

Draft Environmental Assessment

Riverside Adventure Park Archery Facility
Indianapolis, Marion County, Indiana

July, 2024

Prepared For: Indy Parks and Recreation, Indianapolis, Marion County, Indiana

TABLE OF CONTENTS

| | |
|--|----|
| 1 INTRODUCTION | 3 |
| 2. PROPOSED ACTION | 3 |
| 3. BACKGROUND | 3 |
| 4. PURPOSE AND NEED FOR THE ACTION | 4 |
| 5. PUBLIC OUTREACH..... | 5 |
| 6. ALTERNATIVES..... | 6 |
| Alternative A – No Action Alternative | 6 |
| Alternative B – Proposed Action Alternative | 6 |
| 7. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES | 7 |
| 7.1 Physical Environment | 7 |
| 7.1.1 Geology, Soils, and Landcover..... | 7 |
| 7.1.2 Water Resources | 8 |
| 7.1.3 Air Quality | 11 |
| 7.1.4 Noise..... | 12 |
| 7.2 Biological Environment | 12 |
| 7.2.1 Aquatic Fauna and Habitat | 12 |
| 7.2.2 Terrestrial Fauna and Habitat | 13 |
| 7.2.3 Species and Habitats of Concern | 14 |
| 7.3 Cultural and Historic Resources..... | 16 |
| 7.4 Recreation..... | 16 |
| 7.5 Human Health and Safety | 17 |
| 7.6 Socioeconomic Resources..... | 18 |
| 7.7 Environmental Justice | 19 |
| 8. SUMMARY OF ANALYSIS | 19 |
| 9. LIST OF SOURCES, AGENCIES, AND PERSONS CONSULTED | 22 |
| 10. LIST OF PREPARERS..... | 22 |
| 11. LITERATURE CITED | 22 |
| APPENDICES | 23 |

1 INTRODUCTION

This Draft Environmental Assessment (EA) is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. The National Environmental Policy Act requires examination of the effects of proposed actions on the natural and human environment.

2. PROPOSED ACTION

Indy Parks and Recreation is proposing to plan, design, and construct an archery facility (AF) in an urban nature park setting. The proposed AF will be sited within Riverside Regional Park in Indianapolis, Marion County, Indiana. The AF will include:

- A beginner archery range for youth and entry-level participants;
- A competition range for advanced archers;
- A building consisting of approximately 10,000+ sq ft of enclosed space for indoor range, range administration, archery education, restrooms, range workshop/storage, and a retail space for rental/sale of equipment and materials for use in the range;
- Improvement of an existing parking lot, for approximately 100 car capacity, that will serve parking needs for the archery facility; and
- ADA accessibility to buildings, shooting positions and target lanes.

A proposed action may evolve during the NEPA process as Indy Parks and Recreation refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the Draft EA and will be formally documented in the Final EA.

3. BACKGROUND

Riverside Adventure Park (RAP) is a planned improvement area situated within the 862-acre Riverside Regional Park, a public space owned and operated by Indy Parks and Recreation. RAP is approximately 200-acres of the regional park that was formerly operated as the Riverside Golf Course. The golf course was closed in 2019 to facilitate a transition to an outdoor recreation focus, as recommended in the 2017 *Riverside Regional Park Master Plan*.

The schematic design for RAP was completed in 2021. Informed by the site's natural conditions and organized by proposed improvements, five zones were created: River Zone, Racing Zone, Winter Zone, Wetland Education Zone and Central Nature Zone. The schematic design recommends development of an Archery Range Facility near the northeast corner of the property, within the Central Nature Zone.

Construction of several amenities proposed in the schematic design has begun and these improvements are expected to be completed in Fall 2024. These improvements include:

- **River Zone:** New group picnic shelter, comfort station, improved and expanded parking, entry plaza at 30th Street and trail connections. This zone connects the site to the City's greenways system via the White River Greenway along the west side of White River, to the Central Canal Towpath on the east side of the White River at 30th Street and Riverside Dr., and to the Riverside Promenade, a 1.5 mile multiuse path along Riverside Dr. from 30th Street to 16th Street.
- **Racing Zone:** Adult fitness park, entry plaza at 30th Street, trail connections and landscape enhancement along Cold Spring Road.
- **Central Nature Zone:** New group picnic shelter, Nature Playground, a total of 5.6 miles of trails throughout the park, new entry drive with entry plaza, parking and enhancements to the Clubhouse which has been converted for Parks staff offices. The improvements to the Clubhouse include public access to restrooms from the exterior of the building making them more accessible. Additionally, energy-efficient parking lighting, new exterior energy efficient lighting, and painting of Clubhouse will be included.

The new entry drive was realigned to curve to the south to accommodate the proposed AF development.

The proposed AF will be an amenity within RAP's Central Nature Zone, and is located on approximately 15 acres (SITE) within RAP. The SITE is situated southwest of the crossing of Interstate 65 and North White River Parkway in Indianapolis, Marion County, Indiana, at approximate Universal Transverse Mercator (UTM) coordinates 4407813 North, 569049 South. The SITE location is shown in **Figure 1**.

4. PURPOSE AND NEED FOR THE ACTION

The purpose of this proposed action is to provide access to the sport of archery in the urban core of Indianapolis, where participation is not readily available or accessible for many residents. This will be the only public offering for indoor and outdoor archery within the city limits of Indianapolis. The purpose of the proposed action is also to complement the other outdoor recreation activities planned for RAP, serving youth, adults, and families throughout the neighborhood, community, and region.

The *Indy Parks 2023 Comprehensive Master Plan* documents the results of a detailed analysis of local conditions that indicated the following key needs:

- Population projections suggest a need to create new programs to meet the diverse and growing community's needs.
- Detailed demographic analysis of the city's needs indicated that Indy Parks and Recreation should prioritize expansion and improvement in neighborhoods predominantly occupied by people of color and/or low-income households.
- Per a Community-Wide Survey (CWS), the following four youth programs are the most needed: Outdoor Adventure (38%), Youth Sports (35%), After School Programs (32%)

and Youth Summer Camp (28%). Archery opportunities as proposed at RAP satisfy each of these needs.

- Per the CWS, support is most needed for the following adult focus areas: Adult Fitness and Wellness (48%), Nature Education (37%) and Outdoor Adventure (34%). Archery opportunities as proposed at RAP enhance each of these focus areas.

The AF will meet these key needs by providing a safe environment to learn about, practice, and compete in the sport of archery.

5. PUBLIC OUTREACH

During the schematic design phase for RAP, the project team, consisting of Indy Parks and Recreation, V3 Companies, Ltd., Groundwork Indy, and Green 3, LLC, completed public outreach for the project's development. Outreach efforts consisted of the following:

- **Riverside Steering Committees.** The project team assembled steering committees including a "Community Advisory Group" and a "Technical Advisory Committee." Various stakeholders including community advocates, local leaders, and experts on the surrounding neighborhood were invited to participate on the steering committees. The steering committees met three times over an approximately nine-month period. During meetings, the project team recorded committee feedback and vision for the project, incorporating this data into schematic design.
- **Stakeholder Meetings and Interviews.** The project team met with, online and on site, key stakeholders and technical advisors throughout the project development over the course of 16 months. These included City and elected officials, environmental experts, community organizers and funders, and recreational groups and advocates. Specific to the archery facility, the project team met with the following:
 - The Archery Trade Association (ATA), the organization for manufacturers, retailers, distributors, sales representatives and others working in the archery and bowhunting industry. ATA has been a partner in the planning process and is anticipated to provide continued technical assistance in the Schematic Design efforts.
 - Outdoor Youth Exploration Academy (OYEA!), an organization that has been mentoring youth to develop life and leadership skills for over 20 years in Indianapolis. They provide outdoor and sporting experiences, including fishing and archery with a focus on engaging urban youth. They also provide the opportunity for young people to be outside in nature, creating environmental awareness, learning about water conservation and creating a safe space for health and healing. OYEA partners were involved in the Schematic Design efforts for Riverside Adventure Park and are envisioned to be a partner in the Schematic Design development for the archery range.
- **Web Site.** The RAP web site (offline as of this writing) was designed as a part of public outreach and communication tool for the proposed project.

- **Community Survey.** An online/hardcopy survey was launched in July 2020. The survey included questions about amenities, art, recreation, activities, programs, and other features that would be part of RAP. When the survey closed in December 2020, it had received 212 online responses and 92 hardcopy responses. The CWS occurred as a separate survey completed in 2023 as part of the *Indy Parks and Recreation Comprehensive Master Plan*.
- **Public Event.** On 12 September 2020, the project team hosted an “Open House and Art Opening” on the grounds of RAP. Guided walking and biking tours were the focus of the event and were used to solicit participants’ ideas regarding the transformation of the former Riverside Golf Course into the proposed RAP. Local food trucks, music and dance performances, and new temporary art installations were incorporated to support the event. Over 300 people are estimated to have attended.

This Draft EA will be available for public review and comment for 45 calendar days from July 25th, 2024, to September 8th, 2024 on the Indy Parks web site at <https://parks.indy.gov/> under the “Updates” section. Comments may be submitted to indyparks@indy.gov through September 8th, 2024. A paper copy will be available at:

Indy Parks Main Office
200 E. Washington St. CCB Suit 2301
Indianapolis, IN 46204

6. ALTERNATIVES

Alternative A – No Action Alternative

Under Alternative A, Indy Parks and Recreation would not complete any design and development for the AF. The facility would not be constructed, and the area proposed for placement of the AF would be left in its current condition. Indy Parks and Recreation would not satisfy the need to prioritize improvement and expansion in the local neighborhood, would not provide access to the sport of archery in the urban core of Indianapolis, and would not provide an archery element that complements the other RAP amenities.

Alternative B – Proposed Action Alternative

Under Alternative B, Indy Parks and Recreation would design and develop the AF as per the concept presented in the 2021 *Riverside Adventure Park Schematic Design*. The concept includes:

- A beginner archery range for youth and entry-level participants;
- A competition range for advanced archers;
- A building consisting of approximately 10,000+ sq ft of enclosed space for indoor range, range administration, archery education, restrooms, range workshop/storage, and a retail space for rental/sale of equipment and materials for use in the range;
- Improvement of an existing parking lot, for approximately 100 car capacity, that will serve parking needs for the archery facility; and
- ADA accessibility to buildings, shooting positions and target lanes.

A preliminary proposed concept drawing for the AF can be referenced in **Appendix A**.

Alternative B would satisfy the stated purpose (**Section 4**) by creating a facility specifically designed to provide archery opportunities to the neighborhood, community, and region. The AF would be the only facility of its type in Indianapolis, and would complement the other activities proposed for RAP.

Since the AF would be situated within the urban core of Indianapolis, and since it would be located in an area of the city predominantly occupied by people of color and/or low-income households, Alternative B would satisfy the stated need (**Section 4**) to prioritize expansion and improvement in these areas. Alternative B would also satisfy the stated need to provide outdoor adventure, youth sports, after-school programs, youth summer camps, adult fitness and wellness, nature education, and outdoor adventure.

Construction for the AF is expected to begin in 2026. A new entry drive from White River Parkway West Drive, which will provide access to the AF as well as to other RAP activities, is under construction as of this writing.

7. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

7.1 Physical Environment

7.1.1 Geology, Soils, and Landcover

Affected Environment

The 15-acre SITE consists of woodland, fallow land, and the parking lot and buildings of Indy Parks and Recreation infrastructure. Adjacent land use consists of residential properties, public recreation lands, Marian University, Interstate 65, and the White River mainstem with its wooded stream corridor. There are no known unique geologic resources situated within the SITE boundary. **Figure 2** shows the SITE boundary over 2022 aerial photography.

V3 reviewed on-SITE soil map units using the Natural Resource Conservation Service (NRCS) digital soil survey data for Marion County, Indiana. This data is projected over aerial photography, illustrating distinct soil map unit boundaries, in **Figure 3**.

Table 1 – On-SITE Soil Units

| Soil Map Unit | Description |
|---------------|---|
| Ge | Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration |
| Ua | Udorthents, cut and filled |

Environmental Consequences

Alternative A: No Action

Under Alternative A, the SITE would remain in its current condition and there would be no impacts to geology, soils, and landcover.

Alternative B: Riverside Adventure Park Archery Facility

Under Alternative B, there would be minor short-term and long-term adverse impacts to geology, soils, and landcover.

Short-term impacts would consist of soil disturbance and soil compaction due to construction activity during the construction phase. Construction activities that would result in short-term impacts include vehicle traffic, excavation, and grading. These impacts would be limited to the area for which new structures or grades are proposed, and would not cover the entire SITE area. Impacts would avoid 50 to 70 percent of on-SITE woodland. To minimize geology, soil, and landcover impacts, an erosion control plan would be developed to be implemented during construction. Since construction activities are restricted to a limited portion of the SITE area, and since an erosion control plan would be used to mitigate impacts, minor short-term adverse impacts are anticipated.

Long-term impacts would consist of placement of the proposed built structures, including the buildings, archery ranges, parking area, and traffic conveyance infrastructure. Since these impacts would be situated only within a limited share of overall SITE area, minor long-term adverse impacts are anticipated.

7.1.2 Water Resources

Affected Environment

On-SITE water resources were assessed using National Wetlands Inventory (NWI) mapping, National Flood Hazard Layer (NFHL) mapping, and a natural resources assessment (NRA) of the SITE.

National Wetlands Inventory

National Wetlands Inventory (NWI) maps were developed to meet a USFWS mandate to map the wetland and deepwater habitats of the U.S. These maps were developed using high altitude aerial photographs and USGS Quadrangle maps as a topographic base. Indicators that exhibited pre-determined wetland characteristics, visible in the photographs, were identified according to a detailed classification system. The NWI map retains some of the detail of the Quadrangle map;

however, it is used primarily for demonstration of wetland areas identified by the agency. In general, the NWI information requires field verification.

NWI data is shown projected over the Indianapolis West, Indiana USGS 7.5-Minute Quadrangle Maps in **Figure 4**. Two NWI feature(s) are mapped within the SITE area.

Table 2 – National Wetlands Inventory Units

| Symbol | Description | Count |
|---------------|---|--------------|
| PEM1C | Palustrine, emergent, persistent, seasonally flooded | 1 |
| R2UBH | Riverine, lower perennial, unconsolidated bottom, permanently flooded | 1 |

Crooked Creek is mapped as a riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH) feature partially situated within the SITE area. A portion of one palustrine, emergent, persistent, seasonally flooded (PEM1C) feature is also mapped within the SITE's northeast area (Table 2). The presence of NWI features mapped partially or fully within the SITE area suggests the potential presence of wetlands or other aquatic features on-SITE.

National Flood Hazard Layer

The Federal Emergency Management Agency (FEMA) was developed in 1979 to reform disaster relief and recovery, civil defense, and to prepare and mitigate for natural hazards. The Mitigation Division of FEMA manages the National Flood Insurance Program which provides guidance on how to lessen the impact of disasters on communities through flood insurance, floodplain management, and flood hazard mapping. Proper floodplain management can minimize the extent of flooding and flood damage and improve stormwater quality by reducing stormwater velocities and erosion. The one percent annual chance flood (100-year flood) boundary must be kept free of encroachment as the national standard for the program.

V3 reviewed digital National Flood Hazard Layer data for Marion County, Indiana. The entire SITE is situated within an area mapped as Flood Zone AE. The base flood elevation (BFE) for the SITE area is 702 feet above mean sea level (AMSL). North White River Parkway Drive West, situated adjacent to the east edge of the SITE boundary, is a City-owned and maintained levee, at elevation 709 feet AMSL, allowing the roadway to remain dry during periods of high flow.

Natural Resources Assessment

A natural resources assessment (NRA) for the SITE was completed June 2024. The NRA report documents a complete SITE stream and wetland delineation, and can be referenced in Appendix B. The NRA documents three aquatic features situated wholly or partially within the SITE limits, including two wetlands, Wetlands A and B, and a segment of Crooked Creek (Table 3).

Table 3 Features Identified in the NRA

| Feature | Feature Type | Size On-SITE | Anticipated Regulatory Status |
|---------------|------------------|--------------|-------------------------------|
| Wetland A | Emergent wetland | 0.89 acre | USACE/IDEM |
| Wetland B | Forested wetland | 0.02 acre | IDEM |
| Crooked Creek | Perennial Stream | 184 LF | USACE/IDEM |

Wetland A is a palustrine, emergent (PEM) wetland occupying 0.89 acre of the SITE, extending outside of the SITE boundary to the northeast. Wetland A appeared to exhibit a hydrologic connection with Crooked Creek, and would likely be verified as a relatively permanent water and “Water of the U.S.” subject to regulation by the U.S. Army Corps of Engineers (USACE) and the Indiana Department of Environmental Management (IDEM). The vegetative community in Wetland A was dominated by invasive plants, including reed canary grass (*Phalaris arundinacea*) and common reed (*Phragmites australis*), although some native species were present, such as lizard’s tail (*Saururus cernuus*). Microtopography in Wetland A was homogenously flat, and no habitat features were observed. Due to its plant community, and due to the lack of habitat features, Wetland A appeared to provide low-quality wildlife habitat.

Wetland B is a palustrine, forested (PFO) wetland occupying 0.02 acre of the SITE. Wetland B appeared to be an isolated wetland lacking a hydrologic connection to any relatively permanent waters and/or “Waters of the U.S.” As such, Wetland B would likely be subject to regulation by the IDEM alone. The vegetative community in Wetland B appeared to be dominated by a small number of low-quality native plants, including green ash (*Fraxinus pennsylvanica*) and palm sedge (*Carex muskingumensis*). Wetland B did not appear to exhibit microtopography or wetland habitat features. Due to its small size, minimal hydrology, lack of habitat features, and non-diverse plant community, Wetland B appeared to provide low-quality wildlife habitat.

A segment of Crooked Creek was identified within the SITE boundary. The segment was approximately 184 linear feet (LF) situated within the northeast corner of the SITE. Crooked Creek is a perennial stream, relatively permanent water, and “Water of the U.S.” subject to USACE and IDEM authority. The substrate in Crooked Creek appeared to consist of gravel, cobble, sand, and silt. In-stream habitat was minimal. No signs of water quality issues were observed.

Environmental Consequences

Alternative A: No Action

Under Alternative A, there would be no impacts to Wetland A, Wetland B, and/or Crooked Creek.

Alternative B: Riverside Adventure Park Archery Facility

The proposed layout for the AF under Alternative B avoids impacts to Wetland A and to Crooked Creek. However, under Alternative B, potential impacts to Wetland B are anticipated. Wetland B is a wetland of only 0.02 acre, and appears to provide negligible water quality, aquatic habitat, and wildlife use benefits.

Alternative B would involve work in an area mapped as Flood Zone AE, due to the placement of the proposed ranges, buildings, and facility infrastructure. Required permitting would be coordinated through the IDNR Division of Water. Tree removal within the floodplain proposed under Alternative B would require mitigation and would be conducted as required by the agency. The proposed layout for the AF under Alternative B would be hydraulically modeled to understand impacts, and would require permitting through the IDNR Division of Water and Federal Emergency Management Agency (FEMA). Indy Parks and Recreation will comply with agency requirements related to construction in the floodway.

Furthermore, the design proposed under Alternative B minimizes the risk of flood issues at the SITE. The proposed building will be placed two feet above BFE; the parking lot and shooting platform will be positioned at or above the elevation of the BFE, to protect facility features.

Since Alternative B would not result in impacts to Wetland A and/or Crooked Creek, since the benefits provided by Wetland B are negligible, and since floodway impacts would also be negligible, Alternative B is anticipated to have negligible short-term and long-term impacts on water resources.

7.1.3 Air Quality

Affected Environment

At the time of this writing (2024), the U.S. Environmental Protection Agency (USEPA) Green Book does not list any “nonattainment/maintenance status” issues for any criteria pollutants in Marion County, Indiana.

Air quality within Indianapolis is monitored by the IDEM. Within a five-mile radius of the SITE, the IDEM operates three Air Quality Index (AQI) monitoring sites:

- Site #49 (Indy – W18th at 3351 West 18th Street, Indianapolis)
- Site #26 (Indy – Harding at 1321 South Harding Street, Indianapolis)
- Site #28 (Indianapolis – Washington Park (NCORE) at 3120 East 30th Street, Indianapolis)

At the time of this writing, as shown on IDEM’s Data Maps and Display System¹ online, each of these three monitoring sites has an AQI rating of “Good,” indicating no air quality issues locally.

The SITE is situated adjacent to Interstate 65, and as such, receives air pollution associated with interstate traffic.

Environmental Consequences

Alternative A: No Action

Alternative A will not alter local air quality.

Alternative B: Riverside Adventure Park Archery Facility

Alternative B would involve short-term and long-term impacts to air quality, however, these impacts would represent only a minor contribution to local air quality issues since the SITE is situated adjacent to Interstate 65, a major source of automobile-related air pollution.

During construction, Alternative B would result in negligible short-term adverse impacts to air quality due to construction activity and operation of construction machinery. Impacts would consist of temporary increases in particulate matter and other engine-related pollution associated with construction operations. Construction activity would also result in an increase in potential for fugitive dust generation, however, this would be localized and short-term, and would be minimized by the use of Best Management Practices (BMPs) for dust control.

Alternative B would potentially result in long-term impacts on air quality due to a potential increase in automobile traffic to the AF during the operation of the completed facility. This increase in traffic would not be relevant when compared to the air pollution generated by Interstate 65, to which the SITE is adjacent. As such, Alternative B is anticipated to have negligible long-term adverse impacts on air quality.

7.1.4 Noise

Affected Environment

Ambient noise levels on-SITE are high, since the SITE is situated adjacent to Interstate 65.

Environmental Consequences

Alternative A: No Action

Under Alternative A, noise levels will continue to be high due to traffic from Interstate 65.

Alternative B: Riverside Adventure Park Archery Facility

During the construction phase, Alternative B would result in short-term impacts on noise. Noise will increase due to vehicle and equipment operation. Noise from construction activities will be of short duration, lasting only until construction is complete. Negligible short-term adverse impacts on noise are anticipated.

Operation of the completed facility will not increase local noise issues. The activities for which the facility is proposed are not noise-generating activities. The major source of noise locally is Interstate 65. Since traffic noise is already audible on-SITE due to Interstate 65, additional noise generated by the completed facility will be negligible. As such, negligible long-term impacts on noise are anticipated.

7.2 Biological Environment

7.2.1 Aquatic Fauna and Habitat

Affected Environment

Aquatic habitat within the SITE area is minimal, consisting only of Wetland A, Wetland B, and a 184 LF segment of Crooked Creek.

The on-SITE segment of Crooked Creek is small, exhibiting no meanders or bends, and discharges into culvert pipes that convey flow under White River Parkway and into the White River. The substrate appeared to consist of silt, sand, and gravel. V3 staff scientists noted that riffle/run development was poor, and did not observe any in-stream aquatic habitat. The on-SITE segment of Crooked Creek provides minimal aquatic habitat.

The on-SITE wetlands do not appear to provide quality aquatic habitat. Hydrology in Wetlands A and B appears to be extremely limited, and these wetlands are likely inundated only during flood events. Plant species diversity in these wetlands was low, and no aquatic fauna were observed at the time of SITE investigation.

Environmental Consequences

Alternative A: No Action

Alternative A is anticipated to result in no impact to aquatic fauna and habitat.

Alternative B: Riverside Adventure Park Archery Facility

Since no impacts to streams or wetlands are proposed, Alternative B is anticipated to result in no impact to aquatic fauna and habitat.

7.2.2 Terrestrial Fauna and Habitat

Affected Environment

Habitat on-SITE consists of a woodland, fallow land, and active construction land.

A woodland of approximately five acres occupies the eastern portion of the SITE. Field reconnaissance (**Appendix B**) for the NRA, completed June 2024, indicated that dominant trees include red mulberry (*Morus rubra*), black walnut (*Juglans nigra*), sugar maple (*Acer saccharum*), Eastern hackberry (*Celtis occidentalis*), box elder (*Acer negundo*), and others. Infestation by Amur honeysuckle (*Lonicera maackii*) and multiflora rose (*Rosa multiflora*) is extensive. During NRA field reconnaissance, high-quality wildlife habitat was not observed in the woodland.

Fallow land occupies the south and west portions of the SITE. Various non-native grasses such as orchard grass (*Dactylis glomerata*), smooth brome (*Bromus inermis*), and reed canary grass dominate the fallow land. This land also contains sparse, scattered individual trees such as sugar maple, red mulberry, and others. During NRA field reconnaissance, high-quality wildlife habitat was not observed in the fallow land.

Overall terrestrial habitat quality was low, since the SITE is situated in an area that appears to be recovering from previous development. On-SITE trees were generally less than 20 inches diameter at breast height (DBH), and understory development was extremely poor, dominated by invasives.

Environmental Consequences

Alternative A : No Action

Under Alternative A, there would be no change to the terrestrial fauna and habitat conditions observed on-SITE at the time of NRA field reconnaissance, 11 June 2024. As such, Alternative A is anticipated to result in no impact to terrestrial fauna and habitat.

Alternative B: Riverside Adventure Park Archery Facility

Under Alternative B, a portion of the woodland and fallow land would be cleared and developed to facilitate placement of the proposed AF. Since the SITE did not contain high-quality wildlife habitat, and since terrestrial vegetative quality was low, Alternative B is anticipated to have negligible long-term adverse impacts on terrestrial fauna and habitat.

7.2.3 Species and Habitats of Concern

Affected Environment

An official species list obtained from the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation (IPaC) web site indicated that the SITE is situated within the range of the following federally listed endangered, threatened, or rare (ETR) species: the Indiana bat (*Myotis sodalis*, endangered); the northern long-eared bat (*Myotis septentrionalis*, endangered); the tricolored bat (*Perimyotis subflavus*, proposed endangered); the monarch butterfly (*Danaus plexippus*, candidate); and the whooping crane (*Grus americana*, experimental population, non-essential).

Correspondence with the Indiana Department of Natural Resources (IDNR) Natural Heritage Data Center (NHDC) indicated the following records of ETR species or special areas within a 0.50 mile radius of the SITE (**Table 4**).

Table 4: Records Identified in NHDC Correspondence

| Record | Site of Record | Year of Record | Notes | Status in Indiana |
|---|---|----------------|--|----------------------------------|
| Broad-Winged Hawk (<i>Buteo platypterus</i>) | Riverside fish hatchery survey site | 1955 | No notes in INHDC correspondence | State Species of Special Concern |
| Common Nighthawk (<i>Chordeiles minor</i>) | Downtown Indianapolis; near Southside; Fountain Square; White River to Arsenal Tech; Fall Creek, Near Northside; up to Marion Univ. | 2022 | No notes in INHDC correspondence | State Species of Special Concern |
| Spike (<i>Eurynia dilatate</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Rabbitsfoot (<i>Theliderma cylindrica</i>) | West Fork White River | 2018 | Historical; weathered dead (Fisher et al., 2007) | State Endangered |
| Rainbow (<i>Villosa iris</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Little spectaclecase (<i>Villosa lienosa</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Migratory Bird Concentration Area | West Fork White River, Lafayette Rd., Crooked Creek, Kessler Blvd. | 2022 | Forest bird concentration | State Significant |
| Raptor migratory concentration area | White River, Riverside Park, 30 th Street to Lafayette Road | 2022 | Migratory raptor concentration | State significant |

Please refer to the NRA report (**Appendix B**) for documentation of ETR-related correspondence with the USFWS and the NHDC.

Habitat on-SITE includes a woodland consisting primarily of trees of less than 20 inches diameter at breast height (DBH), fallow areas dominated by weedy herbaceous vegetation, and active construction areas. No apparent habitat for monarch butterflies or whooping cranes could be

identified within the SITE area. Since the SITE contains woodland, there is a possibility of the presence of potential Indiana bat, tri-colored bat, and/or Northern long-eared bat roosting habitat.

Environmental Consequences

Alternative A: No Action

Under Alternative A, there would be no impacts to ETR species or their habitats situated within the SITE area.

Alternative B: Riverside Adventure Park Archery Facility

Since the SITE lacks suitable habitat for the monarch butterfly and whooping crane, Alternative B would result in no impact to these ETR species.

The SITE may contain trees that could provide potential bat roosting habitat, and there is a potential for impacts to Indiana bat, tri-colored bat, and/or Northern long-eared bat habitat. To avoid potential impacts to this habitat, tree clearing activities will be completed between October 1 and March 31. Since tree clearing activities will be completed outside of the roosting season, Alternative B is anticipated to result in no impact to these species.

Correspondence with the INHDC indicated one record of the broad-winged hawk within a 0.50 mile radius of the SITE. This species uses relatively large, contiguous forests as habitat. Woodland habitat on-SITE is part of a highly fragmented, urban landscape consisting primarily of developed land. Furthermore, the existing record is 69 years old as of this writing, and is associated with a fish hatchery that has been closed for several decades. Since there have been no subsequent records of broad-winged hawks since that time, the record appears to be outdated. Furthermore, tree clearing activities will take place outside of this species' nesting season, which is April through August.² As such, Alternative B is anticipated to result in no impact to broad-winged hawks.

Correspondence with the INHDC indicated records of the spike, rabbitsfoot, rainbow, and little spectaclecase within a 0.50 mile radius of the SITE. These records are associated with the West Fork White River, which is situated outside of the SITE area. As such, Alternative B is anticipated to result in no impacts to these species.

The SITE does not appear to contain breeding or nesting habitat for common nighthawks. Common nighthawk breeding habitat consists of "open habitats where the ground is devoid of vegetation, such as sand dunes, beaches, logged areas, burned-over areas, forest clearings, rocky outcrops, rock barrens, prairies, peatbogs, and pastures,"³ all of which are absent on-SITE. Nesting habitat includes grasslands, open forests, and urban rooftops,⁴ although rooftops are not ideal habitat.⁵ Since the SITE does not contain suitable common nighthawk habitat, Alternative B is anticipated to result in no impact to common nighthawks.

Correspondence with the INHDC also indicated records of two migratory bird concentration areas within a 0.50 mile radius of the SITE. Since these areas are situated outside of the SITE area, Alternative B is not anticipated to result in impacts.

Given the above considerations, the SITE of the proposed AF does not appear to be a likely habitat for any of the species and habitats of concern indicated in agency correspondence. For this reason, Alternative B is anticipated to have no impact on species and habitats of concern.

7.3 Cultural and Historic Resources

Affected Environment

As a federal action, the undertaking of the proposed project with federal grant funds must comply with Section 106 of the National Historic Preservation Act and must consider effects to historic areas and properties.

A review of National Park Service geospatial information system (GIS) data for the National Register of Historic Places (NRHP) showed no sites mapped within the project area or overall RAP property. The closest NRHP site is a historic district located across the White River approximately 0.30 miles to the east.

No known historical structural or archaeological sites have been identified in the project area to date. An archaeological short report was performed during the schematic design of the overall Riverside Adventure Park project. This report concluded that the project area has the potential to contain cultural resources. Archeological reconnaissance was recommended.

A Phase I archaeological investigation for the SITE was completed, with field reconnaissance occurring on 27 and 28 June 2024. This investigation detected no archaeological sites within the SITE boundary. A copy of the archaeological field reconnaissance report can be referenced in **Appendix C**. The authors of the report make specific recommendations related to on-SITE archaeological monitoring.

Environmental Consequences

Alternative A: No Action

Alternative A would not disturb any potential cultural resource sites, and is anticipated to result in no impact to cultural and historic resources.

Alternative B: Proposed Action

Since investigations have not revealed on-SITE cultural and historic resources, and since construction for the proposed AF will comply with Indiana State Historic Preservation Office (SHPO) requirements, no impacts to cultural and historic resources are anticipated.

7.4 Recreation

Affected Environment

The approximate 200-acre SITE of RAP is situated within the 862-acre Riverside Regional Park, a property owned by the City of Indianapolis, Department of Parks and Recreation, since 1898. As described in **Section 3**, RAP was previously operated as Riverside Golf Course.

As of this writing, the local area contains abundant golf opportunities. Two golf courses are situated within Riverside Regional Park, and five additional golf courses are situated within a three-mile radius of the SITE.

