Illinois Department of Transportation
Division of Highways / District 8
1102 Eastport Plaza Drive / Collinsville, Illinois / 62234-6198

January 11, 2022

Route: FAI 270
Section: 60B-1, 61-1WRS-4
County: Madison
Existing SN: 060-0350
Dual SN: 060-0351
Contract #: 76J90

ADVERTISEMENT DATE: May 13, 2022
RESPONSE DATE: March 1, 2022
CONTACT PERSON(S):
Philip Coppernoll (618) 346-3181

I-270 over Mississippi River – Structure replacement, Riverview Drive interchange reconstruction, and widening on Choteau Island

Mr. Brenton Barkley
U.S. Army Corps of Engineers, St. Louis District
1222 Spruce Street
St. Louis, MO 63103-2833

Dear Mr. Barkley:

The Illinois Department of Transportation (IDOT) is submitting additional information in support of our permit applications for Section 408, Section 10, and Section 404 which were submitted in November of 2021. A description of the supplemental information is provided below.

An addendum to the Hydraulic report has been provided. The addendum includes additional hydraulic justification in support of our individual floodway construction permit that was submitted to the Illinois Department of Natural Resources – Office of Water Resources. In particular, the addendum provides justification in support of Part 3700 section a) 1) B).

Plan, profile and details for the proposed levee access road are provided. Previously, preliminary sketches were provided. The details show the proposed road and tie-in to the existing parking lot at the southern end of the levee access road. The profile of the levee remains unchanged, except for approximately 100 feet near the southern end where an 8% profile grade is established to transition up to the existing profile of the parking lot. The 8% is the maximum traversable slope for IDOT maintenance and inspection equipment.

A copy of IDOT's response to IEPA request for supplemental information is provided. In a December 15, 2021 memo, the IEPA requested additional information in support of our application for an individual IEPA water quality permit. The original request letter, IDOT response letter, and attachments are provided for your use. The attachments include the updated 2022 Natural Resource Review, Drilled Shaft Special Provision, Storm Water Pollution Prevention Plan, Plan sheet with commitments, Anti-Degradation Analysis, US Fish and Wildlife Service Concurrence,

and the Illinois Department of Natural Resources response to Ecocat. The Natural Resource review includes information regarding removal and construction methods and describes how the design has been developed to help minimize environmental impacts.

Plans and cross sections which show the proposed widening on Chouteau Island are included in this submittal. A summary of construction timeline and supporting documents has been provided.

Additional coordination with Missouri State agencies will be done by others. Contact Phil Coppernoll at (618) 346-3181 if you have questions or need additional information.

Sincerely,

Kirk H. Brown

Kirk Brown, P.E.
Program Development Engineer

Attachments

- Hydraulic Report Addendum
- Plan and Profile for Levee Access Road
- Supplemental Environmental Submittal to IEPA
- Summary of Construction Timeline and Supporting Documents
- Plans and Cross Sections of Roadway Widening

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CONTACT PERSON(S):
Philip Coppernoll (618) 346-3181

IEPA AGENCY LOG number (C-0240-21)

I-270 over Mississippi River – Structure replacement, Riverview Drive interchange reconstruction, and widening on Chouteau Island

Mr. Darren Gove
Illinois Environmental Protection Agency
1021 North Grand Avenue East
PO Box 19276
Springfield, IL 62794-9276

Dear Mr. Gove:

IDOT has received your request for additional information in response to IDOT's application for Section 401 Certification for the above referenced project. IDOT provides the following data and information in accordance with 35 Ill. Admin. Code 302.105(f)(1). The numbers below are in reference to your December 15, 2021 letter.

