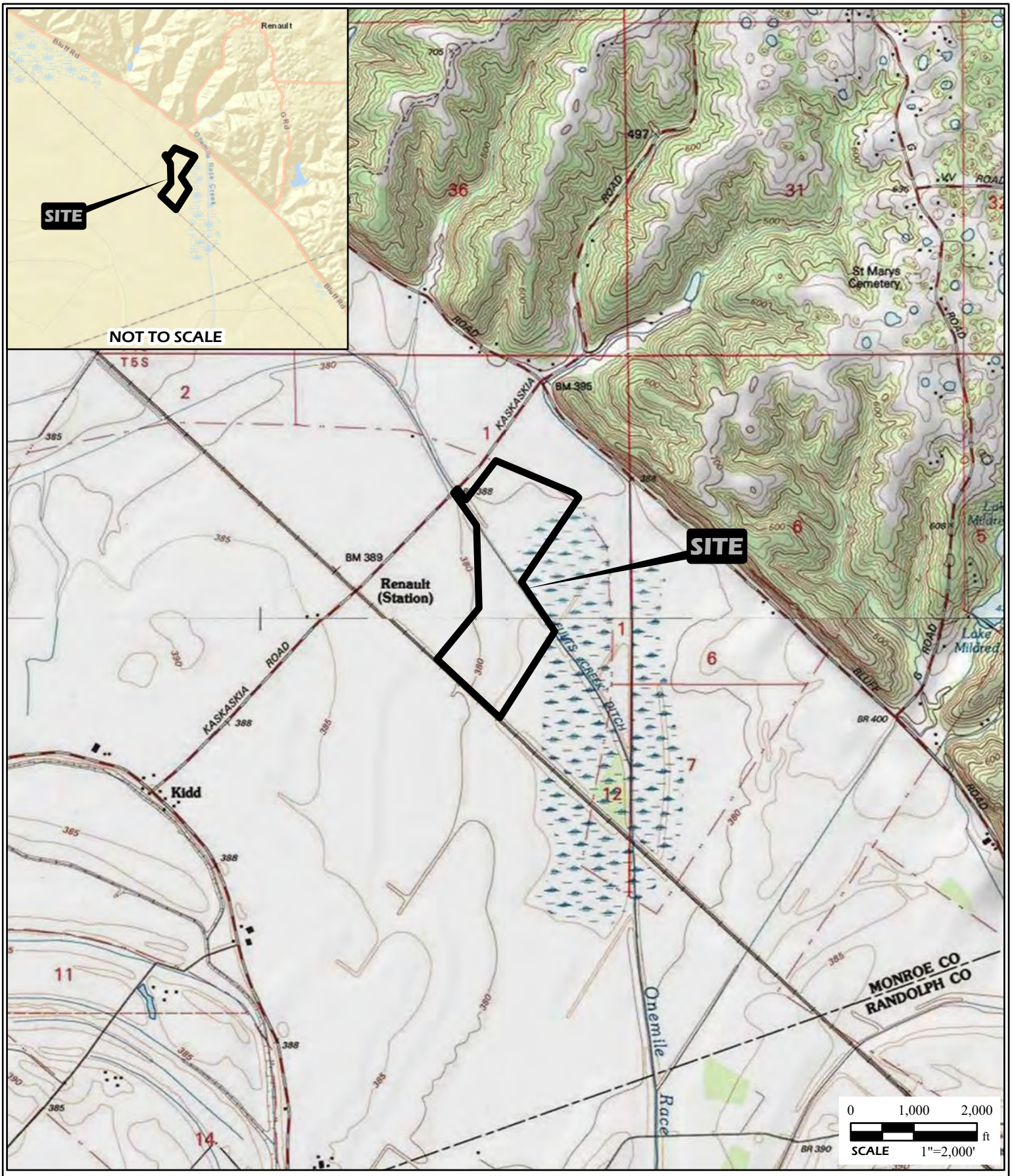
8.0 LIMITATIONS

This report has been prepared for the exclusive use of WFI Holdings-B LLC and the USACE. SCI is not responsible for independent conclusions or recommendations made by others. The size and location of all identified wetland and waterbody features have been delineated and quantified using a sub-meter accurate global positioning system. The USACE has the sole authority to determine if any of the features identified would be under their jurisdiction. Furthermore, written consent must be provided by SCI should anyone

other than WFI Holdings-B LLC and the USACE wish to excerpt or rely on the contents of this report. The findings of this report are valid as of the present date of the delineation. SCI is not responsible for surveys, calculations, or plans that were prepared by others.

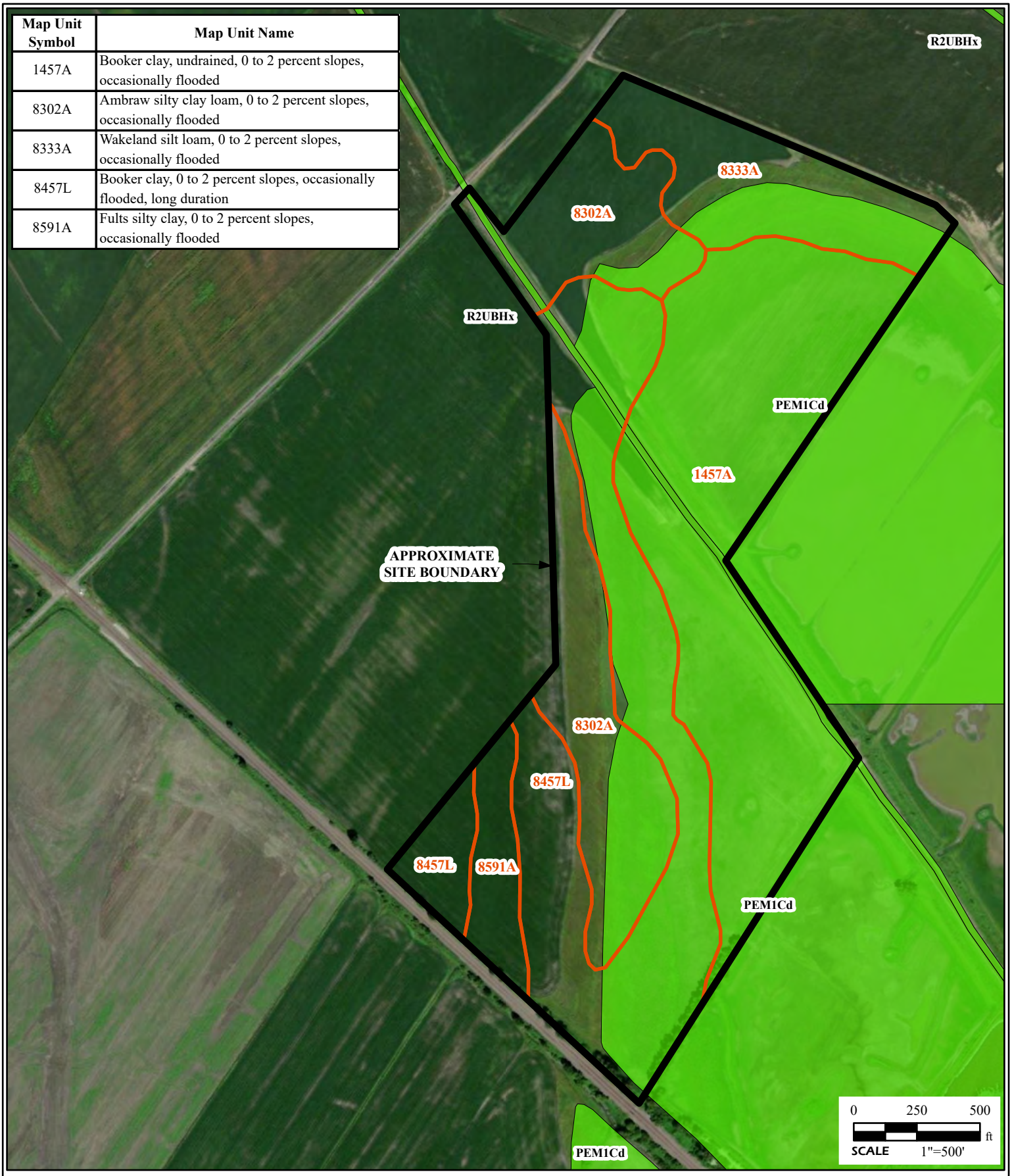
This delineation is based on professional experience in the approved methodology and from experience with the USACE; however, this delineation does not constitute a jurisdictional determination of waters of the United States. This delineation has been based on the professional experience of SCI staff and our interpretation of USACE regulations at 33 CFR 328.3 and joint USACE/Environmental Protection Agency guidance documents. While, SCI believes our delineation to be accurate, final authority to interpret the regulations and to issue or deny a permit lies solely with the USACE. SCI in no way guarantees the acquisition of a permit from the USACE and/or IEPA, if it is deemed necessary.

Changes in surface and subsurface conditions of a property can occur with the passage of time, whether due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation, the broadening of knowledge, or other reasons. Accordingly, the findings of this report may be invalidated in whole or in part by changes outside our control.



SCI	PROJECT NAME LOCHE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS			GENERAL NOTES/LEGEND USGS TOPOGRAPHIC MAP RENAULT, ILLINOIS QUADRANGLE DATED 1972 BLOOMSDALE, ILLINOIS QUADRANGLE DATED 1982 5' CONTOURS	N W E S
	VICINITY AND TOPOGRAPHIC MAP				
	DRAWN BY RCV CHECKED BY LAV	DATE 07/2021	JOB NUMBER 2021-0626.30	STREET MAP HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_STREET_MAP	FIGURE 1

Map Unit Symbol	Map Unit Name
1457A	Booker clay, undrained, 0 to 2 percent slopes, occasionally flooded
8302A	Ambraw silty clay loam, 0 to 2 percent slopes, occasionally flooded
8333A	Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded
8457L	Booker clay, 0 to 2 percent slopes, occasionally flooded, long duration
8591A	Fults silty clay, 0 to 2 percent slopes, occasionally flooded



PROJECT NAME
LOCKE BOTTOM
WETLAND AND STREAM MITIGATION BANK SITE
MONROE COUNTY, ILLINOIS
NATIONAL WETLAND INVENTORY &
USDA SOIL SURVEY MAP

DRAWN BY	RCV	DATE	JOB NUMBER
CHECKED BY	LAV	07/2021	2021-0626.30

GENERAL NOTES/LEGEND

SOILS DATA OBTAINED FROM
https://websoilsurvey.sc.egov.usda.gov/
WETLAND DATA OBTAINED FROM
https://www.fws.gov/wetlands/

AERIAL PHOTOGRAPH OBTAINED FROM ARCGIS ONLINE, WORLD IMAGERY.
DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY.
DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

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FIGURE
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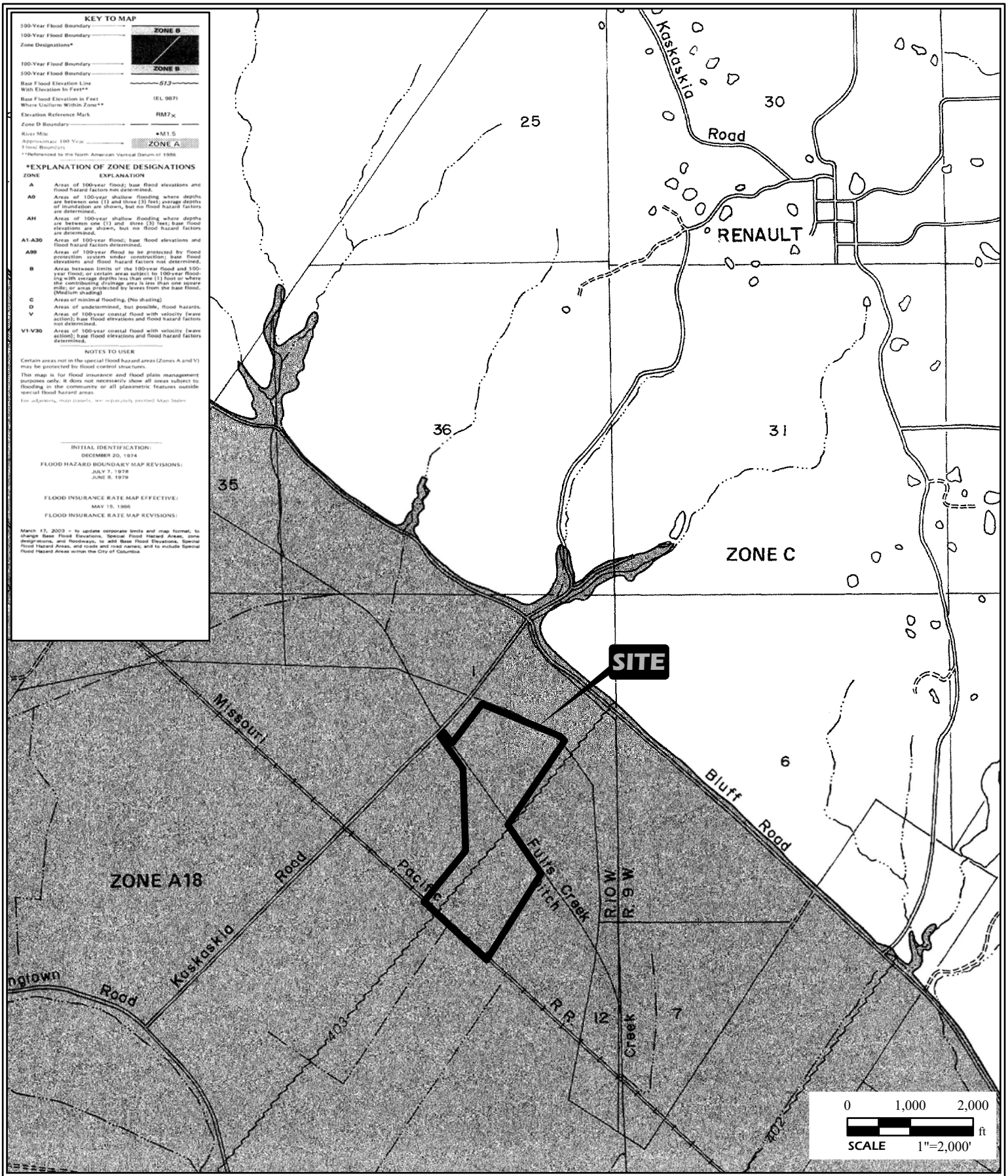

PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS				GENERAL NOTES/LEGEND MONROE COUNTY, ILLINOIS PANEL: 1705090200D EFFECTIVE DATE: 3/17/2003 DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.
FEMA FLOOD MAP				
DRAWN BY	RCV	DATE	JOB NUMBER	
CHECKED BY	LAV	07/2021	2021-0626.30	

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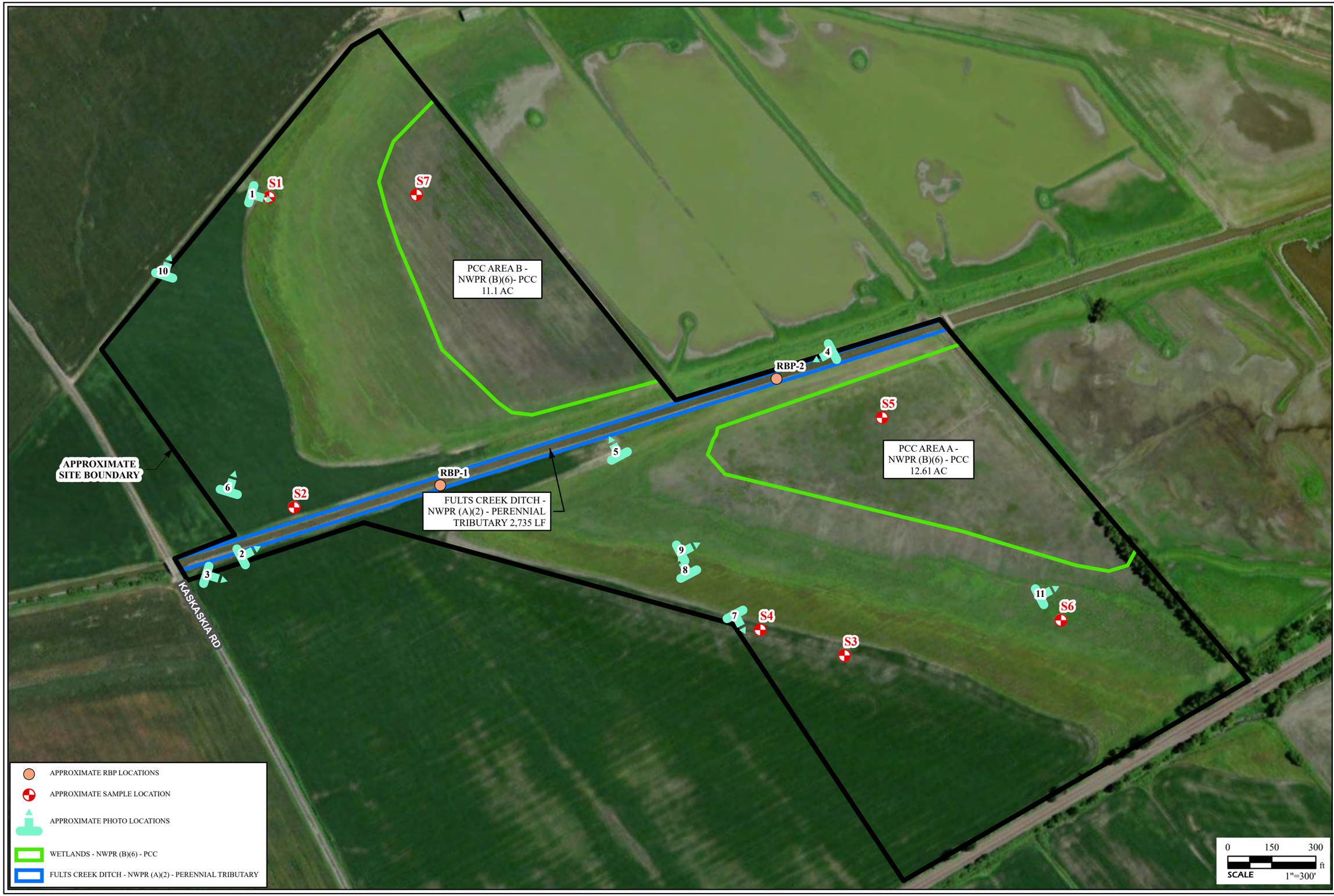
FIGURE
3



GENERAL NOTES/LEGEND

AERIAL PHOTOGRAPH OBTAINED FROM ARCGIS ONLINE, WORLD IMAGERY.

DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

PROJECT NAME

LOCKE BOTTOM
WETLAND AND STREAM MITIGATION BANK SITE
MONROE COUNTY, ILLINOIS

WETLAND DELINEATION & AERIAL PHOTOGRAPH

JOB NUMBER 2021-0626.30

DATE 07/2021

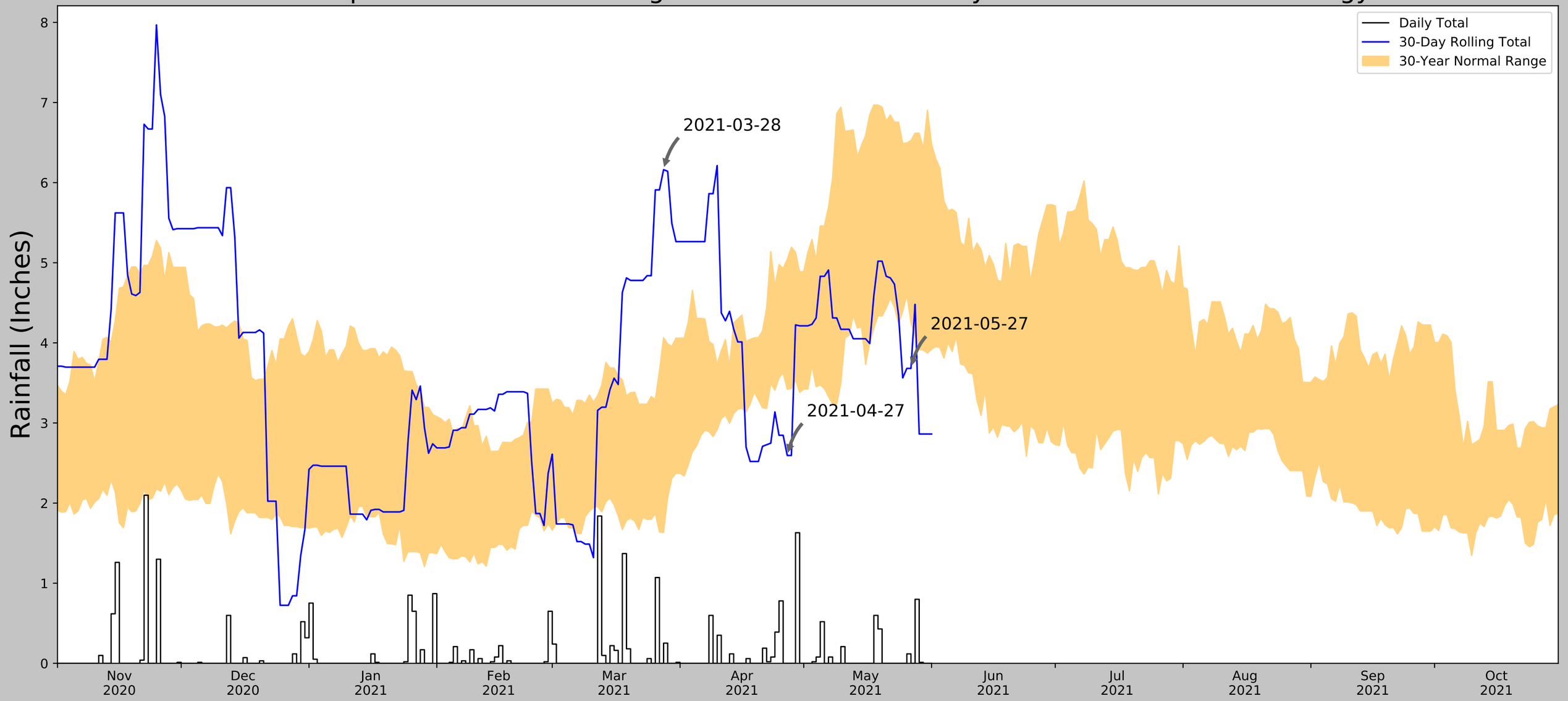
DRAWN BY RCV

CHECKED BY LAV

FIGURE 4

Appendix A

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	38.127643, -90.153666
Observation Date	2021-05-27
Elevation (ft)	378.91
Drought Index (PDSI)	Mild wetness (2021-04)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2021-05-27	4.249606	6.525591	3.681102	Dry	1	3	3
2021-04-27	3.420866	5.043701	2.594488	Dry	1	2	2
2021-03-28	1.635827	4.064173	6.161418	Wet	3	1	3
Result							Drier than Normal - 8

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
KASKASKIA RVR NAVIGATION LOCK	37.9833, -89.9469	379.921	15.034	1.011	6.78	10093	88
STE. GENEVIEVE 0.5 S	37.9672, -90.0495	425.853	5.698	45.932	2.826	59	2
CHESTER	37.9019, -89.8308	390.092	8.465	10.171	3.895	1201	0

Appendix B

Photo 1. Overview of northern agricultural field facing southeast

Photo 2. Overview of Perennial Tributary Fults Creek Ditch bisecting the site and facing southeast

Photo 3. Overview of southern agricultural field plowed and facing south

Photo 4. Overview of Fults Creek Ditch looing upstream and facing northwest

Photo 5. View showing bank to bank of Fults Creek Ditch facing northeast

Photo 6. Overview of site showing downgradient landscape facing east

Photo 7. Overview of agricultural field facing southwest

Photo 8. Overview of agricultural field looking toward Fults Creek ditch and facing northeast

Photo 9. Overview of agricultural field facing southeast

Photo 10. View of farm access road along the northern boundary of the site facing east

Photo 11. Overview of the southern corner of the site looking toward the railroad and southeast

Appendix C

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S1

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.130779 | Long: -90.152389 | Datum: WGS 84

Soil Map Unit Name: Wakeland silt loam, 0 to 2 percent slopes, occasionally flooded | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks:
Sample point S1 lays within an active agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Rumex crispus*	3%	Yes	FAC
2. *Bromus tectorum*	3%	Yes	UPL
3. *Trifolium repens*	2%	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	8%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	3%	x3 =	0.09
FACU species	2%	x4 =	0.08
UPL species	3%	x5 =	0.15
Column Totals:	0.08 (A)		0.32 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted.