Archery classes are currently provided at the Riverside Family Center, a facility within the Riverside Regional Park. However, this facility is not dedicated to the sport of archery, and hosts other programming and events. Archery classes at the Riverside Family Center do not fully provide the many recreation benefits of the sport of archery.

There are no known archery facilities of any type (commercial or public) situated inside the limits of the Interstate 465 circle, and only one known facility situated within the city limits overall. The Marion County Fish and Game Indy Range facility, situated in the outer limits of Indianapolis, is a private gun range with a small outdoor area set aside for archery practice. This facility is situated approximately five miles west of the SITE, with a driving time of approximately 20 minutes from the SITE.

The only known public archery range in Central Indiana is the Koteewi Archery Range, a property of Hamilton County Parks and Recreation, situated in Noblesville, Hamilton County, Indiana. This facility is situated approximately 24 miles from the SITE, with a driving time of approximately one hour from the SITE.

Environmental Consequences

Alternative A: No Action

Under Alternative A, Riverside Regional Park will remain a landmark recreational facility for the surrounding community and region. However, since opportunities for safe and legal archery in Indianapolis would continue to be unavailable, Alternative A is anticipated to result in moderate to major short-term and long-term adverse impacts.

Alternative B: Proposed Action

Alternative B would provide a dedicated facility that will anchor the Central Nature Zone of RAP. It will also activate a portion of the site that has historically been utilized for maintenance operations and make it accessible to park visitors. The project as proposed is an enhancement to the recreational purpose of RAP.

The AF would provide access to a unique facility to adjacent neighborhoods and residents, but due to Riverside Park's classification as a regional park, the benefits will extend throughout Marion County. The surrounding neighborhood demographics are predominantly minority, and Alternative B would fulfill a key recommendation to the Indy Parks mission to prioritize expansion and improvement in neighborhoods with predominantly people of color and low-income households.

Due to the recreation benefits described above, Alternative B is anticipated to result in major long-term positive benefits. Since none of these benefits will establish during the construction phase, Alternative B is anticipated to result in no impact during AF construction, indicating no short-term impact to recreation.

7.5 Human Health and Safety

Affected Environment

RAP is designed to be an accessible ADA-compliant facility. No major human health and safety conditions have been identified.

Environmental Consequences

Alternative A: No Action

Alternative A would keep the area primarily undeveloped and inaccessible to the public. Alternative A is anticipated to result in no impact to human health and safety.

Alternative B: Proposed Action

The proposed project is considered a positive consequence since it would increase the availability of safety training and archery proficiency. The safety features of the facility will be state of the art, and protocols including a range officer will be integrated into the facility. ADA accessibility to buildings, shooting positions, and target lanes is a major part of the design.

Since human health and safety is one of the goals of the proposed AF, Alternative B is anticipated to result in moderate to major long-term positive impacts on human health and safety. Since none of these benefits will establish during the construction phase, Alternative A is anticipated to result in no impact during AF construction, indicating no short-term impact to human health and safety.

7.6 Socioeconomic Resources

Affected Environment

Social and economic conditions were examined to identify any potential negative impacts associated with the proposed action. The proposed project is in an urban area of the City of Indianapolis, Marion County, Indiana. The U.S. Census Bureau's 2022 estimates report its population was 876,564 and it contained 401,713 housing units within its 361.6 square miles. Indianapolis' median household income is reported as \$61,501. Specifically, the project is within Census Tract 3501 with a 2022 estimated population of 1,460 and 779 housing units within 0.6 square miles. The median household income within the tract was \$48,424, which is about 80% of the county average.

Environmental Consequences

Alternative A: No Action

Under Alternative A, local recreational opportunities would not be expanded by the addition of the proposed AF. This would decrease availability of public recreational archery opportunities in the area and beyond. Since Alternative A fails to expand the opportunities available for local participation in the sport of archery in an under-served area, Alternative A is anticipated to result in minor short-term and long-term adverse impacts on socioeconomic resources.

Alternative B: Proposed Action

Through increased safety, accessibility, and enhancement of user experience, the proposed action alternative will provide recreational users with affordable access to a safe and quality archery facility. Facility construction would increase the availability of safety training opportunities. The addition of improvements to the land is considered a positive socio-economic consequence since it would increase the availability of archery training and proficiency.

Since Alternative B improves the human uses of the SITE, and will provide local construction and archery operations jobs, Alternative B is anticipated to result in minor long-term positive impacts on socioeconomic resources.

7.7 Environmental Justice

Affected Environment

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

The one-mile vicinity around the project area contains both minority and low-income populations including disadvantaged communities as identified by the U.S. EPA's environmental justice screening tool (ejscreen.epa.gov). The one-mile radius vicinity includes a population that is 74% people of color and 53% low income. The area also exceeds most state and national averages for pollution sources.

Environmental Consequences

Alternative A: No Action

No action results in no changes in the environmental justice circumstances of the surrounding vicinity.

Alternative B: Proposed Action

Indy Parks and Recreation continues to prioritize expansion and improvement in neighborhoods with predominately people of color and low-income households. Development of the project will meet many of these expressed needs, especially regarding outdoor adventure programming, and an archery facility within the park will provide a safe environment to learn about archery, provide practice facilities, and provide opportunities for participation in a sport that is not available or accessible to many residents in the urban core of Indianapolis. Archery lessons are currently being offered in the Riverside Family Center, but a new, dedicated archery facility would greatly enhance the opportunities for youth to learn about, practice and engage in the sport.

Since Alternative B is situated within an area that is predominantly occupied by people of color and low-income households, and will provide state-of-the-art recreational resources in said area, Alternative B is anticipated to result in moderate long-term positive impacts on environmental justice. Since these impacts will not establish until completion of the construction phase, Alternative B is anticipated to result in no short-term impact to environmental justice.

8. SUMMARY OF ANALYSIS

The purpose of this EA is to provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

Alternative A: No Action

Analysis indicated the following anticipated impacts for Alternative A (**Table 5**).

Table 5: Summary of Impacts, Alternative A

| Resource Category | Alternative A | |
|---------------------------------|------------------------|------------------------|
| | Short-Term Impacts | Long-Term Impacts |
| Geology, Soils, and Landcover | No Impact | No Impact |
| Water Resources | No Impact | No Impact |
| Air Quality | No Impact | No Impact |
| Noise | No Impact | No Impact |
| Aquatic Fauna and Habitat | No Impact | No Impact |
| Terrestrial Fauna and Habitat | No Impact | No Impact |
| Species and Habitats of Concern | No Impact | No Impact |
| Cultural and Historic Resources | No Impact | No Impact |
| Recreation | Moderate/Major adverse | Moderate/Major adverse |
| Human Health and Safety | No Impact | No Impact |
| Socioeconomic Resources | Minor adverse | Minor adverse |
| Environmental Justice | No impact | No Impact |

Alternative A would have no impact on the biophysical resource categories (water resources, air quality, noise, aquatic fauna & habitat, terrestrial fauna & habitat, species & habitats of concern) since no action would be taken. However, since Alternative A deprives the community, city, and region of the benefits of the proposed AF, Alternative A is anticipated to result in adverse impacts on the human dimensions resource categories (recreation, human health & safety, socioeconomic resources, environmental justice).

Alternative B: Riverside Adventure Park Archery Facility

Analysis indicated the following anticipated impacts for Alternative B (Table 6).

Table 6: Summary of Impacts, Alternative B

| Resource Category | Alternative B | |
|---------------------------------|--------------------|-------------------------|
| | Short-Term Impacts | Long-Term Impacts |
| Geology, Soils, and Landcover | Minor adverse | Minor adverse |
| Water Resources | Negligible | Negligible |
| Air Quality | Negligible | Negligible |
| Noise | Negligible | Negligible |
| Aquatic Fauna and Habitat | No Impact | No Impact |
| Terrestrial Fauna and Habitat | Negligible | Negligible |
| Species and Habitats of Concern | No Impact | No Impact |
| Cultural and Historic Resources | | |
| Recreation | No Impact | Major positive |
| Human Health and Safety | No Impact | Moderate/major positive |
| Socioeconomic Resources | Minor positive | Minor positive |
| Environmental Justice | No Impact | Moderate positive |

As described above, this analysis identified only one area in which Alternative B would have an adverse impact: Geology, Soils, and Landcover. Impacts to this resource category associated with the proposed AF are anticipated to be minor.

Impacts to the other biophysical resource categories are negligible or no impact. The proposed AF avoids the majority of on-SITE woodland and also avoids impacts to Wetland A and to Crooked Creek. Potential impacts to Wetland B are anticipated to result in negligible impacts on

waterresources due to the negligible benefits provided by this small and hydrologically limited wetland. Existing wildlife habitat on-SITE is poor. Potential bat roosting habitat was verified within the SITE area, however impacts to this habitat would be avoided by restricting tree clearing activities to the period outside of the roosting season. No other habitat for species of concern was observed on-SITE.

Since the AF is designed to provide recreational opportunities safely, in an area occupied predominantly by low-income households and people of color, it is anticipated to have a positive impact on the human dimensions resource categories.

9. LIST OF SOURCES, AGENCIES, AND PERSONS CONSULTED

Agencies consulted include the following:

- U.S. Fish and Wildlife Service
- Indiana Department of Natural Resources
- State Historic Preservation Office
- Indy Parks & Recreation
- V3 Companies, Ltd. (primary authors)

10. LIST OF PREPARERS

V3 Companies, Ltd:

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- Ms. Sarah Evans, PLA, ASLA (Landscape Architecture Group Leader)
- Ms. Olivia Speckman (Project Scientist)
- Mr. Aaron Geckle (Senior Project Manager)
- Mr. Jeff Moody (Regulatory Services Group Leader)

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APPENDICES

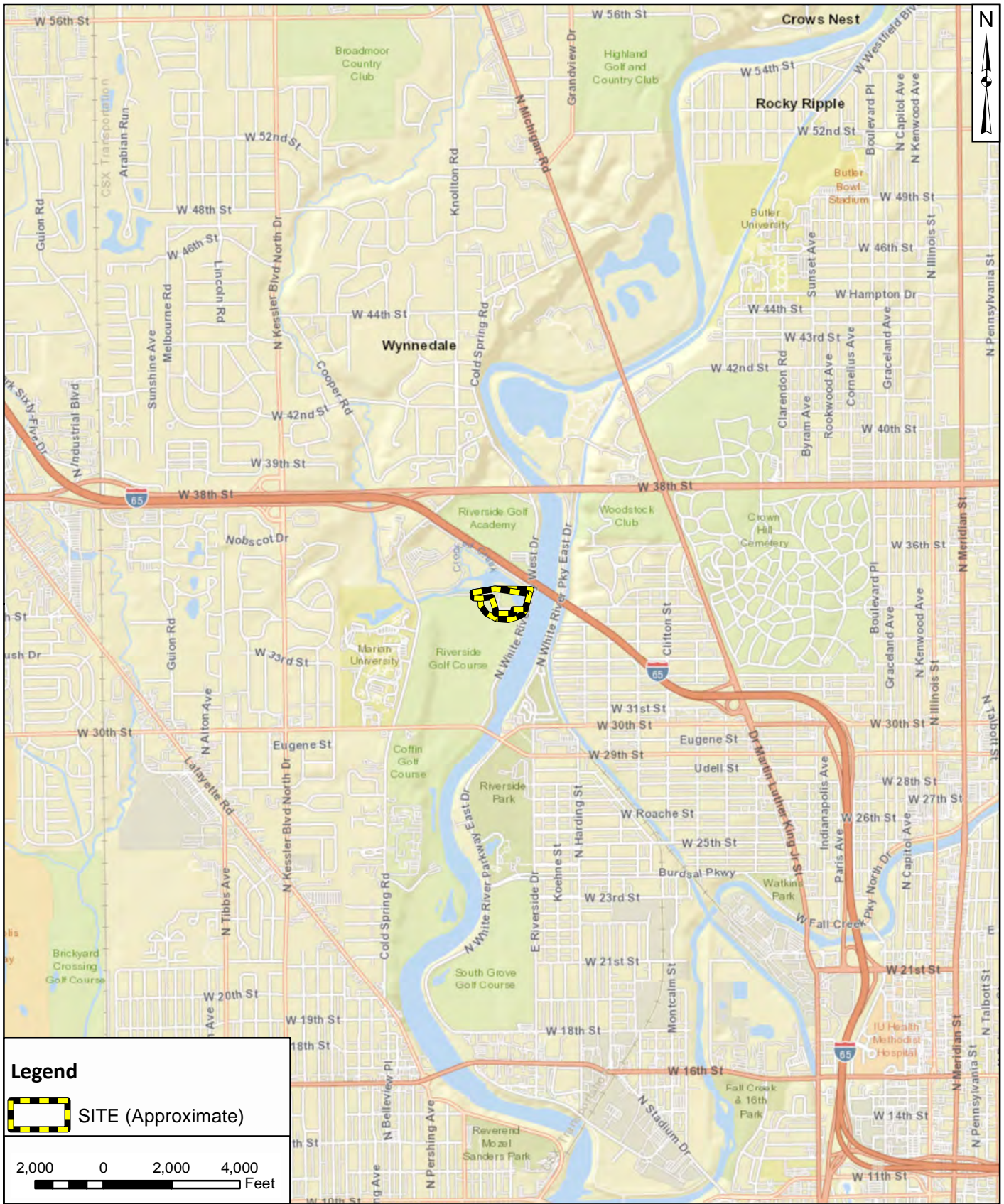
Appendix A: Proposed Archery Facility Concept Drawing

Appendix B: Natural Resources Assessment Report


Appendix C: Archaeological Field Reconnaissance Report

FIGURES






Legend


 SITE (Approximate)


2,000 0 2,000 4,000
Feet

| | | | | | |
|--|------------------------------|---|---|---|------------------|
|  <p>619 N. Pennsylvania Street Indianapolis, IN 46204 317.423.0690 phone www.v3co.com</p> | <p>PROJECT NO.: 19593.02</p> | <p>CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204</p> | <p>TITLE: PROJECT LOCATION MAP</p> | | |
| | <p>CREATED BY: LPV</p> | <p>DATE: 06/25/2024</p> | <p>BASE LAYER: ESRI Street Map (2024)</p> | <p>SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana</p> | <p>FIGURE: 1</p> |
| <p>Visio, Vertere, Virtute... "The Vision To Transform with Excellence"</p> | | <p>SCALE: See Scale Bar</p> | | | |



Legend

 SITE (Approximate)

400 0 400 800
 Feet

 619 N. Pennsylvania Street
 Indianapolis, IN 46204
 317.423.0690 phone
 www.v3co.com


Visio, Vertere, Virtute...
 "The Vision To Transform with Excellence"

| | | |
|--------------------------|--|--------|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 | TITLE: |
| CREATED BY: LPV | | |
| DATE: 06/25/2024 | BASE LAYER: ESRI Street Map (2024) | |
| SCALE: See Scale Bar | | |

| | |
|--|---------------------|
| 2022 AERIAL PHOTOGRAPH | |
| Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | FIGURE: 2 |



Legend

 SITE (Approximate)

250 0 250 500 Feet

 619 N. Pennsylvania Street
Indianapolis, IN 46204
317.423.0690 phone
www.v3co.com


Visio, Vertere, Virtute...
"The Vision To Transform with Excellence"

| | |
|--------------------------|--|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: LPV | |
| DATE: 06/25/2024 | BASE LAYER: Aerial Imagery (2023) |
| SCALE: See Scale Bar | |

| | |
|---|---------------------|
| TITLE: SOIL SURVEY OF MARION COUNTY, INDIANA | FIGURE: 3 |
| SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |



Legend

 SITE (Approximate)

200 0 200 400
Feet

 619 N. Pennsylvania Street
Indianapolis, IN 46204
317.423.0690 phone
www.v3co.com

Visio, Vertere, Virtute...
"The Vision To Transform with Excellence"

| | |
|--------------------------|--|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: LPV | |
| DATE: 06/25/2024 | BASE LAYER: USGS Topographic Map Indianapolis West Quadrangle |
| SCALE: See Scale Bar | |

| | |
|---|---------------------|
| TITLE: NATIONAL WETLANDS INVENTORY (NWI) MAP | FIGURE: 4 |
| SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |

APPENDIX A

PROPOSED ARCHERY FACILITY CONCEPT DRAWING






 619 N. Pennsylvania Street
 Indianapolis, IN 46204
 317.423.0690 phone
 www.v3co.com
 Visio, Vertere, Virtute...
 "The Vision To Transform With Excellence"

PROJECT NO.: 19593.02
 CREATED BY: LPV
 DATE: 07/10/2024
 SCALE: See Scale Bar

CLIENT: Indy Parks and Recreation
 200 East Washington Street
 Suite 2301
 Indianapolis, IN 46204
 BASE LAYER: Aerial Photograph (2023)

TITLE: **PROPOSED ARCHERY FACILITY CONCEPT DRAWING**
 SITE: Riverside Adventure Park Archery Facility
 Indianapolis, Marion County, Indiana

FIGURE: **A**

APPENDIX B

NATURAL RESOURCES ASSESSMENT REPORT



**RIVERSIDE ADVENTURE PARK
ARCHERY FACILITY
NATURAL RESOURCE ASSESSMENT**



PROJECT SITE:

**2420 East Riverside Drive
Indianapolis, Indiana 46208**

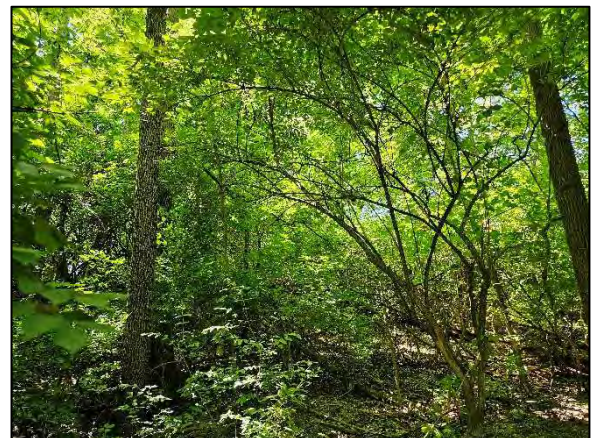
PREPARED FOR:

Indy Parks and Recreation
200 East Washington Street
Suite 2301
Indianapolis, Indiana 46204



PREPARED BY:

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July 2024

TABLE OF CONTENTS

EXECUTIVE SUMMARYIII

CHAPTER 1 INTRODUCTION 1

1.1 INTRODUCTION 1

CHAPTER 2 JURISDICTIONAL RESOURCES..... 2

2.1 U.S. ARMY CORPS OF ENGINEERS..... 2

 2.1.2 WETLANDS 4

 2.1.3 REGIONAL SUPPLEMENT MANUALS 5

2.2 UNITED STATES FISH AND WILDLIFE SERVICE 5

2.3 INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT..... 6

 2.3.1 IDEM PERMIT NOT REQUIRED..... 6

 2.3.2 IDEM PERMIT REQUIRED..... 7

 2.3.3 MITIGATION..... 7

2.4 INDIANA DEPARTMENT OF NATURAL RESOURCES 8

 2.4.1 CONSTRUCTION IN THE FLOODWAY 8

 2.4.2 ENDANGERED, THREATENED, AND RARE SPECIES AND HIGH-QUALITY NATURAL COMMUNITIES..... 8

 2.4.3 IDNR IN-LIEU FEE PROGRAM..... 8

2.5 SOIL AND WATER CONSERVATION DISTRICT 9

2.6 MARION COUNTY SURVEYOR’S OFFICE 9

CHAPTER 3 DESKTOP REVIEW 10

3.1 PROJECT LOCATION MAP 10

3.2 NATIONAL WETLANDS INVENTORY MAP 10

3.2 UNITED STATES GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLE MAP 10

3.4 FLOOD INSURANCE RATE MAP 10

3.5 UNITED STATES DEPARTMENT OF AGRICULTURE SOIL SURVEY 11

3.6 ENDANGERED, THREATENED, AND RARE SPECIES EVALUATION 11

CHAPTER 4 SITE RECONNAISSANCE..... 14

4.1 METHODOLOGY 14

4.2 SITE AND ADJACENT PROPERTY LAND USE..... 14

4.3 WETLAND SUMMARY 14

 4.3.1 WETLAND A – (0.89-ACRE PEM ON-SITE)..... 14

 4.3.2 WETLAND B – (0.02-ACRE PEM ON-SITE)..... 15

4.4 DATA POINT SUMMARY 16



4.5 STREAMS, DRAINAGE FEATURES, AND OTHER AQUATIC FEATURES 18
 4.5.1 CROOKED CREEK – (184 LF, PERENNIAL)..... 18
 CHAPTER 5 CONCLUSIONS 19

FIGURES

- FIGURE 1: PROJECT LOCATION MAP
- FIGURE 2: NATIONAL WETLAND INVENTORY MAP
- FIGURE 3: USGS TOPOGRAPHIC MAP
- FIGURE 4: NATIONAL FLOOD HAZARD LAYER MAP
- FIGURE 5: SOIL SURVEY OF MARION COUNTY, INDIANA MAP
- FIGURE 6: STREAM AND WETLAND DELINEATION MAP

TABLES

TABLE 2-1 TYPICAL MITIGATION RATIOS FOR JURISDICTIONAL WETLANDS..... 3
 TABLE 2-2 ISOLATED WETLAND CLASSES..... 6
 TABLE 2-4 ISOLATED WETLAND MITIGATION RATIOS 8
 TABLE 3-1 NWI CLASSIFICATION DESCRIPTION 10
 TABLE 3-2 SOIL SURVEY ON-SITE 11
 TABLE 3-3 NHDC CORRESPONDENCE..... 12
 TABLE 5-1 AQUATIC FEATURES IDENTIFIED ON-SITE..... 19

APPENDICES

- APPENDIX A: ETR SPECIES CORRESPONDENCE
- APPENDIX B: SITE PHOTOGRAPHS
- APPENDIX C: DATA FORMS



EXECUTIVE SUMMARY

V3 Companies, Ltd. (V3) performed a natural resource assessment (NRA) and wetland delineation for the proposed Riverside Adventure Park Archery Facility, located in Indianapolis, Marion County, Indiana (SITE) on 11 June 2024.

V3 reached the following conclusions based on review of available and reasonably ascertainable federal, state, and local resources, and a SITE inspection conducted on the date referenced above.

- A segment of Crooked Creek was identified within the SITE boundary. Crooked Creek is a perennial stream and relatively permanent water qualifying as a federally jurisdictional “Water of the U.S.” subject to regulation by the U.S. Army Corps of Engineers (USACE) and the Indiana Department of Environmental Management (IDEM).
- Two wetlands were identified on-SITE, Wetlands A and B. Wetland A appeared to exhibit a hydrologic connection to Crooked Creek and would likely be verified as a federally jurisdictional wetland qualifying as a “Water of the U.S.” subject to USACE and IDEM authority. Wetland B appeared to lack a hydrologic connection to any “Water of the U.S.,” and would likely be considered isolated and subject to regulation by the IDEM alone.
- Analysis of the MapIndy¹ online GIS application indicated that no county regulated drains are situated within the SITE area.
- An official species list obtained from the U.S. Fish and Wildlife Service (USFWS) Information Planning and Consultation (IPaC) web site indicated that the SITE is within the range of the Northern long-eared bat (*Myotis septentrionalis*, endangered), Indiana bat (*Myotis sodalis*, endangered), tricolored bat (*Perimyotis subflavus*, proposed endangered), whooping crane (*Grus americana*, experimental population, non-essential), and monarch butterfly (*Danaus plexippus*, candidate).
- Correspondence with the Indiana Department of Natural Resources (IDNR) Indiana Natural Heritage Data Center (INHDC) indicated eight records of endangered, threatened, or rare (ETR) species or significant areas are within a 0.50 mile radius of the SITE.

V3 anticipates that Crooked Creek and Wetland A will be verified as federally jurisdictional “Waters of the U.S.” subject to USACE and IDEM authority. If impacts to these features are proposed, the type of permit(s) required will depend on the type and extent of impacts:

- Proposed impacts of less than 0.10 acre of wetland and/or 300 linear feet (LF) of stream will qualify for the Regional General Permit Notification (RGPN) to IDEM. Under the RGPN, mitigation for impacts is not typically required.
- Proposed impacts of more than 0.25 acre of wetland and/or 500 LF of stream will require an Individual Section 401 Water Quality Certification (WQC) from the IDEM.
- Proposed impacts of less than 0.25 acre of wetland and/or less than 500 linear feet (LF) of stream will qualify for the USACE Nationwide Permit (NWP) #42 (Recreation Facilities). Under the NWP #42, mitigation is required only if impacts exceed 0.10 acre of wetland and/or 300 LF of stream.
- Proposed impacts of 0.50 to 0.99 acre of wetland and/or 500 to 1,500 LF of stream will qualify for the USACE Regional General Permit (RGP) with Individual Section 401 WQC from the IDEM. Under the USACE RGP, mitigation is required for impacts.

¹ “MapIndy,” *IndyGIS Applications*, [Indy.gov](https://maps.indy.gov/MapIndy/). Accessed June 2024. Available: <https://maps.indy.gov/MapIndy/>



Mitigation for impacts to federally jurisdictional “Waters of the U.S.” is usually required at a ratio of 1:1 for stream impacts, 4:1 for palustrine, forested (PFO) impacts, and 2:1 for palustrine, emergent (PEM) impacts.

The definition of “Waters of the U.S.” may change in response to legal challenges or policy measures. The USACE is the final authority responsible for determining whether any aquatic feature qualifies for jurisdiction under the Clean Water Act.

V3 anticipates that Wetland B will be verified as an isolated wetland and “Water of the State” subject to regulation by the IDEM alone. The type of permit required, and the mitigation ratios, depend on the class of the wetland as verified by IDEM. If mitigation is required, ratios range from 3:1 to 1:1. IDEM may grant an exemption from permitting and mitigation requirements for impacts to wetlands that qualify as “exempt isolated wetlands” per Indiana Code (IC) § 13-11-2-74.5.

If development activities are proposed to impact any of the on-SITE aquatic features, V3 recommends that the final report and associated figures be submitted to USACE for Jurisdictional Determination (JD).

A review of the digital National Flood Hazard Layer (NFHL) for Marion County indicated that the entire SITE is situated within an area mapped as Flood Zone AE (White River). The base flood elevation (BFE) on-SITE is approximately 702 feet above mean sea level (AMSL). Work within the regulated floodway of Crooked Creek will require permitting via the IDNR Division of Water, and may require a Construction in a Floodway permit.

If proposed development activities will disturb one or more acres of land, a Construction Stormwater General Permit may be required.

At the time of SITE reconnaissance, V3 observed potential bat habitat on-SITE. The USFWS recommends avoiding impacts to bat habitat trees between March 31 and October 1. This will likely become a condition of any required permitting. This also avoids potential impacts to broad-winged hawks, whose nesting period is April through August. The SITE does not appear to contain habitat for the other endangered, threatened, and rare (ETR) species indicated in agency correspondence.



CHAPTER 1 INTRODUCTION

This report has been prepared solely in accordance with an agreement between Indy Parks and Recreation (“CLIENT”) and V3 Companies, Ltd (“V3”).

The services performed by V3 have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practices relating to this type of engagement.

This report is solely for the use of CLIENT and was prepared based upon an understanding of CLIENT’s specific objective(s) and based upon information obtained by V3 in furtherance of CLIENT’s specific objective(s). Any reliance of this report by third parties shall be at such third party's sole risk as this report may not contain, or be based upon, sufficient information for purposes of other parties, for their objectives, or for other uses. This report shall only be presented in full and may not be used to support any other objectives than those for CLIENT as set out in the report, except where written approval and consent are expressly provided by CLIENT and V3.

1.1 INTRODUCTION

The purpose of this investigation was to conduct an NRA and wetland delineation of the SITE to evaluate potential land development permitting requirements regarding natural resources. In this report, V3 provides a detailed description of the information reviewed and collected as part of the scope of work for this project. V3 summarizes the jurisdictional framework applicable to this project, provides a desktop review of relevant and publicly available documents, and details information collected during the SITE reconnaissance including a wetlands determination, an evaluation of the potential presence of other natural resources within the SITE boundary, and a discussion of ETR species and habitat. The Conclusions section summarizes V3’s findings, addresses potential areas of concern and permitting, regulatory, and other relevant issues.

The SITE is approximately 15 acres and is located at 2420 East Riverside Drive in Indianapolis, Marion County, Indiana (**Figure 1**).



CHAPTER 2 JURISDICTIONAL RESOURCES

2.1 U.S. ARMY CORPS OF ENGINEERS

Through the Clean Water Act (CWA) of 1972, Section 404, the USACE maintains authority over “Waters of the U.S.” as defined in the Code of Federal Regulations (CFR). The definition of “Waters of the U.S.” changes in response to U.S. Supreme Court (USSC) decisions and agency rulemaking.

At the time of this writing, the definition of “Waters of the U.S.” varies from state to state, as per each state’s response to the 2023 USSC decision *Sackett v. Environmental Protection Agency*. Currently, Indiana’s definition of “Waters of the U.S.” derives from the pre-2015 regulatory regime, as published in the July 2014 Federal Register, at 33 CFR § 328.3. According to this definition, “Waters of the U.S.” are:

- All waters used in commerce and subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters (lakes, streams, wetlands, etc.) relevant to interstate/foreign commerce;
- All impoundments of waters otherwise qualifying as “Waters of the U.S.”;
- Tributaries of waters otherwise identified as “Waters of the U.S.”;
- Territorial seas; and
- Wetlands adjacent to waters identified as “Waters of the U.S.”

For a water to qualify for USACE regulation as a “Water of the U.S.,” that water must be a “relatively permanent water” as per the definitions given in 40 CFR § 120.2. The USACE is the final authority on whether a water qualifies as a “relatively permanent water” and “Water of the U.S.,” and makes determinations on a case-by-case basis. For non-tidal “Waters of the U.S.” subject to USACE regulation, the limit of jurisdiction, as described in the July 2014 version of 33 CFR § 328.4, is the ordinary high water mark (OHWM), unless adjacent wetlands are present. If adjacent wetlands are present, the limit of jurisdiction is the boundary of the adjacent wetland.

Section 10 of the Rivers and Harbors Act of 1899 (33 United States Code [USC] § 403) also serves as a basis of federal authority over certain waters. Definitions and permitting requirements for jurisdictional waters under Section 10 can be found in 33 CFR § 322 and 329.

Before any fill or dredging activities are conducted within the boundary of a “Water of the U.S.,” including federal jurisdictional wetlands, a Section 404 permit must be obtained from the USACE. The USACE uses nationwide permits (NWP), regional general permits (RGPs) for Indiana, and individual permits (IPs).

Nationwide Permits have been developed for projects that meet a specific criterion and are deemed to have minimal impacts to the aquatic environment. There are/will be 58 NWPs created to streamline the permit process for smaller, repetitive, low-impact projects including, but not limited to, aids to navigation, fish and wildlife harvesting, outfall structures and maintenance, stream and wetland restoration, maintenance dredging of existing basins, agriculture activities, mining activities, oil or natural gas pipeline activities, surface coal mining activities, residential developments, commercial and institutional developments, agricultural activities, recreational facilities, stormwater management facilities, mining activities, commercial shellfish mariculture activities, underground coal mining activities, land-based renewable energy generation facilities, and water-based renewable energy generation pilot projects. The new final rule issues four new NWPs: NWP 55 (seaweed mariculture activities); NWP 56 (finfish mariculture activities); NWP 57



(electric utility line and telecommunications activities); and NWP 58 (utility line activities for water and other substances).

Regional General Permits (RGP) for Indiana authorizes proposed impacts associated with any construction activities including agriculture and mining activities. Wetland impacts must be less than one (1) acre to qualify for this type of permit.

RGP Notification to IDEM may be used for impacts that are less than 0.10 acre of wetland or 300 linear feet (LF) of stream, and are deemed to have minimal impacts to the aquatic environment. Furthermore, the USACE will also need to be notified for any projects that propose qualifying impacts.

Individual Permits (IP) are required for proposed wetland impacts of one acre and greater. The review process for this type of permit may take up to one year due to the higher level of scrutiny by the regulatory agencies.