1. See attached documents for Natural Resources Review (NRR).

2. Additional information found necessary to understand the scope of impacts to the environment in accordance with 35 Ill. Admin. Code Section 302.105(f)(1)(E) including the following:

    a. Lead paint is present on the existing steel beam and steel bearing elements. Commitments provided on the plan sheets (see attached) prohibit dropping of existing bridge superstructure elements into the water. A general description of the removal process is included in the NRR review.

    b. See the Special Provision for Drilled Shafts. The installation procedure submitted by the Contractor will identify how containment of discharge during shaft excavation and concrete placement will occur. As noted in the NRR review the anticipated installation includes a permanent casing that will be screwed into the ground down to rock prior to shaft

excavation. This slow and methodical process minimizes disturbance and allows for excavated materials from the shaft and rock socket to be contained within the permanent casing and removed without spilling into the river. The permanent casing also allows the Contractor to remove the discharge from concrete placement because discharge can be removed from the top of the encasement without spilling into the river.

c. The Storm Water Pollution Prevention Plan is attached for your reference.

3. See attached antidegradation analysis for additional information.

4. See attached antidegradation analysis for additional information.

This supplemental information is being provided to the US Army Corps of Engineers. Contact Phil Coppernoll at (618) 346-3181 if you have questions or need additional information.

Sincerely,

Kirk H. Brown

Kirk Brown, P.E.
Program Development Engineer

Attachments:

Updated 2022 Natural Resource Review
Drilled Shaft Special Provision
Storm Water Pollution Prevention Plan
Plan Sheet with Commitments
Antidegradation Analysis
USFWS Concurrence
IDNR Response to Ecocat

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 · (217) 782-3397
JB PRITZKER, GOVERNOR JOHN J. KIM, DIRECTOR

Monday, December 15, 2021

Illinois Department of Transportation, District 8
Keith Roberts, P.E., Acting Region 5 Engineer
1102 Eastport Plaza Drive
Collinsville, IL 62234-6198

Subject: Notice of Application for Clean Water Act (CWA) Section 401 Certification
Concerning the "New I-270 Bridges over Mississippi River and 6-lane interstate construction between Mississippi River and Chain of Rocks Canal" in Madison County
Illinois EPA Log number: C-0240-21 / Federal Agency Permit No.: Unknown

Dear Applicant:

On Monday, November 8, 2021 the Illinois EPA (Agency) received your documentation concerning the subject project. Based on an administrative review of this documentation, we are providing the following comments.

The Agency has determined that the submitted documentation is considered a valid application for certification for dredge and fill activities pursuant to 35 Ill. Admin. Code Part 395. A valid application means; the Agency has been informed that a case-specific 401 certification has been determined to be necessary by the applicable federal permitting agency and that sufficient project information has been submitted to initiate a technical review of the activity. The Agency has also tentatively determined, based on certain relevant factors, that a 120-calendar-day review period, ending on Tuesday, March 8, 2022, is an appropriate reasonable period of time pursuant to CWA Section 401(a)(1). This date may be subject to revision or extension as determined appropriate by the U.S. Army Corps of Engineers. The Agency has assigned a Bureau of Water project manager, identified below, to begin processing your 401 certification request.

Additionally, based on a limited technical review of the documentation, the application has been determined to be incomplete and missing the following information, which is considered necessary by the Agency to satisfy applicable state law or regulations.

Pursuant to 35 Ill. Admin. Code Section 302.105, the Agency must conduct an antidegradation assessment of the pollutant discharge associated with the proposed dredge or fill activity to ensure the activity does not cause unnecessary deterioration of waters of the State. To the extent determined necessary by the Agency, data and information in accordance with 35 Ill. Admin. Code Section 302.105(f)(1) is required for this assessment to be completed. Please provide the following information:

1. The Agency notes that the Applicant's cover letter dated November 8, 2021 (Page 3 of 3) indicates that finalization of an antidegradation analysis is pending receipt of Natural Resources Review. Please advise the Agency if the applicant intends to submit this information and when.