SOIL

Sampling Point: S1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 3/2	100					Silt Loam	
3-7"	10YR 4/2	98	10YR 4/6	2	C	M	Silty Clay Loam	
7-15"	10YR 4/2	70	10YR 4/6	25	C	M	Clay Loam	
			10YR 2/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S2

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.130132 | Long: -90.155194 | Datum: WGS 84

Soil Map Unit Name: Ambraw silty clay loam, 0 to 2 percent slopes, occasionally flooded | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks:
Sample point S2 lays within an active agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	No	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	3%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species	____	x1 =	____
FACW species	____	x2 =	____
FAC species	____	x3 =	____
FACU species	____	x4 =	____
UPL species	3%	x5 =	0.15
Column Totals:	0.03 (A)		0.15 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted. Wheat stubble observed.

SOIL

Sampling Point: S2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 3/2	100					Sandy Loam	
3-8"	10YR 4/3	90	10YR 4/6	5	C	M	Clay Loam	
			10YR 5/2	5	D	M	Clay	
8-15"	10YR 5/2	90	10YR 4/6	10	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ### FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S3

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.123300 | Long: -90.154533 | Datum: WGS 84

Soil Map Unit Name: Ambraw silty clay loam, 0 to 2 percent slopes, occasionally flooded | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**	
Hydric Soil Present?	Yes ____	No X	**within a Wetland?**	Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X		

Remarks:
Sample point S3 lays within an active agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	Yes	UPL
2. *Persicaria maculosa*	2%	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	5%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	2%	x2 =	0.04
FAC species		x3 =	
FACU species		x4 =	
UPL species	3%	x5 =	0.15
Column Totals:	0.05 (A)		0.19 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

____ 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted. Wheat stubble observed.

SOIL

Sampling Point: S3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/2	100					Sandy Loam	
4-10"	10YR 2/2	94	10YR 4/3	3	C	M	Clay Loam	
			10YR 4/2	3	D	M		
8-15"	10YR 4/2	90	10YR 4/3	5	C	M	Clay	
			10YR 2/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S4

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.124419 | Long: -90.155008 | Datum: WGS 84

Soil Map Unit Name: Booker clay, 0 to 2 percent slopes, occasionally flooded, long duration | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Sample point S4 lays within an active agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	Yes	UPL
2. *Rumex crispus*	2%	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	5%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species		x2 =	
FAC species	2%	x3 =	0.06
FACU species		x4 =	
UPL species	3%	x5 =	0.15
Column Totals:	0.05 (A)		0.21 (B)

Prevalence Index = B/A = 4.20

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation
____ 2-Dominance Test is >50%
____ 3-Prevalence Index is ≤3.0[1]
____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted. Wheat stubble observed.

SOIL

Sampling Point: S4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 2/2	100					Sandy Clay Loam	
3-10"	10YR 2/2	95	10YR 4/6	5	C	M	Clay Loam	
10-15"	10YR 4/2	90	10YR 4/6	5	D	M	Clay	
			10YR 2/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S5

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.124853 | Long: -90.152109 | Datum: WGS 84

Soil Map Unit Name: Booker clay, undrained, 0 to 2 percent slopes, occasionally flooded | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Sample point S5 lays within an active agricultural field, and a farmed wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	Yes	UPL
2. *Rumex crispus*	5%	Yes	FAC
3. *Persicaria maculosa*	3%	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	11%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	3%	x2 =	0.06
FAC species	5%	x3 =	0.15
FACU species		x4 =	
UPL species	3%	x5 =	0.15
Column Totals:	0.11 (A)		0.36 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted.

SOIL

Sampling Point: S5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/2	100					Clay Loam	
4-6"	10YR 2/2	70	10YR 4/2	30	D	M	Clay Loam	
6-16"	10YR 4/1	90	10YR 2/2	5	D	M	Clay	
			10YR 4/6	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S6

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.124419 | Long: -90.155008 | Datum: WGS 84

Soil Map Unit Name: Booker clay, 0 to 2 percent slopes, occasionally flooded, long duration | NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** Yes ____ No X
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Sample point S6 lays within an active agricultural field.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	Yes	UPL
2. *Rumex crispus*	2%	Yes	FAC
3. *Persicaria maculosa*	2%	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	7%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	____	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	2%	x2 =	0.04
FAC species	2%	x3 =	0.06
FACU species		x4 =	
UPL species	3%	x5 =	0.15
Column Totals:	0.07 (A)		0.25 (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted. Wheat stubble observed.

SOIL

Sampling Point: S6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR 2/2	100					Clay Loam	
3-8"	10YR 4/2	80	10YR 4/6	15	C	M	Clay Loam	
			10YR 2/2	5	D	M		
8-15"	10YR 4/2	50	10YR 4/3	30	C	M	Clay	
			10YR 5/6	15	C	M		
			10YR 2/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM -- Midwest Region

Project/Site: Locke Bottom Mitigation Bank Site | City/County: Monroe County | Sampling Date: 5/27/2021

Applicant/Owner: WFI HOLDINGS LLC. | State: IL | Sampling Point: S7

Investigator(s): SCI - L. Vrabel, PWS-2273 | Section, Township, Range: S1-T5S-R10W

Landform (hillslope, terrace, etc.): plain | Local relief (concave, convex, none): none

Slope (%): 0% | Lat: 38.129582 | Long: -90.151158 | Datum: WGS 84

Soil Map Unit Name: Booker clay, undrained, 0 to 2 percent slopes, occasionally flooded | NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation Y, Soil Y, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:
Sample point S7 lays within an active agricultural field, and a farmed wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5' radius)			
1. *Glycine max*	3%	Yes	UPL
2. *Rumex crispus*	5%	Yes	FAC
3. *Persicaria maculosa*	5%	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
	13%	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
That Are OBL, FACW, or FAC:			A/B
OBL species		x1 =	
FACW species	5%	x2 =	0.1
FAC species	5%	x3 =	0.15
FACU species		x4 =	
UPL species	3%	x5 =	0.15
Column Totals:	0.13 (A)		0.4 (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:

____ 1-Rapid Test for Hydrophytic Vegetation

X 2-Dominance Test is >50%

____ 3-Prevalence Index is ≤3.0[1]

____ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (Include photo numbers here or on a separate sheet.)
Soybeans had been recently planted.

SOIL

Sampling Point: S7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/2	100					Clay Loam	
4-6"	10YR 2/2	70	10YR 4/2	30	D	M	Clay Loam	
6-16"	10YR 4/1	90	10YR 2/2	5	D	M	Clay	
			10YR 4/6	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Dark Surface (S7)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
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- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- X Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___ No X	Depth (inches):	
Water Table Present?	Yes ___ No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___ No X	Depth (inches):	

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix D

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (FRONT)

STREAM NAME Fults Creek Ditch	LOCATION Monroe County	
STATION # RBP 1 and 2 RIVERMILE_____	STREAM CLASS Perennial	
LAT 38.127757 LONG -90.153473	RIVER BASIN Mississippi River	
STORET #	AGENCY SCI Engineering	
INVESTIGATORS SCI Engineering		
FORM COMPLETED BY SCI - Laura Vrabel, PWS	DATE 5-27-21 TIME 9:00-11:00 AM PM	REASON FOR SURVEY Potential Mitigation Site

WEATHER CONDITIONS

Now

☐ storm (heavy rain)
☐ rain (steady rain)
☐ showers (intermittent)
____% ☐ %cloud cover
☑ clear/sunny

Past 24 hours

☐
☐
☑
☐ ____%
☐

Has there been a heavy rain in the last 7 days? ☐ Yes ☑ No

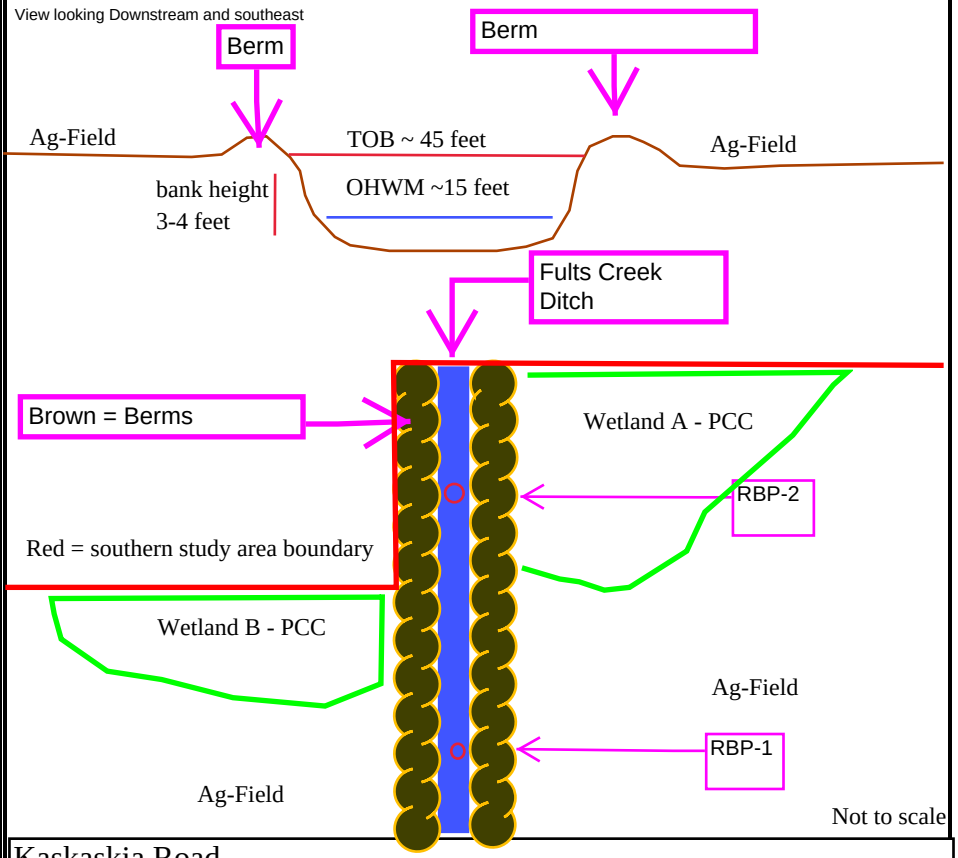
Air Temperature 75 ^{0} C

Other_____

SITE LOCATION/MAP

Draw a map of the site and indicate the areas sampled (or attach a photograph)

View looking Downstream and southeast



STREAM CHARACTERIZATION

Stream Subsystem
☑ Perennial ☐ Intermittent ☐ Tidal

Stream Type
☐ Coldwater ☑ Warmwater

Stream Origin
☐ Glacial
☐ Non-glacial montane
☐ Swamp and bog
☐ Spring-fed
☑ Mixture of origins
☐ Other_____

Catchment Area 24.7 km^2

PHYSICAL CHARACTERIZATION/WATER QUALITY FIELD DATA SHEET (BACK)

WATERSHED FEATURES

Predominant Surrounding Landuse
☐ Forest ☐ Commercial
☐ Field/Pasture ☐ Industrial
☑ Agricultural ☐ Other _____
☐ Residential

Local Watershed NPS Pollution
☐ No evidence ☐ Some potential sources
☑ Obvious sources

Local Watershed Erosion
☐ None ☑ Moderate ☐ Heavy

RIPARIAN VEGETATION (18 meter buffer)

Indicate the dominant type and record the dominant species present
☐ Trees ☐ Shrubs ☐ Grasses ☑ Herbaceous

dominant species present smartweed, curly dock, butterweed, reed canary grass, ragweed

INSTREAM FEATURES

Estimated Reach Length 724 m

Estimated Stream Width 14 m

Sampling Reach Area 9,929 m^2

Area in km^2 (m^2x1000) 9,929,000 km^2

Estimated Stream Depth 0.15 m

Surface Velocity (at thalweg) 0.9 m/sec

Canopy Cover
☐ Partly open ☐ Partly shaded ☐ Shaded

High Water Mark 4.5 m

Proportion of Reach Represented by Stream Morphology Types
❑ Riffle _____ % ☒ Run 100 %
❑ Pool _____ %

Channelized ☑ Yes ☐ No

Dam Present ☐ Yes ☑ No

LARGE WOODY DEBRIS

LWD N/A m^2

Density of LWD _____ m^2/km^2 **(LWD/ reach area)**

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating
☐ Floating Algae ☐ Attached Algae

dominant species present N/A

Portion of the reach with aquatic vegetation 0 %

WATER QUALITY

Temperature 65 ^{0} C

Specific Conductance 4500uS/cm

Dissolved Oxygen _____

pH 6.6

Turbidity 95 ppm

WQ Instrument Used combo pH&EC Hanna pen

Water Odors
☑ Normal/None ☐ Sewage
☐ Petroleum ☐ Chemical
☑ Fishy ☐ Other _____

Water Surface Oils
☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
☑ None ☐ Other _____

Turbidity (if not measured)
☐ Clear ☐ Slightly turbid ☑ Turbid
☐ Opaque ☐ Stained ☐ Other _____

SEDIMENT/ SUBSTRATE

Odors
☑ Normal ☐ Sewage ☐ Petroleum
☐ Chemical ☑ Anaerobic ☐ None
☐ Other _____

Oils
☑ Absent ☐ Slight ☐ Moderate ☐ Profuse

Deposits
☐ Sludge ☐ Sawdust ☐ Paper fiber ☑ Sand
☑ Relict shells ☐ Other silt

Looking at stones which are not deeply embedded, are the undersides black in color?
☐ Yes ☐ No N/A no stones

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	**Diameter**	**% Composition in Sampling Reach**	**Substrate Type**	**Characteristic**	**% Composition in Sampling Area**
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	40			
Clay	< 0.004 mm (slick)	30			

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (FRONT)

STREAM NAME Fults Creek Ditch	LOCATION Monroe Co., IL	
STATION # RBP 1 & 2 RIVERMILE	STREAM CLASS Perennial	
LAT 38.127757 LONG -90.153473	RIVER BASIN Mississippi River	
STORET #	AGENCY SCI Engineering	
INVESTIGATORS Laura Vrabel, PWS		
FORM COMPLETED BY SCI	DATE 5/27/21 TIME 9:00 AM AM PM	REASON FOR SURVEY Potential Mitigation Bank Site

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	**Suboptimal**	**Marginal**	**Poor**
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 5	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS (BACK)

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	**Suboptimal**	**Marginal**	**Poor**
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 2 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 4 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 4 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 1 (LB)	Left Bank 10 9	8 7 6	5 4 3	2 1 0
SCORE 1 (RB)	Right Bank 10 9	8 7 6	5 4 3	2 1 0

Total Score 36

Appendix 8

Archaeological Phase 1 Survey

and

Environmental Phase 1 Site Assessment

ILLINOIS
DEPARTMENT OF NATURAL RESOURCES

Illinois Department of **Natural Resources**

www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

Mailing address: State Historic Preservation Office, 1 Old State Capitol Plaza, Springfield, IL 62701

Monroe County
Kidd
SW of Kaskaskia Road & Bluff Road
Section:1-Township:5S-Range:10W, Section:12-Township:5S-Range:10W
Sites: 11MO1138-1143
IEPA, SCI-2021-0626.40
New construction, wetland/streambank mitigation bank - Locke Bottom

PLEASE REFER TO: SHPO LOG #003072021

August 20, 2021

Bryan Carlo
SCI Engineering, Inc.
650 Bierce Blvd.
O'Fallon, IL 62269

Dear Mr. Carlo:

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state funded, permitted or licensed undertakings for their effect on cultural resources. Pursuant to this, we have received information regarding the referenced project for our comment.

Our staff has reviewed the specifications and assessed the impact of the project as submitted by your office. We have determined, based on the available information, that this project, as proposed, will have no effect on any Historic Properties. We, therefore, have no objection to the undertaking proceeding as planned.

According to the information you have provided concerning your proposed project, apparently there is no federal involvement in your project. However, please note that the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits, use federal property, or involve assistance from a federal agency, then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

Please retain this letter in your files as evidence of compliance with the Illinois State Agency Historic Resources Preservation Act, as amended.

If further assistance is needed please contact Jeff Kruchten, Chief Archaeologist at 217/785-1279 or Jeffery.kruchten@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic
Preservation Officer

SCI ENGINEERING, INC.
EARTH • SCIENCE • SOLUTIONS
GEOTECHNICAL
ENVIRONMENTAL
NATURAL RESOURCES
CULTURAL RESOURCES
CONSTRUCTION SERVICES

July 16, 2021

Mr. Linden Graber
WFI Holdings LLC
248 Southwoods Center
Columbia, Illinois 62236

RE: Results of a Phase One Cultural Resource Survey
Locke Bottom Mitigation Bank
Monroe County, Illinois
SCI No. 2021-0626.40

Dear Mr. Graber:

SCI Engineering, Inc. (SCI) has completed the Phase One Cultural Resource Survey (Phase One) at the above referenced site. The Phase One Survey located six cultural resource sites. Site 11MO1138 is considered potentially significant and sites 11MO1139, 11MO1140, 11MO1141, 11MO1142, and 11MO1143 are considered not significant. SCI recommends clearance of sites 11MO1139, 11MO1140, 11MO1141, 11MO1142, and 11MO1143. The 11MO1138 site area will not be impacted by the proposed project, as described herein. If the 11MO1138 site area is to be impacted by any future project, Phase Two Testing for National Register eligibility is recommended.

Please contact us if you have any questions or comments regarding this report.

Respectfully,

SCI ENGINEERING, INC.

Bryan Carlo

Bryan M. Carlo, MA
Senior Archaeologist

Don Booth

Don L. Booth, MA
Chief Archaeologist

BMC/DLB/rah

Appendices
Appendix A – Figures
Appendix B – Photographic Summary
Appendix C – IAS Site Forms

Public disclosure of site locations reported herein is prohibited by 16 USC 470W-3

N:\Projects\2021\2021-0626 Brinkmann Mitigation Bank\CR\Report\Locke Bottom Phase One CRS Report.docx

ARCHAEOLOGICAL SURVEY SHORT REPORT **REVIEWER_____**
Illinois Department of Natural Resources **DATE_____**
Illinois State Historic Preservation Office
One Old State Capitol Plaza **_____Accepted ____Rejected**
Springfield, Illinois 62701

IHPO LOG NUMBER_____

LOCATION INFORMATION AND SURVEY CONDITIONS

County: Monroe

Quad: Bloomsdale 7.5' and Renault 7.5' (Figures 1 and 2)

Project Type/Title: Locke Bottom Mitigation Bank

SCI No. 2021-0626.40

Funding or Permitting Agency: USACE

Natural Division: 12a

Section: 1 **Township:** 5S **Range:** 10W
Section: 12 **Township:** 5S **Range:** 10W

UTM: Center-- Zone 15S 422381 N — 749488 E

Project Description: Construction of a wetland/stream mitigation bank site. Project plans are not currently available.