The Louisville District of USACE developed mitigation guidelines in September 2004 for the federal jurisdictional wetlands and “Waters of the U.S.” The guidelines require stream and wetland characterizations for all drainage features and wetlands proposed to be impacted. The document required for permitting must contain extensive detail of the proposed impact sites, the proposed mitigation sites, and information regarding the construction and monitoring of the mitigation sites.

Impacts to USACE jurisdictional wetlands or other “Waters of the U.S.” will require in-kind mitigation. The 2008 Compensatory Mitigation Rule states three mechanisms for mitigation and order of preference: mitigation banks, in-lieu fee programs, and permittee-responsible mitigation. The typical mitigation ratios for impacts to federally jurisdictional wetlands and other “Waters of the U.S.” are as follows:

Table 2-1 Typical Mitigation Ratios for Jurisdictional Wetlands

| Impact Type | Replacement |
|----------------------|--------------------|
| Emergent Wetland | 2:1 Acres |
| Scrub-Shrub Wetland | 3:1 Acres |
| Forested Wetland | 4:1 Acres |
| Stream/Drainage Ways | 1:1 Linear feet |
| Open Water | 1:1 Acres |

*4:1 ratio is an IDEM requirement and USACE only requires 3:1 ratio for forested wetlands.



2.1.2 Wetlands

Wetlands offer a variety of functions and values that may include, but are not limited to, groundwater recharge/discharge, flood flow alteration, sediment/toxicant retention, and fish and wildlife habitat. Because of the perceived functions and values of wetlands, USACE developed the Wetlands Delineation Manual, (*1987 Manual*)² to identify wetlands.

Wetlands are defined in the *1987 Manual* as, “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”² The *1987 Manual* outlines the protocol for distinguishing wetland areas from “upland” areas. Wetland areas are delineated according to three (3) primary criteria: vegetation, soil, and hydrology. An area is determined to qualify as a wetland if it meets the following “general diagnostic environmental characteristics:”

- Hydrophytic vegetation
- Hydrology
- Hydric Soil

Hydrophytic Vegetation

The *1987 Manual* defines hydrophytic vegetation as, “...the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present...”

The USFWS and the National Wetland Plant List Panel developed the following categories to establish the relative probability of species occurring within the ranges between upland and wetland. The list was updated by USACE with cooperation with other federal agencies in 2020. The following list is the categories for plant species:

- ***Obligate Wetland Plants*** (OBL) – Probability of >99% occurrence in wetlands with a 1% probability of occurrence in upland areas.
- ***Facultative Wetland Plants*** (FACW) – Probability of 67% - 99% occurrence in wetlands with a 1% - 33% probability of occurrence in upland areas.
- ***Facultative Plants*** (FAC) - Probability of 34% - 66% occurrence in either wetlands or upland areas.
- ***Facultative Upland Plants*** (FACU) - Probability of 67% - 99% occurrence in upland areas with a 1% - 33% probability of occurrence in wetland areas.
- ***Obligate Upland Plants*** (UPL) - Probability of >99% occurrence in upland areas with a 1% probability of occurrence in wetland areas.

The hydrophytic vegetation criterion is met if greater than 50% of dominant species are FAC, FACW, or OBL.

Hydrology

Areas that are inundated or saturated to the surface for a significant time during the growing season typically exhibit indicators of wetland hydrology. Careful examination of the site conditions is needed to adequately identify wetland areas. The anaerobic and reducing conditions in inundated or saturated

² USACE. Waterways Experiment Station. Wetlands Research Program. “Corps of Engineers Wetlands Delineation Manual.” Vicksburg, MS: Environmental Laboratory, 1987



soils influence the plant community and may favor a dominance of hydrophytic species. The *1987 Manual* further defines the growing season and methodology for determining evidence of hydrology.

There are two types of hydrology indicators, primary and secondary. Primary indicators include, but are not limited to, inundation, saturation within the upper 12 inches of soil, water marks, drift lines, sediment deposits, and drainage patterns. Secondary indicators include, but are not limited to, oxidized root channels, water stained leaves, local soil survey data, FAC-Neutral test, etc. One primary or two secondary indicators are required to satisfy this criterion.

Hydric Soil

As per the *Hydric Soils Technical Note 1* "A hydric soil is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."

³ All organic soils (except Folists) are considered hydric, while mineral soils must be carefully examined to qualify as hydric. There are several indicators that suggest a soil is hydric. An inspection of the soil profile to a minimum depth of 16 inches below ground surface is required in order to make this determination. The soil data used is the horizon of soil immediately below the A-horizon, or at 10 inches below the soil surface. Hydric soils may be present in an upland position; however, there may be insufficient evidence of hydrology or vegetation for the area to qualify as wetland.

2.1.3 Regional Supplement Manuals

A series of regional supplements⁴ to the 1987 manual are developed by the Army Engineer Research and Development Center (ERDC) to be more specific to regionally geographical conditions. Each supplement manual is developed to account for regional differences in climate, geology, soils, hydrology, plant and animal communities, etc. The intent of the regional supplements is to update the 1987 Manual with current information and technology rather than change the definition or manner that wetlands were delineated. The procedure for completing a wetland delineation is to use a combination of the 1987 Manual and the correct regional supplement manual (**Table 2-2**).

Regional Supplement Manuals will continue to be developed and revised electronically with the improvement of technology and procedures.

2.2 UNITED STATES FISH AND WILDLIFE SERVICE

The Endangered Species Act (ESA) of 1973 intends to conserve the habitats of federally endangered or threatened species and to assist in the recovery of species listed. The USFWS is the regulating authority for this act and works with the states to provide additional conservation measures. The USFWS⁵ defines two classifications of protected species, endangered and threatened. An endangered species is an organism that is in danger of extinction throughout all or a significant portion of its range. A threatened species is an organism that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals are eligible for listing.

Any activity that may incidentally harm federally threatened or endangered species is prohibited by the ESA. For proposed development areas that contain listed species, private landowners may create a Habitat Conservation Plan to minimize the impact on the listed species. This plan should include the

³ U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). Hydric Soils Technical Note 1. Proper Use of Hydric Soil Terminology. Accessed January 2018. <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/hydric/>

⁴ U. S. Army Corps of Engineers. 2008. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-27. Vicksburg, MS: U.S. Army Engineer Research and Development Center

⁵ U.S. Fish and Wildlife Service (USFWS). Endangered Species Program. *ESA Basics*. Arlington, VA: USFWS, 2004. Accessed January 2018. https://www.fws.gov/endangered/esa-library/pdf/ESA_basics.pdf



protection of breeding, foraging, and shelter requirements for the listed species. The USFWS may then grant an Incidental Take Permit for the project. In the event that any person knowingly violates any provision of the Act or Permit, the person may be assessed penalties.

Projects that involve federal funding or permitting on a site where endangered or threatened species are known to occur or where significant habitat is present will require an alternatives analysis and extensive documentation of agency coordination.

2.3 INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IDEM is the state agency that reviews and issues permits for impacts to non-jurisdictional aquatic resources. IDEM regulates impacts to isolated wetlands, which are wetlands that exhibit wetland indicators but do not qualify as “Waters of the U.S.” and are not subject to USACE regulation under Section 404(a) of the CWA.⁶ IDEM does not require a permit for impacts to ephemeral streams.^{7,8}

IC 13-11-2-25.8 divides isolated wetlands into three classes:

Table 2-23 Isolated Wetland Classes

| Class I Isolated Wetland | Class II Isolated Wetland | Class III Isolated Wetland |
|--|--|---|
| Has been disturbed or affected by human activity (at least 50 percent of wetland area) | Supports moderate habitat or hydrological functions | Located in an undisturbed or minimally disturbed setting; supports more than minimal wildlife or aquatic habitat or hydrologic function |
| Supports minimal wildlife or aquatic habitat or hydrologic function, does not provide critical habitat for ETR species | Is dominated by native species but is without the presence of, or habitat for, ETR species | Is one of the rare and ecologically important types listed in IC 13-11-2-25.8(3)(B) |

IDEM regulates impacts to isolated wetlands using the isolated wetland general permit (IWGP) and the isolated wetland individual permit (IWIP). However, permitting requirements depend on whether the isolated wetland to be impacted is an exempt isolated wetland or a state regulated wetland.

2.3.1 IDEM Permit Not Required

No IDEM permit is required if:

- The impacted wetland is an exempt isolated wetland; or
- The impacted wetland is a state regulated wetland, and certain conditions are met

Exempt isolated wetlands include the following. Definitions and qualifications can be referenced in IC 13-11-2-74.5(a).

- Class I isolated wetlands, regardless of size
- Class II isolated wetlands of 0.375 acre or smaller
- Fringe wetlands
- Incidental features
- Voluntarily-created isolated wetlands
- Isolated wetlands associated with manmade waters
- Isolated wetlands situated on land subject to certain regulations

⁶ Indiana Code (IC) 13-11-2-112.5

⁷ IC 13-18-22-1(b)(6)

⁸ An ‘ephemeral stream’ is “surface water flowing or pooling only in direct response to precipitation such as rain or snowfall,” defined in IC 13-11-2-72.4.



- Pollution or stormwater control wetlands

For sites where multiple Class II isolated wetland exemptions are claimed and no other exemption applies, an exemption may be claimed for either the largest qualifying individual Class II isolated wetland on-site, or for 60 percent of the cumulative acreage of qualifying Class II isolated wetlands on-site, whichever is larger.⁹

If an isolated wetland does not qualify as an exempt isolated wetland, it is a state regulated wetland as per IC 13-11-2-221.5. As of 1 July 2021, IDEM does not require a permit for impacts to state regulated wetlands that meet the following conditions:

- Class II isolated wetlands of 0.750 acre or smaller situated within a municipality, where proposed impacts consist of dredge/fill¹⁰
- Isolated wetlands situated in cropland that has been farmed in the five years preceding impacts or for which the USACE has issued a jurisdictional determination finding no federally regulated wetlands on-site within the ten years preceding impacts¹¹

2.3.2 IDEM Permit Required

If the conditions in **Section 2.3.1** do not apply, isolated wetland impacts require a permit from IDEM. The permits available are the IWGP or the IWIP. IDEM permit applications are submitted concurrently with USACE permit applications and/or IDEM Section 401 WQCs.

The IWGP is required for:

- Class II isolated wetland impacts associated with field tile maintenance if such maintenance is necessary to restore adjacent drainage and does not drain the wetland
- Class III isolated wetland impacts associated with field tile maintenance if such maintenance is necessary to restore adjacent drainage and does not drain the wetland. In such cases IDEM also requires site-specific approval for the impacts

The IWIP is required for:

- Class II isolated wetland impacts of more than 0.375 acre, unless such impacts are for field tile maintenance that qualifies for the IWGP
- Class III isolated wetland impacts, regardless of size, unless the impacts are for field tile maintenance that qualifies for the IWGP

2.3.3 Mitigation

IWGP and IWIP permits require compensatory mitigation. Mitigation may be completed through an approved mitigation bank,¹² the in-lieu fee (ILF) program,¹³ on-site, or off-site. If off-site mitigation is proposed, it must be situated within the same eight-digit U.S. Geological Survey (USGS) hydrologic unit code (HUC) as the impacts, or within the same county, or within a designated service area established in an approved ILF mitigation program. Exempt isolated wetlands can also be used to contribute toward

⁹ IC 13-11-2-74.5(c)

¹⁰ IC 13-18-22-1(b)(7)

¹¹ IC 13-18-22-1(d). Cropland is farmland that is “cultivated for agricultural purposes” and “from which crops are harvested” (IC 13-11-2-48.5). Pasture does not qualify as cropland unless it is in “active rotation with cultivated crops for purposes of soil maintenance or improvement” (IC 13-11-2-48.5).

¹² 327 IAC 9.5-2-4(2); 327 IAC 17-4-5(b); 327 IAC 17-4-10.

¹³ IC 13-11-2-104.7



mitigation requirements. If this is done, the exempt isolated wetlands become state regulated wetlands.¹⁴

If compensatory mitigation is completed prior to the start of the wetland activity, the mitigation ratio of impacts to mitigation required is 1 to 1. In all other cases, the following mitigation ratios apply¹⁵:

Table 2-45 Isolated Wetland Mitigation Ratios

| Impacted Wetland Class | Replacement Class | On-Site and In-Lieu Fee Ratio | Off-Site Ratio |
|------------------------|-----------------------|-------------------------------|-----------------------|
| Class II | Class II or Class III | 1.5 to 1 Non-forested | 2 to 1 Non-forested |
| | | 2 to 1 Forested | 2.5 to 1 Forested |
| Class III | Class III | 2 to 1 Non-forested | 2.5 to 1 Non-forested |
| | | 2.5 to 1 Forested | 3 to 1 Forested |

These mitigation ratios do not apply to USACE jurisdictional wetlands. They apply only to state regulated wetlands.

2.4 INDIANA DEPARTMENT OF NATURAL RESOURCES

2.4.1 Construction in the Floodway

The IDNR Division of Water has authority over the floodways of waterways that have a watershed greater than one square mile. If construction activities are proposed in a regulated floodway then a Construction in a Floodway permit would be required. A watershed analysis would be required to determine the actual drainage for each waterway proposed to be impacted. In addition, trees cleared within a regulated floodway will require compensatory mitigation.

2.4.2 Endangered, Threatened, and Rare Species and High-Quality Natural Communities

The IDNR Division of Nature Preserves provides a Natural Heritage Data center for the documentation of state and federally listed ETR species and high-quality natural communities. The IDNR serves to identify, protect, and manage significant natural areas and ETR species through coordination with the land owner. Currently over 23,000 acres of dedicated Nature Preserves are located throughout the state. The preservation of natural communities supports species diversity and provides examples of historic conditions for recreational, educational, and scientific opportunities.

2.4.3 IDNR In-Lieu Fee Program

Effective 3 May 2018, the USACE Louisville, Chicago, and Detroit Districts approved the IDNR In-Lieu Fee (ILF) program. The Indiana Stream and Wetland Mitigation Program (IN SWMP) was approved to sell wetland and stream mitigation credits consistent with 33 CFR Part 332, "Compensatory Mitigation for Losses of Aquatic Resources." The ILF program allows the DNR to sell stream and wetland mitigation credits that can be used for compensatory mitigation for unavoidable impacts to isolated wetlands in the State of Indiana and "Waters of the U.S." Permits are required from USACE in accordance with

¹⁴ IC 13-11-22-6

¹⁵ IC 13-18-22-6



Section 404 of the CWA and by IDEM under Section 401 Water Quality Certification of the CWA and Indiana Isolated Wetlands Law (IAC 13-18-22).

2.5 SOIL AND WATER CONSERVATION DISTRICT

A Construction Stormwater General Permit is required for construction related activities that will disturb one or more acres of land that is not within a designated Municipal Separate Storm Sewer System (MS4) entity or is in a MS4 entity that does not have a stormwater ordinance established. The purpose is to reduce pollutants, mainly sediment from soil erosion, in stormwater discharges into surface Waters of the State for the protection of public health, existing water uses, and aquatic biota.

A Construction Plan, including a Storm Water Pollution Prevention Plan, must be reviewed and approved by the Marion County Soil and Water Conservation District (SWCD) or the applicable local agency as part of the Construction Stormwater General Permit process. A public notice of the intent to operate under the Construction Stormwater General Permit must be submitted in a newspaper of general circulation. A Notice of Intent (NOI) letter must then be submitted to IDEM including a \$75 application fee, proof of the public notice, and the Construction Plan Review Approval Verification Form as received from the local agency. A Construction Stormwater General Permit will be issued by IDEM if all materials are approved.

2.6 MARION COUNTY SURVEYOR'S OFFICE

The Indianapolis and Marion County Department of Public Works has authority over designated regulated drains. Drains could include subdivision drains, field tiles, or open ditches and creeks, within Marion County. Authorization from the Indianapolis and Marion County Department of Public Works would be required for any work conducted within the easement of a regulated drain. Any construction affecting a regulated drain, and/or the corresponding easement on either side of the drain must be reviewed and approved by the Indianapolis and Marion County Department of Public Works prior to disturbance.



CHAPTER 3 DESKTOP REVIEW

V3 reviewed applicable, readily available and accessible historical information for the potential presence of wetlands, “Waters of the U.S.”, and other natural resources. The findings are presented below.

3.1 PROJECT LOCATION MAP

The project is located at 2420 East Riverside Drive in Indianapolis, Marion County, Indiana. The SITE location is shown on the ESRI World Street Map in **Figure 1**.

3.2 NATIONAL WETLANDS INVENTORY MAP

National Wetlands Inventory (NWI) maps were developed to meet a USFWS mandate to map the wetland and deepwater habitats of the U.S. These maps were developed using high altitude aerial photographs and USGS Quadrangle maps as a topographic base. Indicators that exhibited pre-determined wetland characteristics, visible in the photographs, were identified according to a detailed classification system. The NWI map retains some of the detail of the Quadrangle map; however, it is used primarily for demonstration of wetland areas identified by the agency. In general, the NWI information requires field verification.

NWI data is shown projected over the Indianapolis West, Indiana USGS 7.5-Minute Quadrangle Maps in **Figure 2**. Two NWI feature(s) is/are mapped within the SITE area. Crooked Creek is mapped as a riverine, unconsolidated bottom (R2UBH) feature, and a portion of a palustrine, emergent (PEM1C) feature is mapped within the SITE’s northeast area (**Table 3-1**). The presence of NWI features mapped partially or fully within the SITE area suggests the potential presence of wetlands or other aquatic features on-SITE.

Table 3-1 NWI Classification Description

| Symbol | Description | Count |
|--------|---|-------|
| PEM1C | Palustrine, emergent, persistent, seasonally flooded | 1 |
| R2UBH | Riverine, lower perennial, unconsolidated bottom, permanently flooded | 1 |

3.2 UNITED STATES GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLE MAP

A USGS 7.5-Minute Quadrangle map displays contour lines to portray the shape and elevation of the land surface. Quadrangle maps render the three-dimensional changes in elevation of the terrain on a two-dimensional surface. The maps usually portray both manmade and natural topographic features. Although they show lakes, rivers, various surface water drainage trends, vegetation, etc., they typically do not provide the level of detail needed for accurate evaluation of wetlands. However, the existence of these features may suggest the potential presence of wetlands.

The SITE is situated in the Indianapolis West, Indiana USGS 7.5-Minute Quadrangle Map, in Section 22, Township 16 North, Range 3 East. V3 evaluated the topography and concluded that the SITE elevation ranges from approximately 710 to 695 feet AMSL. Crooked Creek appears as a named aquatic feature mapped partially within the SITE area (**Figure 3**).

3.4 FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) was developed in 1979 to reform disaster relief and recovery, civil defense, and to prepare and mitigate for natural hazards. The Mitigation Division of



FEMA manages the National Flood Insurance Program which provides guidance on how to lessen the impact of disasters on communities through flood insurance, floodplain management, and flood hazard mapping. Proper floodplain management has the ability to minimize the extent of flooding and flood damage and improve stormwater quality by reducing stormwater velocities and erosion. The one percent annual chance flood (100-year flood) boundary must be kept free of encroachment as the national standard for the program.

V3 reviewed digital National Flood Hazard Zone data for Marion County, Indiana. The entire SITE is situated within an area mapped as floodway (**Figure 4**).

3.5 UNITED STATES DEPARTMENT OF AGRICULTURE SOIL SURVEY

V3 reviewed the soils mapped on-SITE using the Natural Resource Conservation Service (NRCS) digital soil survey data for Marion County, Indiana. This data is projected over aerial photography, illustrating distinct soil map unit boundaries, in **Figure 5**.

Table 3-2 Soil Survey On-SITE

| Soil Map Unit | Description | Hydric within Marion County |
|---------------|---|-----------------------------|
| Ge | Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration | No |
| Ua | Udorthents, cut and filled | No |

No hydric soil units are mapped within the SITE. Soils are considered hydric if more than 50 percent of the soil contains hydric components according to the NRCS Web Soil Survey.

3.6 ENDANGERED, THREATENED, AND RARE SPECIES EVALUATION

Please refer to **Appendix C** for documentation of ETR-related correspondence with the USFWS and the NHDC.

An official species list obtained from the USFWS IPaC web site¹⁶ indicated that the SITE is situated within the range of the following federally listed species: the Indiana bat (*Myotis sodalis*, endangered); the northern long-eared bat (*Myotis septentrionalis*, endangered); the tricolored bat (*Perimyotis subflavus*, proposed endangered); the monarch butterfly (*Danaus plexippus*, candidate); and the whooping crane (*Grus americana*, experimental population, non-essential).

Habitat on-SITE includes a woodland consisting primarily of trees of less than 20 inches diameter at breast height (DBH), fallow areas dominated by weedy herbaceous vegetation, and active construction areas. No apparent habitat for monarch butterflies or whooping cranes could be identified within the SITE area. However, since the SITE contains woodland, there is a possibility of the presence of potential Indiana bat, tri-colored bat, and/or Northern long-eared bat roosting habitat. To avoid potential impacts to bat roosting habitat, the USFWS recommends that tree clearing activities are completed outside of the bat roosting season. Tree clearing should occur only between October 1 and March 31.

¹⁶ "Information for Planning and Consultation," U.S. Fish & Wildlife Service (USFWS), Accessed November 2023. Available: <https://ipac.ecosphere.fws.gov/>



Correspondence with the Indiana Department of Natural Resources (IDNR) Natural Heritage Data Center (NHDC) indicated the following records of ETR species or special areas within a 0.50 mile radius of the SITE (Table 4).

Table 3-3 NHDC Correspondence

| Record | Site of Record | Year of Record | Notes | Status in Indiana |
|---|---|----------------|--|----------------------------------|
| Broad-Winged Hawk (<i>Buteo platypterus</i>) | Riverside fish hatchery survey site | 1955 | No notes in NHDC correspondence | State Species of Special Concern |
| Common Nighthawk (<i>Chordeiles minor</i>) | Downtown Indianapolis; near Southside; Fountain Square; White River to Arsenal Tech; Fall Creek, Near Northside; up to Marion Univ. | 2022 | No notes in NHDC correspondence | State Species of Special Concern |
| Spike (<i>Eurynia dilatate</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Rabbitsfoot (<i>Theliderma cylindrica</i>) | West Fork White River | 2018 | Historical; weathered dead (Fisher et al., 2007) | State Endangered |
| Rainbow (<i>Villosa iris</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Little spectaclecase (<i>Villosa lienosa</i>) | West Fork White River | 2018 | Weathered dead (Fisher, 2018) | State Species of Special Concern |
| Migratory Bird Concentration Area | West Fork White River, Lafayette Rd., Crooked Creek, Kessler Blvd. | 2022 | Forest bird concentration | State Significant |
| Raptor migratory concentration area | White River, Riverside Park, 30 th Street to Lafayette Road | 2022 | Migratory raptor concentration | State significant |

Correspondence with the INHDC indicated one record of the broad-winged hawk within a 0.50 mile radius of the SITE. This species uses relatively large, contiguous forests as habitat.^{17,18} Woodland habitat on-SITE is part of a highly fragmented, urban landscape consisting primarily of developed land. Furthermore, the existing record is 69 years old as of 2024, and is associated with a fish hatchery that has been closed for several decades. There have been no subsequent records of broad-winged hawks since that time. To avoid potential impacts to broad-winged hawks during the nesting season of April through August,¹⁹ tree clearing activities should be completed between September 1 and March 31.

¹⁷ Titus, K, and J Mosher, "Nest-Site Habitat Selected by Woodland Hawks in the Central Appalachians," *The Auk* 98 (1981).

¹⁸ McCabe, R, L Goodrich, T Master, and Z Bordner, "Broad-Winged Hawk Nesting Behavior in Forested Landscapes of Pennsylvania," *Journal of Raptor Research* 53 (2019).

¹⁹ University of Minnesota College of Veterinary Medicine, "Broad-Winged Hawk," *The Raptor Center*. Accessed online, July 2024. Available: <https://raptor.umn.edu/about-raptors/raptors-north-america/broad-winged-hawk>



The SITE does not appear to contain breeding or nesting habitat for common nighthawks. Common nighthawk breeding habitat consists of “open habitats where the ground is devoid of vegetation, such as sand dunes, beaches, logged areas, burned-over areas, forest clearings, rocky outcrops, rock barrens, prairies, peatbogs, and pastures,”²⁰ all of which are absent on-SITE. Nesting habitat includes grasslands, open forests, and urban rooftops,²¹ although rooftops are not ideal habitat.²²

The SITE does not appear to contain habitat for the spike (*Eurynia dilatate*), rabbitsfoot (*Theliderma clyndrica*), rainbow (*Villosa iris*), and little spectaclecase (*Villosa lienosa*), since these records were found on the White River, and the SITE does not contain any segments of the White River mainstem. The two migratory bird concentration areas are also situated off-SITE.

Based on the correspondence referenced above, additional correspondence with the agencies does not appear to be warranted at this time. If federal permitting or federal financing will be used in future development, additional coordination may be necessary.

²⁰ Committee on the Status of Endangered Wildlife in Canada (COSEWIC), COSEWIC Assessment and Status Report on the Common Nighthawk, *Chordeiles minor*, in Canada, COSEWIC. Catalogue #CW69-14/515/2007E-PDF, Ottawa, Ontario: Her Majesty the Queen in Right of Canada, 2007.

²¹ Newberry, GN, and DL Swanson, “Common Nighthawks (*Chordeiles minor*) in the Western Corn Belt: Habitat Associations and Population Effects of Grassland and Rooftop Nesting Habitat Conversion,” *American Midland Naturalist* 180 (2018).

²² Brigham, RM, “Roost and Nest Sites of Common Nighthawks: Are Gravel Roofs Important?” *The Condor* 91 (1989).



CHAPTER 4 SITE RECONNAISSANCE

4.1 METHODOLOGY

V3 conducted a field investigation at the SITE on 11 June 2024. During this investigation, V3 noted the presumed land use of the SITE and surrounding area, and evaluated the SITE for the potential presence of wetlands, “Waters of the U.S.,” and natural resources using the findings of the desktop review and field observations. Photographs were taken during the field investigation and are provided in **Appendix B**.

V3 used the Routine Determination Method (RDM) with an established baseline and transects as described in the *1987 Manual* for typical sites over five acres. V3 recorded data from a number of data points (DP) along the transect as a function of diversity of vegetation, property size, soil types, habitat variability, and other SITE features as deemed appropriate by V3. Where evidence of a wetland was suspected, three wetland criteria were applied to determine if the area in question was representative of a wetland using the methodology set forth by USACE. More specifically, V3 visually examined and recorded the dominant vegetation, recorded soil properties such as texture and color using the Munsell Soil Color Chart (Munsell Color Chart), excavated soil pits, and evaluated the primary and secondary indicators of hydrology as discussed in **Section 2.1.2**.

If all three criteria were met, i.e., vegetation, soil properties, and indicators of hydrology, a second DP was established adjacent to the wetland DP in an area outside of the presumed wetland boundary for the purpose of delineating between the wetland and non-wetland areas. Once delineated, V3 continued the RDM to evaluate the remainder of the SITE.

4.2 SITE AND ADJACENT PROPERTY LAND USE

The 15-acre SITE consists of the wooded stream corridor of Crooked Creek, fallow land, and the parking lot and buildings of Indy Parks and Recreation infrastructure. Adjacent land use consists of residential properties, public recreation lands including a golf course, the campus of Marian University, and Interstate 65.

4.3 WETLAND SUMMARY

Two wetlands were identified during this investigation based upon the methodology set forth in the *1987 Manual* and the *Midwest Regional Supplement*. Information that V3 collected at each DP on 11 June 2024 is described in the following section. This information is summarized on the forms provided in **Appendix C**. An overall SITE delineation map showing placement of the DPs is included as **Figure 6**.

4.3.1 Wetland A – (0.89-acre PEM on-SITE)

Wetland A was situated in the northeast portion to the SITE and consisted of 0.89 acre of palustrine, emergent (PEM) wetland. Wetland A did appear to exhibit a hydrologic connection with Crooked Creek, and as such would likely be verified as a relatively permanent water and federally jurisdictional “Waters of the U.S.” subject to regulation by the USACE and the IDEM.

DP A1

This DP was collected in the west portion of Wetland A. All three criteria were met, which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of lizard’s-tail (*Saururus cernuus*, OBL, 60%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of



wetland hydrology included oxidized rhizospheres on living roots (C3), geomorphic position (D2), and FAC-neutral test (D5).

DP A2

This DP was collected in the upland area adjacent to DP A1. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of silver maple (*Acer saccharinum*, FACW, 35%), red mulberry (*Morus rubra*, FACU, 20%), and Amur honeysuckle (*Lonicera maackii*, UPL, 70%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP A3

This DP was collected in the east portion of Wetland A. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of reed canary grass (*Phalaris arundinacea*, FACW 80%). The soil profile met the depleted matrix (F3) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2) and FAC-neutral test (D5).

DP A4

This DP was collected in the upland area adjacent to DP A1. This area met hydrophytic vegetation criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of silver maple (FACW, 20%), Amur honeysuckle (UPL, 20%), American sycamore (*Platanus occidentalis*, FACW 15%), reed canary grass (FACW, 75), and Canadian thistle (*Cirsium arvense*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.3.2 Wetland B – (0.02-acre PEM on-SITE)

Wetland B was situated in the northeast portion to the SITE and consisted of 0.02 acre of palustrine, forested (PFO) wetland. Wetland B did not appear to exhibit a hydrologic connection with any relatively permanent waters or “Waters of the U.S.,” and as such would likely be verified as an isolated wetland subject to regulation by the IDEM alone.

DP B1

This DP was collected inside the boundary of Wetland B. All three criteria were met which qualifies this area as a wetland. The dominant vegetation for each stratum present consisted of green ash (*Fraxinus pennsylvanica*, FACW, 80%), Muskingum sedge (*Carex muskingumensis*, OBL, 20%), creeping-jenny (*Lysimachia nummularia*, FACW, 20%), and reed canary grass (FACW 20%). The soil profile met the redox dark surface (F6) indicator for hydric soil. Evidence of wetland hydrology included geomorphic position (D2) and FAC-neutral test (D5).

DP B2

This DP was collected in the upland area adjacent to DP B1. This area met hydrophytic vegetation criteria but did not meet any other criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of ash-leaf maple (*Acer negundo*, FAC, 40%), Amur honeysuckle (UPL, 60%), white avens (*Geum canadense*, FAC, 20%), and deer-tongue rosette grass (*Dichanthelium clandestinum*, FACW, 5%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



4.4 DATA POINT SUMMARY

Below is a description of the information collected at each additional DP during the 11 June 2024 field investigation that was not associated with an identified wetland area. The purpose of collecting these DPs was to describe the remaining characteristics of the SITE. Information that was collected at each DP is summarized on the forms provided in **Appendix C**. Their placement is depicted in **Figure 6**.

DP 1

This DP was collected in the west portion of the SITE. Since this DP was situated in an active construction zone, no soil pit was excavated. This DP exhibited no vegetation and no indicators of wetland hydrology. Since all three criteria were not met, this area did not qualify as a wetland.

DP 2

This DP was collected in the southwest portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Norway spruce (*Picea abies*, UPL, 10%), Northern catalpa (*Catalpa speciosa*, FACU, 5%), smooth brome (*Bromus inermis*, UPL, 30%), Kentucky blue grass (*Poa pratensis*, FAC, 30%), and perennial rye grass (*Lolium perenne*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 3

This DP was collected in the southwest portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of sugar maple (*Acer saccharum*, FACU, 20%), tree-of-heaven (*Ailanthus altissima*, FACU, 20%), red mulberry (*Morus rubra*, FACU, 10%), Amur honeysuckle (UPL, 17%), staghorn sumac (*Rhus typhina*, UPL, 5%), and reed canary grass (FACW, 90%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 4

This DP was collected in the west portion of the SITE. Since this DP was situated in an active construction zone, no soil pit was excavated. This DP exhibited no vegetation and no indicators of wetland hydrology. Since all three criteria were not met, this area did not qualify as a wetland.