2. Additional information found necessary to understand the scope of impacts to the environment in accordance with 35 Ill. Admin. Code Section 302.105(f)(1)(E) includes the following:

a. Provide a discussion about any determinations that have been made regarding lead based paint remaining on portions of the bridge and what plan, if any, has been developed to prevent discharge of lead containing paint chips to the Mississippi River during the bridge's demolition?

b. Provide a discussion that explains the expected quantity and quality of discharge water from a typical drilled shaft casing emplacement and rock socket excavation that would occur within the river? What type of treatment would be provided or would be necessary to ensure the discharge would not cause water quality violations including effluent quality standards?

c. The Agency notes that the November 8, 2021 cover letter mentions a stormwater pollution prevention plan; however, no plan was found in the application. Please advise the Agency if the applicant intends to submit this information and when.

3. Provide a summary assessment of the alternatives to the proposed project that result in less pollutant loading to the receiving waters, no load increase or minimal environmental degradation in accordance with 302.105(f)(1)(D).

4. A discussion of how the proposed plan incorporates all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading in accordance with 302.105(c)(2)(B)(iii).

The above data and information is necessary for the Agency to finalize its review and make a final determination regarding compliance with applicable water quality requirements. To enable the Agency to comply with the statutory reasonable time period indicated above, the Agency requests that the applicant provide the necessary information within 15-calendar days of this letter's date. Failure to provide the necessary information may result in denial of the requested Section 401 water quality certification.

If additional time is needed to provide the requested information, you may contact the assigned project manager identified below to coordinate additional time. Alternatively, the project proponent may elect to withdraw the certification request in writing and then reapply at a later date when the necessary information is available.

When submitting additional information, please ensure that the Agency log number (C-0240-21) is referenced in each submittal. Upon timely receipt of the necessary information the Agency will conclude its technical review and a public notice or final determination regarding water quality certification will be issued by the Agency.

Please be advised that this project may require a Construction Site Activities Storm Water NPDES Permit issued prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. Such activity requires a separate submittal of a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section or by visiting the following website: https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx/.

If you have any questions about this notification or about the Illinois 401 review process, please contact Darren Gove at 217/782-3362 or Darren.Gove@Illinois.gov.

Sincerely,

Darren R. Gove
Environmental Protection Engineer, Permit Section
Division of Water Pollution Control

Attachments(s): none

CC: FederalAgency
Consultant
BOW_File

Illinois Department of Transportation

Memorandum

To:	Jeffrey Keirn	Attn: Keith Rogers
From:	Jack A. Elston	By: Thomas C. Brooks
Subject:	Natural Resources Review Renewal	
Date:	January 11, 2022	

FAI 270 (I-270)
T 4N, R 10W, Sec 25, 36, 30
Seq.: 19320 B
Madison County

This Natural Resource Review Memo is for the Preferred Alignment for the replacement of I-270 over the Mississippi River. The project length is approximately 0.5 miles and extends from west of Levee Road to the Missouri River Bank. At this time, the amount of right-of-way is unknown. There will be an unknown amount of tree removal. There will be in stream work to the Mississippi River. Land cover in the project area is open water and forested floodplain. The project is being processed as a Categorical Exclusion.

A meeting was held June 16, 2021 to discuss the scope of work involved with the deconstruction of the existing bridge and construction of the new one and to discuss the feasibility of certain avoidance and minimization measures. Representatives from IDOT, MODOT, Project Consultant Teams, USFWS, and IDNR were present. The following is summary of what was discussed at the meeting.

Existing bridge demolition: It is anticipated that the deck of the superstructure would be removed in pieces from the center working out to the end bents or from one end to the other. This would allow the contractor to utilize the existing bridge as a working platform. Deck pieces will likely be removed in sections and loaded on to barges below or trucks on the bridge. After the deck is removed, the girders will be cut into pieces and loaded onto barges below.

Removal of the existing piers will be determined by the contractor and may utilize equipment from barges to remove them to the existing streambed. A Technical Memorandum dated June 12, 2017 described the general process of how pier removal is likely to occur. The following is from that document:

Once the superstructure is completely removed, construction barges containing excavators and concrete breakers will be placed around the piers. Broken pieces from above the barge will be captured and will not be allowed to drop in the river. Removal from below the water will utilize the same equipment; however, broken pieces of concrete will be allowed to settle to the bottom of the river where they will then be removed. For piers where there is significant scour, if deemed acceptable, the broken pieces of concrete may be used to fill in these

voids so long as they do not exceed the height of the pier to be left in place. If this is not acceptable, cofferdams would have to be constructed to ensure the complete removal of the broken concrete.