Topography: The project area is situated within the Mississippi River floodplain (Figures 1 and 2).

Soils: Booker clay, undrained 0 to 2 percent slope; Ambraw silty clay loam 0 to 2 percent slope; Wakeland silt loam 0 to 2 percent slope; Booker clay, 0 to 2 percent slopes, occasionally flooded, long duration; Fults silty clay, 0 to 2 percent slope (USDA-NRCS Web Soil Survey).

Drainage: Fults Creek Ditch runs though the project area. It drains into Onemile Race Creek, which empties into the Mississippi River.

Land Use/Ground Cover (Include Percent Visibility): At the time of survey, the project area was agricultural field under early-growth crop. Ground surface visibility was approximately 70-90%.

Survey Limitations: The northeast portion of the survey tract contained standing water.

ARCHAEOLOGICAL AND HISTORICAL INFORMATION

Sources:
1840 GLO Map of Township 5 South Range 10 West (Figure 3)
1875 Atlas Map of Monroe County, Illinois (Figure 4)
1915 Renault, IL 15' USGS Quadrangle (Figure 5)
1916 Plat of Monroe County, Illinois (Figure 6)
1929 Plat of Monroe County, Illinois (Figure 7)
1940 Renault, IL 15' USGS Quadrangle (Figure 8)
1951 Plat of Monroe County, Illinois (Figure 9)
1970 Bloomsdale, IL 7.5' USGS Quadrangle/1970 Renault, IL 7.5' USGS Quadrangle (Figure 10)
1993 Bloomsdale, IL 7.5' USGS Quadrangle/1993 Renault, IL 7.5' USGS Quadrangle (Figure 11)
2012 Bloomsdale, IL 7.5' USGS Quadrangle/2012 Renault, IL 7.5' USGS Quadrangle (Figure 12)
2015 Bloomsdale, IL 7.5' USGS Quadrangle/2015 Renault, IL 7.5' USGS Quadrangle (Figure 13)
2017 Bloomsdale, IL 7.5' USGS Quadrangle/2018 Renault, IL 7.5' USGS Quadrangle (Figure 14)

Previously Reported Sites: None previously recorded within project area. Twenty-two sites have been recorded within a one-mile radius. They are (11MO): 87, 138, 488, 507, 506, 533, 433, 429, 430, 431, 437, 434, 435, 432, 539, 537, 536, 541, 535, 534, 528, 529. Sites (11MO): 533, 539, 537, 536, 535, 534, 528, 529 are recorded as mounded.

Previous Surveys: None previously conducted within the project area. Two conducted within a one-mile radius. They are IHPO Doc # 2256 and an undesignated survey (# 99999).

Regional Archaeologist Contacted: IAS site file online database consulted 6/9/2021.

Investigation Techniques: Pedestrian survey at 5-meter intervals and hand-auger testing.

Acres: 110 **Time:** 24 person hours

Materials: See Comments.

Sites/Spots Located: 11MO1138, 11MO1139, 11MO1140, 11MO1141, 11MO1142, 11MO1143

Collection Technique: All prehistoric material and historic material greater than 50 years in age was collected. **Curated:** ISM

___ Phase I Archaeological Reconnaissance Has Located No Archaeological Material; Project Clearance Is Recommended.

___ Phase I Archaeological Reconnaissance Has Located Archaeological Materials; Site(s) Does (Do) Not Meet Requirements For National Register Eligibility; Project Clearance Is Recommended.

_X_ Phase I Archaeological Reconnaissance Has Located Archaeological Materials; Site(s) May Meet Requirements For National Register Eligibility; Phase II Testing Is Recommended.

_____ Phase II Archaeological Investigation Has Indicated That Site(s) Does (Do) Not Meet Requirements For National Register Eligibility; Project Clearance Is Recommended.

____ Phase II Archaeological Investigation Has Indicated That Site(s) Meet Requirements For National Register Eligibility.

COMMENTS:

The project area is located east of Kaskaskia Road and south of Bluff Road in Monroe County, Illinois (Figures 1 and 2). The survey area is a 110-acre tract divided by the Fults Creek Ditch (Photo 1). The Grand Coulie meander scar is located within the project area. The Mississippi River is located approximately 3.5 miles south of the project area. The survey tract is the proposed location for construction of a wetland and stream mitigation bank. Project plans are currently not available.

The survey tract is an agricultural field within a floodplain setting that is currently under new soybean growth. Ground surface visibility is approximately 70 to 90 percent. The eastern portion of the tract north of Fults Creek Ditch contained standing water (Photo 2). Ground surface visibility was sufficient for pedestrian survey throughout the project area (Photos 3 through 6). Pedestrian survey was conducted across the entire project area at five-meter intervals, reduced to two-meter intervals when artifacts were located. Research methodology also included four hand auger tests to search for a buried A-horizon, photographic recordation of the project area environs, and GIS-aided mapping. In addition, an IAS site file search and historic document review were conducted.

A review of the IAS site file database indicated the project area has never been subject to a professional cultural resource survey. Two surveys have been conducted within a one-mile radius. No previously recorded sites exist within the project area. Twenty-two have been recorded within a one-mile radius, eight of which are recorded as mounded.

A review of the available historic maps (Figures 3 through 14) provides insight regarding the nature of property ownership and the presence or absence of structures within the project area through time. The earliest depiction of the project area is found upon the 1840 GLO map (Figures 3). GLO maps do not depict structures. The earliest available map to depict structures is the 1875 Atlas map (Figure 4). No structures are shown within the project area upon this map or subsequent historic maps (Figures 5 through 14). However, the 2012, 2015, and 2018 Renault, Illinois 7.5' Quadrangles as well as the 2012, 2015, and 2017 Bloomsdale, Illinois 7.5' Quadrangles do not depict structures (Figures 12 through 14). No standing architecture is present within the project area, and no evidence of structures was located during field investigations.

The 1840 GLO map is the earliest available to reveal that the project area was located within the French long lots for the town of St. Philips, established in 1723 (Figure 3). The project area is also approximately 2.50 miles north of Fort de Chartres. No French Colonial artifacts were recovered during field investigations. The 1840 GLO also shows that the project area is on the west bank of the Grand Coulie meander scar (Figure 3).

A check of the Illinois Historic Preservation Office's HARGIS online database (accessed June 2021) indicated that there are no National Register Listed properties within the project area. There are four properties listed within one mile of the project area. The four properties have the eligibility status of undetermined, one of which is a bridge on Kaskaskia Road that spans Fults Creek Ditch (HARGIS Reference # 525159). It is located near the northwest boundary of the project area. The French Colonial Historic District, a National Register Historic District (Reference # 200816) is located approximately 0.80 miles to the south (Figure 15).

RESULTS OF INVESTIGATIONS

SCI personnel conducted investigations within the project area June 4, 5, and 29, 2021. The project area was investigated through pedestrian survey, as there was sufficient ground surface visibility within the entirety of the project area. Hand-auger testing was also conducted to search for a buried A-horizon or

deeply buried sites. The locations of artifacts recovered on the ground surface as well as hand auger test locations were recorded with a handheld GPS unit (Figure 16).

Hand auger test 1 was conducted in the southern portion of the project area (Figure 16). The soil profile for hand auger 1 was 10YR 4/2 Dark Grayish Brown silty clay loam from 0 to 4 cm below ground surface, and 10YR 5/1 Gray clay from 4 to 15 cm below surface. Underlying this was a 10YR 5/1 Gray clay containing redoximorphic features indicating periodic inundation from 15 to 78 cm below ground surface and underlying this was a 10YR 5/1 Gray silty sandy clay from 78 to 88 centimeters below the surface. The final stratum was a 10YR 5/1 Gray sand from 88 to 96 centimeters below surface. After this layer water was encountered within the test and the auger test was terminated at 96 centimeters. No cultural materials were recovered, and a buried A-horizon was not observed.

Hand auger test 2 was conducted in the southern portion of the project area, north of auger 1 (Figure 16). The soil profile for hand auger 2 was 10YR 4/2 Dark Grayish brown silty clay loam from 0 to 6 cm below ground surface, and 10YR 5/1 Gray clay from 6 to 28 cm below surface. Underlying this was a 10YR 5/1 Gray clay containing redoximorphic features indicating periodic inundation from 28 to 82 cm below ground surface and underlying this was a 10YR 5/1 Gray silty sandy clay from 82 to 90 centimeters below the surface. The final stratum was a 10YR 5/1 Gray sand from 90 to 102 centimeters below surface. After this layer water was encountered and the auger test was terminated at 102 centimeters. No cultural materials were recovered, and a buried A-horizon was not observed.

Hand auger 3 was conducted in the western portion of the project area (Figure 16). The soil profile for hand auger 3 was 10YR 4/2 Dark Grayish Brown silty sandy loam 0 to 26 centimeters below surface. Underlying this was 10YR 5/2 Grayish Brown sandy loam from 26 to 38 centimeters below surface, and below this was a 10YR 5/2 Grayish Brown sand from 38 to 110 centimeters below surface. After this layer water was encountered and the auger test was terminated at 110 centimeters. No cultural materials were recovered, and a buried A-horizon was not observed.

Hand auger 4 was conducted in the northwest portion of the project area (Figure 16). The soil profile for hand auger 4 was 10YR 5/6 Yellowish Brown clay mottled with a 10YR 4/2 Dark Grayish brown silty clay loam. It is possible this level contained some soil from the nearby ditch. Below that was a 10YR 5/6 Yellowish Brown clay loam from 32 to 72 centimeters below surface and underlying this was a 10YR 4/4 Dark Yellowish Brown clay loam from 72 to 95 centimeters below surface. Below that was a 10YR 3/2 Very Dark Grayish Brown clay loam from 95 to 112 centimeters below surface. Finally, from 112 to 160 centimeters below the ground surface was a 10YR 5/2 Grayish Brown clay. No cultural materials were recovered. However, the Very Dark Grayish Brown clay loam (10YR 3/2) encountered between 95 and 112 centimeters below surface may indicate a buried A-horizon. The soil is darker than that encountered above it, and the hand auger test is located within the vicinity of artifacts located upon the surface.

Ground surface conditions within the project area consisted of recently planted agricultural field yielded surface visibility sufficient for pedestrian survey. The identification and recovery of artifacts via pedestrian survey allowed for the delineation of six cultural resource sites (Figure 1). The sites were delineated according to artifact distribution. Site forms and associated maps were submitted to IAS, and the newly identified sites were provided the designations 11MO1138, 11MO1139, 11MO1140, 11MO1141, 11MO1142, 11MO1143. These sites are briefly discussed below.

11MO1138

Site 11MO1138 is located in the northwest portion of the project area (Figures 1 and 17). The site was identified June 4, 2021 through pedestrian survey as a surface scatter of prehistoric artifacts. A total of 14 artifacts were recovered: one reworked and plow-damaged projectile point (Photo 7), two heat-altered Burlington chert flakes, one Mo-Pac projectile point, one Marion Thick rim sherd (Photo 8), two Burlington chert tertiary flakes, one modified cobble fragment (possibly a mano), two glacial till tertiary flakes, one

Burlington chert biface tip, one glacial till chert secondary flake and one Burlington graver. The Marion Thick ceramic sherd indicates an Early Woodland temporal affiliation. The Mo-Pac projectile point indicates a Late Archaic/Early Woodland temporal affiliation. The reworked and plow-damaged point may not easily fit within a type designation, but the square base and overall size of the point suggests a Late Archaic/Early Woodland temporal affiliation. The point is asymmetrical in shape and was likely hafted as a knife sometime during its use-life. The shoulders are also asymmetrical, with one being horizontal and the other sloping downward. The point may belong to the Ledbetter Stemmed Cluster, which dates to the Late Archaic/Early Woodland. The presence of the Marion Thick ceramic sherd, diagnostic Mo-Pac projectile point, and possible mano fragment suggests site 11MO1138 represents a Late Archaic/Early Woodland habitation, with a high potential for the presence of intact subsurface features within the site boundary. It is SCI's opinion the site is potentially significant. After consultation, the client has decided to alter the project to not impact the 11MO1138 site area (Figure 17). The alterations include removal of a significant portion of the site from the project area, southwest of Fults Creek Ditch. An access area will also be created along the south side of Fults Creek Ditch, to access the project area from Kaskaskia Road. An empty space will be created northeast of Fults Creek Ditch. This area is "empty" in the sense that it will be purchased but not used for the project. It is an area where there will be no mitigation bank development. Therefore, the portion of site 11MO1138 that remains within the current project area is to be purchased but excluded from the conservation easement associated with the project. Accordingly, the present project will not impact the 11MO1138 site area. However, SCI recommends Phase Two Testing for National Register eligibility should any future project impact the site area.

11MO1139

Site 11MO1139 is located in the southern portion of the project area (Figures 1 and 18). The site was identified June 5, 2021, and consists of an isolated find, a solitary Burlington chert tertiary flake. No diagnostics or ceramics were recovered. The recovery of this prehistoric isolated find is not a strong indicator for the presence of intact subsurface features. Therefore, it is SCI's opinion that the site is not significant.

11MO1140

Site 11MO1140 is located in the southern portion of the project area (Figures 1 and 19). The site was identified June 5, 2021, and consists of an isolated find, a solitary heat-altered Burlington chert tertiary flake. No diagnostics or ceramics were recovered. A solitary non-diagnostic prehistoric artifact is not a strong indicator for the presence of intact subsurface features. Therefore, it is SCI's opinion that the site is not significant.

11MO1141

Site 11MO1142 is located in the southern portion of the project area (Figures 1 and 20). The site was identified June 29, 2021, and consists of an isolated find, a contracting stem point made from Burlington chert (Photo 9). The point displays attributes that would normally place it within a Late Archaic/Early Woodland temporal frame. The area surrounding the point was searched for additional artifacts, and none were located. No ceramics were observed. The solitary projectile point may be a case of accidental loss or dispossession. Although diagnostic, the solitary projectile point is not a strong indicator for subsurface features. Rather, it is considered a material correlate of the known, considerable prehistoric utilization of the American Bottom. The site is considered not significant.

11MO1142

Site 11MO1142 is located in the southern portion of the project area (Figures 1 and 21). The site was identified June 29, 2021, and consists of an isolated find, a broken biface. The artifact appears to represent the midsection of a projectile point and does not possess diagnostic attributes. The area surrounding the broken biface was searched for additional artifacts, and none were located. No ceramics were observed. The solitary projectile point midsection is not a strong indicator for subsurface features. The site is considered not significant.

11MO1143

Site 11MO1143 is located in the southern portion of the project area (Figures 1 and 22). The site was identified June 29, 2021, and consists of an isolated find, an expanding stem point made from Burlington chert (Photo 10). The point displays attributes that would normally place it within a Late Archaic/Early Woodland temporal frame. The area surrounding the point was searched for additional artifacts, and none were located. No ceramics were observed. The solitary projectile point may be a case of accidental loss or dispossession. Although diagnostic, the projectile point is not a strong indicator for subsurface features. The site is considered not significant.

SUMMARY AND CONCLUSIONS

On June 4, 5, and 29, 2021, SCI personnel conducted archaeological field investigations of a survey tract totaling 110 acres in Monroe County, Illinois. The project area consisted of agricultural field, with new soybean growth and yielding excellent ground surface visibility. The northeast portion of the project area was inundated with standing water, yet still subjected to pedestrian survey. The entire project area was investigated through pedestrian survey, and four hand-auger tests were also conducted.

Six cultural resource sites were located. Site 11MO1138 was identified through pedestrian survey and recovery of prehistoric artifacts. Diagnostic artifacts recovered from the site suggest a Late Archaic/Early Woodland habitation. The recovery of a Marion Thick ceramic sherd suggests intact subsurface features may be present. The site is considered potentially significant. The client has chosen to alter the project regarding the 11MO1138 site area, avoiding an impact to the site. However, SCI recommends Phase Two Testing for National Register eligibility should any future project impact the site area.

Sites 11MO1139, 11MO1140, 11MO1141, 11MO1142, and 11MO1143 represent isolated finds. Sites 11MO1139 and 11MO1140 consist of a single chert flake each. This low artifact density and lack of diagnostics suggest low potential for intact subsurface features within the vicinity of these finds. These sites are considered not significant. Sites 11MO1141, 11MO1142, and 11MO1143 represent isolated finds consisting of projectile points or fragments thereof, and diagnostic in the case of 11MO1141 and 11MO1143. These finds represent Late Archaic/Early Woodland utilization of the regional floodplain area, but by themselves are not strong indicators for the presence of subsurface features. It is SCI's opinion that further work at 11MO1139, 11MO1140, 11MO1141, 11MO1142, and 11MO1143 is unwarranted, and clearance is recommended for them.

ARCHAEOLOGICAL CONTRACTOR INFORMATION:

Archaeological Contractor: SCI Engineering, Inc.

Address/Phone: 650 Pierce Boulevard
O'Fallon, Illinois 62269
(618) 624-6969

Surveyor (s): Bryan Carlo & Kyle Potter

Survey Date(s): 4, 5, 29 June 2021

Report Completed By: Jacob Province and Bryan Carlo **Date:** 16 July 2021

Submitted By (signature and title): Don Bush, Chief Archaeologist

IHPO LOG NUMBER _____

ATTACHMENT CHECK LIST: (#1 Through #4 Are Mandatory)

__X__ 1) Relevant Portion of USGS 7.5' Topographic Quadrangle Map(s) Showing Project Location And Any Recorded Sites

__X__ 2) Project Map(s) Depicting Survey Limits And, When Applicable, Approximate Site Limits And Concentrations Of Cultural Materials.

__X__ 3) Site Form(s)

__X__ 4) All Relevant Project Correspondence.

_____ 5) Additional Information Sheets As Necessary.

ADDRESS OF OWNER/AGENT/AGENCY TO WHOM SHPO COMMENT SHOULD BE MAILED:

Mr. Linden Graber	cc.	Bryan Carlo
WFI Holding LLC		SCI Engineering, Inc.
248 Southwoods Center		650 Pierce Boulevard
Columbia, Illinois 62236		O'Fallon, Illinois 62269

Contact Person: Bryan Carlo Phone: (618) 206-3048

REFERENCES

G.A. Ogle & Co.
1901 *Standard Atlas of Monroe County, Illinois Including a Plat Book of the Villages, Cities and Townships of the County*. Chicago, Illinois.

General Land Office
1840 Map of Township 5 South, Range 10 West, Monroe County, Illinois. General Land Office.

General Map Company
1951 *Plat Book of Monroe County, Illinois*. Rockford, Illinois.

HARGIS (online database accessed June 2021).

Unigraphic, Inc.
1916 *An Illustrated Historical Atlas Map of Monroe County, Illinois*. Evansville, Indiana.

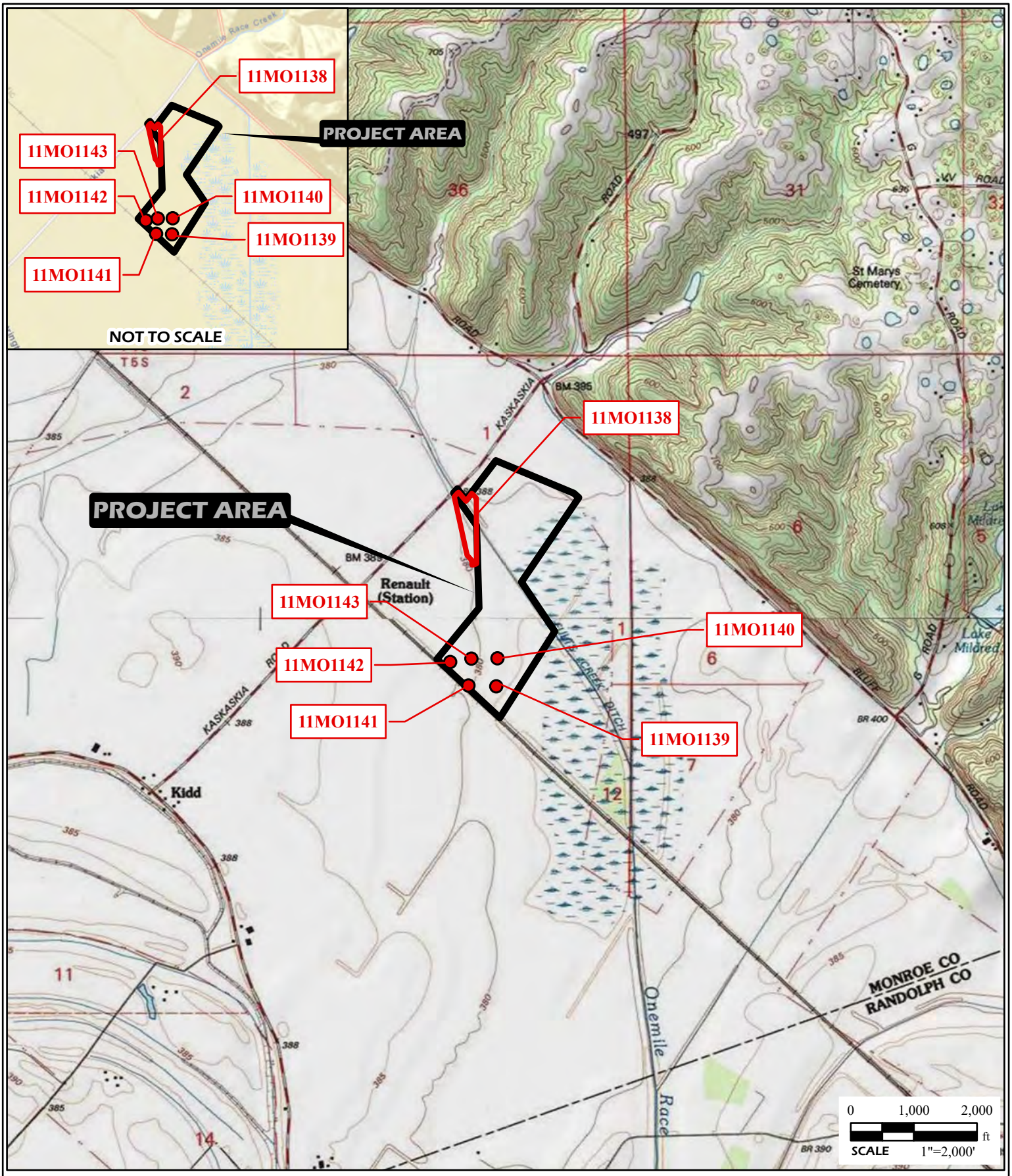
United States Geological Survey
1970 Bloomsdale, MO 7.5' USGS Quadrangle topographic). Reston, Virginia.
1970 Renault, IL 7.5' USGS Quadrangle (topographic). Reston, Virginia.
1993 Bloomsdale, MO 7.5' USGS Quadrangle topographic). Reston, Virginia.
1993 Renault, IL 7.5' USGS Quadrangle (topographic). Reston, Virginia.
2012 Bloomsdale, MO 7.5' USGS Quadrangle topographic). Reston, Virginia.
2012 Renault, IL 7.5' USGS Quadrangle (topographic). Reston, Virginia.
2015 Bloomsdale, MO 7.5' USGS Quadrangle topographic). Reston, Virginia.
2015 Renault, IL 7.5' USGS Quadrangle (topographic). Reston, Virginia.
2017 Bloomsdale, MO 7.5' USGS Quadrangle topographic). Reston, Virginia.
2018 Renault, IL 7.5' USGS Quadrangle (topographic). Reston, Virginia.