DP 5

This DP was collected in the southeast portion of the SITE. This area met did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Eastern cottonwood (*Populus deltoides*, FAC, 40%), red mulberry (FACU, 20%), Amur honeysuckle (UPL, 15%), and orchard grass (*Dactylis glomerata*, FACU, 60). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 6

This DP was collected in the west portion of the SITE. Since this DP was situated in an active construction zone, no soil pit was excavated. This DP exhibited no vegetation and no indicators of wetland hydrology. Since all three criteria were not met, this area did not qualify as a wetland.

DP 7

This DP was collected in the west portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of Common Hackberry (*Celtis occidentalis*, FAC, 10%), Eastern Red-Cedar



(*Juniperus virginiana*, FACU, 7%), Annual Ragweed (*Ambrosia artemisiifolia*, FACU, 25%), Yellow Sweet-Clover (*Melilotus officinalis*, FACU, 20%), and White Clover (*Trifolium repens*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 8

This DP was collected in the north-central portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of annual ragweed (*Ambrosia artemisiifolia*, FACU, 25%) and large barnyard grass (*Echinochloa crus-galli*, FACW, 15%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 9

This DP was collected in the northwest portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of ash-leaf maple (AC, 40%), black locust (*Robinia pseudoacacia*, FACU, 40%), and Amur honeysuckle (UPL, 60). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 10

This DP was collected near the center of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of sugar maple (FACU, 25%), black walnut (*Juglans nigra*, FACU, 25%), red mulberry (FACU 20%), Amur honeysuckle (UPL 60%), and Virginia-creeper (*Parthenocissus quinquefolia*, FACU, 5%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 11

This DP was collected near the center of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black walnut (FACU, 20%), red mulberry (FACU, 20%), silver maple (FACW, 10%), Amur honeysuckle (UPL, 40%), ash-leaf maple (FAC, 20%), Allegheny blackberry (*Rubus Allegheniensis*, FACU, 20%), tall false rye grass (*Schedonorus arundinaceus*, FACU, 20%), and Canadian goldenrod (*Solidago canadensis*, FACU, 20%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

DP 12

This DP was collected in the east portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black locust (FACU, 40%), red mulberry (FACU, 25%), basswood (*Tilia americana*, FACU, 20%), and Amur honeysuckle (UPL, 60%). No indicators of hydric soils were observed. Evidence of wetland hydrology included geomorphic position (D2).

DP 13

This DP was collected in the east portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of American elm (*Ulmus americana*, FACW, 35%), black locust (FACU, 30%), black walnut (FACU, 25%), and Amur honeysuckle (UPL, 60%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.



DP 14

This DP was collected in the east portion of the SITE. This area did not meet any criteria. Since all three criteria were not met, this area does not qualify as a wetland. The dominant vegetation for each stratum present consisted of black locust (FACU, 30%), red mulberry (FACU, 15%), Amur honeysuckle (UPL, 20%), and reed canary grass (FACW, 100%). No indicators of hydric soils were observed. No indicators of wetland hydrology were observed.

4.5 STREAMS, DRAINAGE FEATURES, AND OTHER AQUATIC FEATURES

A segment of Crooked Creek was identified during this investigation using the methods described in Chapter 2. Analysis of the IndyMap online GIS resource indicated no county regulated drains located on the SITE. Information that V3 collected for each feature on 11 June 2024 is described in the following section. An overall SITE delineation map is included as **Figure 6**.

4.5.1 Crooked Creek – (184 LF, Perennial)

The SITE segment of Crooked Creek is in the northeast portion of the SITE and consisted of 184 LF of perennial stream within the SITE. The substrate of Crooked Creek consisted of sand, silt, and gravel. Crooked Creek exhibited an OHWM and will likely qualify as federally jurisdictional “Waters of the U.S.” subject to USACE and IDEM authority. The on-SITE segment of Crooked Creek has an average width at the OHWM of 12 feet.

No other streams, drainage features, or other aquatic features were identified within the SITE area.

CHAPTER 5 CONCLUSIONS

On 11 June 2024, V3 performed a wetland delineation of the SITE located in the Indianapolis West, Indiana USGS 7.5-Minute Quadrangle Map, in Section 22, Township 16 North, Range 3 East.

Table 5-1 Aquatic Features Identified On-SITE

| Feature | Feature Type | Size On-SITE | Anticipated Regulatory Status |
|---------------|------------------|--------------|-------------------------------|
| Crooked Creek | Perennial stream | 184 LF | USACE/IDEM |
| Wetland A | PEM wetland | 0.89 acre | USACE/IDEM |
| Wetland B | PFO wetland | 0.02 acre | IDEM |

V3 anticipates that Crooked Creek and Wetland A will be verified as a relatively permanent waters and federally jurisdictional “Waters of the U.S.” subject to USACE and IDEM authority. If impacts to these features are proposed, the type of permit(s) required will depend on the type and extent of impacts:

- Proposed impacts of less than 0.10 acre of wetland and/or 300 linear feet (LF) of stream will qualify for the Regional General Permit Notification (RGPN) to IDEM. Under the RGPN, mitigation for impacts is not typically required.
- Proposed impacts of more than 0.25 acre of wetland and/or 500 LF of stream will require an Individual Section 401 Water Quality Certification (WQC) from the IDEM.
- Proposed impacts of less than 0.25 acre of wetland and/or less than 500 linear feet (LF) of stream will qualify for the USACE Nationwide Permit (NWP) #42 (Recreation Facilities). Under the NWP #42, mitigation is required only if impacts exceed 0.10 acre of wetland and/or 300 LF of stream.
- Proposed impacts of 0.50 to 0.99 acre of wetland and/or 500 to 1,500 LF of stream will qualify for the USACE Regional General Permit (RGP) with Individual Section 401 WQC from the IDEM. Under the USACE RGP, mitigation is required for impacts.
- Proposed impacts of more than 1.00 acre of wetland and/or 1,500 LF of stream will qualify for the USACE Individual Permit (IP) with an Individual Section 401 WQC from the IDEM. Under the USACE IP, mitigation is required for impacts.

Mitigation for impacts to federally jurisdictional “Waters of the U.S.” is usually required at a ratio of 1:1 for stream impacts, 4:1 for palustrine, forested (PFO) impacts, and 2:1 for palustrine, emergent (PEM) impacts.

The definition of “Waters of the U.S.” may change in response to legal challenges or policy measures. The USACE is the final authority responsible for determining whether any aquatic feature qualifies for jurisdiction under the Clean Water Act.

V3 anticipates that Wetland B will be verified as an isolated wetland and “Water of the State” subject to regulation by the IDEM alone. The type of permit required, and the mitigation ratios, depend on the class of the wetland as verified by IDEM. If mitigation is required, ratios range from 3:1 to 1:1. IDEM may grant an exemption from permitting and mitigation requirements for impacts to wetlands that qualify as “exempt isolated wetlands” per Indiana Code (IC) § 13-11-2-74.5.



If development activities are proposed to impact any of the on-SITE aquatic features, V3 recommends that the final report and associated figures be submitted to USACE for Jurisdictional Determination (JD).

A review of the digital National Flood Hazard Layer (NFHL) for Marion County indicated that the entire SITE is situated within an area mapped as Flood Zone AE (White River). The base flood elevation (BFE) on-SITE is approximately 702 feet above mean sea level (AMSL). Work within the regulated floodway of Crooked Creek will require permitting via the IDNR Division of Water, and may require a Construction in a Floodway permit.

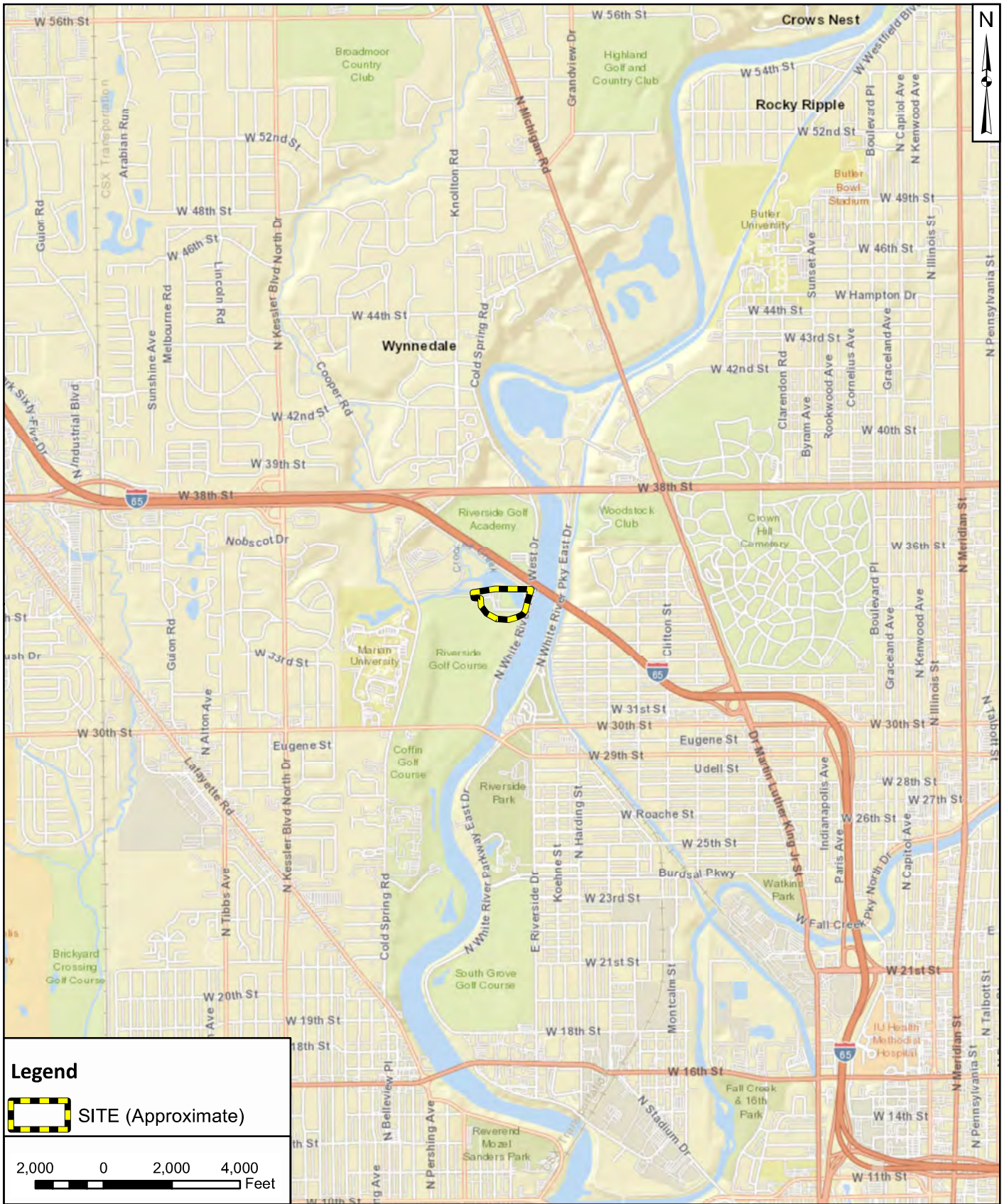
If proposed development activities will disturb one or more acres of land, a Construction Stormwater General Permit may be required.

At the time of SITE reconnaissance, V3 observed potential bat habitat on-SITE. The USFWS recommends avoiding impacts to bat habitat trees between March 31 and October 1. This will likely become a condition of any required permitting. This also avoids potential impacts to broad-winged hawks, whose nesting period is April through August. The SITE does not appear to contain habitat for the other endangered, threatened, and rare (ETR) species indicated in agency correspondence.




FIGURES




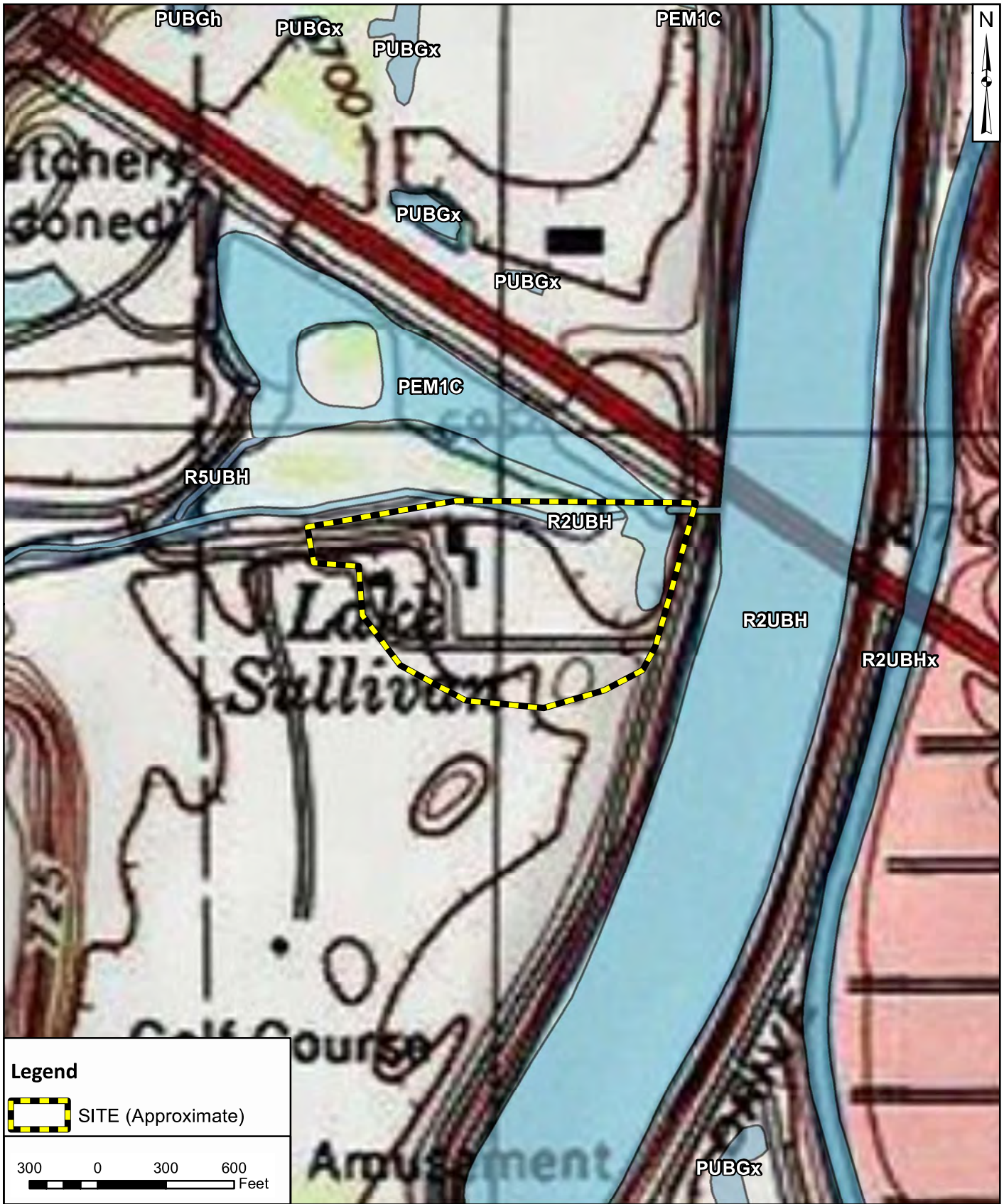


Legend


 SITE (Approximate)

2,000 0 2,000 4,000
Feet

| | | | |
|--|--------------------------|--|---|
|  <p>619 N. Pennsylvania Street Indianapolis, IN 46204 317.423.0690 phone www.v3co.com</p> | PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 | TITLE: PROJECT LOCATION MAP |
| | CREATED BY: LPV | Indianapolis, IN 46204 | |
| | DATE: 06/11/2024 | BASE LAYER: ESRI Street Map (2024) | SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana |
| Visio, Vertere, Virtute... "The Vision To Transform with Excellence" | SCALE: See Scale Bar | | FIGURE: 1 |



Legend

 SITE (Approximate)

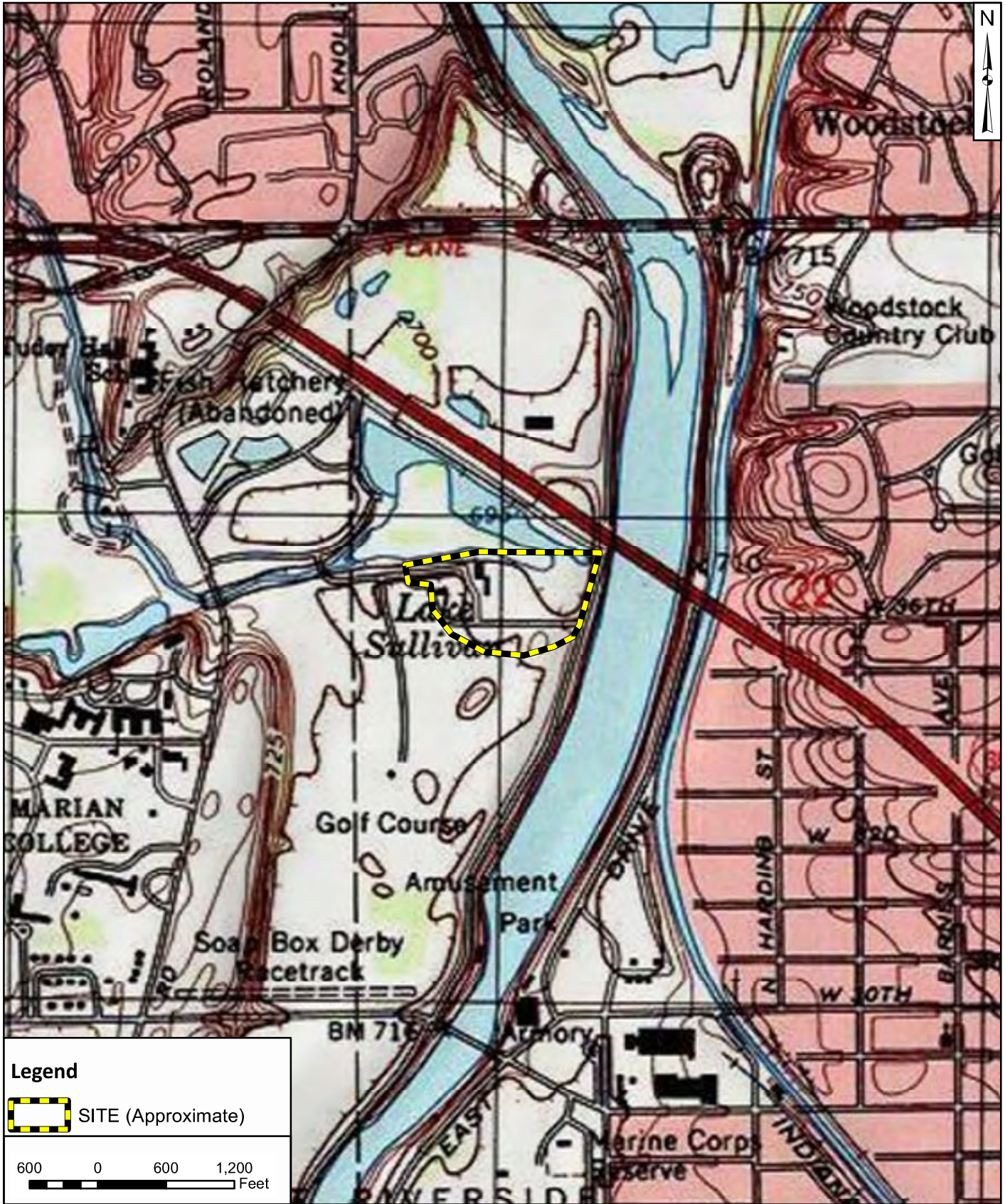
300 0 300 600
Feet

 619 N. Pennsylvania Street
Indianapolis, IN 46204
317.423.0690 phone
www.v3co.com


Visio, Vertere, Virtute...
"The Vision To Transform with Excellence"

| | |
|--------------------------|--|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: LPV | |
| DATE: 06/11/2024 | BASE LAYER: USGS Topographic Map Indianapolis West Quadrangle |
| SCALE: See Scale Bar | |

| | |
|---|---------------------|
| TITLE: NATIONAL WETLANDS INVENTORY (NWI) MAP | FIGURE: 2 |
| SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |



Legend

 SITE (Approximate)

600 0 600 1,200
Feet

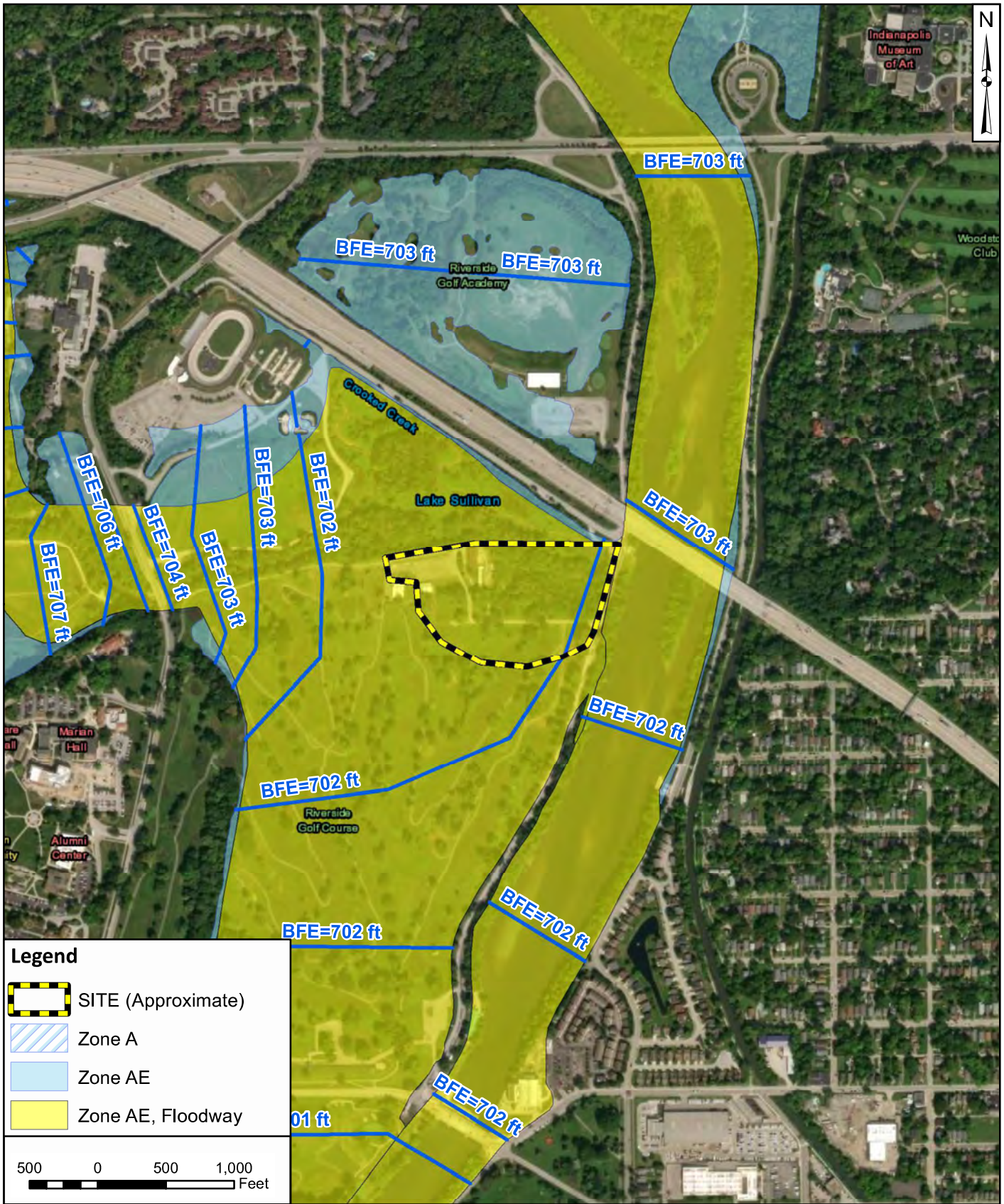


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| | |
|--------------------------|--|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: LPV | |
| DATE: 06/27/2024 | BASE LAYER: USGS Topographic Map Indianapolis West Quadrangle (2013) |
| SCALE: See Scale Bar | |

| | |
|---|---------------------|
| TITLE: USGS TOPOGRAPHIC MAP | FIGURE: 3 |
| SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |



Legend

- SITE (Approximate)
- Zone A
- Zone AE
- Zone AE, Floodway

500 0 500 1,000 Feet

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PROJECT NO.: 19593.02
 CLIENT: Indy Parks and Recreation
 200 East Washington Street
 Suite 2301
 Indianapolis, IN 46204

CREATED BY: LPV
 BASE LAYER: Aerial Imagery (2023)

DATE: 06/27/2024
 SCALE: See Scale Bar


TITLE: **NATIONAL FLOOD HAZARD LAYER**


SITE: Riverside Adventure Park Archery Facility
 Indianapolis, Marion County, Indiana

FIGURE: **4**



Legend

 SITE (Approximate)

 Hydric Soils of Indiana

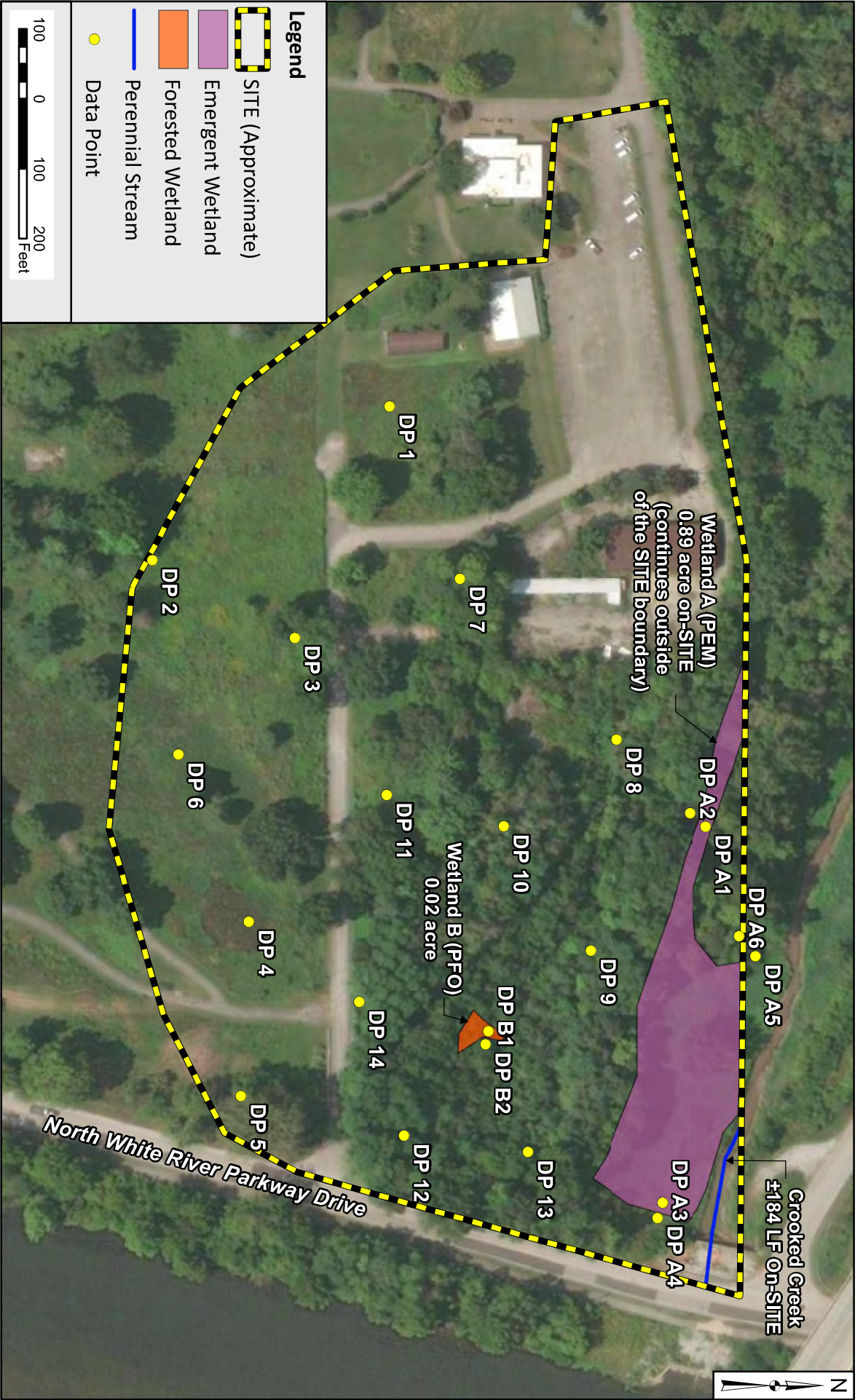
250 0 250 500 Feet

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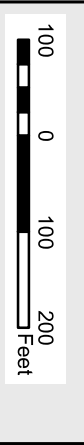
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|--------------------------|--|
| PROJECT NO.: 19593.02 | CLIENT: Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: LPV | |
| DATE: 06/27/2024 | BASE LAYER: Aerial Imagery (2023) |
| SCALE: See Scale Bar | |

| | |
|---|---------------------|
| TITLE: SOIL SURVEY OF MARION COUNTY, INDIANA MAP | FIGURE: 5 |
| SITE: Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |



Legend

- SITE (Approximate)
- Emergent Wetland
- Forested Wetland
- Perennial Stream
- Data Point



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| | | | |
|--------------|---------------|-------------|---|
| PROJECT NO.: | 19593.02 | CLIENT: | Indy Parks and Recreation 200 East Washington Street Suite 2301 Indianapolis, IN 46204 |
| CREATED BY: | LPV | DATE: | 06/27/2024 |
| SCALE: | See Scale Bar | BASE LAYER: | Aerial Photograph (2023) |

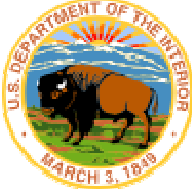
| | | |
|--------|---|--|
| TITLE: | STREAM AND WETLAND DELINEATION MAP | |
| SITE: | Riverside Adventure Park Archery Facility Indianapolis, Marion County, Indiana | |

FIGURE:
6

APPENDIX A

ETR SPECIES CORRESPONDENCE





United States Department of the Interior



FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To:

06/12/2024 14:17:17 UTC

Project Code: 2024-0102935

Project Name: Riverside Adventure Park Archery Facility

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

PROJECT SUMMARY

Project Code: 2024-0102935
Project Name: Riverside Adventure Park Archery Facility
Project Type: Recreation - New Construction
Project Description: This is a proposed development for a public park.
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.817641050000006,-86.1935740277082,14z>



Counties: Marion County, Indiana

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

| NAME | STATUS |
|---|------------------------|
| Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045 | Endangered |
| Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

BIRDS

| NAME | STATUS |
|--|--|
| Whooping Crane <i>Grus americana</i> Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758 | Experimental Population, Non- Essential |

INSECTS

| NAME | STATUS |
|--|-----------|
| Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Bald and Golden Eagle Protection Act](#) of 1940.
2. The [Migratory Birds Treaty Act](#) of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|--|-------------------------|
| Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

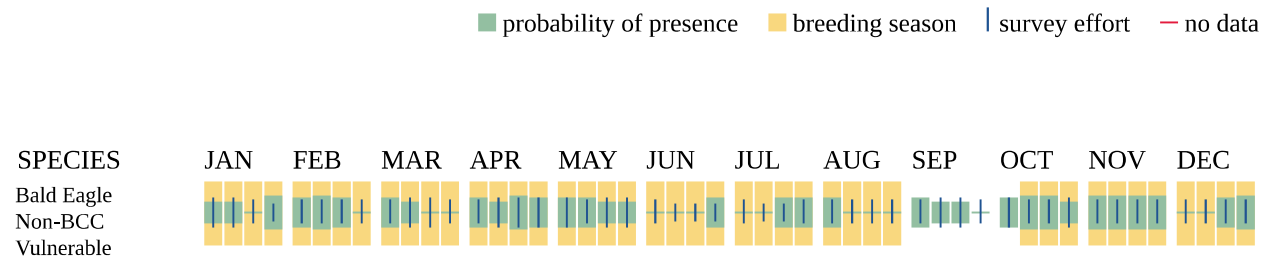
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|--|-------------------------|
| <p>Bald Eagle <i>Haliaeetus leucocephalus</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p>https://ecos.fws.gov/ecp/species/1626</p> | Breeds Oct 15 to Aug 31 |
| <p>Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9399</p> | Breeds May 15 to Oct 10 |
| <p>Bobolink <i>Dolichonyx oryzivorus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9454</p> | Breeds May 20 to Jul 31 |
| <p>Cerulean Warbler <i>Setophaga cerulea</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/2974</p> | Breeds Apr 21 to Jul 20 |
| <p>Chimney Swift <i>Chaetura pelagica</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9406</p> | Breeds Mar 15 to Aug 25 |
| <p>Eastern Whip-poor-will <i>Antrastomus vociferus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/10678</p> | Breeds May 1 to Aug 20 |
| <p>Kentucky Warbler <i>Geothlypis formosa</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9443</p> | Breeds Apr 20 to Aug 20 |
| <p>Lesser Yellowlegs <i>Tringa flavipes</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9679</p> | Breeds elsewhere |
| <p>Pectoral Sandpiper <i>Calidris melanotos</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9561</p> | Breeds elsewhere |
| <p>Prothonotary Warbler <i>Protonotaria citrea</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9439</p> | Breeds Apr 1 to Jul 31 |

| NAME | BREEDING SEASON |
|---|-------------------------|
| Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398 | Breeds May 10 to Sep 10 |
| Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478 | Breeds elsewhere |
| Upland Sandpiper <i>Bartramia longicauda</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9294 | Breeds May 1 to Aug 31 |
| Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431 | Breeds May 10 to Aug 31 |

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

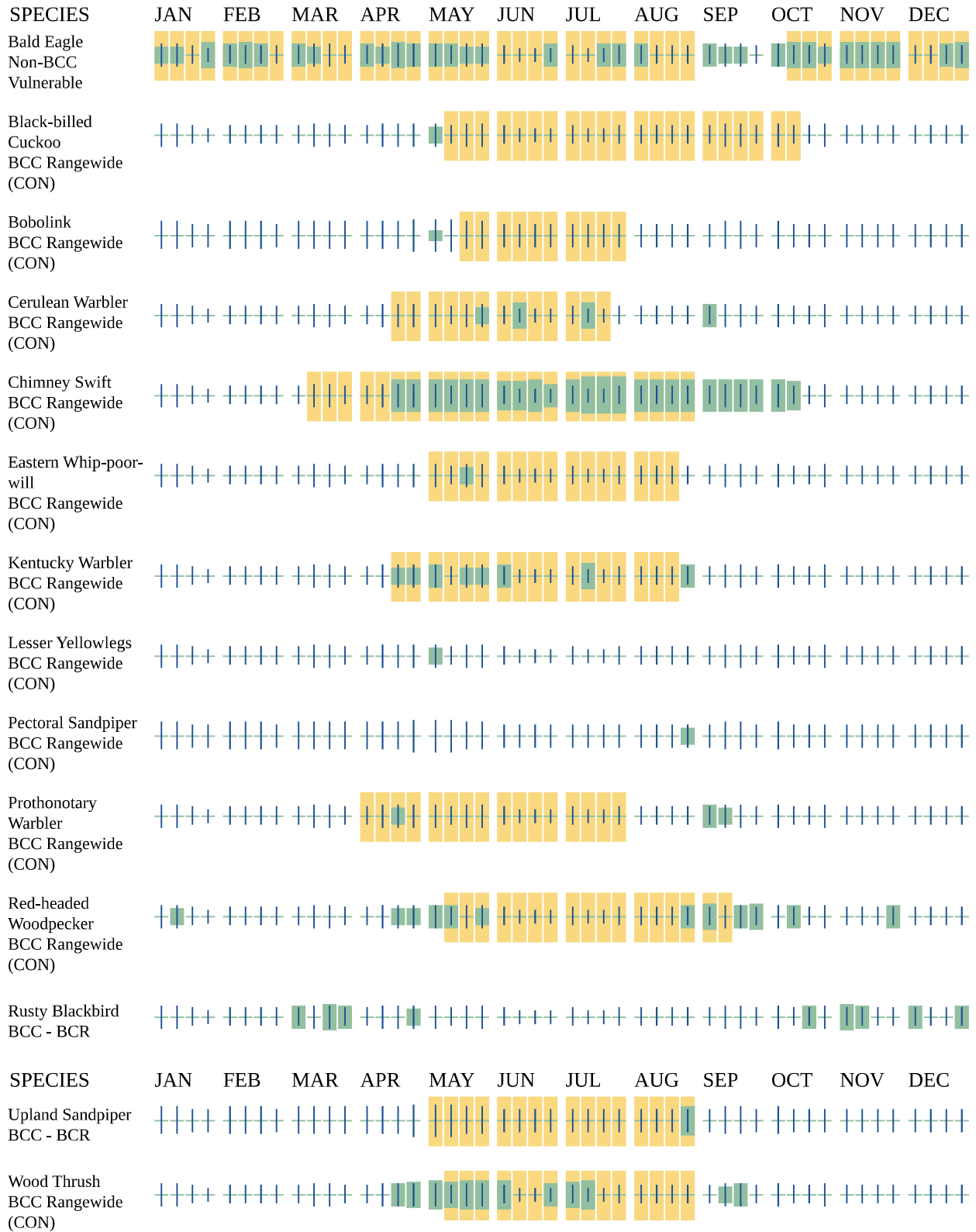
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort — no data



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C

RIVERINE

- R2UBH

IPAC USER CONTACT INFORMATION

Agency: V3 Companies, Ltd.

Name: Landon Vine

Address: 619 North Pennsylvania Street

City: Indianapolis

State: IN

Zip: 46204

Email: lvine@v3co.com

Phone: 3174230690



Division of Nature Preserves
402 W. Washington St., Rm W267
Indianapolis, IN 46204-2739

June 24, 2024

Landon Vine
V3 Companies, Ltd.
619 North Pennsylvania Street
Indianapolis, IN 46204

Dear Landon Vine:

I am responding to your request for information on the threatened or endangered (T&E) species, high quality natural communities, and natural areas for the Riverside Adventure Park Archery Facility Project located in Marion County, Indiana. The Indiana Natural Heritage Data Center has been checked and included you will find a datasheet with information on the T&E species documented within 0.5 mile of the project area.

If you need a review of the impacts to the animal species mentioned or a general environmental review, you can submit the project information (description, location map, and copy of this letter) to the DNR Division of Fish and Wildlife Environmental Coordinator, at environmentalreview@dnr.in.gov (preferred), or send to the street address below.

Department of Natural Resources
Environmental Review
Division of Fish and Wildlife
402 W. Washington Street, Room W273
Indianapolis, IN 46204

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. If you have concerns about potential Endangered Species Act issues you should contact the Service at their Bloomington, Indiana office.

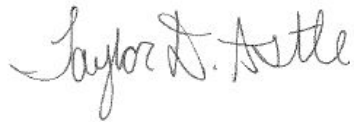
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 47403-2121
(812)334-4261

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)233-2558 if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Taylor D. Astle".

Taylor Davis Astle
Indiana Natural Heritage Data Center

Enclosure: datasheet

June 24, 2024

INDIANA HERITAGE DATA WITHIN 0.5 MILE OF: *Riverside Adventure Park Archery Facility Project, Marion County*

| Sci. Name | Com. Name | State | Fed. | Date | Site | Comments |
|-----------------------|----------------------|-------|------|------|--|---|
| Bird | | | | | | |
| Buteo platypterus | Broad-winged Hawk | SSC | | 1955 | RIVERSIDE FISH HATCHERY SURVEY SITE | |
| Chordeiles minor | Common Nighthawk | SSC | | 2022 | DOWNTOWN INDIANAPOLIS; NEAR SOUTHSIDE, FOUNTAIN SQUARE; WHITE RIVER TO ARSENAL TECH; FALL CREEK, NEAR NORTHSIDE; UP TO MARION UNIV | |
| Mollusk | | | | | | |
| Eurynia dilatata | spike | SSC | | 2018 | WEST FORK WHITE RIVER | WEATHERED DEAD (FISHER, 2018). |
| Theliderma cylindrica | rabbitsfoot | SE | T | 2018 | WEST FORK WHITE RIVER | HISTORICAL; WEATHERED DEAD. (FISHER ET AL, 2007). |
| Villosa iris | rainbow | SSC | | 2018 | WEST FORK WHITE RIVER | WEATHERED DEAD (FISHER, 2018). |
| Villosa lienosa | little spectaclecase | SSC | | 2018 | | WEATHERED DEAD (FISHER, 2018). |

Fed: E = Federal endangered; T = Federal threatened; C = Federal candidate species

State: SE = State endangered; ST= State threatened; SR = State rare; SSC = State species of special concern; SG = State significant; no rank - not ranked but tracked to monitor status

| Sci. Name | Com. Name | State | Fed. | Date | Site | Comments |
|----------------|-------------------------------------|-------|------|------|--|--------------------------------|
| Mollusk | | | | | | |
| | | | | | WEST FORK WHITE RIVER | |
| Other | | | | | | |
| | Migratory Bird Concentration Area | | SG | 2022 | WEST FORK WHITE RIVER, LAFAYETTE RD, CROOKED CREEK, KESSLER BLVD | FOREST BIRD CONCENTRATION |
| | Raptor Migratory Concentration Area | | SG | 2022 | WHITE RIVER, RIVERSIDE PARK, 30TH STREET TO LAFAYETTE ROAD | MIGRATORY RAPTOR CONCENTRATION |

Fed: E = Federal endangered; T = Federal threatened; C = Federal candidate species
State: SE = State endangered; ST= State threatened; SR = State rare; SSC = State species of special concern; SG = State significant; no rank - not ranked but tracked to monitor status

APPENDIX B

SITE PHOTOGRAPHS



Photo: 1

Data Point A1

Direction of View:

North

Date:

11 June 2024



Photo: 2

Data Point A1

Direction of View:

East

Date:

11 June 2024



Photo: 3

Data Point A1

Direction of View:

South

Date:

11 June 2024

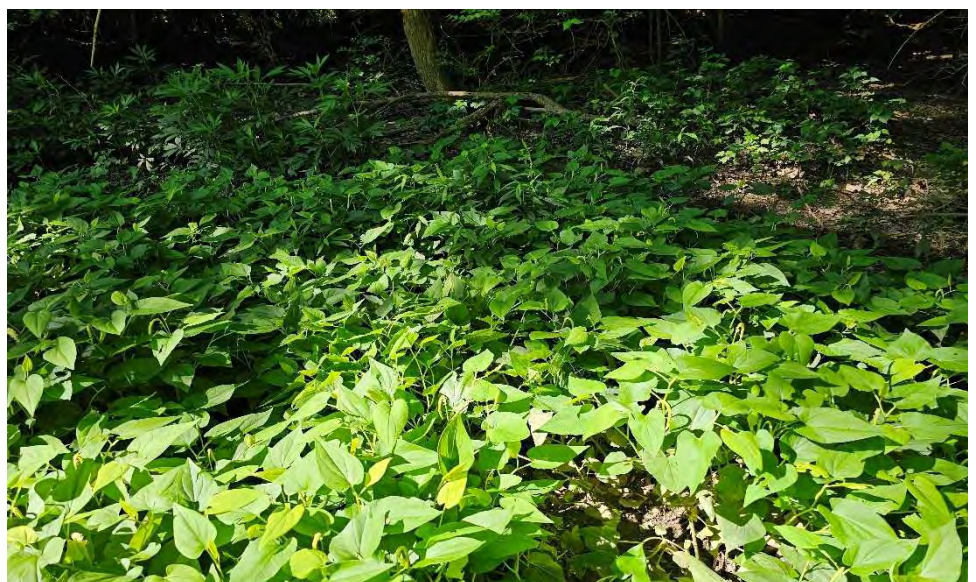


Photo: 4

Data Point A1

Direction of View:

West

Date:

11 June 2024



Photo: 5

Data Point A2

Direction of View:

North

Date:

11 June 2024



Photo: 6

Data Point A2

Direction of View:

East

Date:

11 June 2024



Photo: 7

Data Point A2

Direction of View:

South

Date:

11 June 2024



Photo: 8

Data Point A2

Direction of View:

West

Date:

11 June 2024



Photo: 9

Data Point A3

Direction of View:

North

Date:

11 June 2024



Photo: 10

Data Point A3

Direction of View:

East

Date:

11 June 2024



Photo: 11

Data Point A3

Direction of View:

South

Date:

11 June 2024



Photo: 12

Data Point A3

Direction of View:

West

Date:

11 June 2024



Photo: 13

Data Point A4

Direction of View:

North

Date:

11 June 2024



Photo: 14

Data Point A4

Direction of View:

East

Date:

11 June 2024



Photo: 15

Data Point A4

Direction of View:

South

Date:

11 June 2024



Photo: 16

Data Point A4

Direction of View:

West

Date:

11 June 2024



Photo: 17

Data Point B1

Direction of View:

North

Date:

11 June 2024



Photo: 18

Data Point B1

Direction of View:

East

Date:

11 June 2024



Photo: 19

Data Point B1

Direction of View:

South

Date:

11 June 2024



Photo: 20

Data Point B1

Direction of View:

West

Date:

11 June 2024



Photo: 21

Data Point B2

Direction of View:

North

Date:

11 June 2024



Photo: 22

Data Point B2

Direction of View:

East

Date:

11 June 2024



Photo: 23

Data Point B2

Direction of View:

South

Date:

11 June 2024



Photo: 24

Data Point B2

Direction of View:

West

Date:

11 June 2024

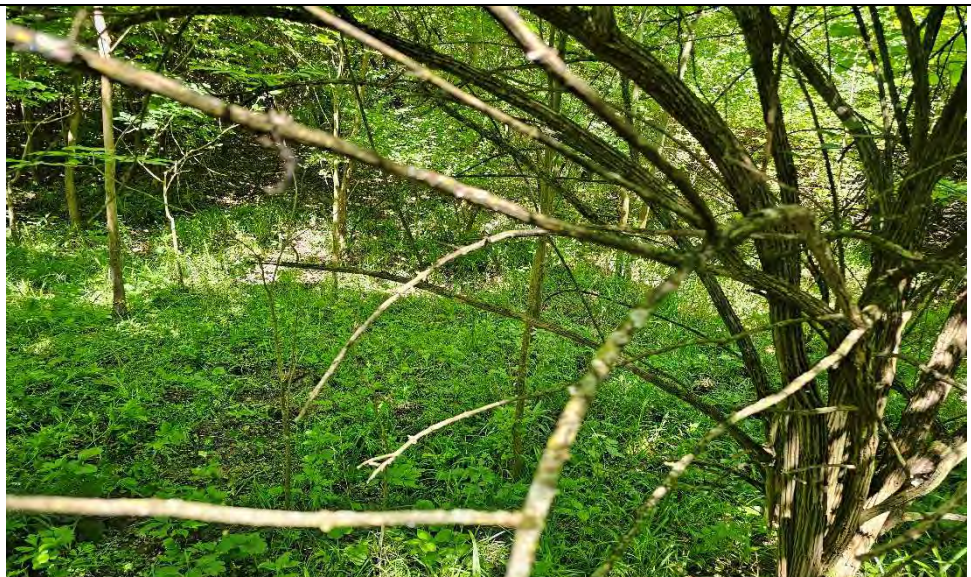


Photo: 25

Data Point 1

Direction of View:

North

Date:

11 June 2024



Photo: 26

Data Point 1

Direction of View:

East

Date:

11 June 2024



Photo: 27

Data Point 1

Direction of View:

South

Date:

11 June 2024



Photo: 28

Data Point 1

Direction of View:

West

Date:

11 June 2024



Photo: 29

Data Point 2

Direction of View:

North

Date:

11 June 2024



Photo: 30

Data Point 2

Direction of View:

East

Date:

11 June 2024



Photo: 31

Data Point 2

Direction of View:

South

Date:

11 June 2024



Photo: 32

Data Point 2

Direction of View:

West

Date:

11 June 2024



Photo: 33

Data Point 3

Direction of View:

North

Date:

11 June 2024



Photo: 34

Data Point 3

Direction of View:

East

Date:

11 June 2024



Photo: 35

Data Point 3

Direction of View:

South

Date:

11 June 2024



Photo: 36

Data Point 4

Direction of View:

North

Date:

11 June 2024



Photo: 37

Data Point 4

Direction of View:

East

Date:

11 June 2024



Photo: 38

Data Point 4

Direction of View:

South

Date:

11 June 2024



Photo: 39

Data Point 4

Direction of View:

West

Date:

11 June 2024



Photo: 40

Data Point 5

Direction of View:

North

Date:

11 June 2024



Photo: 41

Data Point 5

Direction of View:

East

Date:

11 June 2024



Photo: 42

Data Point 5

Direction of View:

South

Date:

11 June 2024



Photo: 43

Data Point 5

Direction of View:

West

Date:

11 June 2024



Photo: 44

Data Point 6

Direction of View:

North

Date:

11 June 2024



Photo: 45

Data Point 6

Direction of View:

East

Date:

11 June 2024



Photo: 46

Data Point 6

Direction of View:

South

Date:

11 June 2024



Photo: 47

Data Point 6

Direction of View:

West

Date:

11 June 2024



Photo: 48

Data Point 7

Direction of View:

North

Date:

11 June 2024



Photo: 49

Data Point 7

Direction of View:

East

Date:

11 June 2024



Photo: 50

Data Point 7

Direction of View:

South

Date:

11 June 2024



Photo: 51

Data Point 7

Direction of View:

West

Date:

11 June 2024



Photo: 52

Data Point 8

Direction of View:

North

Date:

11 June 2024



Photo: 53

Data Point 8

Direction of View:

East

Date:

11 June 2024



Photo: 54

Data Point 8

Direction of View:

South

Date:

11 June 2024



Photo: 55

Data Point 8

Direction of View:

West

Date:

11 June 2024



Photo: 56

Data Point 9

Direction of View:

North

Date:

11 June 2024



Photo: 57

Data Point 9

Direction of View:

East

Date:

11 June 2024



Photo: 58

Data Point 9

Direction of View:

South

Date:

11 June 2024



Photo: 59

Data Point 9

Direction of View:

West

Date:

11 June 2024



Photo: 60

Data Point 10

Direction of View:

North

Date:

11 June 2024



Photo: 61

Data Point 10

Direction of View:

East

Date:

11 June 2024



Photo: 62

Data Point 10

Direction of View:

South

Date:

11 June 2024



Photo: 63

Data Point 10

Direction of View:

West

Date:

11 June 2024



Photo: 64

Data Point 11

Direction of View:

North

Date:

11 June 2024



Photo: 65

Data Point 11

Direction of View:

East

Date:

11 June 2024



Photo: 66

Data Point 11

Direction of View:

South

Date:

11 June 2024



Photo: 67

Data Point 11

Direction of View:

West

Date:

11 June 2024



Photo: 68

Data Point 12

Direction of View:

North

Date:

11 June 2024



Photo: 69

Data Point 12

Direction of View:

East

Date:

11 June 2024



Photo: 70

Data Point 12

Direction of View:

South

Date:

11 June 2024



Photo: 71

Data Point 12

Direction of View:

West

Date:

11 June 2024



Photo: 72

Data Point 13

Direction of View:

North

Date:

11 June 2024



s

Photo: 73

Data Point 13

Direction of View:

East

Date:

11 June 2024



Photo: 74

Data Point 13

Direction of View:

South

Date:

11 June 2024



Photo: 75

Data Point 13

Direction of View:

West

Date:

11 June 2024



Photo: 76

Data Point 14

Direction of View:

North

Date:

11 June 2024



Photo: 77

Data Point 14

Direction of View:

East

Date:

11 June 2024



Photo: 78

Data Point 14

Direction of View:

South

Date:

11 June 2024



Photo: 79

Data Point 14

Direction of View:

West

Date:

11 June 2024



Photo: 80

Crooked Creek

Direction of View:

West

Date:

11 June 2024



Photo: 81

Crooked Creek

Direction of View:

East

Date:

11 June 2024



APPENDIX C

DATA FORMS



WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: A1
Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
Investigator(s): L. Vine Landform Floodplain Local Relief Concave
Slope (%): 0-3 Lat. 39.818333° Long. -86.193247° Datum NAD83 NWI Class: N/A
Soil Map Unit Name: Udorthents, cut and filled

Climatic/hydrologic conditions typical for time of year? Y/N Y
Vegetation, Soil or Hydrology significantly disturbed
Vegetation, Soil or Hydrology naturally problematic

Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

Table with 2 columns: Findings (Hydrophytic Vegetation Present?, Hydric Soil Present?, Wetland Hydrology Present?) and Is the DP within a Wetland? (Yes X No)

VEGETATION

Large table for vegetation data. Includes columns for Tree Stratum, Shrub Stratum, Herb Stratum, and Woody Vine Stratum. Each stratum has a 5-item list for species, plot size, absolute % cover, dominant species, and indicator status. Includes dominance test and prevalence index worksheets.

SOIL

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

Table with 10 columns: Depth (inches), Matrix (Color, %), Redox Features (Color, %, Type*, Loc**), Texture, and Remarks. Rows show data for depths 0-16 and 16-18 inches.

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Table listing hydric soil indicators such as Histosol (A1), Histic Epipedon (A2), Black Histic (A3), Hydrogen Sulfide (A4), etc., with corresponding soil types and redox features.

Restrictive Layer (if observed): Type, Depth (Inches), and Hydric Soil Present? (Yes X No)

HYDROLOGY

Wetland Hydrology Indicators table. Divided into Primary Indicators (check all that apply) and Secondary Indicators. Includes field observations for surface water, water table, and saturation.

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: A2
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Floodplain Local Relief: Convex
 Slope (%): 0 - 3 Lat. 39.818287° Long. -86.193300° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Udortheints, cut and filled
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

VEGETATION

| Tree Stratum | Plot size: 30' | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>50</u> x <u>2</u> = <u>100</u> FAC species <u>15</u> x <u>3</u> = <u>45</u> FACU species <u>25</u> x <u>4</u> = <u>100</u> UPL species <u>70</u> x <u>5</u> = <u>350</u> Total <u>160</u> Prevalence Index: <u>3.72</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u> |
|--|----------------|------------------|------------------|------------------|---|
| 1. <u>Acer saccharinum</u> | | <u>35</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. <u>Morus rubra</u> | | <u>20</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Acer negundo</u> | | <u>15</u> | | <u>FAC 3</u> | |
| 4. <u>Platanus occidentalis</u> | | <u>15</u> | | <u>FACW 2</u> | |
| 5. <u>Catalpa speciosa</u> | | <u>5</u> | | <u>FACU 4</u> | |
| | | <u>90</u> | Total Cover | | |
| Shrub Stratum | Plot size: 15' | | | | |
| 1. <u>Lonicera maackii</u> | | <u>70</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| | | <u>70</u> | Total Cover | | |
| Herb Stratum | Plot size: 5' | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | | | | |
| | | <u>0</u> | Total Cover | | |
| Woody Vine Stratum | Plot size: 5' | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| | | <u>0</u> | Total Cover | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|--|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | | |
| 0 - 18 | 10YR 4/2 | 100 | | | | | | SiCL | |
| | | | | | | | | | |
| | | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u> </u> | Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Depth (Inches) <u> </u> | |

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |
| Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: A3
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief: Concave
 Slope (%): 0-2 Lat. 39.818204° Long. -86.191774° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> | Is the DP within a Wetland? Yes <u>X</u> No <u> </u> |
| Hydric Soil Present? Yes <u>X</u> No <u> </u> | |
| Wetland Hydrology Present? Yes <u>X</u> No <u> </u> | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>1</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>10</u> x <u>1</u> = <u>10</u> FACW species <u>85</u> x <u>2</u> = <u>170</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>5</u> x <u>4</u> = <u>20</u> UPL species <u>0</u> x <u>5</u> = <u>0</u> Total <u>100</u> Prevalence Index: <u>2.00</u> |
|--------------------------------|-------------------|-------------------|-------------------|----------------------|--|
| 1. <u> </u> | <u>30'</u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>0</u> | Total Cover | | |
| Shrub Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>15'</u> | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>0</u> | Total Cover | | |
| Herb Stratum | Plot size: | | | | |
| 1. <u>Phalaris arundinacea</u> | <u>5'</u> | <u>80</u> | <u>Y</u> | <u>FACW</u> <u>2</u> | |
| 2. <u>Typha latifolia</u> | | <u>10</u> | | <u>OBL</u> <u>1</u> | |
| 3. <u>Cirsium arvense</u> | | <u>5</u> | | <u>FACU</u> <u>4</u> | |
| 4. <u>Phragmites australis</u> | | <u>5</u> | | <u>FACW</u> <u>2</u> | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | | | | |
| | | <u>100</u> | Total Cover | | |
| Woody Vine Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>5'</u> | | | | |
| 2. <u> </u> | | | | | |
| | | <u>0</u> | Total Cover | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks |
| 0 - 8 | 10YR 4/1 | 100 | | | | | SiL | |
| 8 - 18 | 10YR 4/2 | 95 | 10YR 4/6 | 5 | C | M | SiL | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u>X</u> Depleted Matrix (F3) | <u> </u> Other |

Restrictive Layer (if observed): Type: Depth (Inches)

Hydric Soil Present? Yes X No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u>X</u> Geomorphic Position (D2) | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u>X</u> FAC-Neutral Test (D5) | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)

Hydrology Indicators Present? Yes X No

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: A4
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief: Convex
 Slope (%): 0-2 Lat. 39.818189° Long. -86.191715° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

Remarks:

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>60.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>120</u> x <u>2</u> = <u>240</u> FAC species <u>0</u> x <u>3</u> = <u>0</u> FACU species <u>20</u> x <u>4</u> = <u>80</u> UPL species <u>20</u> x <u>5</u> = <u>100</u> Total <u>160</u> Prevalence Index: <u>2.63</u> |
|----------------------------------|-------------------|------------------|--------------------|------------------|--|
| 1. <i>Fraxinus pennsylvanica</i> | <u>30'</u> | <u>5</u> | <u> </u> | <u>FACW 2</u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| | | <u>5</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: | | | | |
| 1. <i>Acer saccharinum</i> | <u>15'</u> | <u>20</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. <i>Lonicera maackii</i> | | <u>20</u> | <u>Y</u> | <u>UPL 5</u> | |
| 3. <i>Platanus occidentalis</i> | | <u>15</u> | <u>Y</u> | <u>FACW 2</u> | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| | | <u>55</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: | | | | |
| 1. <i>Phalaris arundinacea</i> | <u>5'</u> | <u>75</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. <i>Cirsium arvense</i> | | <u>20</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <i>Urtica dioica</i> | | <u>5</u> | | <u>FACW 2</u> | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | | | | |
| | | <u>100</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>5'</u> | | | | |
| 2. <u> </u> | | | | | |
| | | <u>0</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks |
| 0 - 6 | 10YR 4/3 | 100 | | | | | | SiL |
| 6 - 18 | 10YR 4/2 | 100 | | | | | | SiL |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u> </u> | Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Depth (Inches) <u> </u> | |

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | | | Secondary Indicators | | |
|--|---|---|--|----------------------|--|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | | | | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | | | | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | | | | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | | | | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | | | | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | | | | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | | | | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | | | | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | | | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | | | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |
| Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: B1
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform Flood plains Local Relief Concave
 Slope (%): 0-2 Lat. 39.817679° Long. -86.192446° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation _____, Soil _____ or Hydrology _____ significantly disturbed
 Vegetation _____, Soil _____ or Hydrology _____ naturally problematic
 Are Normal Circumstances Present? Yes X No _____

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | Is the DP within a Wetland? Yes <u>X</u> No _____ |
| Hydric Soil Present? Yes <u>X</u> No _____ | |
| Wetland Hydrology Present? Yes <u>X</u> No _____ | |

Remarks:

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>4</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>100.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>20</u> x 1 = <u>20</u> FACW species <u>135</u> x 2 = <u>270</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Total <u>170</u> Prevalence Index: <u>1.97</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. _____ Dominance Test is >50% <u>x</u> Prevalence Index is <=3.0* _____ Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No _____ |
|--------------------------------------|------------------------------|------------------|--------------------|------------------|---|
| 1. <u>Fraxinus pennsylvanica</u> | <u>30'</u> | <u>80</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. _____ | | | | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | <u>80</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: <u>15'</u> | | | | |
| 1. _____ | | | | | |
| 2. _____ | | | | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | <u>0</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u>Carex muskingumensis</u> | | <u>20</u> | <u>Y</u> | <u>OBL 1</u> | |
| 2. <u>Lysimachia nummularia</u> | | <u>20</u> | <u>Y</u> | <u>FACW 2</u> | |
| 3. <u>Phalaris arundinacea</u> | | <u>20</u> | <u>Y</u> | <u>FACW 2</u> | |
| 4. <u>Geum canadense</u> | | <u>15</u> | | <u>FAC 3</u> | |
| 5. <u>Carex cristatella</u> | | <u>10</u> | | <u>FACW 2</u> | |
| 6. <u>Symphotrichum lateriflorum</u> | | <u>5</u> | | <u>FACW 2</u> | |
| 7. _____ | | | | | |
| 8. _____ | | <u>90</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: <u>5'</u> | | | | |
| 1. _____ | | | | | |
| 2. _____ | | <u>0</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | | |
|----------------|----------|-----|----------------|----|-------|-------|---------|---------|--|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks | |
| 0 - 3 | 10YR 3/2 | 100 | | | | | | SiL | |
| 3 - 18 | 10YR 3/2 | 90 | 10YR 5/6 | 10 | C | | M | SaL | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|---------------------------------|--|
| _____ Histosol (A1) | _____ Sandy Mucky Mineral (S1) | _____ <u>X</u> Redox Dark Surface (F6) |
| _____ Histic Epipedon (A2) | _____ 5cm Mucky Peat or Peat | _____ Depleted Dark Surface (F7) |
| _____ Black Histic (A3) | _____ True Aquatic Plants (B14) | _____ Redox Depressions (F8) |
| _____ Hydrogen Sulfide (A4) | _____ Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| _____ Stratified Layers (A5) | _____ Stripped Matrix (S6) | _____ Coast Prairie Redox (A16) |
| _____ 2 cm Muck (A10) | _____ Loamy Mucky Mineral (F1) | _____ Iron-Manganese Masses (F12) |
| _____ Depleted Below Dark Surface (A11) | _____ Loamy Gleyed Matrix (F2) | _____ Very Shallow Dark Surface (F12) |
| _____ Thick Dark Surface (A12) | _____ Depleted Matrix (F3) | _____ Other |

| | |
|---|---|
| Restrictive Layer (if observed): Type: _____ | Hydric Soil Present? Yes <u>X</u> No _____ |
| Depth (Inches) _____ | |

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| _____ Surface Water (A1) | _____ Water Stained Leaves (B9) | _____ Surface Soil Cracks (B6) | |
| _____ High Water Table (A2) | _____ Aquatic Fauna (B13) | _____ Drainage Patterns (B10) | |
| _____ Saturation (A3) | _____ True Aquatic Plants (B14) | _____ Dry-Season Water Table (C2) | |
| _____ Water Marks (B1) | _____ Hydrogen Sulfide Odor (C1) | _____ Crayfish Burrows (C8) | |
| _____ Sediment Deposits (B2) | _____ Oxidized Rhizospheres on Living Roots | _____ Saturation Visible on Aerial Imagery (C9) | |
| _____ Drift Deposits (B3) | _____ Presence of Reduced Iron (C4) | _____ Stunted or Stressed Plants (D1) | |
| _____ Algal Mat or Crust (B4) | _____ Recent Iron Reduction in Tilled Soil (C6) | _____ <u>X</u> Geomorphic Position (D2) | |
| _____ Iron Deposits (B5) | _____ Thin Muck Surface (C7) | _____ <u>X</u> FAC-Neutral Test (D5) | |
| _____ Inundation Visible on Aerial Imagery | _____ Gauge or Well Data (D9) | | |
| _____ Sparsely Vegetated Concave Surface | _____ Other | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____ | Hydrology Indicators Present? Yes <u>X</u> No _____ |
| Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____ | |
| Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____ | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: B2
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief: Convex
 Slope (%): 0-2 Lat. 39.817671° Long. -86.192395° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