W. R. Brink & Co.
1875 *An Illustrated Historical Atlas Map of Monroe County, Illinois*. Edwardsville, Illinois.

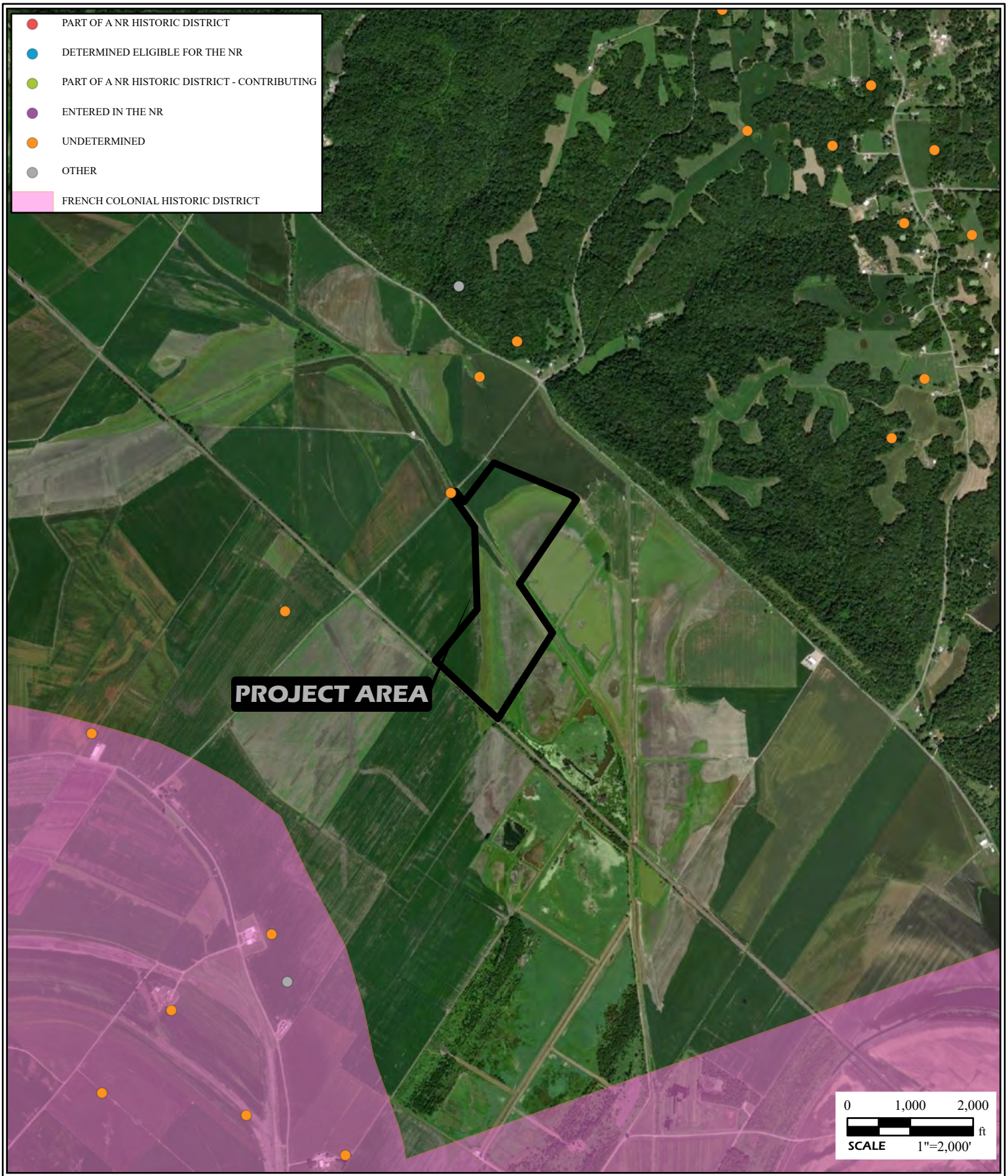
W.W. Hixson & Co.
1929 *Plat Book of Monroe County, Illinois*. Rockford, Illinois.

REVIEWER'S COMMENTS:

Appendix A



SCI	PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS			GENERAL NOTES/LEGEND USGS TOPOGRAPHIC MAP BLOOMSDALE, ILLINOIS QUADRANGLE DATED 1982 RENAULT, ILLINOIS QUADRANGLE DATED 1972 5' CONTOURS	N W E S
	VICINITY AND TOPOGRAPHIC MAP				
	DRAWN BY LFC CHECKED BY BMC	DATE 07/2021	JOB NUMBER 2021-0626.40	STREET MAP HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_STREET_MAP	FIGURE 1



PROJECT NAME
LOCKE BOTTOM
WETLAND AND STREAM MITIGATION BANK SITE
MONROE COUNTY, ILLINOIS

HARGIS MAP

DRAWN BY	CHECKED BY	DATE	JOB NUMBER
LFC	BMC	07/2021	2021-0626.40

GENERAL NOTES/LEGEND

HARGIS DATABASE ACCESSED 06/10/2021 AT:
https://idnr.maps.arcgis.com/apps/webappviewer/

AERIAL PHOTOGRAPH OBTAINED FROM ARCGIS ONLINE, WORLD IMAGERY.

DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY.
DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

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GENERAL NOTES/LEGEND

- APPROXIMATE AUGER LOCATIONS
- APPROXIMATE PIECE PLOT LOCATIONS

AERIAL PHOTOGRAPH OBTAINED FROM ARCGIS ONLINE, WORLD IMAGERY. DIMENSIONS AND LOCATIONS ARE APPROXIMATE. ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

PROJECT NAME
LOCKE BOTTOM
WETLAND AND STREAM MITIGATION BANK SITE
MONROE COUNTY, ILLINOIS

TESTING MAP

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2021-0626.40

DATE
07/2021

DRAWN BY
LFC

CHECKED BY
BMC

FIGURE
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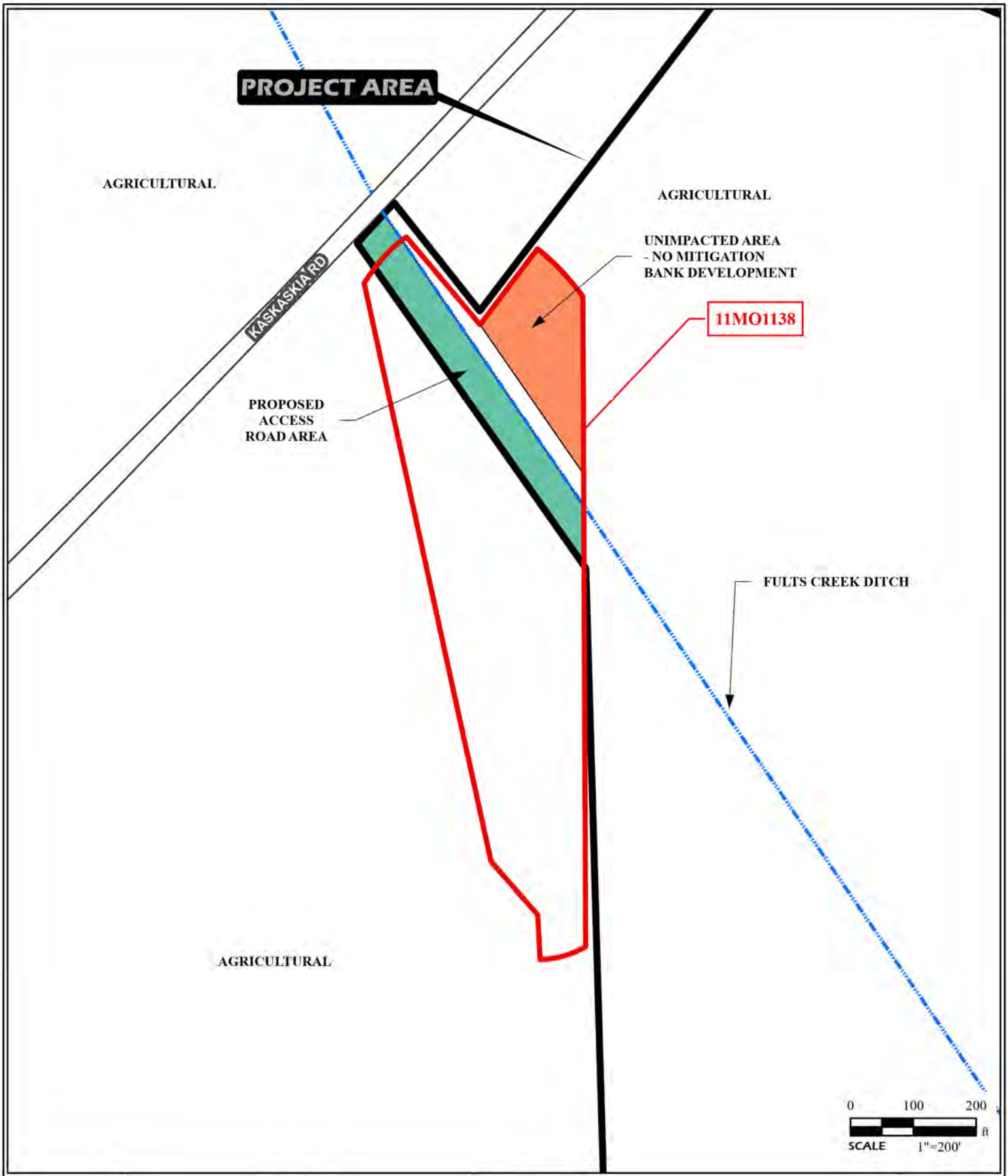

PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS				GENERAL NOTES/LEGEND
SKETCH MAP				
DRAWN BY	LFC	DATE	JOB NUMBER	DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.
CHECKED BY	BMC	07/2021	2021-0626.40	

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FIGURE
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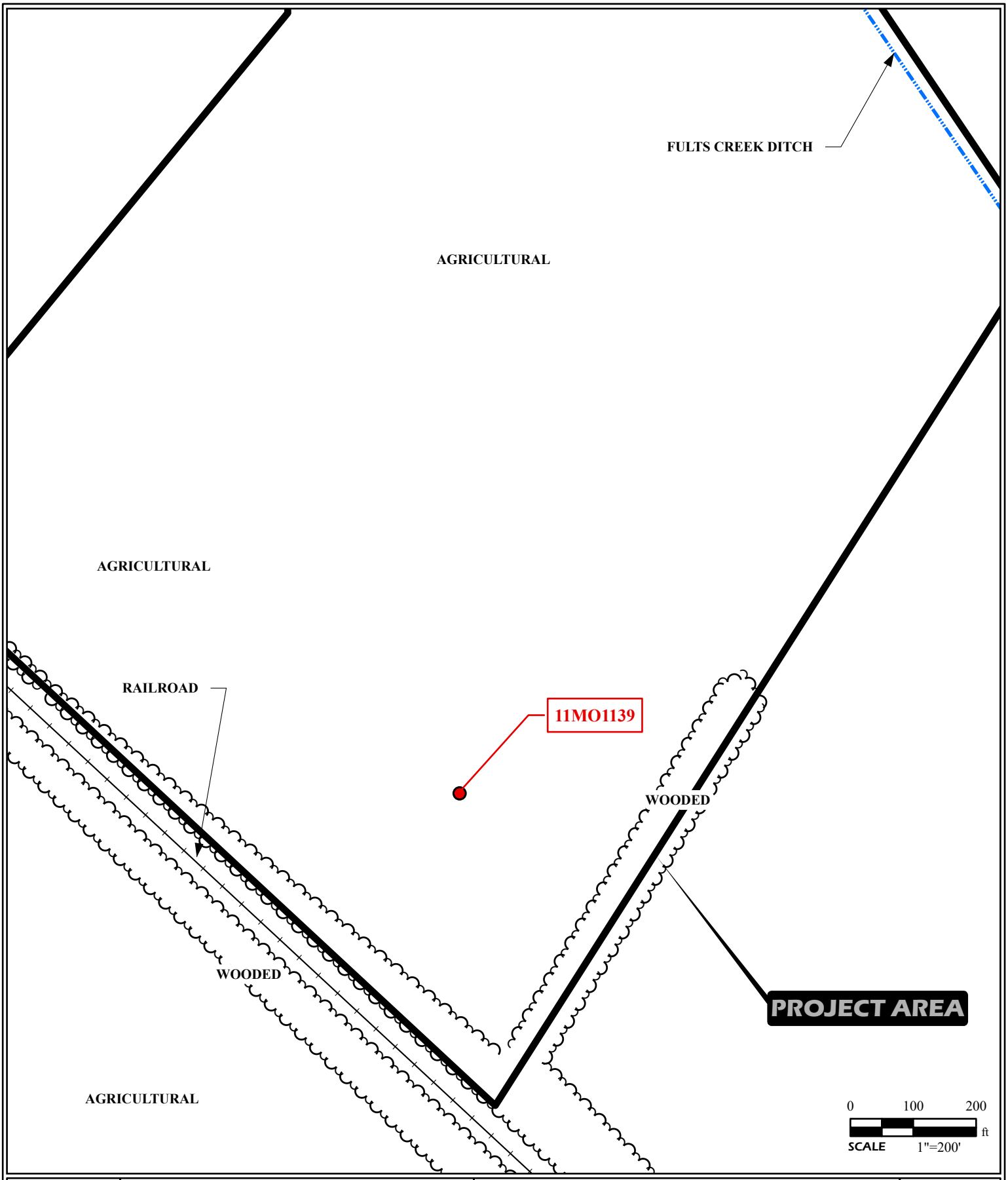

PROJECT NAME
LOCKE BOTTOM
WETLAND AND STREAM MITIGATION BANK SITE
MONROE COUNTY, ILLINOIS

SKETCH MAP

DRAWN BY	CHECKED BY	DATE	JOB NUMBER
LFC	BMC	07/2021	2021-0626.40

GENERAL NOTES/LEGEND

DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

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FIGURE
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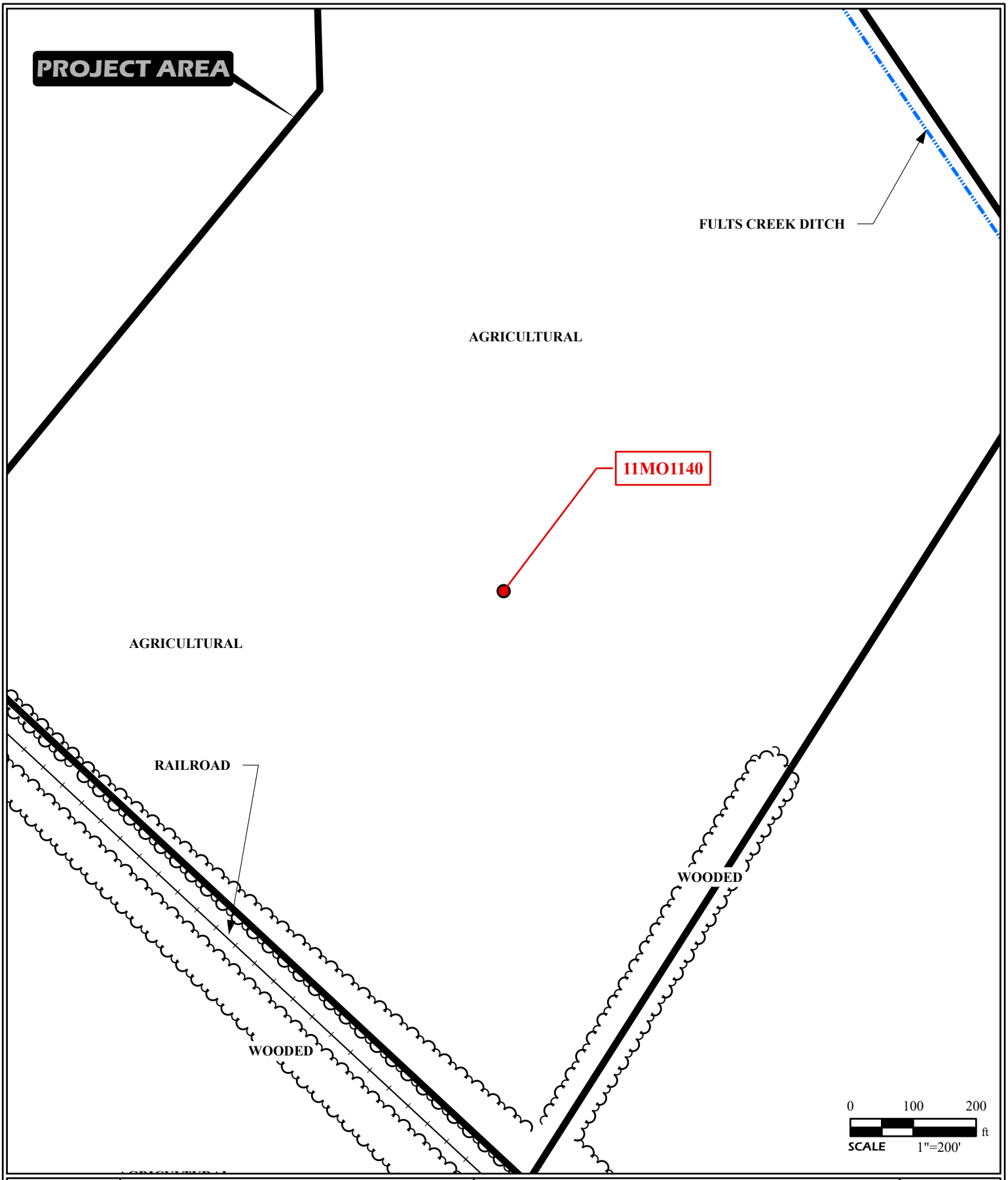
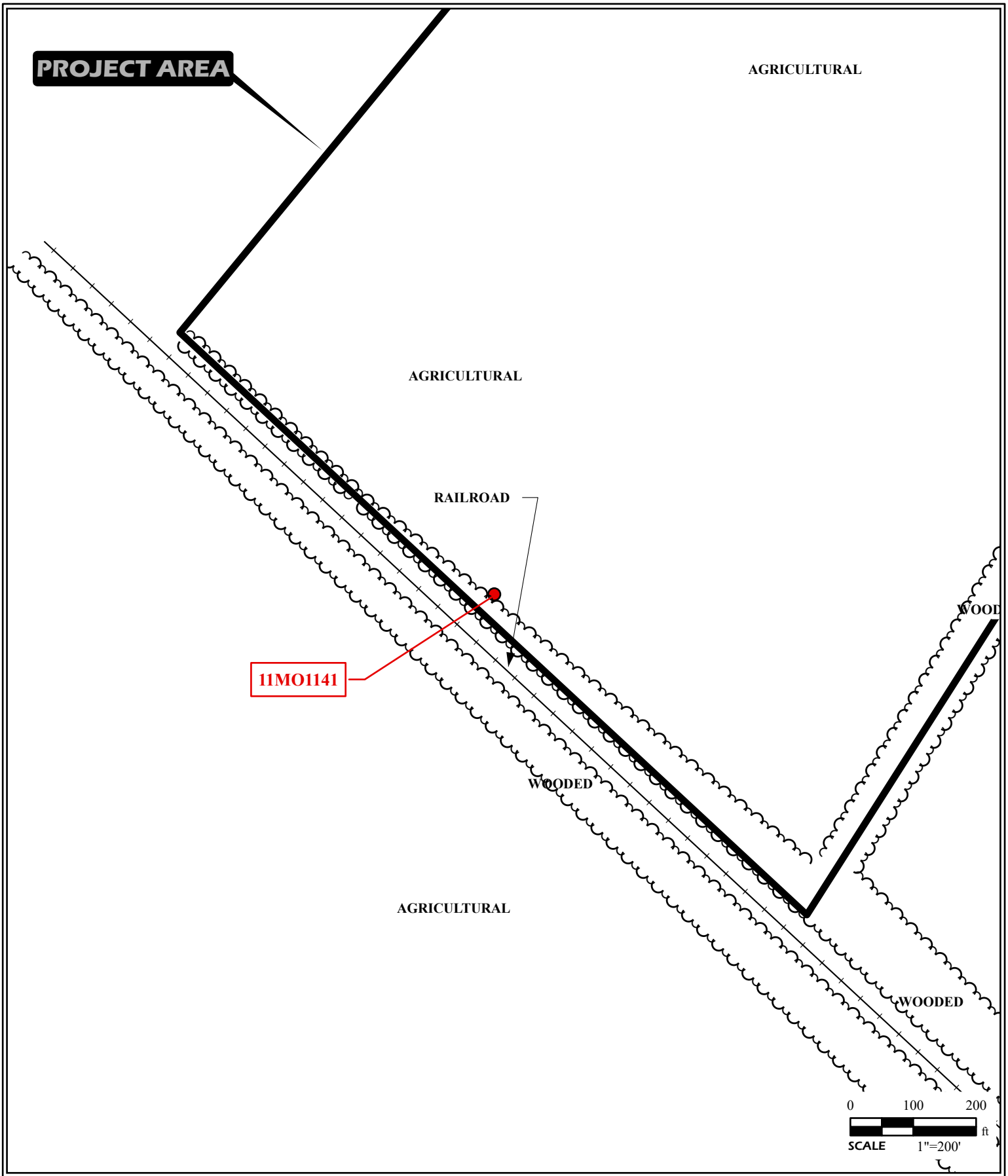
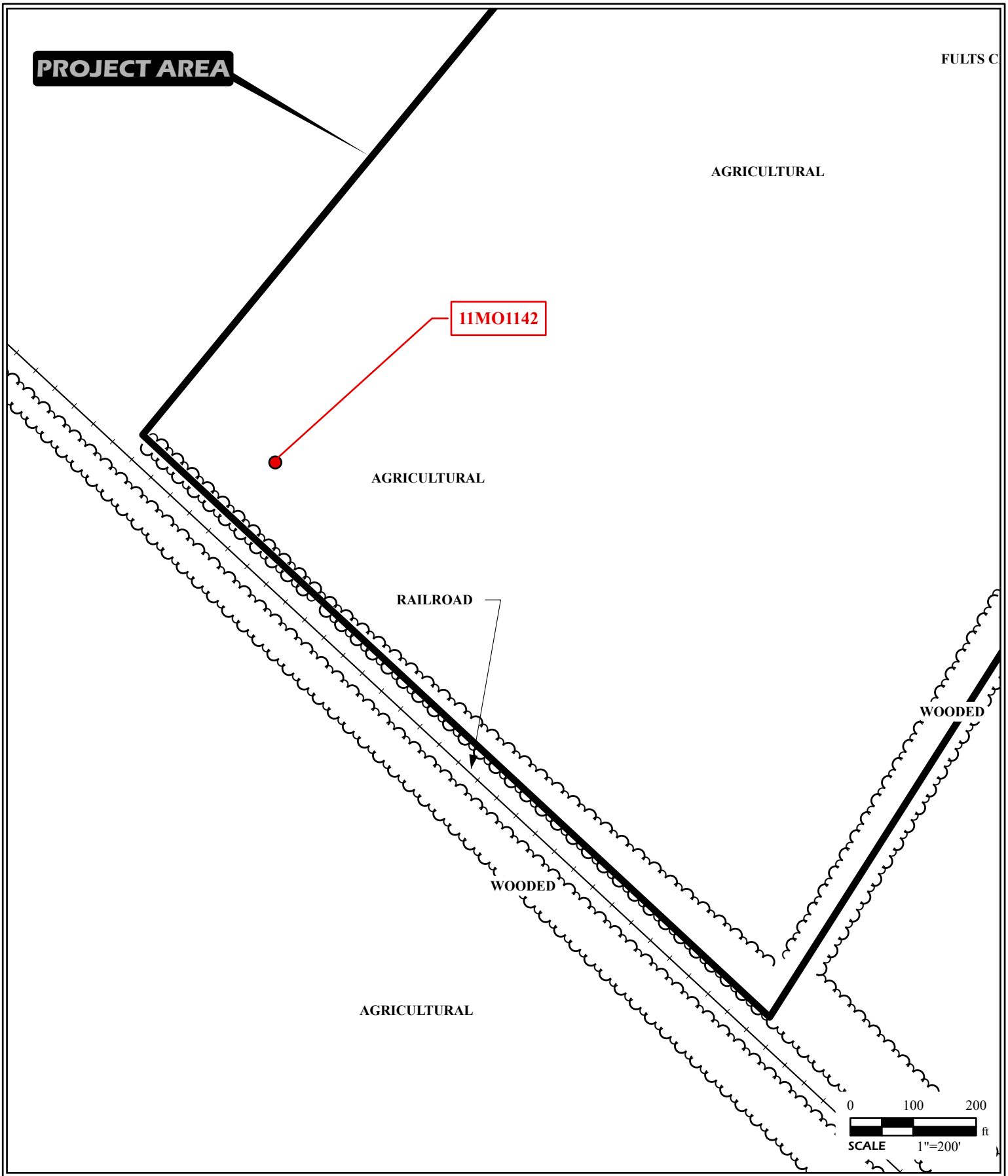