Remarks:

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>3</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>75.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>60</u> x <u>3</u> = <u>180</u> FACU species <u>0</u> x <u>4</u> = <u>0</u> UPL species <u>60</u> x <u>5</u> = <u>300</u> Total <u>130</u> Prevalence Index: <u>3.85</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>x</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>x</u> No <u> </u> |
|--------------------------------------|------------------------------|------------------|--------------------|------------------|--|
| 1. <u>Acer negundo</u> | <u>30'</u> | <u>40</u> | <u>Y</u> | <u>FAC 3</u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>40</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: <u>15'</u> | | | | |
| 1. <u>Lonicera maackii</u> | | <u>60</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u>Fraxinus pennsylvanica</u> | | <u>5</u> | | <u>FACW 2</u> | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>65</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u>Geum canadense</u> | | <u>20</u> | <u>Y</u> | <u>FAC 3</u> | |
| 2. <u>Dichanthelium clandestinum</u> | | <u>5</u> | <u>Y</u> | <u>FACW 2</u> | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | <u>25</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>0</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|--|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks | |
| 0 - 8 | 10YR 4/3 | 100 | | | | | | SiCL | |
| 8 - 18 | 10YR 3/3 | 100 | | | | | | SiCL | |
| | | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u> </u> | Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Depth (Inches) <u> </u> | |

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | | | Secondary Indicators | | |
|--|---|---|--|----------------------|--|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | | | | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | | | | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | | | | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | | | | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | | | | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | | | | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | | | | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | | | | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | | | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | | | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |
| Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches) <u> </u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 1
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief: Convex
 Slope (%): 0-2 Lat. 39.817383° Long. -86.194894° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |
| Remarks: <u>Collected in an area of active construction. No wetland criteria were met</u> | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>0</u> Percent of dominant species that are OBL, FACW, or FAC: <u>#DIV/0!</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>0</u> x 2 <u>0</u> FAC species <u>0</u> x 3 <u>0</u> FACU species <u>0</u> x 4 <u>0</u> UPL species <u>0</u> x 5 <u>0</u> Total <u>0</u> Prevalence Index: <u>#DIV/0!</u> |
|--|-------------------|-------------------|-------------------|-------------------|---|
| 1. <u> </u> | <u>30'</u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>0</u> | Total Cover | | |
| Shrub Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>15'</u> | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>0</u> | Total Cover | | |
| Herb Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>5'</u> | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | <u>0</u> | Total Cover | | |
| Woody Vine Stratum | Plot size: | | | | |
| 1. <u> </u> | <u>5'</u> | | | | |
| 2. <u> </u> | | | | | |
| | | <u>0</u> | Total Cover | | |
| Remarks: <u>No vegetation observed</u> | | | | | Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> ##### Dominance Test is >50% <u> </u> ##### Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes ##### No ##### |

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|--------|---|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| <u>N/A</u> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u> </u> | Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Depth (Inches) <u> </u> | |
| Remarks: <u>No pit excavated since this DP was situated in an active construction work area</u> | |

HYDROLOGY

| Wetland Hydrology Indicators: | | | |
|--|---|---|--|
| Primary Indicators (check all that apply) | | Secondary Indicators | |
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | |
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u> | |
| Water Table Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | | |
| Saturation Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | |

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 2
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.816669° Long. -86.194292° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>20.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>41</u> x 4 = <u>164</u> UPL species <u>40</u> x 5 = <u>200</u> Total <u>121</u> Prevalence Index: <u>4.00</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is <=3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u>X</u> |
|----------------------------------|----------------|------------------|------------------|------------------|--|
| 1. <i>Picea abies</i> | 30' | 10 | Y | UPL 5 | |
| 2. <i>Catalpa speciosa</i> | | 5 | Y | FACU 4 | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | 15 | Total Cover | | |
| Shrub Stratum | Plot size: 15' | | | | |
| 1. <i>Prunus serotina</i> | | 1 | | FACU 4 | |
| 2. _____ | | | | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | 1 | Total Cover | | |
| Herb Stratum | Plot size: 5' | | | | |
| 1. <i>Bromus inermis</i> | | 30 | Y | UPL 5 | |
| 2. <i>Poa pratensis</i> | | 30 | Y | FAC 3 | |
| 3. <i>Lolium perenne</i> | | 20 | Y | FACU 4 | |
| 4. <i>Solidago canadensis</i> | | 10 | | FACU 4 | |
| 5. <i>Toxicodendron radicans</i> | | 10 | | FAC 3 | |
| 6. _____ | | | | | |
| 7. _____ | | | | | |
| 8. _____ | | | | | |
| | | 100 | Total Cover | | |
| Woody Vine Stratum | Plot size: 5' | | | | |
| 1. <i>Vitis labrusca</i> | | 5 | | FACU 4 | |
| 2. _____ | | | | | |
| | | 5 | Total Cover | | |

Remarks: _____

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| 0 - 18 | 10YR 3/2 | 100 | | | | | SiL | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

| | |
|---|---|
| Restrictive Layer (if observed): Type: _____ | Hydric Soil Present? Yes <u></u> No <u></u> X <u>X</u> |
| Depth (Inches) _____ | |

Remarks: _____

HYDROLOGY

| Wetland Hydrology Indicators: | | Field Observations: | | Hydrology Indicators Present? | |
|--|---|---------------------|-------------|-----------------------------------|------------|
| Primary Indicators (check all that apply) | | | | Yes | No |
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | Yes <u></u> | No <u>X</u> | Yes <u></u> No <u></u> X <u>X</u> | X <u>X</u> |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | Yes <u></u> | No <u>X</u> | | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | Yes <u></u> | No <u>X</u> | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | Yes <u></u> | No <u>X</u> | | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 3
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.817098° Long. -86.193988° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>16.67</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>90</u> x <u>2</u> = <u>180</u> FAC species <u>12</u> x <u>3</u> = <u>36</u> FACU species <u>68</u> x <u>4</u> = <u>272</u> UPL species <u>27</u> x <u>5</u> = <u>135</u> Total <u>197</u> Prevalence Index: <u>3.16</u> |
|----------------------------------|------------|------------------|------------------|------------------|--|
| 1. <i>Acer saccharum</i> | 30' | 20 | Y | FACU 4 | |
| 2. <i>Ailanthus altissima</i> | | 20 | Y | FACU 4 | |
| 3. <i>Morus rubra</i> | | 10 | Y | FACU 4 | |
| 4. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 5. <u></u> | | <u></u> | <u></u> | <u></u> | |
| | | 50 | Total Cover | | |
| Shrub Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is ≤3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u>X</u> |
| 1. <i>Lonicera maackii</i> | 15' | 17 | Y | UPL 5 | |
| 2. <i>Rhus typhina</i> | | 5 | Y | UPL 5 | |
| 3. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 4. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 5. <u></u> | | <u></u> | <u></u> | <u></u> | |
| | | 22 | Total Cover | | |
| Herb Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u>X</u> |
| 1. <i>Phalaris arundinacea</i> | 5' | 90 | Y | FACW 2 | |
| 2. <i>Avena sativa</i> | | 5 | | UPL 5 | |
| 3. <i>Cirsium arvense</i> | | 3 | | FACU 4 | |
| 4. <i>Toxicodendron radicans</i> | | 2 | | FAC 3 | |
| 5. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 6. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 7. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 8. <u></u> | | <u></u> | <u></u> | <u></u> | |
| | | 100 | Total Cover | | |
| Woody Vine Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u>X</u> |
| 1. <i>Vitis labrusca</i> | 5' | 15 | | FACU 4 | |
| 2. <i>Toxicodendron radicans</i> | | 10 | | FAC 3 | |
| 3. <u></u> | | <u></u> | <u></u> | <u></u> | |
| 4. <u></u> | | <u></u> | <u></u> | <u></u> | |
| | | 25 | Total Cover | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| 0 - 18 | 10YR 3/3 | 100 | | | | | SiL | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

| | |
|--|---|
| Restrictive Layer (if observed): Type: <u></u> Depth (Inches) <u></u> | Hydric Soil Present? Yes <u></u> No <u></u> X <u>X</u> |
|--|---|

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) | |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u></u> Geomorphic Position (D2) | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | Hydrology Indicators Present? Yes <u></u> No <u></u> X <u>X</u> |
| Water Table Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | |
| Saturation Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 4
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform Flood plains Local Relief _____
 Slope (%): 0-2 Lat. 39.816959° Long. -86.192876° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation _____, Soil _____ or Hydrology _____ significantly disturbed
 Vegetation _____, Soil _____ or Hydrology _____ naturally problematic
 Are Normal Circumstances Present? Yes X No _____

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | Is the DP within a Wetland? Yes _____ No <u>X</u> |
| Hydric Soil Present? Yes _____ No <u>X</u> | |
| Wetland Hydrology Present? Yes _____ No <u>X</u> | |
| Remarks: <u>Collected in an area of active construction. No wetland criteria were met</u> | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>0</u> Percent of dominant species that are OBL, FACW, or FAC: <u>#DIV/0!</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>0</u> x 2 <u>0</u> FAC species <u>0</u> x 3 <u>0</u> FACU species <u>0</u> x 4 <u>0</u> UPL species <u>0</u> x 5 <u>0</u> Total <u>0</u> Prevalence Index: <u>#DIV/0!</u> |
|--|------------------------------|------------------|------------------|------------------|---|
| 1. _____ | <u>30'</u> | _____ | _____ | _____ | |
| 2. _____ | | _____ | _____ | _____ | |
| 3. _____ | | _____ | _____ | _____ | |
| 4. _____ | | _____ | _____ | _____ | |
| 5. _____ | | <u>0</u> | Total Cover | _____ | |
| Shrub Stratum | Plot size: <u>15'</u> | | | | Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>#####</u> Dominance Test is >50% <u>#####</u> Prevalence Index is ≤3.0* <u>#####</u> Morphological Adaptations* _____ Problematic Hydrophytic Vegetation* _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>#####</u> No <u>#####</u> |
| 1. _____ | | _____ | _____ | _____ | |
| 2. _____ | | _____ | _____ | _____ | |
| 3. _____ | | _____ | _____ | _____ | |
| 4. _____ | | _____ | _____ | _____ | |
| 5. _____ | | <u>0</u> | Total Cover | _____ | |
| Herb Stratum | Plot size: <u>5'</u> | | | | Hydrophytic Vegetation Present? Yes <u>#####</u> No <u>#####</u> |
| 1. _____ | | _____ | _____ | _____ | |
| 2. _____ | | _____ | _____ | _____ | |
| 3. _____ | | _____ | _____ | _____ | |
| 4. _____ | | _____ | _____ | _____ | |
| 5. _____ | | <u>0</u> | Total Cover | _____ | |
| Woody Vine Stratum | Plot size: <u>5'</u> | | | | Hydrophytic Vegetation Present? Yes <u>#####</u> No <u>#####</u> |
| 1. _____ | | _____ | _____ | _____ | |
| 2. _____ | | _____ | _____ | _____ | |
| 3. _____ | | _____ | _____ | _____ | |
| 4. _____ | | _____ | _____ | _____ | |
| 5. _____ | | <u>0</u> | Total Cover | _____ | |
| Remarks: <u>No vegetation observed</u> | | | | | |

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|--------|---|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| <u>N/A</u> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|--------------------------------|-----------------------------------|--------------------------|
| _____ | Histosol (A1) | Sandy Mucky Mineral (S1) |
| _____ | Histic Epipedon (A2) | 5cm Mucky Peat or Peat |
| _____ | Black Histic (A3) | Sandy Gleyed Matrix (S4) |
| _____ | Hydrogen Sulfide (A4) | Sandy Redox (S5) |
| _____ | Stratified Layers (A5) | Stripped Matrix (S6) |
| _____ | 2 cm Muck (A10) | Loamy Mucky Mineral (F1) |
| _____ | Depleted Below Dark Surface (A11) | Loamy Gleyed Matrix (F2) |
| _____ | Thick Dark Surface (A12) | Depleted Matrix (F3) |

| Restrictive Layer (if observed): | | |
|---|----------------------|--|
| Type: _____ | Depth (Inches) _____ | Hydric Soil Present? Yes _____ No _____ X _____ |

Remarks: No soil pit was excavated since this DP was situated in an active construction work area

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|--------------------------------------|-----------------------------|---|
| _____ | Surface Water (A1) | _____ | Surface Soil Cracks (B6) |
| _____ | High Water Table (A2) | _____ | Drainage Patterns (B10) |
| _____ | Saturation (A3) | _____ | Dry-Season Water Table (C2) |
| _____ | Water Marks (B1) | _____ | Crayfish Burrows (C8) |
| _____ | Sediment Deposits (B2) | _____ | Saturation Visible on Aerial Imagery (C9) |
| _____ | Drift Deposits (B3) | _____ | Stunted or Stressed Plants (D1) |
| _____ | Algal Mat or Crust (B4) | _____ | Geomorphic Position (D2) |
| _____ | Iron Deposits (B5) | _____ | FAC-Neutral Test (D5) |
| _____ | Inundation Visible on Aerial Imagery | _____ | |
| _____ | Sparsely Vegetated Concave Surface | _____ | |

| Field Observations: | | | | Hydrology Indicators Present? | | |
|----------------------------|-----------------------|----------------|-------|--------------------------------------|--|--|
| Surface Water Present? | Yes _____ No <u>X</u> | Depth (inches) | _____ | Yes _____ No _____ X _____ | | |
| Water Table Present? | Yes _____ No <u>X</u> | Depth (inches) | _____ | | | |
| Saturation Present? | Yes _____ No <u>X</u> | Depth (inches) | _____ | | | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 5
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.816936° Long. -86.192192° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>5</u> x <u>2</u> = <u>10</u> FAC species <u>55</u> x <u>3</u> = <u>165</u> FACU species <u>109</u> x <u>4</u> = <u>436</u> UPL species <u>18</u> x <u>5</u> = <u>90</u> Total <u>187</u> Prevalence Index: <u>3.75</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is ≤3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> x <u>X</u> |
|--------------------------------------|----------------|------------------|------------------|------------------|---|
| 1. <i>Populus deltoides</i> | 30' | 40 | Y | FAC 3 | |
| 2. <i>Morus rubra</i> | | 20 | Y | FACU 4 | |
| 3. <i>Acer negundo</i> | | 5 | | FAC 3 | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| | | 65 | Total Cover | | |
| Shrub Stratum | Plot size: 15' | | | | |
| 1. <i>Lonicera maackii</i> | | 15 | Y | UPL 5 | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| | | 15 | Total Cover | | |
| Herb Stratum | Plot size: 5' | | | | |
| 1. <i>Dactylis glomerata</i> | | 60 | Y | FACU 4 | |
| 2. <i>Cirsium arvense</i> | | 15 | | FACU 4 | |
| 3. <i>Phytolacca americana</i> | | 7 | | FACU 4 | |
| 4. <i>Geum canadense</i> | | 5 | | FAC 3 | |
| 5. <i>Symphotrichum lateriflorum</i> | | 5 | | FACW 2 | |
| 6. <i>Avena sativa</i> | | 3 | | UPL 5 | |
| 7. <u></u> | | | | | |
| 8. <u></u> | | | | | |
| | | 95 | Total Cover | | |
| Woody Vine Stratum | Plot size: 5' | | | | |
| 1. <i>Humulus lupulus</i> | | 7 | | FACU 4 | |
| 2. <i>Toxicodendron radicans</i> | | 5 | | FAC 3 | |
| | | 12 | Total Cover | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|--|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | | |
| 0 - 18 | 10YR 3/3 | 100 | | | | | | SiL | |
| | | | | | | | | | |
| | | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u></u> | Hydric Soil Present? Yes <u></u> No <u></u> X <u>X</u> |
| Depth (Inches): <u></u> | |

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | | | |
|--|---|---|--|
| Primary Indicators (check all that apply) | | Secondary Indicators | |
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) | |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u></u> Geomorphic Position (D2) | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | Hydrology Indicators Present? Yes <u></u> No <u></u> X <u>X</u> |
| Water Table Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | |
| Saturation Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 6
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform Flood plains Local Relief
 Slope (%): 0-2 Lat. 39.816747° Long. -86.19353° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |
| Remarks: <u>Collected in an area of active construction. No wetland criteria were met</u> | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>0</u> Percent of dominant species that are OBL, FACW, or FAC: <u>#DIV/0!</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>0</u> x 2 <u>0</u> FAC species <u>0</u> x 3 <u>0</u> FACU species <u>0</u> x 4 <u>0</u> UPL species <u>0</u> x 5 <u>0</u> Total <u>0</u> Prevalence Index: <u>#DIV/0!</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>#####</u> Dominance Test is >50% <u>#####</u> Prevalence Index is ≤3.0* Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>#####</u> No <u>#####</u> |
|---|------------|------------------|------------------|------------------|---|
| 1. <u></u> | 30' | | | | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | 0 | Total Cover | | |
| Shrub Stratum Plot size: 15' | | | | | |
| 1. <u></u> | | | | | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | 0 | Total Cover | | |
| Herb Stratum Plot size: 5' | | | | | |
| 1. <u></u> | | | | | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| 6. <u></u> | | | | | |
| 7. <u></u> | | | | | |
| 8. <u></u> | | 0 | Total Cover | | |
| Woody Vine Stratum Plot size: 5' | | | | | |
| 1. <u></u> | | | | | |
| 2. <u></u> | | 0 | Total Cover | | |
| Remarks: <u>No vegetation observed</u> | | | | | |

SOIL

| Profile Description: (Describe to depth needed to document the indicator or confirm absence of indicators.) | | | | | | | | |
|--|----------------------------------|---|--|---|-------|-------|---------|---------|
| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| N/A | Color | % | Color | % | Type* | Loc** | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| *Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix | | | | | | | | |
| Hydric Soil Indicators: | | | | | | | | |
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | | <u></u> Redox Dark Surface (F6) | | | | | |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | | <u></u> Depleted Dark Surface (F7) | | | | | |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | | <u></u> Redox Depressions (F8) | | | | | |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | | Indicators for Problematic Hydric Soils | | | | | |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | | <u></u> Coast Prairie Redox (A16) | | | | | |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | | <u></u> Iron-Manganese Masses (F12) | | | | | |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | | <u></u> Very Shallow Dark Surface (F12) | | | | | |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | | <u></u> Other | | | | | |
| Restrictive Layer (if observed): Type: <u></u> Depth (Inches) <u></u> Hydric Soil Present? Yes <u></u> No <u>X</u> | | | | | | | | |
| Remarks: <u>No soil pit was excavated since this DP was situated in an active construction work area</u> | | | | | | | | |

HYDROLOGY

| | | | | |
|--|---|---|--|--|
| Wetland Hydrology Indicators: | | | | |
| Primary Indicators (check all that apply) | | | Secondary Indicators | |
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) | | |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) | | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) | | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) | | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) | | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) | | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u></u> Geomorphic Position (D2) | | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) | | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | | | |
| Field Observations: Surface Water Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | | | Hydrology Indicators Present? Yes <u></u> No <u>X</u> | |
| Water Table Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | | | | |
| Saturation Present? Yes <u></u> No <u>X</u> Depth (inches) <u></u> | | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | | | |

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 7
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.817594° Long. -86.194219° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>20.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>0</u> x 2 <u>0</u> FAC species <u>13</u> x 3 <u>39</u> FACU species <u>97</u> x 4 <u>388</u> UPL species <u>13</u> x 5 <u>65</u> Total <u>123</u> Prevalence Index: <u>4.00</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is <3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> x <u>X</u> |
|---|------------|------------------|------------------|------------------|---|
| 1. <i>Celtis occidentalis</i> | 30' | 10 | Y | FAC 3 | |
| 2. <i>Juniperus virginiana</i> | | 7 | Y | FACU 4 | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | 17 | Total Cover | | |
| Shrub Stratum Plot size: 15' | | | | | |
| 1. <i>Lonicera maackii</i> | | 3 | | UPL 5 | |
| 2. _____ | | | | | |
| 3. _____ | | | | | |
| 4. _____ | | | | | |
| 5. _____ | | 3 | Total Cover | | |
| Herb Stratum Plot size: 5' | | | | | |
| 1. <i>Ambrosia artemisiifolia</i> | | 25 | Y | FACU 4 | |
| 2. <i>Mellilotus officinalis</i> | | 20 | Y | FACU 4 | |
| 3. <i>Trifolium repens</i> | | 20 | Y | FACU 4 | |
| 4. <i>Avena sativa</i> | | 10 | | UPL 5 | |
| 5. <i>Schedonorus arundinaceus</i> | | 10 | | FACU 4 | |
| 6. <i>Solidago canadensis</i> | | 7 | | FACU 4 | |
| 7. <i>Thlaspi arvense</i> | | 5 | | FACU 4 | |
| 8. <i>Rumex crispus</i> | | 3 | | FAC 3 | |
| | | 100 | Total Cover | | |
| Woody Vine Stratum Plot size: 5' | | | | | |
| 1. <i>Humulus lupulus</i> | | 3 | | FACU 4 | |
| 2. _____ | | | | | |
| | | 3 | Total Cover | | |

Remarks: _____

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| 0 - 18 | 10YR 3/2 | 100 | | | | | SiL | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--------------------------------|--|
| _____ Histosol (A1) | _____ Sandy Mucky Mineral (S1) | _____ Redox Dark Surface (F6) |
| _____ Histic Epipedon (A2) | _____ 5cm Mucky Peat or Peat | _____ Depleted Dark Surface (F7) |
| _____ Black Histic (A3) | _____ Sandy Gleyed Matrix (S4) | _____ Redox Depressions (F8) |
| _____ Hydrogen Sulfide (A4) | _____ Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| _____ Stratified Layers (A5) | _____ Stripped Matrix (S6) | _____ Coast Prairie Redox (A16) |
| _____ 2 cm Muck (A10) | _____ Loamy Mucky Mineral (F1) | _____ Iron-Manganese Masses (F12) |
| _____ Depleted Below Dark Surface (A11) | _____ Loamy Gleyed Matrix (F2) | _____ Very Shallow Dark Surface (F12) |
| _____ Thick Dark Surface (A12) | _____ Depleted Matrix (F3) | _____ Other |

Restrictive Layer (if observed): Type: _____ Depth (Inches) _____

Hydric Soil Present? Yes No X X

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| _____ Surface Water (A1) | _____ Water Stained Leaves (B9) | _____ Surface Soil Cracks (B6) | |
| _____ High Water Table (A2) | _____ Aquatic Fauna (B13) | _____ Drainage Patterns (B10) | |
| _____ Saturation (A3) | _____ True Aquatic Plants (B14) | _____ Dry-Season Water Table (C2) | |
| _____ Water Marks (B1) | _____ Hydrogen Sulfide Odor (C1) | _____ Crayfish Burrows (C8) | |
| _____ Sediment Deposits (B2) | _____ Oxidized Rhizospheres on Living Roots | _____ Saturation Visible on Aerial Imagery (C9) | |
| _____ Drift Deposits (B3) | _____ Presence of Reduced Iron (C4) | _____ Stunted or Stressed Plants (D1) | |
| _____ Algal Mat or Crust (B4) | _____ Recent Iron Reduction in Tilled Soil (C6) | _____ Geomorphic Position (D2) | |
| _____ Iron Deposits (B5) | _____ Thin Muck Surface (C7) | _____ FAC-Neutral Test (D5) | |
| _____ Inundation Visible on Aerial Imagery | _____ Gauge or Well Data (D9) | | |
| _____ Sparsely Vegetated Concave Surface | _____ Other | | |

Field Observations: Surface Water Present? Yes No X Depth (inches) _____
 Water Table Present? Yes No X Depth (inches) _____
 Saturation Present? Yes No X Depth (inches) _____

Hydrology Indicators Present? Yes No X X

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 8
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Floodplain Local Relief: Concave
 Slope (%): 0 - 3 Lat. 39.818065° Long. -86.193589° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Udortheints, cut and filled

Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic

Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u> </u> X <u> </u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u> </u> 1 Total number of dominant species across all strata: <u> </u> 2 Percent of dominant species that are OBL, FACW, or FAC: <u> </u> 50.00 Prevalence Index Worksheet Total % cover of: OBL species <u> </u> x 1 <u> </u> 0 FACW species <u> </u> x 2 <u> </u> 30 FAC species <u> </u> x 3 <u> </u> 0 FACU species <u> </u> x 4 <u> </u> 192 UPL species <u> </u> x 5 <u> </u> 0 Total <u> </u> 63 <u> </u> 222 Prevalence Index: <u> </u> 3.52 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u> |
|---|------------|-----------------------------|-----------------------------|-----------------------------|--|
| 1. <u> </u> | 30' | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| Shrub Stratum Plot size: <u> </u> 15' | | <u> </u> | <u> </u> | <u> </u> | |
| 1. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| Herb Stratum Plot size: <u> </u> 5' | | <u> </u> | <u> </u> | <u> </u> | |
| 1. <u>Ambrosia artemisiifolia</u> | | 25 | Y | FACU 4 | |
| 2. <u>Echinochloa crus-galli</u> | | 15 | Y | FACW 2 | |
| 3. <u>Solidago canadensis</u> | | 10 | | FACU 4 | |
| 4. <u>Plantago lanceolata</u> | | 7 | | FACU 4 | |
| 5. <u>Thlaspi arvense</u> | | 3 | | FACU 4 | |
| 6. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 7. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| 8. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| Woody Vine Stratum Plot size: <u> </u> 5' | | <u> </u> | <u> </u> | <u> </u> | |
| 1. <u>Humulus lupulus</u> | | 3 | | FACU 4 | |
| 2. <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |
| Remarks: <u> </u> | | <u> </u> | <u> </u> | <u> </u> | |

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|--------------------------|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks |
| 0 - 1 | 10YR 5/2 | 100 | | | | | SiL | |
| 1 - 8 | 10YR 3/2 | 100 | | | | | SiL | |
| 8+ | N/A | N/A | | | | | Gravel | Prohibitive gravel layer |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

Restrictive Layer (if observed): Type: Depth (Inches) **Hydric Soil Present?** Yes No X
 Remarks: Soil pit could not be excavated deeper than 8 inches due to a restrictive gravel layer

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | | | Secondary Indicators | | |
|--|---|---|--|----------------------|--|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | | | | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | | | | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | | | | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | | | | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | | | | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | | | | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | | | | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | | | | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | | | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | | | | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)
Hydrology Indicators Present? Yes No X

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 9
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Floodplain Local Relief: Concave
 Slope (%): 0 - 3 Lat. 39.817988° Long. -86.192761° Datum: NAD83 NWI Class: N/A
 Soil Map Unit Name: Udortheints, cut and filled
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>3</u> Percent of dominant species that are OBL, FACW, or FAC: <u>33.33</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>0</u> x <u>2</u> = <u>0</u> FAC species <u>40</u> x <u>3</u> = <u>120</u> FACU species <u>45</u> x <u>4</u> = <u>180</u> UPL species <u>60</u> x <u>5</u> = <u>300</u> Total <u>145</u> = <u>600</u> Prevalence Index: <u>4.14</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> x <u> </u> |
|--------------------------------|-----------------------|------------------|--------------------|------------------|--|
| 1. <u>Acer negundo</u> | <u>30'</u> | <u>40</u> | <u>Y</u> | <u>FAC 3</u> | |
| 2. <u>Robinia pseudoacacia</u> | | <u>40</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>80</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: <u>15'</u> | | | | |
| 1. <u>Lonicera maackii</u> | | <u>60</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | <u>60</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | <u>0</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u>Vitis labrusca</u> | | <u>5</u> | | <u>FACU 4</u> | |
| 2. <u> </u> | | <u>5</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| 0 - 18 | 10YR 3/2 | 100 | | | | | SiL | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

| | |
|---|--|
| Restrictive Layer (if observed): Type: <u> </u> | Hydric Soil Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Depth (Inches) <u> </u> | |

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u> </u> Geomorphic Position (D2) | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | |

| | | |
|---|--|---|
| Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | Hydrology Indicators Present? Yes <u> </u> No <u> </u> X <u> </u> |
| Water Table Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | |
| Saturation Present? Yes <u> </u> No <u>X</u> | Depth (inches) <u> </u> | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 10
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.817726° Long. -86.193249° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration

Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic

Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>6</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>92</u> x 4 = <u>368</u> UPL species <u>60</u> x 5 = <u>300</u> Total <u>169</u> Prevalence Index: <u>4.24</u> |
|--|------------|------------------|--------------------|------------------|---|
| 1. <u>Acer saccharum</u> | <u>30'</u> | <u>25</u> | <u>Y</u> | <u>FACU 4</u> | |
| 2. <u>Juglans nigra</u> | | <u>25</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Morus rubra</u> | | <u>20</u> | <u>Y</u> | <u>FACU 4</u> | |
| 4. <u>Populus deltoides</u> | | <u>15</u> | | <u>FAC 3</u> | |
| 5. <u>Catalpa speciosa</u> | | <u>10</u> | | <u>FACU 4</u> | |
| | | <u>95</u> | <u>Total Cover</u> | | |
| Shrub Stratum Plot size: <u>15'</u> | | | | | |
| 1. <u>Lonicera maackii</u> | | <u>60</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| | | <u>60</u> | <u>Total Cover</u> | | |
| Herb Stratum Plot size: <u>5'</u> | | | | | |
| 1. <u>Acer saccharum</u> | | <u>7</u> | <u>Y</u> | <u>FACU 4</u> | |
| 2. <u>Parthenocissus quinquefolia</u> | | <u>5</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Carex grayi</u> | | <u>2</u> | | <u>FACW 2</u> | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| 6. <u></u> | | | | | |
| 7. <u></u> | | | | | |
| 8. <u></u> | | | | | |
| | | <u>14</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum Plot size: <u>5'</u> | | | | | |
| 1. <u></u> | | | | | |
| 2. <u></u> | | | | | |
| | | <u>0</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks |
| 0 - 14 | 10YR 3/2 | 100 | | | | | | SiL |
| 14 - 18 | 10YR 4/3 | 100 | | | | | | SiL |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

Restrictive Layer (if observed): Type: Depth (Inches) **Hydric Soil Present?** Yes No X X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | | | Secondary Indicators | | |
|--|---|---|--|----------------------|--|--|
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) | | | | |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) | | | | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) | | | | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) | | | | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) | | | | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) | | | | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u></u> Geomorphic Position (D2) | | | | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) | | | | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | | | | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | | | | | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)
Hydrology Indicators Present? Yes No X X

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 11
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.817374° Long. -86.193372° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u></u> | Is the DP within a Wetland? Yes <u></u> No <u></u> |
| Hydric Soil Present? Yes <u></u> No <u></u> | |
| Wetland Hydrology Present? Yes <u></u> No <u></u> | |
| Remarks: Does not meet all wetland criteria | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>2</u> Total number of dominant species across all strata: <u>8</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>10</u> x <u>2</u> = <u>20</u> FAC species <u>20</u> x <u>3</u> = <u>60</u> FACU species <u>110</u> x <u>4</u> = <u>440</u> UPL species <u>40</u> x <u>5</u> = <u>200</u> Total <u>180</u> Prevalence Index: <u>4.00</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is ≤3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u></u> |
|------------------------------------|----------------|------------------|------------------|------------------|---|
| 1. <i>Juglans nigra</i> | 30' | 20 | Y | FACU 4 | |
| 2. <i>Morus rubra</i> | | 20 | Y | FACU 4 | |
| 3. <i>Acer saccharinum</i> | | 10 | Y | FACW 2 | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | 50 | Total Cover | | |
| Shrub Stratum | Plot size: 15' | | | | |
| 1. <i>Lonicera maackii</i> | | 40 | Y | UPL 5 | |
| 2. <i>Acer negundo</i> | | 20 | Y | FAC 3 | |
| 3. <i>Rubus allegheniensis</i> | | 20 | Y | FACU 4 | |
| 4. <i>Ailanthus altissima</i> | | 10 | | FACU 4 | |
| 5. <u></u> | | | | | |
| 6. <u></u> | | 90 | Total Cover | | |
| Herb Stratum | Plot size: 5' | | | | |
| 1. <i>Schedonorus arundinaceus</i> | | 20 | Y | FACU 4 | |
| 2. <i>Solidago canadensis</i> | | 20 | Y | FACU 4 | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| 6. <u></u> | | | | | |
| 7. <u></u> | | | | | |
| 8. <u></u> | | | | | |
| 9. <u></u> | | 40 | Total Cover | | |
| Woody Vine Stratum | Plot size: 5' | | | | |
| 1. <u></u> | | | | | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | 0 | Total Cover | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | |
| 0 - 18 | 10YR 3/2 | 100 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