SCI	PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS			GENERAL NOTES/LEGEND	N W E S
	SKETCH MAP				
	DRAWN BY LFC CHECKED BY BMC	DATE 07/2021	JOB NUMBER 2021-0626.40	DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.	FIGURE 19



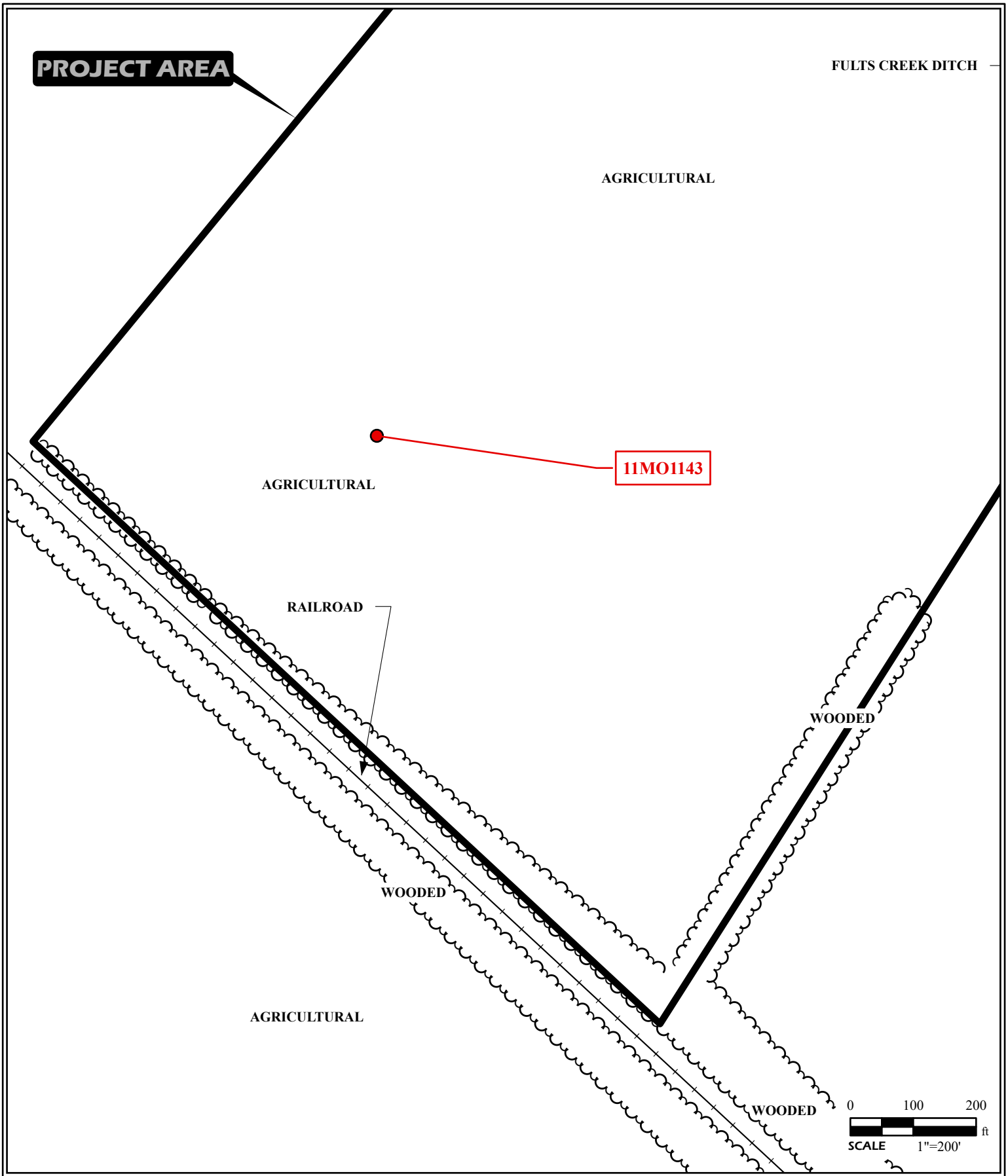
SCI	PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS SKETCH MAP			GENERAL NOTES/LEGEND DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.	N W E S
	DRAWN BY: LFC CHECKED BY: BMC	DATE 07/2021	JOB NUMBER 2021-0626.40		FIGURE 20



	PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS			GENERAL NOTES/LEGEND
	SKETCH MAP			
	DRAWN BY LFC CHECKED BY BMC	DATE 07/2021	JOB NUMBER 2021-0626.40	DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

N
W
E
S

FIGURE
21



	PROJECT NAME LOCKE BOTTOM WETLAND AND STREAM MITIGATION BANK SITE MONROE COUNTY, ILLINOIS			GENERAL NOTES/LEGEND
	SKETCH MAP			
	DRAWN BY LFC CHECKED BY BMC	DATE 07/2021	JOB NUMBER 2021-0626.40	DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

N
W
E
S

FIGURE
22

Appendix B

Photo 1. Fults Creek Ditch, facing east.

Photo 2. Standing water within the project area north of Fults Creek Ditch, facing north.

Photo 3. Surface visibility within project area north of Fults Creek Ditch, facing south.

Photo 4. Overview of project area north of Fults Creek Ditch, facing north.

Photo 5. Overview of project area south of Fults Creek Ditch, facing east.

Photo 6. Overview of project area south of Fults Creek Ditch, facing north.

Photo 7. Plow-damaged and reworked projectile point, Site 11MO1138.

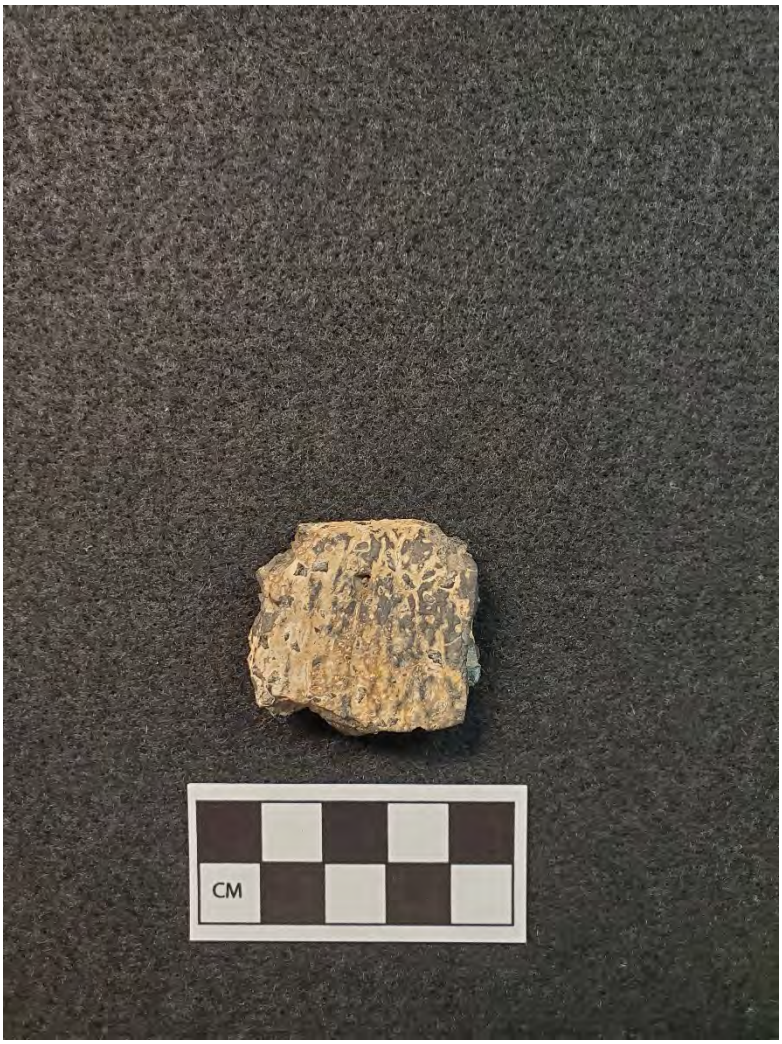


Photo 8. Marion Thick rim sherd, Site 11MO1138.

Appendix C

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 1 **7.5' Quadrangle** Renault **County Site No.** 1138

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 1 **Recorded** 2021.06.09

WGS84 Latitude 38.129151 **Longitude** -90.155288 **Site Area (sq. m)** 23,016

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 116

Soil Association Lawson-Beaucoup (s2261)

Description Site is located within an agricultural field east of Kaskaskia Road and south of Bluff Road. The site is situated on the west bank of the Grand Coulie Lake meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 90

Survey Methods Pedestrian Auger

Site Type Habitation **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 14 **Number of Historic Artifacts (count or estimate)** 0

Y	**Prehistoric Diagnostic Artifacts**	N	**Historic Diagnostic Artifacts**
N	**Prehistoric Surface Features**	N	**Historic Surface Features**
N	**Prehistoric Buried Features** **Ave. Depth (cm)** 0	N	**Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 reworked/plow-damaged pnt, 1 Mo-Pac pnt, 1 Marion Thick sherd, 1 groundstone tool frag, 1 Burl chert graver, 1 Burl chert bif tip, 2 heat-altered Burl chert tert flks, 2 Burl chert tert flks, 1 Burl chert bif thn flk, 3 Till chert flks

TEMPORAL AFFILIATION

	Prehistoric Unknown		**Woodland**		**Protohistoric**		**Frontier Antebellum (1841-April 11, 1861)**
	Paleoindian	Y	**Early Woodland**		**Historic Native American**		**Civil War (April 12, 1861-April 9, 1865)**
	Archaic		**Middle Woodland**		**Historic (generic)**		**Frontier Post-Civil War (April 10, 1865-1870)**
	Early Archaic		**Late Woodland**		**Colonial (1673-1780)**		**Early Industrial (1871-1900)**
	Middle Archaic		**Mississippian**		**Pioneer (1781-1840)**		**Urban Industrial (1901-1945)**
Y	**Late Archaic**		**Upper Mississippian**		**Frontier (generic; 1841-1870)**		**Post-War (1946-present)**

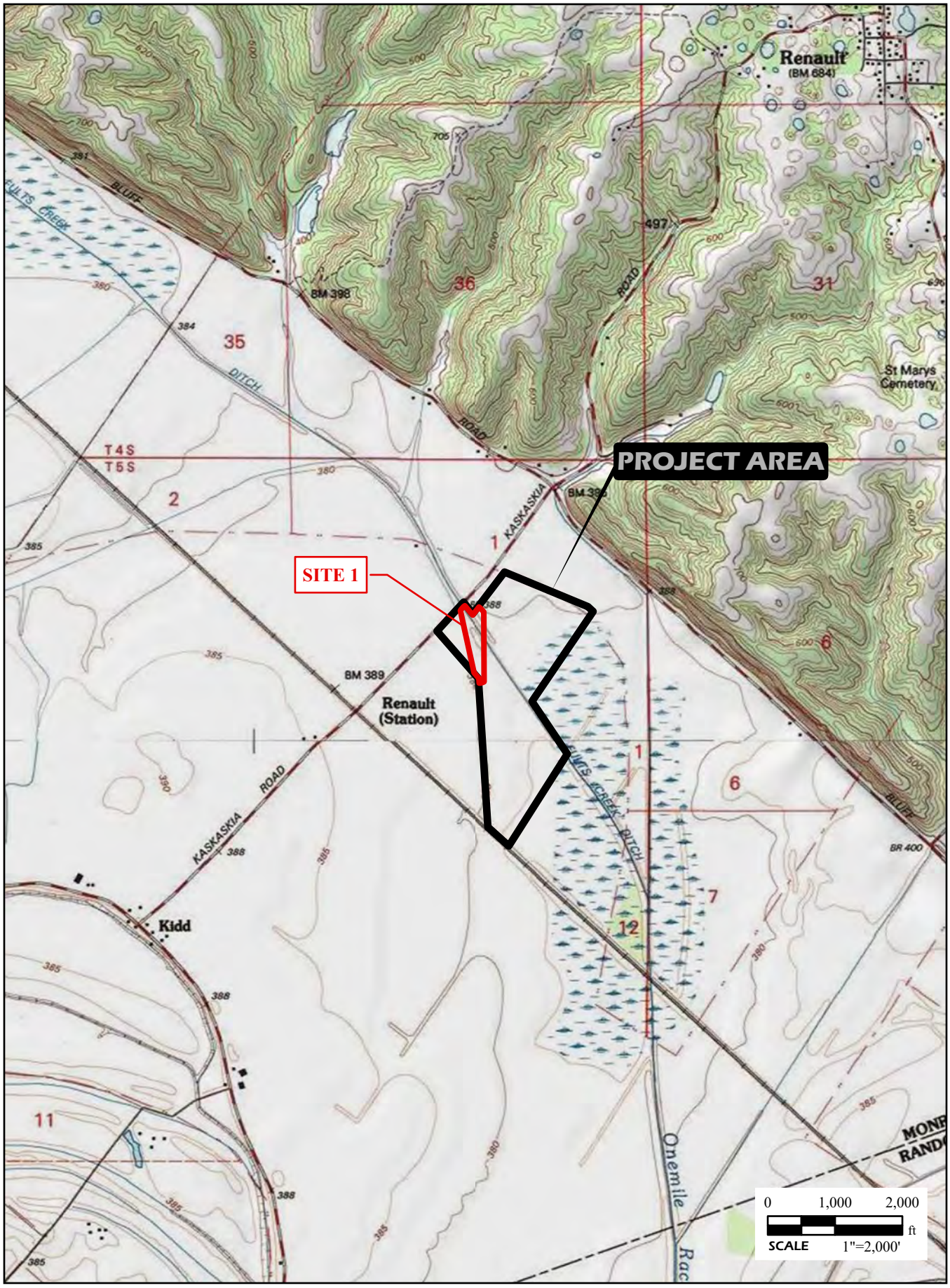
Description Mo-Pac point is Late Archaic/Early Woodland. Marion Thick sherd is Early Woodland.

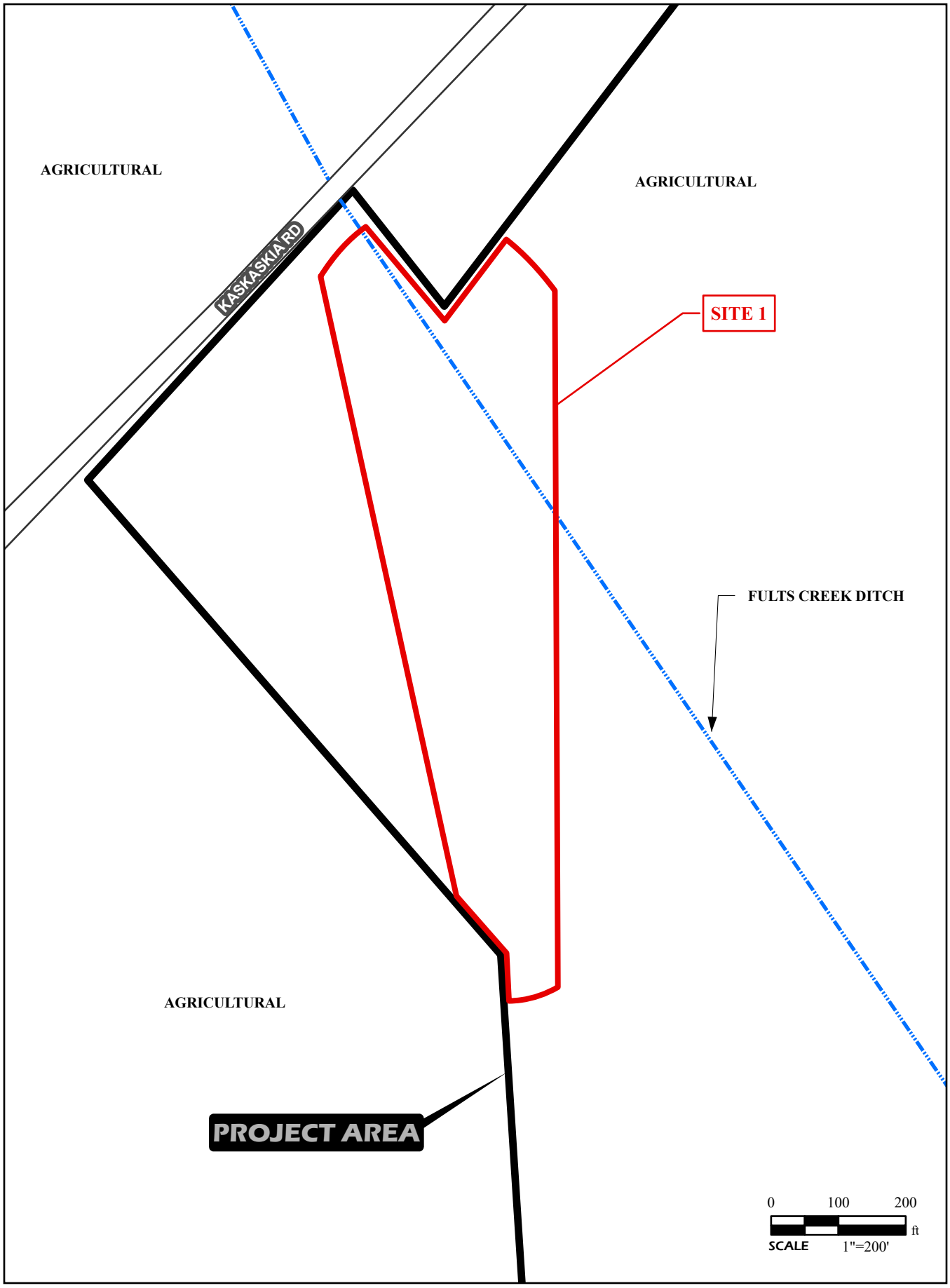
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.04 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.09 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N


Renault
(BM 684)
PROJECT AREA
SITE 1
St Marys
Cemetery
BM 398
BM 389
Renault
(Station)
Kidd
KASKASKIA ROAD
ROAD
DITCH
BLUFF
T4S
T5S
0
1,000
2,000
ft
SCALE
1"=2,000'


AGRICULTURAL
AGRICULTURAL
KASKASKIA RD
SITE 1
FULTS CREEK DITCH
AGRICULTURAL
PROJECT AREA
0
100
200
ft
SCALE
1"=200'

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 2 **7.5' Quadrangle** Bloomsdale **County Site No.** 1139

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 12 **Recorded** 2021.06.09

WGS84 Latitude 38.122083 **Longitude** -90.153751 **Site Area (sq. m)** 0

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 115

Soil Association Lawson-Beaucoup (s2261)

Description Site is located in an agricultural field east of Kaskaskia Road and south of Bluff Road. Site is situated along the west bank of the Grand Coulie meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 90

Survey Methods Pedestrian Auger

Site Type Isolated Find **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 1

N **Prehistoric Diagnostic Artifacts**

N **Prehistoric Surface Features**

N **Prehistoric Buried Features** **Ave. Depth (cm)** 0

Number of Historic Artifacts (count or estimate) 0

N **Historic Diagnostic Artifacts**

N **Historic Surface Features**

N **Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 Burlington chert tertiary flake.