Restrictive Layer (if observed): Type: Depth (Inches):

| | | | |
|-----------------------------|-------------|------------|-----------|
| Hydric Soil Present? | Yes <u></u> | No <u></u> | X <u></u> |
|-----------------------------|-------------|------------|-----------|

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators |
|--|---|---|
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u></u> Geomorphic Position (D2) |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)

| | | | |
|--------------------------------------|-------------|------------|------------|
| Hydrology Indicators Present? | Yes <u></u> | No <u></u> | X <u>X</u> |
|--------------------------------------|-------------|------------|------------|

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 12
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief: Concave
 Slope (%): 0-2 Lat. 39.817425° Long. -86.192037° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> | Is the DP within a Wetland? Yes <u> </u> No <u> </u> X <u> </u> |
| Hydric Soil Present? Yes <u> </u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u> </u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>0</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>0.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>0</u> x 2 <u>0</u> FAC species <u>0</u> x 3 <u>0</u> FACU species <u>100</u> x 4 <u>400</u> UPL species <u>60</u> x 5 <u>300</u> Total <u>160</u> Prevalence Index: <u>4.38</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u> </u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0* <u> </u> Morphological Adaptations* <u> </u> Problematic Hydrophytic Vegetation* <u> </u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u> X <u> </u> |
|--|------------------------------|---------------------|---------------------|------------------|---|
| 1. <u>Robinia pseudoacacia</u> | <u>30'</u> | <u>40</u> | <u>Y</u> | <u>FACU 4</u> | |
| 2. <u>Morus rubra</u> | | <u>25</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Tilia americana</u> | | <u>20</u> | <u>Y</u> | <u>FACU 4</u> | |
| 4. <u>Juniperus virginiana</u> | | <u>15</u> | | <u>FACU 4</u> | |
| | | <u>100</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: <u>15'</u> | | | | |
| 1. <u>Lonicera maackii</u> | | <u>60</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| | | <u>60</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| 3. <u> </u> | | | | | |
| 4. <u> </u> | | | | | |
| 5. <u> </u> | | | | | |
| 6. <u> </u> | | | | | |
| 7. <u> </u> | | | | | |
| 8. <u> </u> | | | | | |
| | | <u>0</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: <u>5'</u> | | | | |
| 1. <u> </u> | | | | | |
| 2. <u> </u> | | | | | |
| | | <u>0</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | Texture | Remarks |
|----------------|----------|-----|----------------|---|-------|-------|--|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | | |
| 0 - 18 | 10YR 2/2 | 100 | | | | | | SiL | |
| | | | | | | | | | |
| | | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|--|---|
| <u> </u> Histosol (A1) | <u> </u> Sandy Mucky Mineral (S1) | <u> </u> Redox Dark Surface (F6) |
| <u> </u> Histic Epipedon (A2) | <u> </u> 5cm Mucky Peat or Peat | <u> </u> Depleted Dark Surface (F7) |
| <u> </u> Black Histic (A3) | <u> </u> Sandy Gleyed Matrix (S4) | <u> </u> Redox Depressions (F8) |
| <u> </u> Hydrogen Sulfide (A4) | <u> </u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u> </u> Stratified Layers (A5) | <u> </u> Stripped Matrix (S6) | <u> </u> Coast Prairie Redox (A16) |
| <u> </u> 2 cm Muck (A10) | <u> </u> Loamy Mucky Mineral (F1) | <u> </u> Iron-Manganese Masses (F12) |
| <u> </u> Depleted Below Dark Surface (A11) | <u> </u> Loamy Gleyed Matrix (F2) | <u> </u> Very Shallow Dark Surface (F12) |
| <u> </u> Thick Dark Surface (A12) | <u> </u> Depleted Matrix (F3) | <u> </u> Other |

Restrictive Layer (if observed): Type: Depth (Inches)

| | | | |
|-----------------------------|-----------------------|----------------------|---------------------|
| Hydric Soil Present? | Yes <u> </u> | No <u> </u> | X <u> </u> |
|-----------------------------|-----------------------|----------------------|---------------------|

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|---|---|--|
| <u> </u> Surface Water (A1) | <u> </u> Water Stained Leaves (B9) | <u> </u> Surface Soil Cracks (B6) | |
| <u> </u> High Water Table (A2) | <u> </u> Aquatic Fauna (B13) | <u> </u> Drainage Patterns (B10) | |
| <u> </u> Saturation (A3) | <u> </u> True Aquatic Plants (B14) | <u> </u> Dry-Season Water Table (C2) | |
| <u> </u> Water Marks (B1) | <u> </u> Hydrogen Sulfide Odor (C1) | <u> </u> Crayfish Burrows (C8) | |
| <u> </u> Sediment Deposits (B2) | <u> </u> Oxidized Rhizospheres on Living Roots | <u> </u> Saturation Visible on Aerial Imagery (C9) | |
| <u> </u> Drift Deposits (B3) | <u> </u> Presence of Reduced Iron (C4) | <u> </u> Stunted or Stressed Plants (D1) | |
| <u> </u> Algal Mat or Crust (B4) | <u> </u> Recent Iron Reduction in Tilled Soil (C6) | <u>X</u> Geomorphic Position (D2) | |
| <u> </u> Iron Deposits (B5) | <u> </u> Thin Muck Surface (C7) | <u> </u> FAC-Neutral Test (D5) | |
| <u> </u> Inundation Visible on Aerial Imagery | <u> </u> Gauge or Well Data (D9) | | |
| <u> </u> Sparsely Vegetated Concave Surface | <u> </u> Other | | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)

| | | | |
|--------------------------------------|-----------------------|----------------------|---------------------|
| Hydrology Indicators Present? | Yes <u> </u> | No <u> </u> | X <u> </u> |
|--------------------------------------|-----------------------|----------------------|---------------------|

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 13
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform Flood plains Local Relief _____
 Slope (%): 0-2 Lat. 39.817799° Long. -86.191973° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y Y
 Vegetation _____, Soil _____ or Hydrology _____ significantly disturbed
 Vegetation _____, Soil _____ or Hydrology _____ naturally problematic
 Are Normal Circumstances Present? Yes X No _____

SUMMARY OF FINDINGS

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <u>_____</u> No <u>X</u> | Is the DP within a Wetland? Yes <u>_____</u> No <u>_____</u> X <u>_____</u> |
| Hydric Soil Present? Yes <u>_____</u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u>_____</u> No <u>X</u> | |
| Remarks: Does not meet all wetland criteria | |

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>4</u> Percent of dominant species that are OBL, FACW, or FAC: <u>25.00</u> Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x 1 <u>0</u> FACW species <u>35</u> x 2 <u>70</u> FAC species <u>0</u> x 3 <u>0</u> FACU species <u>55</u> x 4 <u>220</u> UPL species <u>60</u> x 5 <u>300</u> Total <u>150</u> <u>590</u> Prevalence Index: <u>3.93</u> Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u>_____</u> Dominance Test is >50% <u>_____</u> Prevalence Index is ≤3.0* <u>_____</u> Morphological Adaptations* <u>_____</u> Problematic Hydrophytic Vegetation* <u>_____</u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic Hydrophytic Vegetation Present? Yes <u>_____</u> No <u>_____</u> X <u>_____</u> |
|--|------------|---------------------|---------------------|------------------|--|
| 1. <u>Ulmus americana</u> | <u>30'</u> | <u>35</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. <u>Robinia pseudoacacia</u> | | <u>30</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Juglans nigra</u> | | <u>25</u> | <u>Y</u> | <u>FACU 4</u> | |
| 4. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 5. <u>_____</u> | | <u>90</u> | <u>Total Cover</u> | <u>_____</u> | |
| Shrub Stratum Plot size: <u>15'</u> | | | | | |
| 1. <u>Lonicera maackii</u> | | <u>60</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 3. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 4. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 5. <u>_____</u> | | <u>60</u> | <u>Total Cover</u> | <u>_____</u> | |
| Herb Stratum Plot size: <u>5'</u> | | | | | |
| 1. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 2. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 3. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 4. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 5. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 6. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 7. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 8. <u>_____</u> | | <u>0</u> | <u>Total Cover</u> | <u>_____</u> | |
| Woody Vine Stratum Plot size: <u>5'</u> | | | | | |
| 1. <u>_____</u> | | <u>_____</u> | <u>_____</u> | <u>_____</u> | |
| 2. <u>_____</u> | | <u>0</u> | <u>Total Cover</u> | <u>_____</u> | |
| Remarks: <u>_____</u> | | | | | |

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | Texture | Remarks |
|-------------------|----------|-----|----------------|---|-------|-------|--|---------|---------|
| | Color | % | Color | % | Type* | Loc** | | | |
| 0 - 11 | 10YR 2/2 | 100 | | | | | | SiL | |
| | | | | | | | | | |
| | | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

| Hydric Soil Indicators: | | |
|--|---------------------------------------|--|
| <u>_____</u> Histosol (A1) | <u>_____</u> Sandy Mucky Mineral (S1) | <u>_____</u> Redox Dark Surface (F6) |
| <u>_____</u> Histic Epipedon (A2) | <u>_____</u> 5cm Mucky Peat or Peat | <u>_____</u> Depleted Dark Surface (F7) |
| <u>_____</u> Black Histic (A3) | <u>_____</u> Sandy Gleyed Matrix (S4) | <u>_____</u> Redox Depressions (F8) |
| <u>_____</u> Hydrogen Sulfide (A4) | <u>_____</u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u>_____</u> Stratified Layers (A5) | <u>_____</u> Stripped Matrix (S6) | <u>_____</u> Coast Prairie Redox (A16) |
| <u>_____</u> 2 cm Muck (A10) | <u>_____</u> Loamy Mucky Mineral (F1) | <u>_____</u> Iron-Manganese Masses (F12) |
| <u>_____</u> Depleted Below Dark Surface (A11) | <u>_____</u> Loamy Gleyed Matrix (F2) | <u>_____</u> Very Shallow Dark Surface (F12) |
| <u>_____</u> Thick Dark Surface (A12) | <u>_____</u> Depleted Matrix (F3) | <u>_____</u> Other |

| | |
|--|---|
| Restrictive Layer (if observed): Type: <u>_____</u> | Hydric Soil Present? Yes <u>_____</u> No <u>_____</u> X <u>_____</u> |
| Depth (Inches) <u>_____</u> | |
| Remarks: <u>_____</u> | |

HYDROLOGY

Wetland Hydrology Indicators:

| Primary Indicators (check all that apply) | | Secondary Indicators | |
|--|--|--|--|
| <u>_____</u> Surface Water (A1) | <u>_____</u> Water Stained Leaves (B9) | <u>_____</u> Surface Soil Cracks (B6) | |
| <u>_____</u> High Water Table (A2) | <u>_____</u> Aquatic Fauna (B13) | <u>_____</u> Drainage Patterns (B10) | |
| <u>_____</u> Saturation (A3) | <u>_____</u> True Aquatic Plants (B14) | <u>_____</u> Dry-Season Water Table (C2) | |
| <u>_____</u> Water Marks (B1) | <u>_____</u> Hydrogen Sulfide Odor (C1) | <u>_____</u> Crayfish Burrows (C8) | |
| <u>_____</u> Sediment Deposits (B2) | <u>_____</u> Oxidized Rhizospheres on Living Roots | <u>_____</u> Saturation Visible on Aerial Imagery (C9) | |
| <u>_____</u> Drift Deposits (B3) | <u>_____</u> Presence of Reduced Iron (C4) | <u>_____</u> Stunted or Stressed Plants (D1) | |
| <u>_____</u> Algal Mat or Crust (B4) | <u>_____</u> Recent Iron Reduction in Tilled Soil (C6) | <u>_____</u> Geomorphic Position (D2) | |
| <u>_____</u> Iron Deposits (B5) | <u>_____</u> Thin Muck Surface (C7) | <u>_____</u> FAC-Neutral Test (D5) | |
| <u>_____</u> Inundation Visible on Aerial Imagery | <u>_____</u> Gauge or Well Data (D9) | | |
| <u>_____</u> Sparsely Vegetated Concave Surface | <u>_____</u> Other | | |
| Field Observations: Surface Water Present? Yes <u>_____</u> No <u>X</u> | Depth (inches) <u>_____</u> | Hydrology Indicators Present? Yes <u>_____</u> No <u>_____</u> X <u>_____</u> | |
| Water Table Present? Yes <u>_____</u> No <u>X</u> | Depth (inches) <u>_____</u> | | |
| Saturation Present? Yes <u>_____</u> No <u>X</u> | Depth (inches) <u>_____</u> | | |

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

WETLAND DETERMINATION FORM-MIDWEST REGION

Site: RAR Archery Facility City/County: Indianapolis/Marion Date: 11 June 2024 Data Point: 14
 Client: Indy Parks & Recreation State: IN Section, Township, Range: Section 22, Township 16 North, Range 3 East
 Investigator(s): L. Vine Landform: Flood plains Local Relief:
 Slope (%): 0-2 Lat. 39.817291° Long. -86.192561° Datum NAD83 NWI Class: N/A
 Soil Map Unit Name: Gessie silt loam, 0 to 2 percent slopes, frequently flooded, brief duration
 Climatic/hydrologic conditions typical for time of year? Y/N Y
 Vegetation , Soil or Hydrology significantly disturbed
 Vegetation , Soil or Hydrology naturally problematic
 Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

| | |
|---|--|
| Hydrophytic Vegetation Present? Yes <u></u> No <u>X</u> | Is the DP within a Wetland? Yes <u></u> No <u></u> X <u>X</u> |
| Hydric Soil Present? Yes <u></u> No <u>X</u> | |
| Wetland Hydrology Present? Yes <u></u> No <u>X</u> | |

Remarks: **Does not meet all wetland criteria**

VEGETATION

| Tree Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of dominant species that are OBL, FACW, or FAC: <u>1</u> Total number of dominant species across all strata: <u>5</u> Percent of dominant species that are OBL, FACW, or FAC: <u>20.00</u> |
|--------------------------------|------------|------------------|--------------------|------------------|---|
| 1. <u>Robinia pseudoacacia</u> | <u>30'</u> | <u>30</u> | <u>Y</u> | <u>FACU 4</u> | |
| 2. <u>Morus rubra</u> | | <u>15</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Acer negundo</u> | | <u>10</u> | | <u>FAC 3</u> | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| | | <u>55</u> | <u>Total Cover</u> | | |
| Shrub Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Prevalence Index Worksheet Total % cover of: OBL species <u>0</u> x <u>1</u> = <u>0</u> FACW species <u>100</u> x <u>2</u> = <u>200</u> FAC species <u>10</u> x <u>3</u> = <u>30</u> FACU species <u>65</u> x <u>4</u> = <u>260</u> UPL species <u>20</u> x <u>5</u> = <u>100</u> Total <u>195</u> Prevalence Index: <u>3.03</u> |
| 1. <u>Lonicera maackii</u> | <u>15'</u> | <u>20</u> | <u>Y</u> | <u>UPL 5</u> | |
| 2. <u>Morus rubra</u> | | <u>15</u> | <u>Y</u> | <u>FACU 4</u> | |
| 3. <u>Celtis occidentalis</u> | | <u>5</u> | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| | | <u>40</u> | <u>Total Cover</u> | | |
| Herb Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Veg. <u></u> Dominance Test is >50% <u></u> Prevalence Index is ≤3.0* <u></u> Morphological Adaptations* <u></u> Problematic Hydrophytic Vegetation* <u></u> *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| 1. <u>Phalaris arundinacea</u> | <u>5'</u> | <u>100</u> | <u>Y</u> | <u>FACW 2</u> | |
| 2. <u></u> | | | | | |
| 3. <u></u> | | | | | |
| 4. <u></u> | | | | | |
| 5. <u></u> | | | | | |
| 6. <u></u> | | | | | |
| 7. <u></u> | | | | | |
| 8. <u></u> | | | | | |
| | | <u>100</u> | <u>Total Cover</u> | | |
| Woody Vine Stratum | Plot size: | Absolute % Cover | Dominant Species | Indicator Status | Hydrophytic Vegetation Present? Yes <u></u> No <u></u> X <u>X</u> |
| 1. <u>Humulus lupulus</u> | <u>5'</u> | <u>5</u> | | <u>FACU 4</u> | |
| 2. <u></u> | | | | | |
| | | <u>5</u> | <u>Total Cover</u> | | |

Remarks:

SOIL

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

| Depth (inches) | Matrix | | Redox Features | | | | | |
|----------------|----------|-----|----------------|---|-------|-------|---------|---------|
| | Color | % | Color | % | Type* | Loc** | Texture | Remarks |
| 0 - 12 | 10YR 4/2 | 100 | | | | | SiL | |
| 12 - 18 | 10YR 4/3 | 100 | | | | | SiCL | |
| | | | | | | | | |

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

| | | |
|---|----------------------------------|--|
| <u></u> Histosol (A1) | <u></u> Sandy Mucky Mineral (S1) | <u></u> Redox Dark Surface (F6) |
| <u></u> Histic Epipedon (A2) | <u></u> 5cm Mucky Peat or Peat | <u></u> Depleted Dark Surface (F7) |
| <u></u> Black Histic (A3) | <u></u> Sandy Gleyed Matrix (S4) | <u></u> Redox Depressions (F8) |
| <u></u> Hydrogen Sulfide (A4) | <u></u> Sandy Redox (S5) | Indicators for Problematic Hydric Soils |
| <u></u> Stratified Layers (A5) | <u></u> Stripped Matrix (S6) | <u></u> Coast Prairie Redox (A16) |
| <u></u> 2 cm Muck (A10) | <u></u> Loamy Mucky Mineral (F1) | <u></u> Iron-Manganese Masses (F12) |
| <u></u> Depleted Below Dark Surface (A11) | <u></u> Loamy Gleyed Matrix (F2) | <u></u> Very Shallow Dark Surface (F12) |
| <u></u> Thick Dark Surface (A12) | <u></u> Depleted Matrix (F3) | <u></u> Other |

| | |
|---|---|
| Restrictive Layer (if observed): Type: <u></u> | Hydric Soil Present? Yes <u></u> No <u></u> X <u>X</u> |
| Depth (Inches) <u></u> | |

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | | | |
|--|---|---|--|
| Primary Indicators (check all that apply) | | Secondary Indicators | |
| <u></u> Surface Water (A1) | <u></u> Water Stained Leaves (B9) | <u></u> Surface Soil Cracks (B6) | |
| <u></u> High Water Table (A2) | <u></u> Aquatic Fauna (B13) | <u></u> Drainage Patterns (B10) | |
| <u></u> Saturation (A3) | <u></u> True Aquatic Plants (B14) | <u></u> Dry-Season Water Table (C2) | |
| <u></u> Water Marks (B1) | <u></u> Hydrogen Sulfide Odor (C1) | <u></u> Crayfish Burrows (C8) | |
| <u></u> Sediment Deposits (B2) | <u></u> Oxidized Rhizospheres on Living Roots | <u></u> Saturation Visible on Aerial Imagery (C9) | |
| <u></u> Drift Deposits (B3) | <u></u> Presence of Reduced Iron (C4) | <u></u> Stunted or Stressed Plants (D1) | |
| <u></u> Algal Mat or Crust (B4) | <u></u> Recent Iron Reduction in Tilled Soil (C6) | <u>X</u> Geomorphic Position (D2) | |
| <u></u> Iron Deposits (B5) | <u></u> Thin Muck Surface (C7) | <u></u> FAC-Neutral Test (D5) | |
| <u></u> Inundation Visible on Aerial Imagery | <u></u> Gauge or Well Data (D9) | | |
| <u></u> Sparsely Vegetated Concave Surface | <u></u> Other | | |

Field Observations: Surface Water Present? Yes No X Depth (inches)
 Water Table Present? Yes No X Depth (inches)
 Saturation Present? Yes No X Depth (inches)
Hydrology Indicators Present? Yes No X X

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

APPENDIX C

ARCHAEOLOGICAL FIELD RECONNAISSANCE REPORT



Archaeological Consultants of Ossian

July 8, 2024

Ms. Sarah Evans
V3 Companies
619 N. Pennsylvania St.
Indianapolis, IN 46204

Dear Ms. Evans:

Enclosed is a report entitled *An Archaeological Field Reconnaissance of the Proposed Riverside Park Archery Facility in Indianapolis, Marion County, Indiana*. Archaeological Consultants of Ossian Cultural Resource Management Report #24 FR 65. Please forward this report to the Indiana Historic Preservation Office. Please make a copy of the report for your records. All original documents must be forwarded to the SHPO.

As you will see from the report, Phase I survey has detected no properties that are eligible for nomination to the National Register of Historic Places. However, given the alluvial nature of some of the soil within the project, archaeological monitoring has been recommended for them.

Thank you very much for the opportunity to work with you. If there is anything more I can do for you, please do not hesitate to call me at 765 730-0524.

Sincerely,

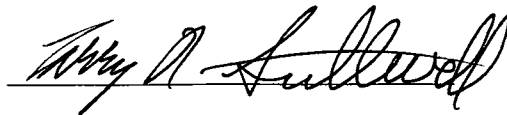


Larry N. Stillwell
Archaeologist

Enclosures: CRM Report 24 FR 65

**An Archaeological Field Reconnaissance of the Proposed Riverside
Park Archery Facility in Indianapolis, Marion County, Indiana**

By
Larry N. Stillwell
Principal Investigator

A handwritten signature in black ink, appearing to read "Larry N. Stillwell", written over a horizontal line.

Submitted by:
Archaeological Consultants of Ossian
P.O. Box 2374
Muncie, IN 47307

Submitted to:
V3 Companies
Indianapolis, IN

July 8, 2024

Introduction

As a result of a request by V3 Companies, Limited, Archaeological Consultants of Ossian (ACO) was contracted to evaluate the effects on cultural resources of the proposed Riverside Park Archery Facility in Indianapolis, Marion County, Indiana (Figure 1). On June 27 and 28, 2024, personnel from Archaeological Consultants of Ossian conducted an archaeological reconnaissance survey of an approximate 10.0-acre tract of land selected for development. The project area is located at WGS84 coordinates latitude 39.817713° and longitude -86.193113° of Section 22, Township 16 North, Range 3 East (Center Township) in Indianapolis, Marion County, Indiana (Figure 2). No archaeological sites were identified as a result of the survey. This report is a summary of the background review and the results of the Phase I archaeological investigation.

Physical Environment

Marion County has a continental humid climate with cold winters and hot summers (average daily low in January = 20 degrees F, average daily high in July = 85 degrees F), with 38.7 inches of precipitation per year (Strum and Gilbert 1978). Approximately 60% of the yearly precipitation falls between the months of April and September. The average number of days per year with minimum temperatures above 32 degrees (five in ten year probability) is 180 (Strum and Gilbert 1978). Marion County is on the fringe of the climatic influence associated with the Great Lakes (also termed the “Great Lakes Effect”). This effect causes cool Canadian air masses to alternate with tropical air masses from the south causing relatively high humidity.

The project area lies within the Tipton Till Plain of central Indiana (Homoya 1985; Schneider 1966), generally a flat featureless till plain which was laid down during the Wisconsin glacial period (Wayne 1963, 1966). In particular, it lies on materials of the Cartersburg Till Member of the Trafalgar Formation (Gutschick 1966; Wayne 1966). These materials, including outwash sand and gravels, and moraines such as the Crawfordsville and Knightsville Moraines, were laid down by a pair of advances and retreats of the ice from northeast to south-central Indiana circa 21,000 to 20,000 years B.P. This ice then became stagnant, as evidenced by eskers and esker troughs found in the region (Schaal 1966; Wayne 1966). The thickness of glacial till deposited by the ice mass over the bedrock ranges from 10 to 200 feet (3 to 60 meters). Owing to the deep mantle of glacial drift, the underlying bedrock has little effect on present-day topographic features. The deep till deposits overlying bedrock has resulted in a relatively chert-poor environment. Bedrock exposures of chert in the study area are not known, although siliceous materials are common components in the gravels of till and outwash deposits. These gravels tend to be small, poor quality, and prone to internal flaws and frost fractures owing to their transport and environment.

Soils in the project area fall within the Genesee-Sloan Association (Strum and Gilbert 1978; Ulrich 1966). The Genesee-Sloan Association is characterized as deep, well drained and very poorly drained, nearly level soils formed in silty alluvium on bottomlands (Strum and Gilbert 1978).

The specific soil types of the project area include the deep, well drained Gessie silt loam, 0-2% slopes, frequently flooded, brief duration; and the deep, Udorthents, cut and filled (Strum and Gilbert 1978; Web Soil Survey 2024). Gessie soils are developed in loamy alluvium and are found on flood plains within the region. Udorthents soils consisted of areas that have been cut, filled, and manipulated through urbanization where the original soil matrix is no longer discernible (Strum and Gilbert 1978; Web Soil Survey 2024).

The hydrology of the area suggests that lack of water would not have been a concern for prehistoric and early historic occupants of the project area. The project area is drained by both Crooked Creek and the White River. Other sources of water located near the survey area include Fall Creek as well as a series of artificially created bodies of water (ponds, lakes, and the Central Canal). The project area is considered to fall within the West Fork of the Upper White River watershed.

Presettlement vegetation of the area was beech-maple forest (Petty and Jackson 1966). The General Land Office survey notes of the township documented maple as the dominant tree species. Other tree species noted were oak, hickory, elm, pin oak, red maple, and willow, etc. (GLO 1820). The diversity of trees, plus other hydrologic variables suggest that the environment was relatively rich, and likely to attract human occupation. Lindsey (et. al. 1965) also cites similar vegetation for the project area.

Taken as a whole, the environmental data (soils, hydrologic, and vegetational) all suggest that the area has a potential to contain archaeological sites. The combination of well drained soils (i.e. Gessie soils) near constant waterways (i.e. the White River) in a vegetational zone that provides abundant resources has consistently yielded moderate densities of archaeological sites in previous surveys (e.g., Hart and Jeske 1988, 1991; Jeske 1992). Climatological, vegetational, and edaphic variables all point to the probability that the area would have been an attractive draw to both hunter-gatherers and early horticulturalists in this portion of the Midwest.

Culture Sequence/Background Review

The archaeology of Marion County is somewhat poorly known. It has only been within the last two decades during the building boom, which the county has experienced that the majority of the archaeological sites on record for the Indianapolis area have been documented. In fact, since 2000, at least 500 previously unknown archaeological sites have been recorded within the county. A records check was completed on June 26, 2024, by the author.

The archaeological site files and maps at Archaeological Consultants of Ossian and at the Indiana Division of Historic Preservation and Archaeology office were examined as part of the background review for this project. Historical documents such as county plat maps (Anonymous 1876) and notes and maps of the General Land Office were also examined. Cultural resources around the county are known from interviews with private collectors, and some are known from historic sources (e.g., Guernsey 1932;

Householder 1959). Still other archaeological resources were discovered as a result of large-scale cultural resource management projects (i.e. Cree 1992).

Numerous cultural resource management projects have been conducted within the county by various archaeologists (i.e. Angst 1994; Babson 1993; Beard 1987, 1988; Bennett 1996; Brinker 1981; Buehrig 1985; Burkett 1989; Gibson 1999; Guending 1978; Haywood 1994; Jackson 1998, 2001; Jeske and Stillwell 1995; Kreinbrink 1997; Levy 1983; Mann 1996; McCullough 1987, 1988; Miller, Scupholm, and Jackson 1995; Orloff et. al. 1995; Pirkel 1996; Pirkel and White 2000; Striker 2004; Tomak 1995; Zoll 1989a, 1989b; etc.). Additionally, the author has extensive knowledge of the region and has conducted numerous archaeological surveys within Marion County (Stillwell 1990, 1992a, 1992b, 1997, 1998a, 1998b, 1999a, 1999b, 1999c, 1999d, 1999e, 1999f, 1999g, 1999h, 2000a, 2000b, 2000c, 2001a, 2001b, 2001c, 2002a, 2002b, 2002c; 2002d, 2003, 2004a, 2004b, 2004c, 2004d, 2004e, 2005a, 2005b, 2005c, 2005d, 2005e, 2005f, 2005g, 2005h, 2005i, 2005j, 2005k, 2005l, 2005m, 2005n, 2005o, 2005p, 2005q, 2005r, 2005s, 2005t, 2005u, 2006a, 2006b, 2006c, 2006d, 2007a, 2007b, 2007c, 2007d, 2007e, 2008a, 2008b, 2008c, 2008d, 2008e, 2008f, 2008g, 2009a, 2009b, 2009c, 2009d, 2009e, 2009f, 2009g, 2009h, 2010a, 2010b, 2010c, 2010d, 2010e, 2011a, 2011b, 2011c, 2011d, 2011e, 2012a, 2012b, 2012c, 2013a, 2013b, 2014a, 2014b, 2014c, 2014d, 2014e, 2014f, 2015, 2020a, 2020b, 2020c, 2020d, 2020e, 2020f, 2020g, 2020h, 2020i, 2020j, 2020k, 2020l, 2020m, 2020n, 2020o, 2020p, 2020q, 2020r, 2020s, 2020t, 2020u, 2020v, 2020w, 2020x, 2020y, 2020z, 2020aa, 2020ab, 2020ac, 2020ad, 2020ae, 2020af, 2020ag, 2020ah, 2020ai, 2020aj, 2020ak, 2020al, 2020am, 2020an, 2020ao, 2020ap, 2020aq, 2020ar, 2020as, 2020at, 2020au, 2020av, 2020aw, 2020ax, 2020ay, 2020az, 2020aaa, , 2020aab, 2020aac, 2020aad, 2020aae, 2020aaf; 2020aag, 2020aah, 2021a, 2021b, 2022, 2023a, 2023b, 2023c; Stillwell & Robertson 2015). All of these resources were reviewed for comparative data.

Significant archaeological survey that has taken place within Marion County includes fieldwork conducted by Cree (1992). Cree (1992) conducted a data base enhancement project, which examined approximately 1,000 acres in Marion and Hamilton Counties, Indiana. The survey involved a comprehensive look at the Tipton Till Plain region in which the current project area was situated. His survey was reviewed for its regional association with Marion County and because of the similarities in drainage, topographic landforms, and soil types that the current project area has in common. Cree also examined significant tracts of land on the till plain within Marion County. The current project is also located upon the till plain within Marion County. Cree (1992) noted a prehistoric cultural chronology for the region that ranged from the Paleo-Indian through the Mississippian Periods. Marion County is known to contain at least two confirmed Paleo-Indian sites (Cree 1992; Hicks 1992). Other periods of Indiana prehistory are also represented through significant archaeological sites located in and just outside of the county. Angst (1992) located a low quality (Jeffersonville) chert resource, which had been exploited during the Archaic Period during his survey of a golf course. Brinker (1984) has documented numerous Late Archaic sites within the county during her “Archaeological Survey of Late Archaic Sites in Central Indiana”. Significant Woodland period sites are also represented by both the circular enclosure and village

located at Strawtown (Hixon 1988; Stephenson 1984). Oliver Phase and Fort Ancient Upper Mississippian ceramics also have been documented by McCullough in detail from the Strawtown site (Hicks 1992). There is still conducting ongoing study of Oliver Phase occupation within Hamilton County.

Around 1,100 archaeological resources have been recorded for Marion County. Records maintained by the Indiana Division of Historic Preservation and Archaeology office indicated that one known archaeological site was located within the survey area. The site, 12-Ma-194, consisted of a collector reported cultural resource and is discussed in detail later in this report (Figure 4). The same archives indicated that 25 known cultural resources were located within an approximate 1.0-mile radius of the proposed project. The sites included 12-Ma-2, 12-Ma-5, 12-Ma-6, 12-Ma-20 through 12-Ma-23, 12-Ma-50, 12-Ma-206, 12-Ma-739, 12-Ma-740, 12-Ma-920, 12-Ma-938, 12-Ma-939, 12-Ma-964, 12-Ma-982 through 12-Ma-984, 12-Ma-986 through 12-Ma-988, 12-Ma-1017, 12-Ma-1026, 12-Ma-1027, and 12-Ma-1037. One of the cultural resources, 12-Ma-20, is located approximately 1,700-feet north of the current project area.

The background review for this project indicated that it underwent a previous records check that not only incorporated the current project area, but additional area as well (Jackson 2020) (Figure 3). The area immediately north of the project was subjected to a previous archaeological investigation (Hilgeman and Hinson 1981).

Marion County has a population of approximately 1,000,000 people. Although mostly an industrial economy with the presence of the city of Indianapolis located in the county, surprisingly, approximately 25% of the area is still farmed (Strum and Gilbert 1978). The extremely fertile land attracted many early settlers from the East and South. Indianapolis became the capital in the 1830's replacing Corydon as the State Capital due to its central location within the state (Barnhart and Riker 1971; Carmony 1966; Rudolph 1980).

Historically, Delaware Indians inhabited the area around the White River within Hamilton/Marion Counties. William Conner befriended/exploited the Delawares and secured their neutrality during the War of 1812. Conner eventually built a home/trading post near Fishers, Indiana, where the Delaware camped. Conner served as an interpreter for 13 treaties between the Indians and Americans. The last treaty secured the removal of the Delaware to lands west of the Mississippi River (Huser and Mann 1991).

Notes from the General Land Office survey for the township indicated that no cultural resources were present within the survey area. Historical plat maps of Marion County (Anonymous 1876) show the presence of a school, two railroads, a canal, three cemeteries, the Mapleton, O'Brien, Clifton, and Brooklyn Heights Additions, and North Indianapolis within an approximate 1.0-mile radius of the project area.

The Shaard GIS system of Marion County indicated that at least 200 historic structures were located within an approximate 1.0-mile radius of the proposed project area. Several of the structures were located just over the White River to the east of the

project. No structures were located within the project limits. Numerous historic bridges were located within a 1.0-mile radius of the project. They included 12-HB-2026, 12-HB-2175, 12-HB-2177, 12-HB-2183, 12-HB-2184, 12-HB-2187, 12-HB-2188, 12-HB-2600, 12-HB-2606, 12-HB-2610, and 12-HB-2612. Additionally, 10 National Register structures were located within a 1.0-mile radius of the project. They included NR-0029, NR-0591, NR-1340, NR-1493, NR-1713, NR-1789, NR-2068, NR-2495, NR-2678, and NR-2703. None of the historic bridges or National Register structures were located within the project limits. A total of seven historic districts were located within a 1.0-mile radius of the project. One of the districts (NR-1711) incorporated the entire project area, while the remaining six (NR-1013, NR-1512, NR-1526, NR-1902, NR-2032, NR-2251, and NR-2504) were located outside of it.

Cemetery records maintained by the Indiana Division of Historic Preservation and Archaeology office indicated that no known historic graveyards would be impacted by the project. The same records indicated that two cemeteries (CR-49-3, CR-49-105, and CR-49-113) were located within a 1.0-mile radius of the project.

Archaeological Survey Methods

The approximate 10.0-acre parcel examined for the proposed Riverside Park Archery Facility was currently located within portions of woods, maintained lawn, and on obviously disturbed land. Ground surface visibility within the project area was estimated to have ranged between 0-100%. Due to the varying ground surface visibility within the project limits, both pedestrian walkover survey and shovel testing were utilized.

Where ground surface visibility was thought to be 30% or greater, pedestrian walkover survey was utilized. Pedestrian survey of the project area consisted of archaeologists walking abreast at 10-meter intervals visually examining the ground for cultural debris. Where cultural materials were located, survey flags were placed, and sites were then re-walked at 5-meter intervals to determine the artifact density and boundary of each site.

In areas where ground surface visibility was determined to be less than 30%, shovel probe survey was implemented. Shovel probe survey consisted of small test holes, approximately 40-cm in diameter and up to 40-cm deep, that were excavated across the project area at intervals of 15-meters along transects spaced 15-meters apart. Soil from the probes was screened through 6.4-mm mesh in an attempt to locate cultural materials. Soil conditions and the presence or absence of cultural materials were noted for each hole. In areas where shovel probes tested positive for cultural materials, additional probes were excavated at 5-meter intervals in the cardinal directions around the positive shovel test pit. Although the shovel probe technique will not find deeply buried sites, and may miss small or ephemeral sites, it is the most cost-effective, reliable form of archaeological survey in areas of low or zero surface visibility (Lightfoot 1986; Nance & Ball 1986).

Due to the presence of alluvial soils within segments of the project, auger testing was conducted. Auger testing within the project area consisted of archaeologists

excavating small test holes approximately four inches in diameter to various depths. Soil from the test was screened through 6.4-mm mesh, and the presence or absence of cultural materials was noted for each hole. The purpose of the tests was to help determine soil stratigraphy and site depth (where applicable) along buried portions of the project area.

If applicable, fire-cracked rock was noted but not collected during the survey. All cultural materials recovered during the course of the survey were taken to the ACO office for processing. All artifacts from the survey will be taken to Ball State University for curation.

Archaeological Reconnaissance Survey

After the background check, ACO personnel conducted an archaeological survey of the project area. On June 27 and 28, 2024, an archaeological field reconnaissance was initiated for the proposed Riverside Park Archery Facility (Figures 2 and 4). The survey was conducted by Brent Alexander (M.A.) and Dave Sherrill. Larry Stillwell (M.A.) served as Principal Investigator. The project area was located through the use of aerial maps and engineering drawings provided by the client.

The approximate 10.0-acre tract consisted of areas of maintained lawn, asphalt covered road and lot, gravel covered lot, buildings, woods, and spoil piles (Figure 4). The project area was bordered by White River Parkway to the east; by buildings and maintained lawn to the south; by woods to the north; and by pavement to the west (Figures 4, and 6-9).

The project area appeared to have been all disturbed. The depth of the disturbance varied. Additionally, ongoing construction activity was occurring in the southern portion of the project (Figures 4, and 10-12). Obvious non-agricultural disturbance within the project area included asphalt/gravel access drives, gravel lots/parking areas, a couple buildings, dirt and gravel spoil areas from ongoing construction activity, and previous disposal activity from the dumping of ground up asphalt and concrete rubble (Figures 4, and 6-17).

Only three shovel probes were attempted in the western portion of the project because virtually all of the area was paved or contained buildings (Figures 4-5). Those three attempted shovel probes were conducted at the extreme western end of the project and uncovered gravel deposits immediately under the surface vegetation as depicted in Figure 16. Due to the disturbance, the shovel probes were extended to 30-meters in that area.

The central portion of the project area was also heavily disturbed. Buildings and gravel storage lots were present in the northwest area and an access drive was present in the south (Figure 4). The woods immediately east of the buildings had ground asphalt mixed within the soils (Figures 4, 14, 15, and 17). Shovel probes were attempted throughout the woods and were extended to 30-meter intervals because of the disturbance (Figure 5). Surface visibility was evident in the southern portion in the central area of the project due to ongoing construction activity (Figures 10-12). Pedestrian walkover survey

was used to augment shovel testing in that area where soils had been bulldozed and graded. This was done to see if any cultural materials had been exposed from the construction activity. Shovel testing was conducted in that area at normal intervals where lack of asphalt and fill allowed (Figure 5). Shovel tests found evidence of small fragments of concrete (1-3 mm in size) as well as some construction gravel and residual fragments of ground asphalt mixed within the soils (Figures 18 and 19).

For the most part, the eastern portion of the project was subjected to shovel testing at regular shovel probe intervals. The only exception being was the southwest corner of the area where ground asphalt was present in dense quantity mixed within the soils (Figure 5). Again small fragments of asphalt, concrete, and even some road gravel were found within the shovel tests as previously evidenced in this report (Figures 18 and 19).

In total, 172 shovel tests were attempted and/or excavated. All of them appeared to demonstrate non-agricultural disturbance. This was not surprising given that approximately half of the project area was situated upon Udorthents, cut and filled soil. The eastern portion of the project was comprised of mostly of Gessie soils. As a result, a single auger test was excavated in the central area in the eastern portion of the project (black dot) (Figure 5). The auger test was excavated to a depth of approximately 48-inches (120 cm) below the ground surface. The auger test indicated that there were at least four layers of silt loam within the soil: A/Ap horizon 0-27cm (10YR 4/2); Bw1 horizon 27-82cm (10YR 4/3); Bw2 horizon 82-111cm (10YR 5/4); and C horizon 112-122cm (10YR 5/3). No cultural materials were recovered from the test. The auger test indicated that the silt loam was deep and only towards the end of the test was the alluvium starting to turn to sand.

During the course of the field reconnaissance, no archaeological sites were located. The field survey determined that the project area had been disturbed by varying degrees of non-agricultural activity. Normally, given that the project area is located approximately 1,700-feet south of a known prehistoric village (12-Ma-20) and that a portion of the proposed archery range is situated in a well drained alluvial context of a primary drainage (the White River), an archaeological subsurface reconnaissance would have been recommended. However, significant portions of the project have been heavily disturbed, while others have experienced varying degrees of disturbance or are currently being impacted by construction activity. Therefore, it is felt that a full blown archaeological subsurface reconnaissance is not warranted at this time. Instead, it has been recommended that archaeological monitoring take place on the alleviated areas of the project that are to be impacted by construction activity. Archaeological monitoring will determine if potentially significant buried cultural materials and/or features will be impacted during the construction phase of the project and determine if further archaeological subsurface investigations are needed.

Surveys conducted by the author as well as by Cree (1992, 1994) have recorded prehistoric densities that range anywhere from one site per every 2.0-15.0 acres studied for the Marion County region. The current field reconnaissance failed to locate any

cultural resources within the approximate 10.0-acre tract. However, the project area had experienced varying degrees of non-agricultural disturbance. As such, no prehistoric site density comparisons have been put forth in this report.

Conclusions and Recommendations

An archaeological field reconnaissance of the proposed Riverside Park Archery Facility in Indianapolis, Marion County, Indiana, located no cultural resources. Archaeological investigation of the project determined that the area had been disturbed by varying degrees of non-agricultural activity. Known sites in the region range in size and significance from smaller ephemeral lithic scatters or single artifact finds of unknown prehistoric age to complex habitation sites along major drainages. Given that the project area is situated in an albeit disturbed alluvial setting it has been recommended by the archaeologist that archaeological monitoring be conducted on the alleviated portions of the project not classed as cut and fill. Archaeological monitoring will determine if potentially significant buried cultural materials and/or features will be impacted during the construction phase of the project and determine if further archaeological subsurface investigations are warranted.

If human remains, features, or midden deposits are encountered within the cut and filled portions of the proposed project, work must be halted and the archaeologists at the Indiana Department of Natural Resources-Division of Historic Preservation and Archaeology must be contacted for additional evaluation before work resumes.

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2020d *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663942) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020i *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663534) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020m *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663946) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020o *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663979) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020p *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662673) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020q *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663678) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020t *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663195) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020u *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662666) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020v *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663242) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020w *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663203) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020x *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663707) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020y *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663538) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020z *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663856) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020aa *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663543) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ab *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663514) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ac *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 661382) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ad *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663509) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ae *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663348) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020af *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662936) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020ah *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663543) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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2020ak *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662671) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020al *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662566) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020am *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662668) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020an *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662931) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ao *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663299) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ap *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663948) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020aq *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663614) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ar *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663849) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020as *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663535) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020at *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663702) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020au *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663950) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020av *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663952) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020aw *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 662568) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ax *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663375) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020ay *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663977) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

2020az *An Archaeological Field Reconnaissance of a Proposed Telecommunications Facility (Project No. 663618) in Indianapolis, Marion County, Indiana.* Archaeological Consultants of Ossian, Muncie, IN.

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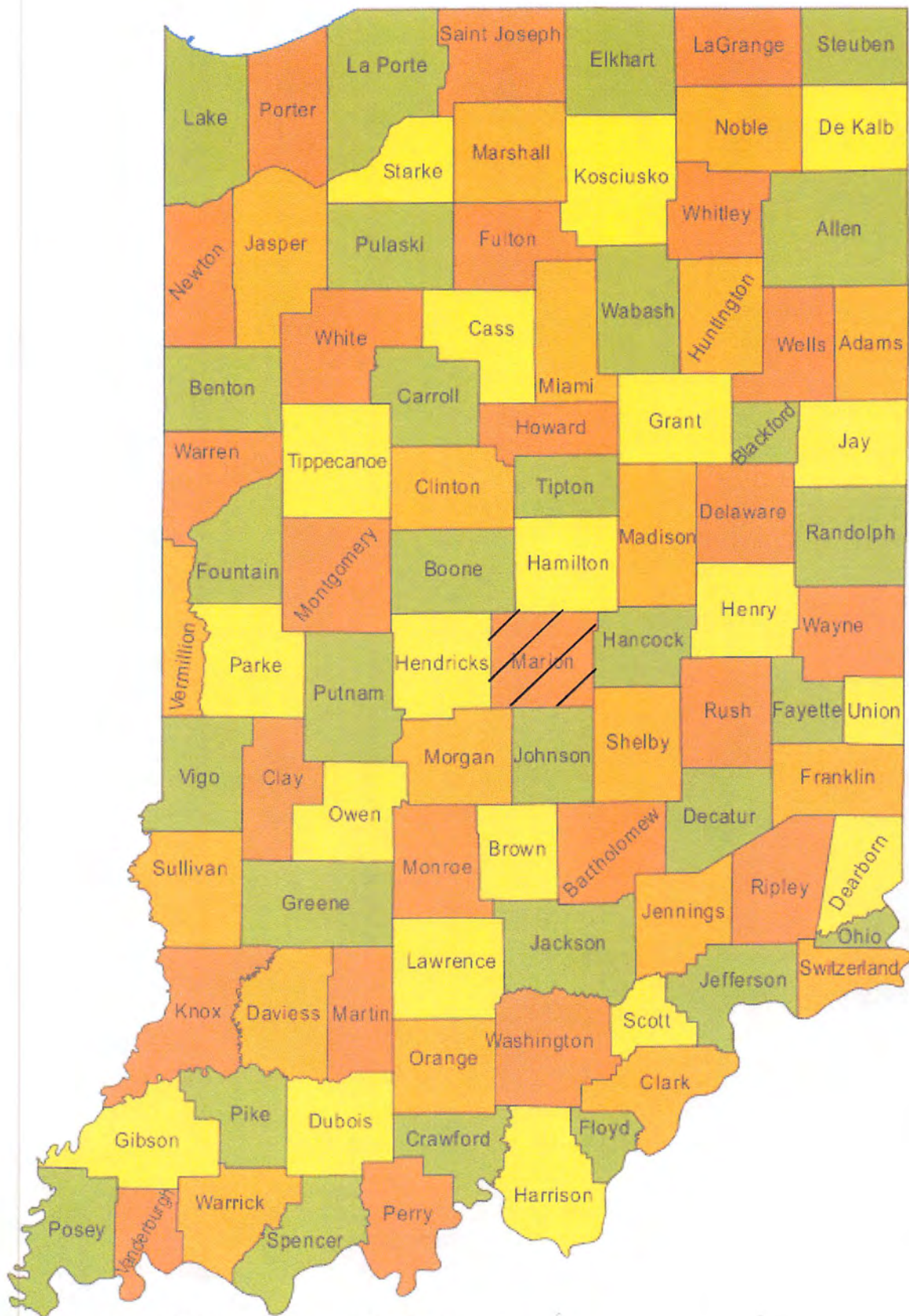


Figure 1. Location of Marion County within the State.

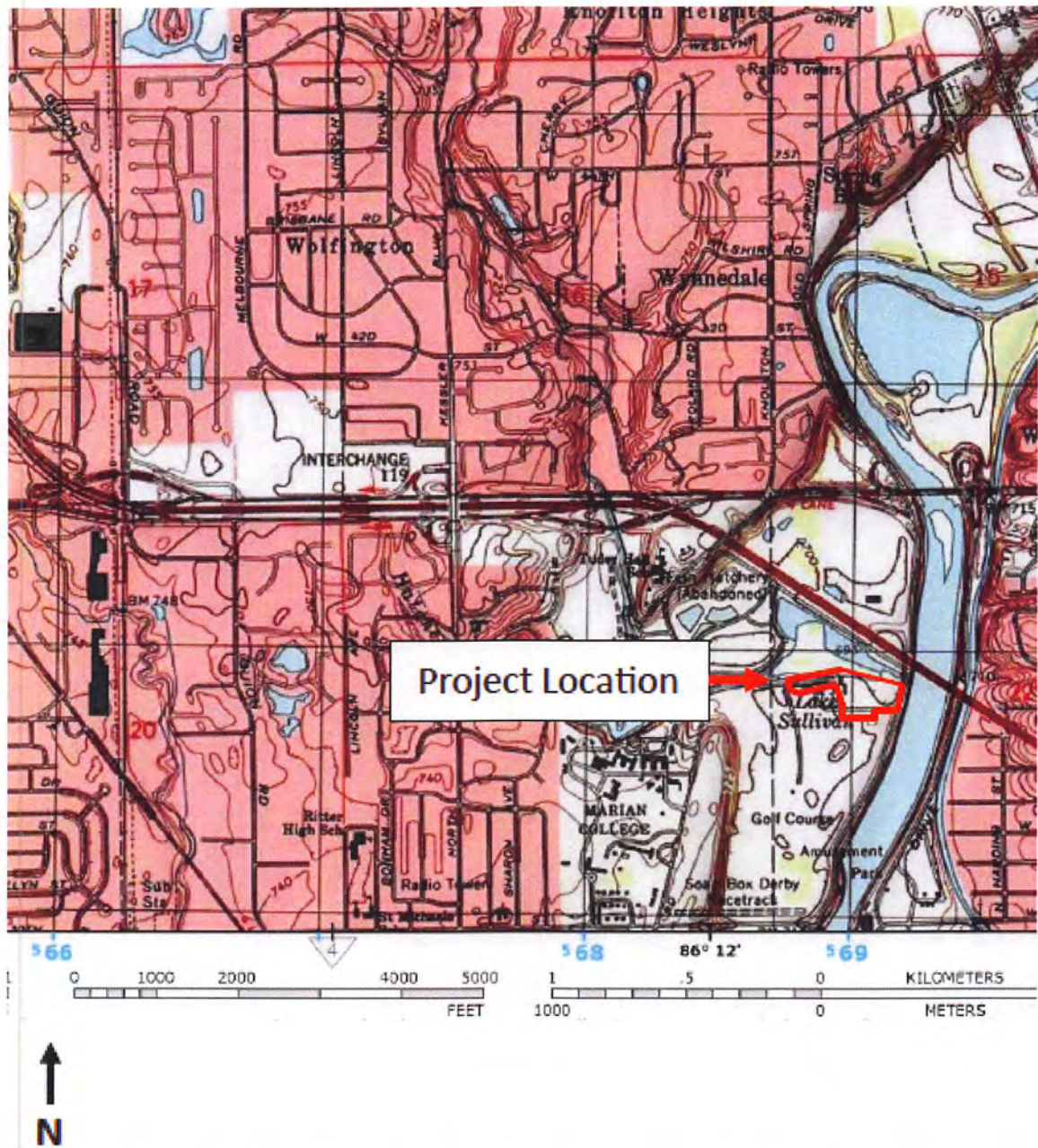


Figure 2. Portion of the Indianapolis West, Indiana USGS 7.5' Quadrangle showing the Project Location.

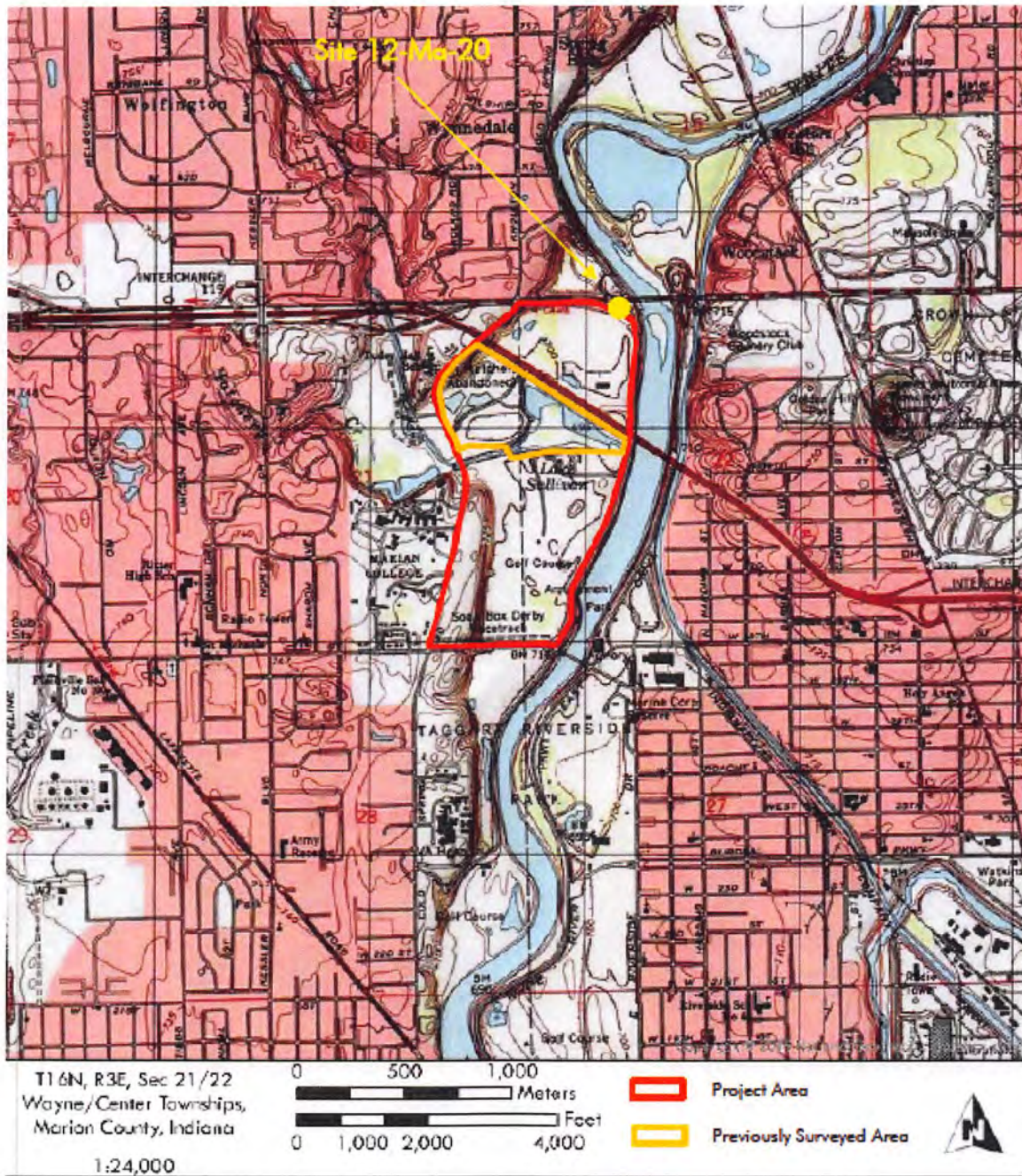


Figure 3. Portion of the Indianapolis West, Indiana USGS 7.5' Quadrangle showing the area of the Previous Archaeological Field Reconnaissance (Yellow) and Records Review (Red) in and around the project.

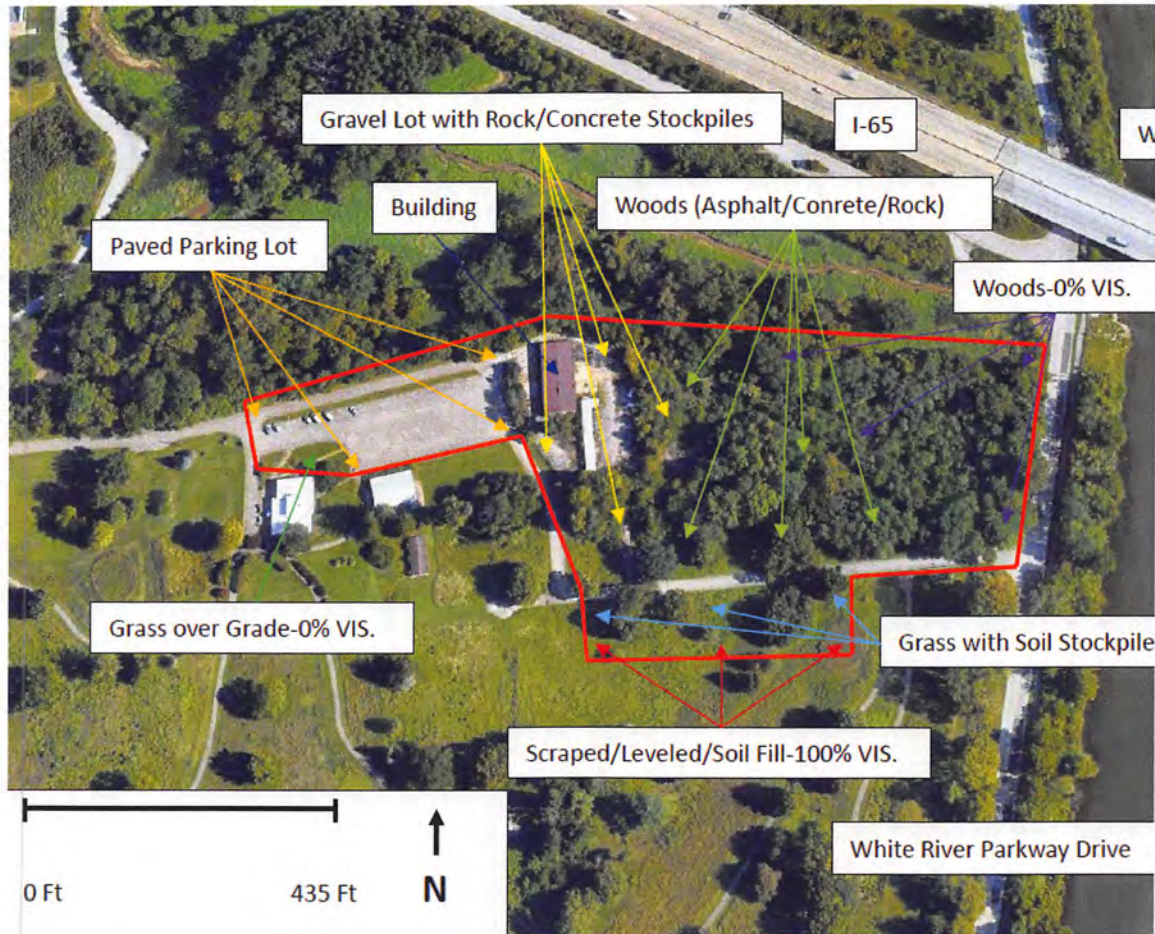


Figure 4. Aerial Map showing the Project Area.

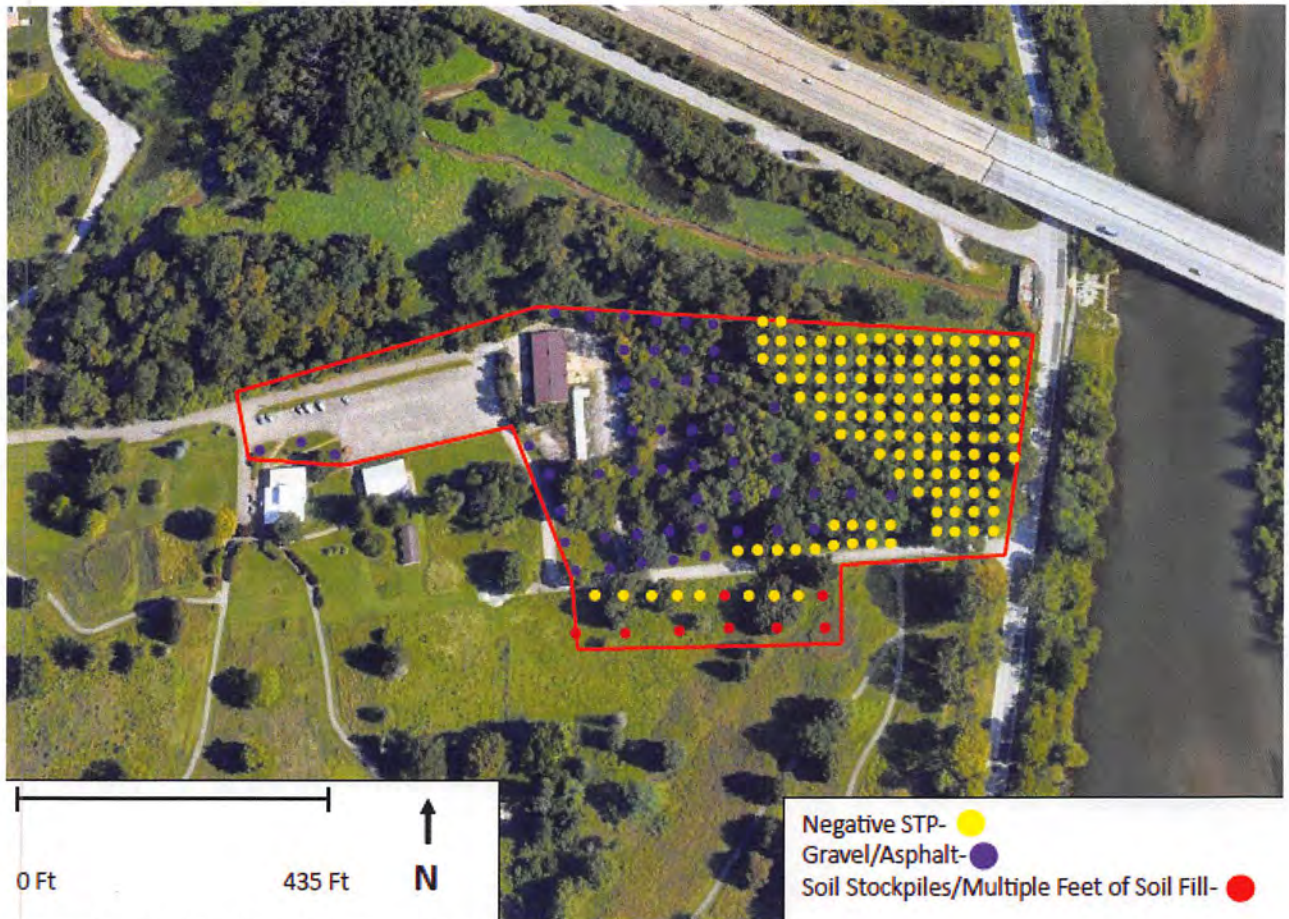


Figure 5. Aerial Map showing shovel test locations.



Figure 6. Looking east across the project area from existing parking lot.



Figure 7. Looking east across the southern portion of the project.



Figure 8. Looking east across the southern portion of the project area.



Figure 9. Looking northwest from parking lot at one of the buildings within survey area.



Figure 10. Spoil piles and grading activity in the southern portion of the project.



Figure 11. Active construction in the southern portion of the project.



Figure 12. Another spoil pile in the southern portion of the project.



Figure 13. Gravel pile for the re-graveling of the lots around buildings.



Figure 14. Asphalt spoil within the wooded portion of the project.



Figure 15. More waste piles of construction materials within the project.



Figure 16. Grass over gravel lot near existing buildings within the project.



Figure 17. Gravel and asphalt mixed within soil within the woods.



Figure 18. Shovel test in eastern portion of the project (note the concrete and gravel fragments within the soil).



Figure 19. Another shovel test within the eastern portion of the project (note the dark spots within the soil from asphalt debris).