TEMPORAL AFFILIATION

Y **Prehistoric Unknown**	**Woodland**	**Protohistoric**	**Frontier Antebellum (1841-April 11, 1861)**
Paleoindian	**Early Woodland**	**Historic Native American**	**Civil War (April 12, 1861-April 9, 1865)**
Archaic	**Middle Woodland**	**Historic (generic)**	**Frontier Post-Civil War (April 10, 1865-1870)**
Early Archaic	**Late Woodland**	**Colonial (1673-1780)**	**Early Industrial (1871-1900)**
Middle Archaic	**Mississippian**	**Pioneer (1781-1840)**	**Urban Industrial (1901-1945)**
Late Archaic	**Upper Mississippian**	**Frontier (generic; 1841-1870)**	**Post-War (1946-present)**

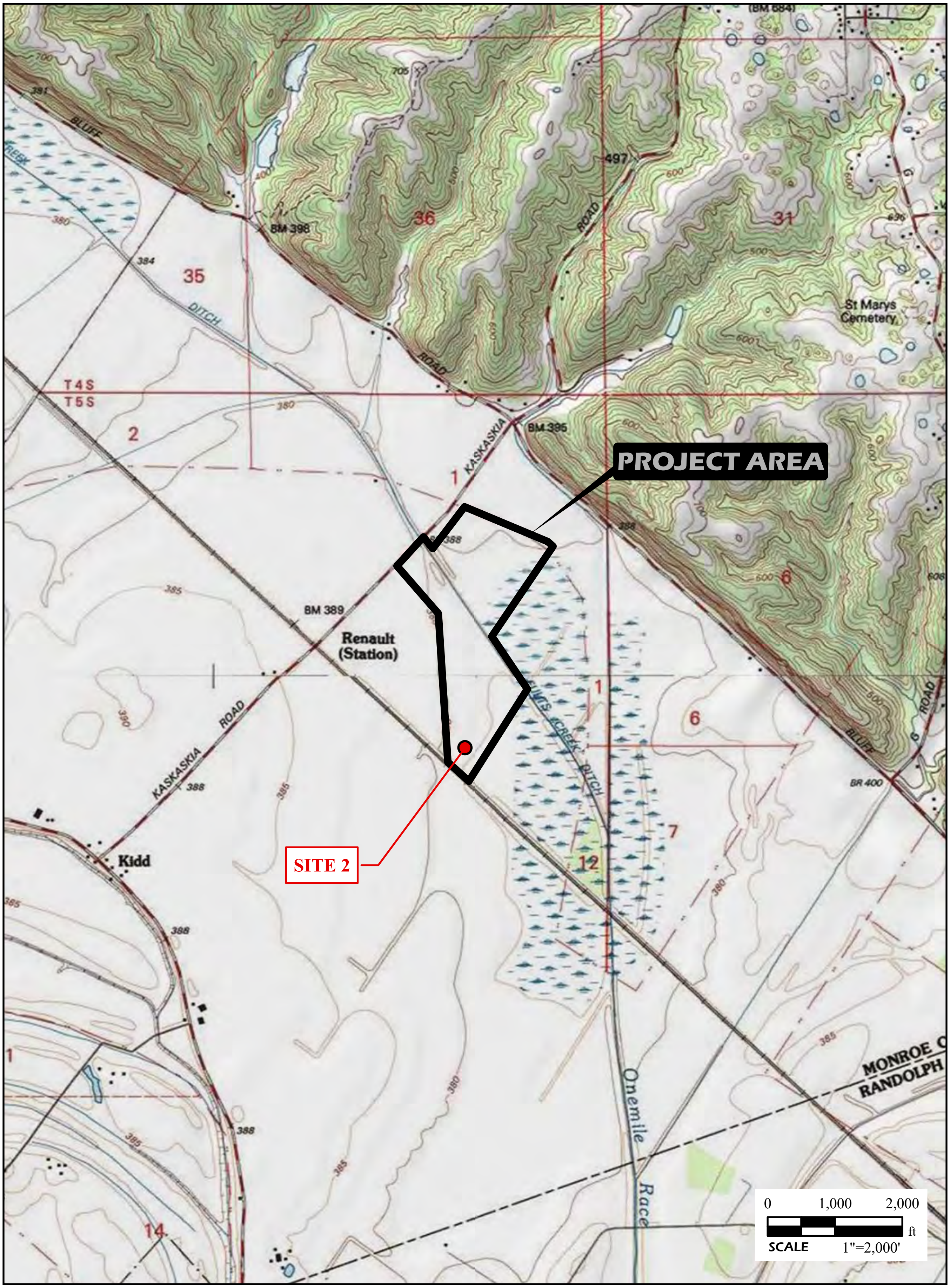
Description The flake is non-diagnostic.

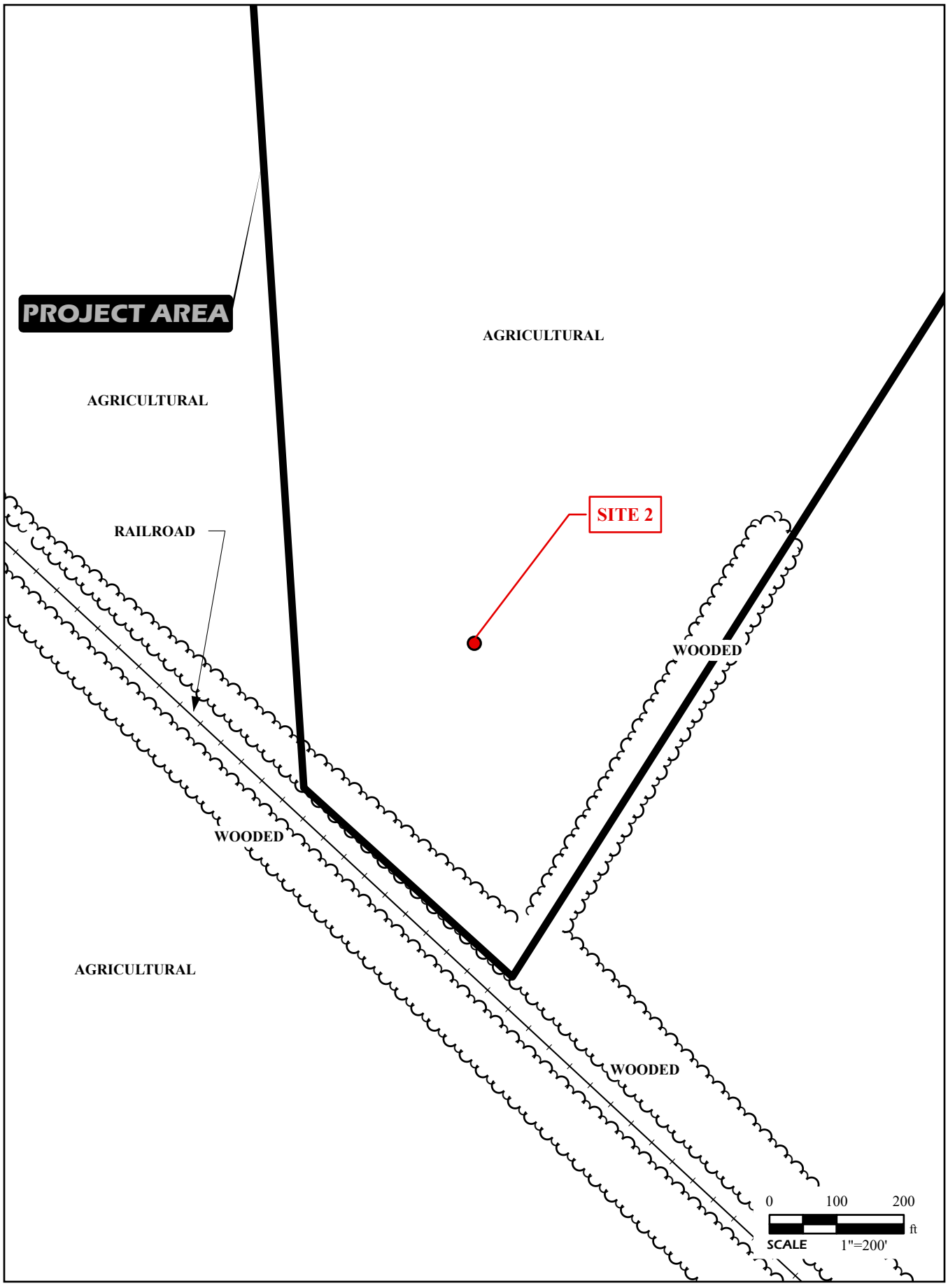
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.05 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.09 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N


PROJECT AREA
SITE 2
Renault
(Station)
Kidd
St Marys
Cemetery
KASKASKIA ROAD
BLUFF ROAD
DITCH
Onemile Race
MONROE C
RANDOLPH
T 4 S
T 5 S
BM 398
BM 395
BM 389
36
35
31
2
1
6
7
12
14
0
1,000
2,000
ft
SCALE
1"=2,000'


PROJECT AREA
AGRICULTURAL
AGRICULTURAL
SITE 2
RAILROAD
WOODED
WOODED
AGRICULTURAL
WOODED
0
100
200
ft
SCALE
1"=200'

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 3 **7.5' Quadrangle** Bloomsdale **County Site No.** 1140

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 1 **Recorded** 2021.06.09

WGS84 Latitude 38.123302 **Longitude** -90.153685 **Site Area (sq. m)** 0

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 115

Soil Association Lawson-Beaucoup (s2261)

Description Site is located in an agricultural field east of Kaskaskia Road and south of Bluff Road. Site is situated along the west bank of the Grand Coulie meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 90

Survey Methods Pedestrian Auger

Site Type Isolated Find **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 1

N **Prehistoric Diagnostic Artifacts**

N **Prehistoric Surface Features**

N **Prehistoric Buried Features** **Ave. Depth (cm)** 0

Number of Historic Artifacts (count or estimate) 0

N **Historic Diagnostic Artifacts**

N **Historic Surface Features**

N **Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 heat-altered Burlington chert tertiary flake.

TEMPORAL AFFILIATION

Y **Prehistoric Unknown**	**Woodland**	**Protohistoric**	**Frontier Antebellum (1841-April 11, 1861)**
Paleoindian	**Early Woodland**	**Historic Native American**	**Civil War (April 12, 1861-April 9, 1865)**
Archaic	**Middle Woodland**	**Historic (generic)**	**Frontier Post-Civil War (April 10, 1865-1870)**
Early Archaic	**Late Woodland**	**Colonial (1673-1780)**	**Early Industrial (1871-1900)**
Middle Archaic	**Mississippian**	**Pioneer (1781-1840)**	**Urban Industrial (1901-1945)**
Late Archaic	**Upper Mississippian**	**Frontier (generic; 1841-1870)**	**Post-War (1946-present)**

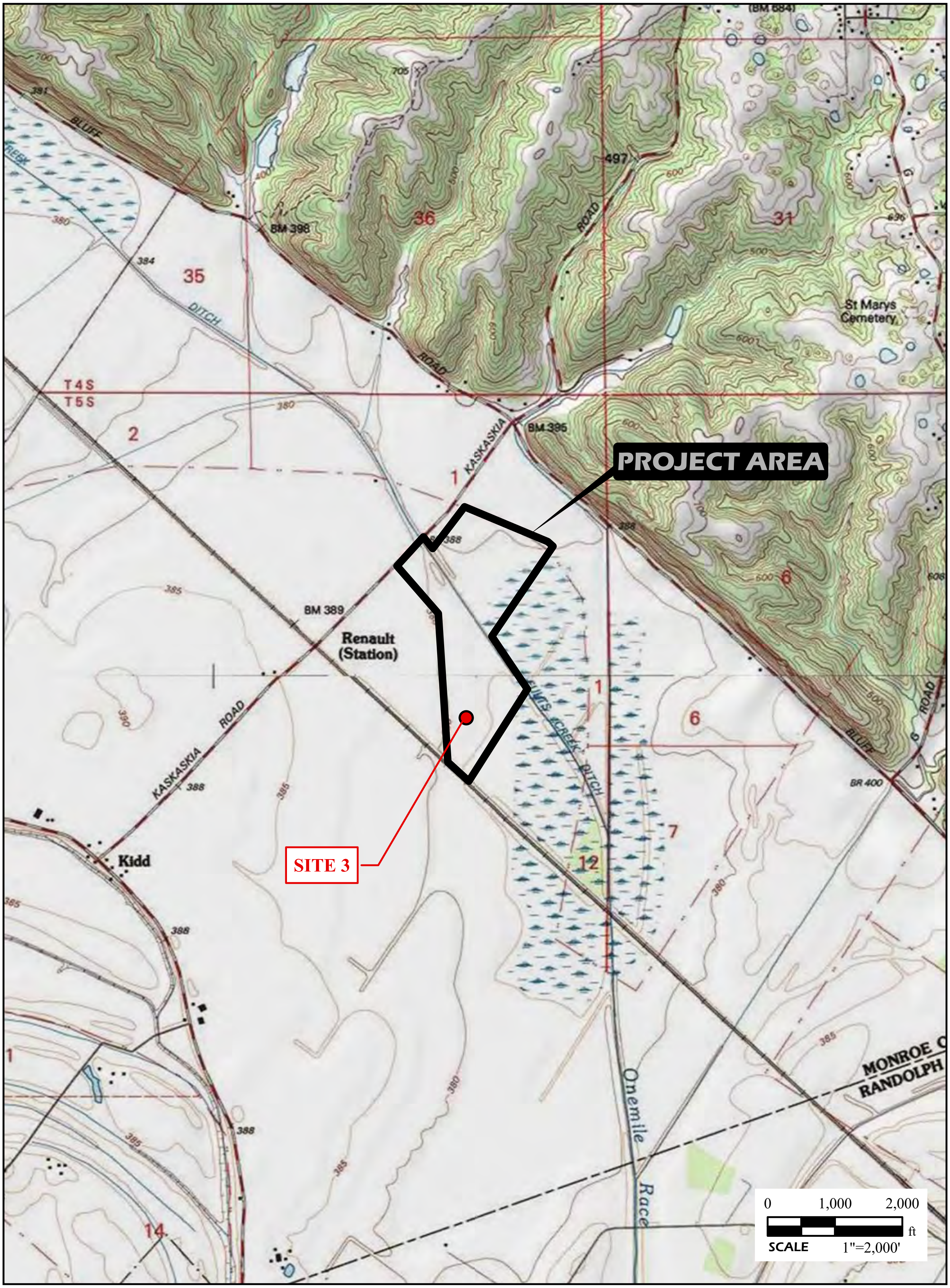
Description The flake is non-diagnostic.

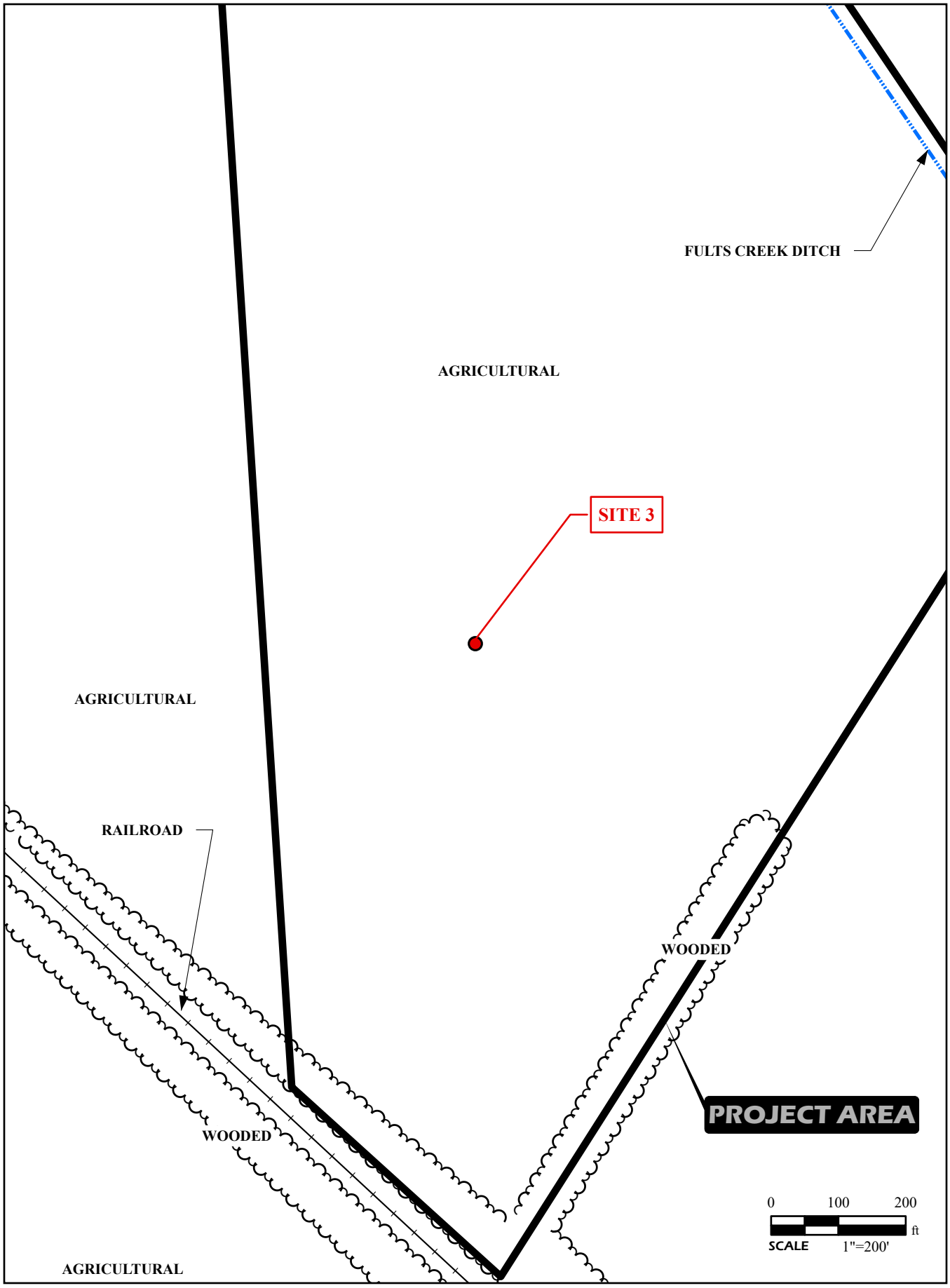
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.15 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.09 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N


PROJECT AREA
SITE 3
Renault
(Station)
Kidd
KASKASKIA ROAD
BLUFF ROAD
DITCH
BM 398
BM 395
BM 389
St Marys
Cemetery
T 4 S
T 5 S
Onemile
Race
MONROE C
RANDOLPH
0 1,000 2,000
ft
SCALE 1"=2,000'


FULTS CREEK DITCH
AGRICULTURAL
SITE 3
AGRICULTURAL
RAILROAD
WOODED
PROJECT AREA
WOODED
AGRICULTURAL
0
100
200
ft
SCALE
1"=200'

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 4 **7.5' Quadrangle** Bloomsdale **County Site No.** 1141

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 12 **Recorded** 2021.07.02

WGS84 Latitude 38.122113 **Longitude** -90.155276 **Site Area (sq. m)** 0

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 117

Soil Association Lawson-Beaucoup (s2261)

Description Site is located in an agricultural field east of Kaskaskia Road and south of Bluff Road. Site is situated along the west bank of the Grand Coulie meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 70

Survey Methods Pedestrian Auger

Site Type Isolated Find **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 1

- Y **Prehistoric Diagnostic Artifacts**
- N **Prehistoric Surface Features**
- N **Prehistoric Buried Features** **Ave. Depth (cm)** 0

Number of Historic Artifacts (count or estimate) 0

- N **Historic Diagnostic Artifacts**
- N **Historic Surface Features**
- N **Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 contracting stem point made of Burlington chert.

TEMPORAL AFFILIATION

[ ] Prehistoric Unknown	[ ] Woodland	[ ] Protohistoric	[ ] Frontier Antebellum (1841-April 11, 1861)
[ ] Paleoindian	[Y] Early Woodland	[ ] Historic Native American	[ ] Civil War (April 12, 1861-April 9, 1865)
[ ] Archaic	[ ] Middle Woodland	[ ] Historic (generic)	[ ] Frontier Post-Civil War (April 10, 1865-1870)
[ ] Early Archaic	[ ] Late Woodland	[ ] Colonial (1673-1780)	[ ] Early Industrial (1871-1900)
[ ] Middle Archaic	[ ] Mississippian	[ ] Pioneer (1781-1840)	[ ] Urban Industrial (1901-1945)
[Y] Late Archaic	[ ] Upper Mississippian	[ ] Frontier (generic; 1841-1870)	[ ] Post-War (1946-present)

Description The point resembles contracting stem points assigned a Late Archaic/Early Woodland temporal affiliation.

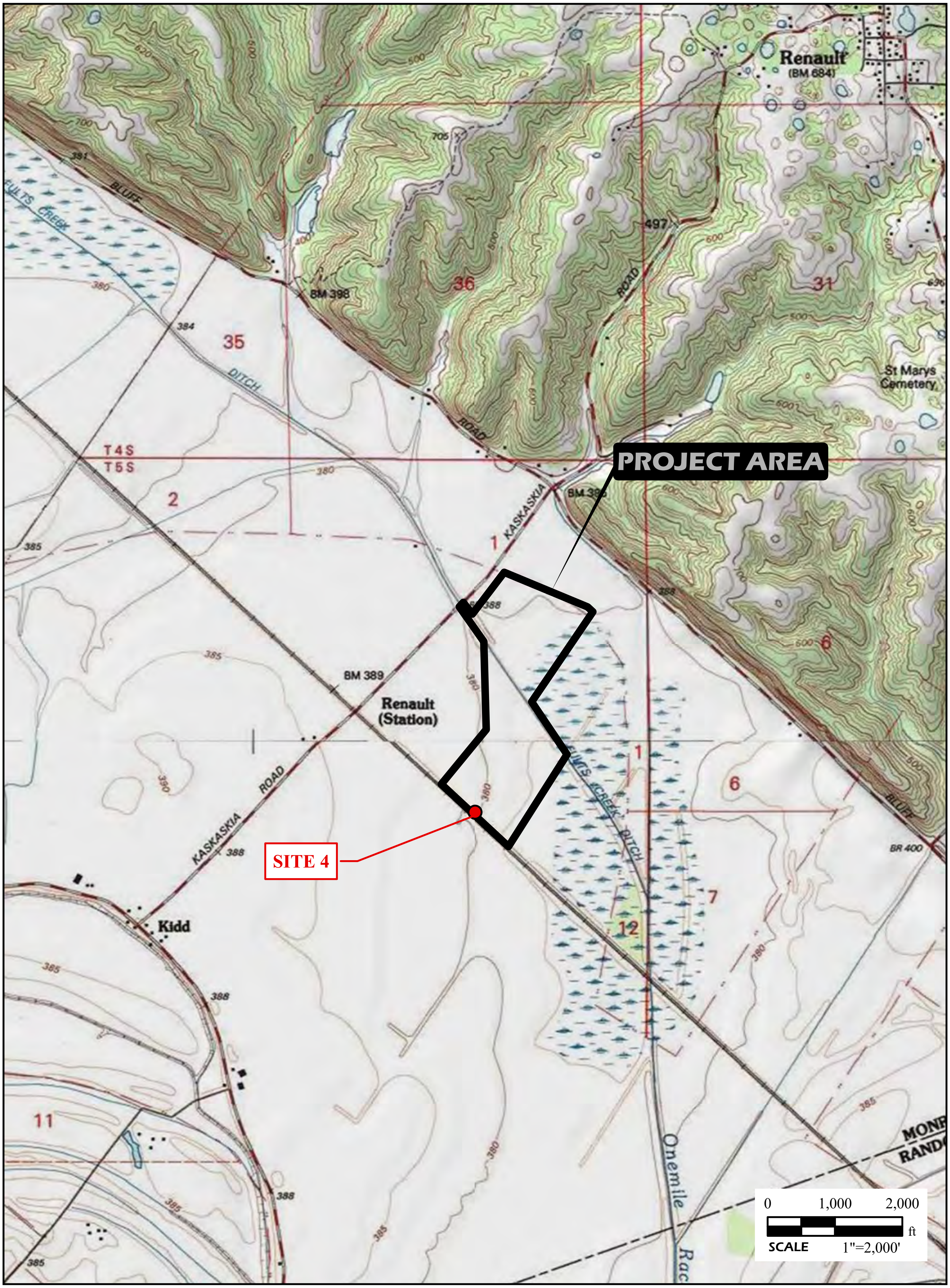
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.29 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.29 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N

Updated 2020.01.23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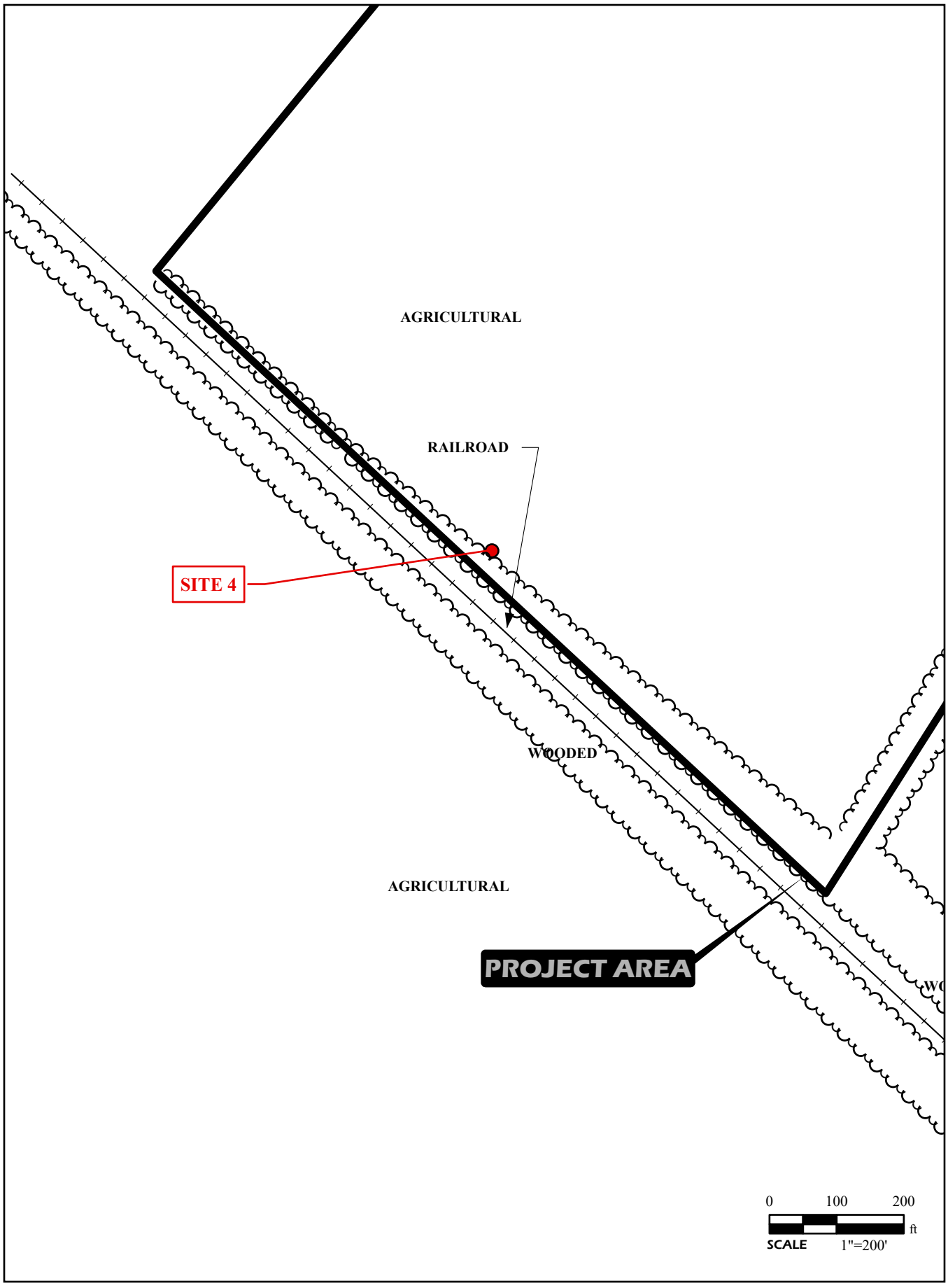
SITE 4
Renault
(BM 684)
St Marys
Cemetery
Renault
(Station)
Kidd
BLUFF
ROAD
KASKASKIA
KASKASKIA ROAD
FULTS CREEK
DITCH
FULTS CREEK DITCH
Onemile
T 4 S
T 5 S
BM 398
BM 389
BM 388
BR 400
35
36
31
2
1
6
7
12
11
0 1,000 2,000
ft
SCALE 1"=2,000'


AGRICULTURAL
RAILROAD
SITE 4
WOODED
AGRICULTURAL
PROJECT AREA
0
100
200
ft
SCALE
1"=200'

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 5 **7.5' Quadrangle** Bloomsdale **County Site No.** 1142

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 1 **Recorded** 2021.07.02

WGS84 Latitude 38.123136 **Longitude** -90.156281 **Site Area (sq. m)** 0

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 117

Soil Association Lawson-Beaucoup (s2261)

Description Site is located in an agricultural field east of Kaskaskia Road and south of Bluff Road. Site is situated along the west bank of the Grand Coulie meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 70

Survey Methods Pedestrian Auger

Site Type Isolated Find **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 1 **Number of Historic Artifacts (count or estimate)** 0

N	**Prehistoric Diagnostic Artifacts**	N	**Historic Diagnostic Artifacts**
N	**Prehistoric Surface Features**	N	**Historic Surface Features**
N	**Prehistoric Buried Features** **Ave. Depth (cm)** 0	N	**Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 broken biface made of Burlington chert. The biface appears to be a midsection of a projectile point.

TEMPORAL AFFILIATION

Y **Prehistoric Unknown**	**Woodland**	**Protohistoric**	**Frontier Antebellum (1841-April 11, 1861)**
Paleoindian	**Early Woodland**	**Historic Native American**	**Civil War (April 12, 1861-April 9, 1865)**
Archaic	**Middle Woodland**	**Historic (generic)**	**Frontier Post-Civil War (April 10, 1865-1870)**
Early Archaic	**Late Woodland**	**Colonial (1673-1780)**	**Early Industrial (1871-1900)**
Middle Archaic	**Mississippian**	**Pioneer (1781-1840)**	**Urban Industrial (1901-1945)**
Late Archaic	**Upper Mississippian**	**Frontier (generic; 1841-1870)**	**Post-War (1946-present)**

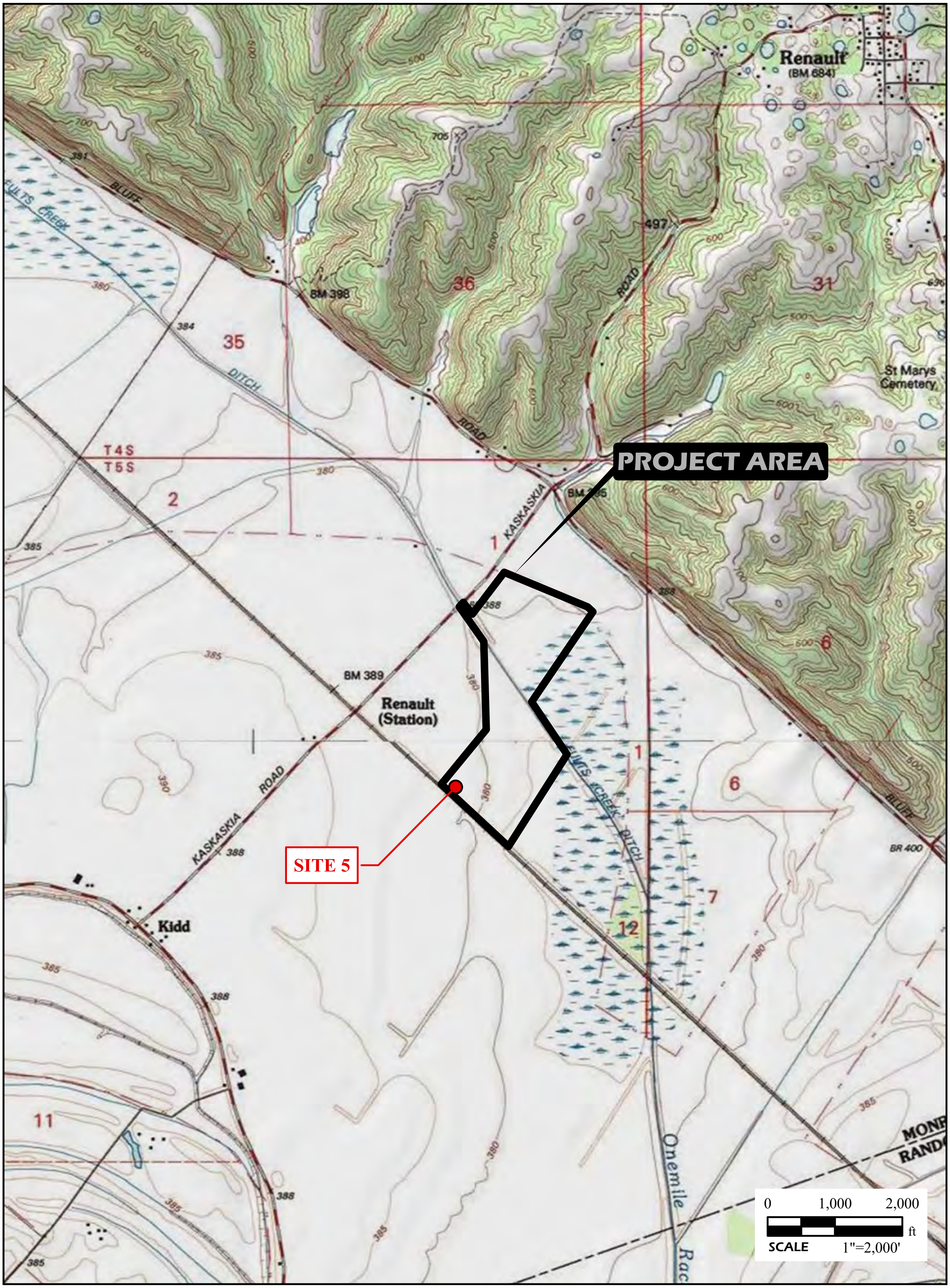
Description The possible projectile point is represented only by a midsection, and does not display diagnostic attributes.

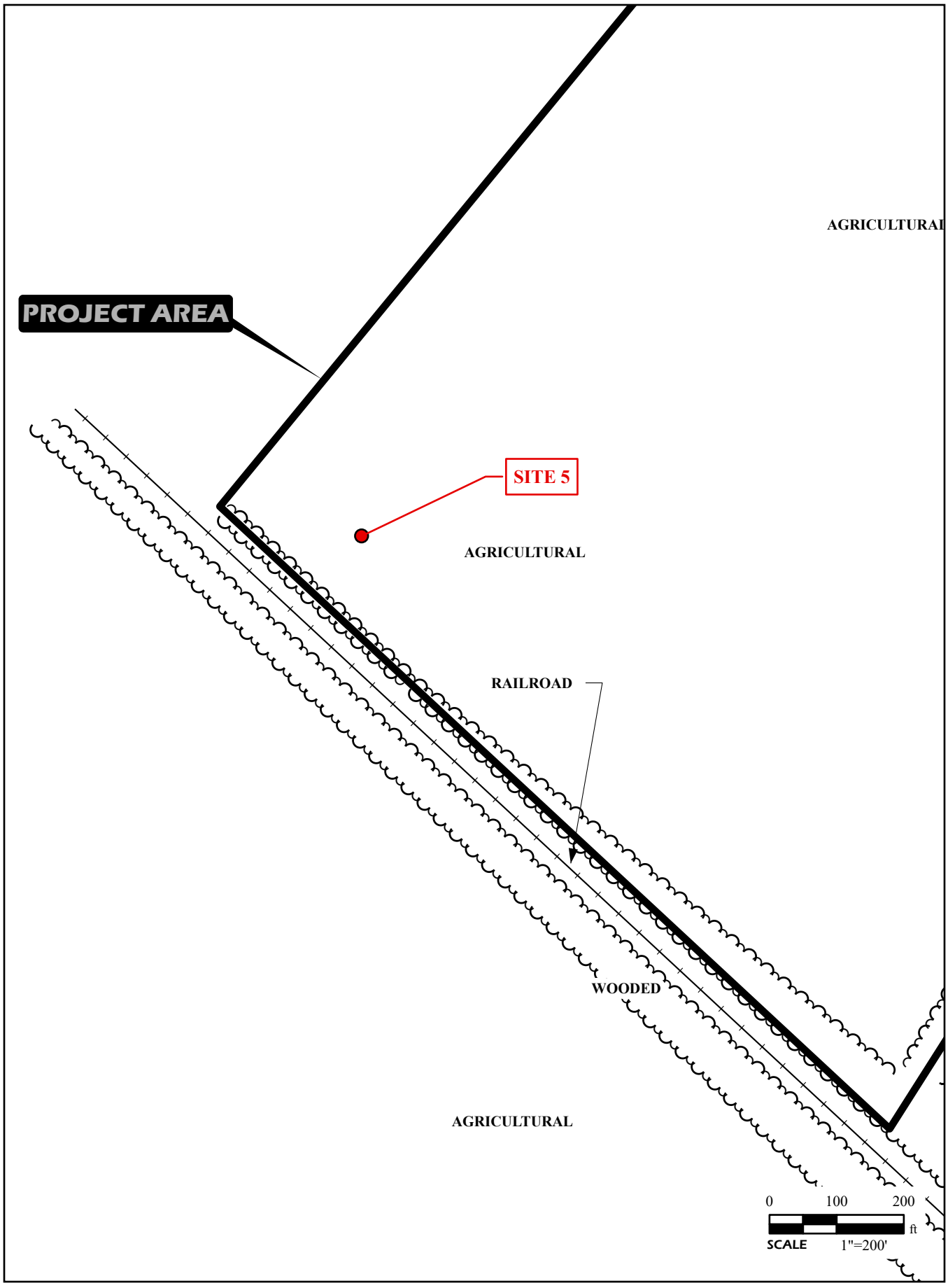
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.29 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.29 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N


Renault
(BM 684)
PROJECT AREA
SITE 5
Renault
(Station)
Kidd
BLUFF
FULTS CREEK
DITCH
ROAD
KASKASKIA
KASKASKIA ROAD
FULTS CREEK DITCH
Onemile
St Marys
Cemetery
BM 398
BM 389
T 4 S
T 5 S
35
36
31
2
1
6
7
12
11
0
1,000
2,000
ft
SCALE
1"=2,000'


AGRICULTURAL
PROJECT AREA
SITE 5
AGRICULTURAL
RAILROAD
WOODED
AGRICULTURAL
0
100
200
ft
SCALE
1"=200'

Illinois Archaeological Site Recording Form

County Monroe **Site Name** **Revisit** N

Field No. Site 6 **7.5' Quadrangle** Bloomsdale **County Site No.** 1143

Ownership Private **Meridian** 3 **Township** 5 S **Range** 10 W **Section** 1 **Recorded** 2021.07.02

WGS84 Latitude 38.123281 **Longitude** -90.155113 **Site Area (sq. m)** 0

Known Alternate Names

ENVIRONMENT

Topography Floodplain **Drainage Basin** Cahokia-Joachim

Nearest Water Supply Fults Creek Ditch **Elevation (meters AMSL)** 117

Soil Association Lawson-Beaucoup (s2261)

Description Site is located in an agricultural field east of Kaskaskia Road and south of Bluff Road. Site is situated along the west bank of the Grand Coulie meander scar.

SURVEY

Project Name Locke Bottom **Project Type** Phase I CRM

Ground Cover Cultivated **Surface Visibility %** 70

Survey Methods Pedestrian Auger

Site Type Isolated Find **Standing Structure** N

SITE CONDITION

Extent of Damage Moderate **Main Cause of Damage** Agriculture

MATERIALS OBSERVED

Survey Sampling Strategy Total Collection

Number of Prehistoric Artifacts (count or estimate) 1 **Number of Historic Artifacts (count or estimate)** 0

Y	**Prehistoric Diagnostic Artifacts**	N	**Historic Diagnostic Artifacts**
N	**Prehistoric Surface Features**	N	**Historic Surface Features**
N	**Prehistoric Buried Features** **Ave. Depth (cm)** 0	N	**Historic Buried Features** **Ave. Depth (cm)** 0

Description 1 expanding stem projectile point made from Burlington chert.

TEMPORAL AFFILIATION

	Prehistoric Unknown		**Woodland**		**Protohistoric**		**Frontier Antebellum (1841-April 11, 1861)**
	Paleoindian	Y	**Early Woodland**		**Historic Native American**		**Civil War (April 12, 1861-April 9, 1865)**
	Archaic		**Middle Woodland**		**Historic (generic)**		**Frontier Post-Civil War (April 10, 1865-1870)**
	Early Archaic		**Late Woodland**		**Colonial (1673-1780)**		**Early Industrial (1871-1900)**
	Middle Archaic		**Mississippian**		**Pioneer (1781-1840)**		**Urban Industrial (1901-1945)**
Y	**Late Archaic**		**Upper Mississippian**		**Frontier (generic; 1841-1870)**		**Post-War (1946-present)**

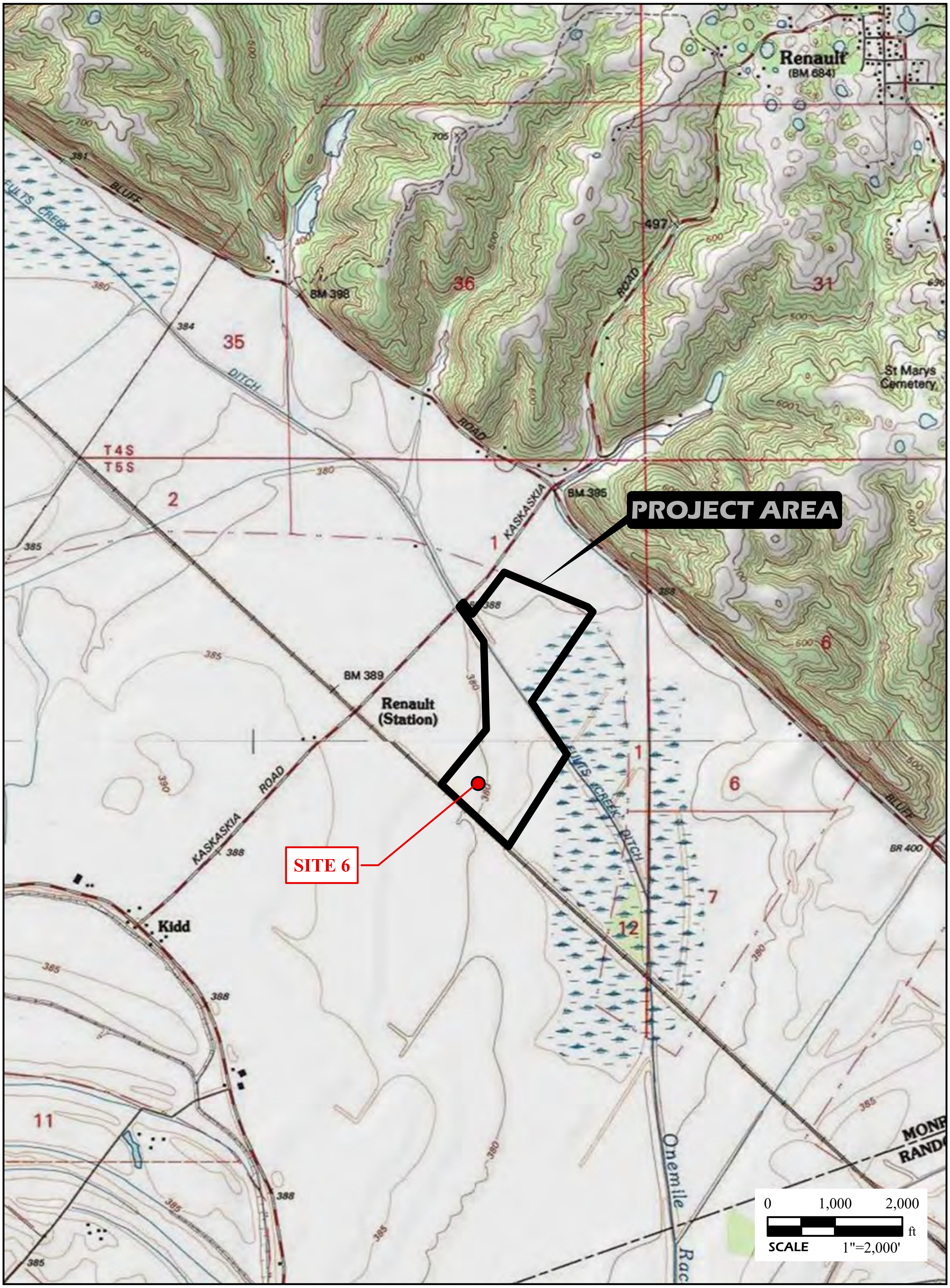
Description The projectile point resembles expanding stem points assigned a Late Archaic/Early Woodland temporal affiliation.

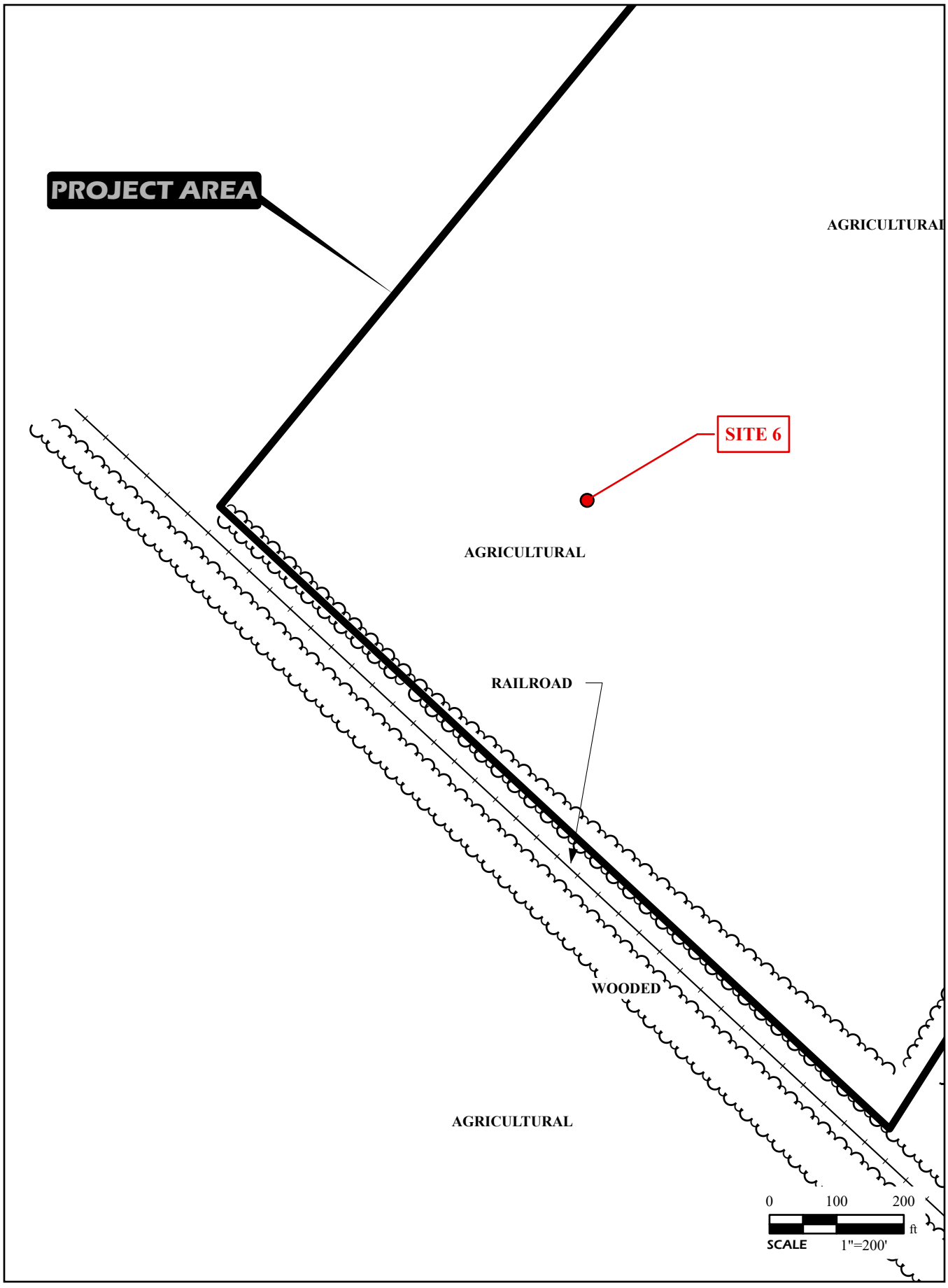
Surveyor B. Carlo **Institution** SCI **Survey Date** 2021.06.29 **Curation Facility** ISM

Form By B. Carlo **Institution** SCI **Report Date** 2021.06.29 **NRHP Listing** N

SHPO Log No. **SHPO 1st Survey Doc No.**

Compliance Status **HSRPA** N


PROJECT AREA
SITE 6
Renault
(BM 684)
Renault
(Station)
Kidd
St Marys
Cemetery
BLUFF
FULTS CREEK
DITCH
ROAD
KASKASKIA
KASKASKIA ROAD
FULTS CREEK DITCH
Onemile
T 4 S
T 5 S
BM 398
BM 395
BM 389
497
705
35
36
31
2
1
6
7
12
11
0
1,000
2,000
ft
SCALE
1"=2,000'


PROJECT AREA
AGRICULTURAL
SITE 6
AGRICULTURAL
RAILROAD
WOODED
AGRICULTURAL
0
100
200
ft
SCALE
1"=200'

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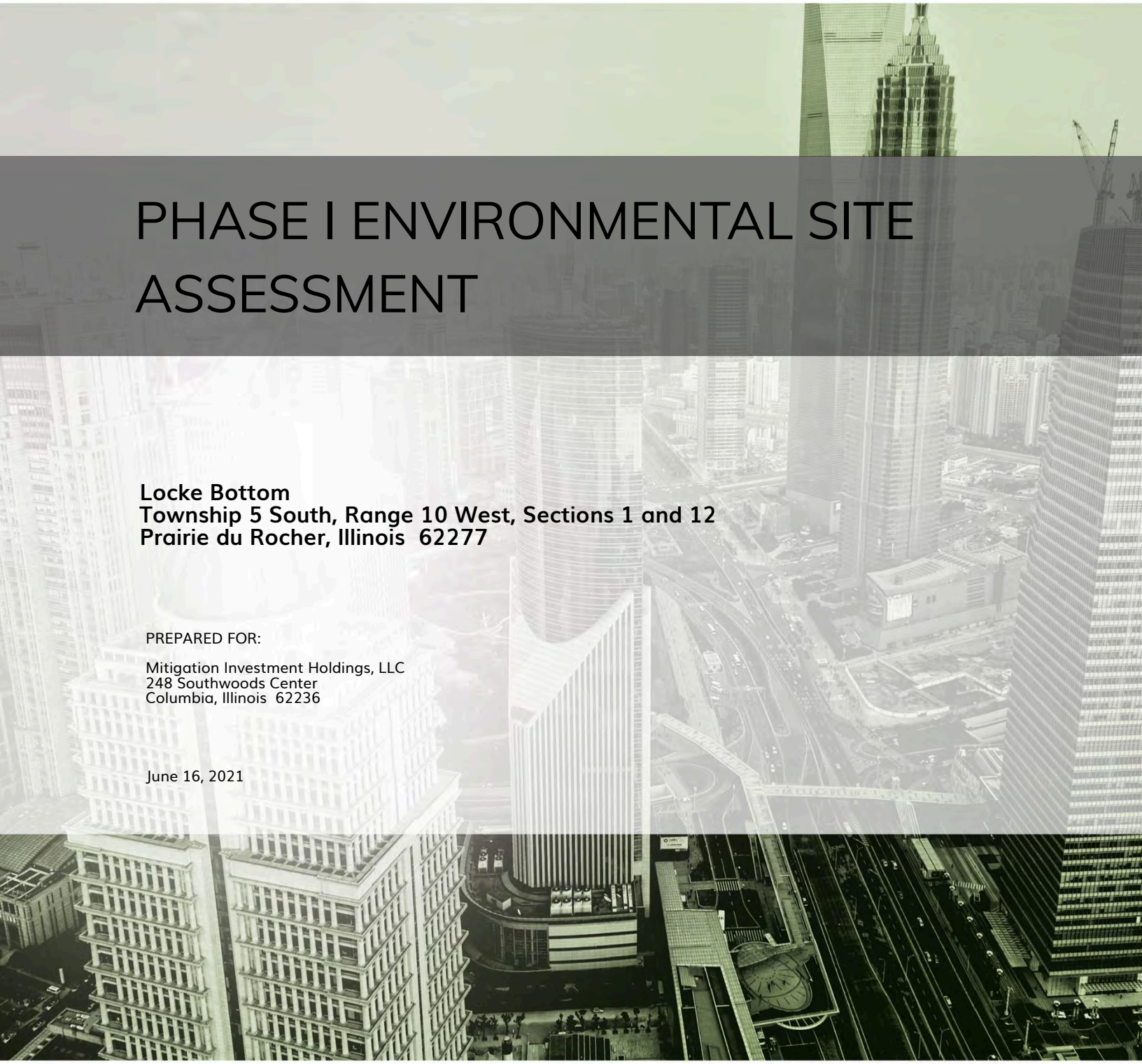

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Locke Bottom
Township 5 South, Range 10 West, Sections 1 and 12
Prairie du Rocher, Illinois 62277

PREPARED FOR:

Mitigation Investment Holdings, LLC
248 Southwoods Center
Columbia, Illinois 62236

June 16, 2021

Progea | Global Vision Local Insight

Phase I
Environmental Site Assessment

Locke Bottom
Township 5 South, Range 10 West, Sections 1 and 12
Prairie du Rocher, Illinois 62277

Progea Project No: 21135
June 16, 2021

Prepared for:

Mitigation Investment Holdings, LLC
248 Southwoods Center
Columbia, Illinois 62236

Prepared By:

Progea, Inc.

www.progeaglobal.com

214.214.4330

PROJECT SUMMARY

Progea, Inc. (Progea) was retained to conduct a Phase I Environmental Site Assessment (ESA) on the agricultural cropland located within Township 5 South, Range 10 West, Sections 1 and 12 in Prairie du Rocher, Monroe County, Illinois 62277, and commonly known as Locke Bottom (the "Site"). This Phase I ESA was performed in accordance with ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Any exceptions to, additions to, or deletions from these guidelines are described in the body of this report. A summary of recognized environmental conditions (RECs), controlled recognized environmental conditions (CRECs), and historical recognized environmental conditions (HRECs) is provided below. In addition, Progea has included a listing of other environmental conditions (OECs), which include non-scope ASTM conditions and/or environmental best management practices.

This assessment has revealed no evidence of RECs, HRECs, or CRECs, as defined by ASTM, in connection with the subject property.

Summary of Findings						
Section No.	Section Name	REC	CREC	HREC	OEC	Recommended Action
3.1	Historical Summary					
3.7	Additional Environmental Records Sources					
4.0	Regulatory Database Review					
5.3	Hazardous Material & Waste					
5.4.1, 5.4.2	Storage Tanks					
5.6	Polychlorinated Biphenyls (PCBs)					
5.7	Surface Water Conditions					
5.8, 5.9, 5.10, 5.11, 5.14, 5.15	Evidence of Spills or Releases					
5.16	Wells					
5.21	Asbestos- Containing Materials					
5.22	Lead-Based Paint					
5.23	Mold & Microbial Issues					
5.25	Wetlands					
5.26	Threatened & Endangered Species					
5.28	Radon					
5.29	Air Emissions					

Section No.	Section Name	REC	CREC	HREC	OEC	Recommended Action
5.31	Vapor Encroachment Condition					
5.12, 5.17, 5.19, 5.20, 5.27, 5.30, 5.33, 5.34	Other					

EXECUTIVE SUMMARY

Progea, Inc. (Progea) was retained to conduct a Phase I Environmental Site Assessment (ESA) on the agricultural cropland located within Township 5 South, Range 10 West, Sections 1 and 12 in Prairie du Rocher, Monroe County, Illinois 62277, and commonly known as Locke Bottom (the "Site"). The objective of the assessment was to provide an independent, professional opinion regarding recognized environmental conditions (RECs), as defined by ASTM, associated with the Site. This Phase I ESA was requested for the purpose of qualifying for the landowner liability protections to CERCLA liability.

Subject Property

The Site currently consists of vacant agricultural cropland totaling approximately 100 acres. The Site is currently developed for dryland row crop farming. No permanent or temporary structures were located on-Site at the time of the inspection. In addition, no domestic water wells, irrigation wells, or oil and gas wells are located on-Site. Fults Creek Ditch crosses the central portion of the Site from northwest to southeast. No large scale areas of dumping or waste accumulation were observed on-Site. No dry cleaners, gas stations, or light industrial facilities are currently located on-Site. The current operations at the Site are not considered a REC.

Historical Review

Review of aerial photographs (1953 - 2017) and historic topographic maps (1915 - 2015) indicate that the Site has been developed as agricultural cropland, with Fults Creek Ditch crossing the central portion of the Site from northwest to southeast, from as early as 1953. Topographic maps before that time show the Site as vacant land. No permanent on-Site structures were evident in the historical information reviewed as part of this assessment. The historic uses of the Site do not represent a REC.

Regulatory Data Review

The Site was not identified on any of the regulatory databases searched and no evidence of current or former dry cleaners located on the Site were indicated in the database review.

Hazardous Materials, Petroleum Products, or Waste

The Site was assessed for signs of storage, use, or disposal of hazardous materials. The assessment consisted of noting evidence (e.g., drums, unusual vegetation patterns, staining) indicating that hazardous materials are currently or were previously located on the Site.

The Site has been developed for agricultural use; therefore, commercially acceptable quantities of pesticides, herbicides, and fertilizers have been applied. No hazardous waster are currently generated on-Site and no bulk chemicals were observed on-Site. None of the records reviewed indicated the historical use of large quantities of hazardous materials at the Site.

Storage Tanks

The subject property was inspected for evidence of aboveground storage tanks (ASTs). No evidence of ASTs was observed at the Site during the assessment. In addition, no features were observed at the Site that would have required ASTs to be present, and there are no ASTs registered with the Illinois Environmental Protection Agency (IEPA), Bureau of Land (BOL), or the Illinois Office of the State Fire Marshal (OSFM).

The subject property was inspected for evidence of underground storage tanks (USTs) (e.g., vent piping, dispensing equipment, and pavement variations). No evidence of USTs was observed at the Site during the assessment. In addition, no features were observed at the Site that would have required USTs to be present, and there are no USTs registered with the IEPA, BOL, or the Illinois OSFM.

Surface Water Conditions

No pits, ponds, or lagoons were observed on-Site at the time of the Site inspection. Fults Creek Ditch crosses the central portion of the Site from northwest to southeast.

Evidence of Spills or Releases

No visible evidence of spills or releases was observed at the time of the Site inspection.

Wells

According to EDR, there are no records of active, inactive, destroyed wells, or dry wells at the Site. Additionally, during the Site visit no wells were observed on Site.

Hazardous Building Materials

The Site does not contain any habitable structures; therefore, the potential presence of hazardous building materials is not considered a concern.

Vapor Encroachment Condition

As part of Progea's evaluation of the potential for chemicals of concern (COCs) to be present at the Site or migrate onto the subject property, Progea conducted a limited Vapor Encroachment Screening (VES). The goal of the VES is to identify potential vapor impacts in the subsurface or within Site buildings caused by the release of COCs into the soil or groundwater at the Site or in near proximity to the Site. As such, Progea reviewed all local, state, and federal database information as well as historical maps and aerial photographs. During the Site visit, Progea did not observe potential contaminant sources that would contribute or cause COCs to be present at the Site. Additionally, Progea did not observe any surrounding facilities that would have potentially caused COCs to migrate onto the subject property. Based on Progea's professional opinion, the potential for Vapor Encroachment Condition (VEC) to be present at the Site is minimal and is not considered an environmental concern.

Non-Phase I ESA Considerations

The Site was inspected for the presence of sensitive ecological areas by noting environmental indicators (e.g., wetlands vegetation, floodplains) located on or immediately adjoining the Site. Evidence of Freshwater Emergent wetland (PEM1Cd) and Riverine wetland (R2UBHx) was depicted on the US Fish and Wildlife Service, Wetland Mapper. Based on farming exemptions contained in Section 404 of the Clean Water Act, the farming activities conducted on-Site appear to be exempt from wetland permitting requirements as long as the on-Site discharges remain part of normal farming, ranching, and forestry activities. Wetland maps are included in Appendix I.

A review of applicable records for information regarding threatened/endangered species was made on the USFWS Online Database System website http://www.eso.fws.gov/. A total of nine threatened and/or endangered bird, clam, crustacean, fish, flowering plant, insect, and mammal species are listed for Monroe County, Illinois. The Site is agricultural cropland surrounded by roadways and similarly developed agricultural cropland. The presence of these species in Monroe County is not expected to interfere with the current use of the Site and is not considered an environmental concern.

Monroe County is located in the EPA radon Zone 2. EPA radon Zone 2 has predicted average screening concentrations between 2 pCi/L and 4 pCi/L. The EPA action level is 4.0 pCi/L. Radon is not expected to represent an environmental concern to current/future occupants or workers at the Site.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Monroe County, number 1705090200D, dated March 17, 2003, was reviewed for the Site. The Site is located within Zone A18. Zone A18 includes areas of 100-year flood with base flood elevations and flood hazards factors determined.

Other

No other significant environmental issues were observed during the Site inspection.

Findings, Opinions & Conclusions

Based on the findings of this assessment, there are no obvious indicators that point to the presence or likely presence of contamination at the Site. **This assessment has revealed no evidence of RECs, HRECs, or CRECs, as defined by ASTM, in connection with the subject property.**