Construction of the new bridge: Pier construction will be completed using drilled shafts. The drilled shafts are approximately 9' in diameter. A permanent steel casing will be screwed into the ground to bedrock. Material will be removed from inside the casing as it is screwed into the earth. The rock sockets will then be drilled out from the inside of the previously installed casings. Reinforced concrete will then be placed in the rock sockets and drilled shafts (cased area) up to an elevation above the water where a strut will be constructed. The columns for the bridge pier will then continue up to the pier cap for placement of the superstructure steel beams. No cofferdams are required for this type of construction and minimal disturbance to the river is achieved. It is worth noting that the installation of the permanent steel casing is a very slow and intentional process with minimal disturbance to the soil material outside of the casing.

Cofferdams and Causeways: USACE advised the project sponsor not to use causeways. Causeways will not be necessary if the drilled shaft is constructed during the historically higher water elevation This timeframe overlaps the time when the Pallid sturgeon is likely to be spawning. Another option is to dredge. The rock is high on this portion of the river. This may make dredging not feasible. Dredging may allow some construction to occur outside of the pallid sturgeon in stream work restriction dates, but some construction would still be required to occur within the in -stream work restriction dates.

Discussion of commitments: The scope and magnitude of the project is such that implementing in stream work date restrictions to avoid and minimize impacts to the Pallid sturgeon are not feasible or reasonably able to be implemented due to other permitting, safety, and construction requirements. However, it should be noted that most of the construction schedule was designed with these vital dates for the Pallid sturgeon in mind. Therefore, other avoidance and minimization measures must be implemented to reduce impacts to the Pallid sturgeon during this time. It was decided during coordination and consultation with resource agencies that no explosives will be used during demolition. The Pallid sturgeon is a bottom dwelling fish and concerns were expressed by USFWS regarding impacts to the riverbed from dredging activities. During the June 16, 2021 meeting it was decided that the contractor will not be permitted to use a cutterhead as a method for dredging activities. The contractor will be limited to mechanical excavation or the use of a dust bin. A discussion of the Pallid sturgeon and the project commitments related to this species can be found in the Review for Section 7 portion of this document.

Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

The Illinois Natural Heritage Database contains records for the State and Federally-listed Pallid sturgeon in the project vicinity. For further discussion of the Pallid sturgeon refer to the Review for Endangered Species Act Section 7 in this document. **This office has determined that the action is not likely to jeopardize the Pallid sturgeon or its essential habitat provided the commitments outlined in the Section 7 portion of this document are implemented.** There are no Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under Part 1075 is terminated.**

This review for compliance with 17 Ill. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

For a discussion of Missouri state listed species please see the February 14, 2018 memorandum issued by the Missouri Department of Transportation subject "J6I3264; I-270 Over Mississippi River; Impacts to T&E Species in Missouri". **Coordination with Missouri Department of Conservation will be updated by transmittance of this memo. As of January 4, 2022, MDC has not commented during the updated coordination.**

Review for Illinois Interagency Wetland Policy Act – Part 1090

The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, plan sheets, USDA soil maps, and topographic quadrangle maps were examined. A wetland survey was conducted between June 21 and September 2, 2016. Multiple sites were determined to be wetlands. The Wetland Delineation Report and spatial information (ArcGIS shapefile) are saved in the project folder.

A Wetland Impact Evaluation (WIE) was sent in. There will be 2.815 acres of wetland impacts. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. 4.1625 acres of in kind wetland credits has been deducted from the IDOT District 8 Fairmont City Wetland Mitigation Site ledger. **Therefore, review for Part 1090 is complete.**

Review for Endangered Species Act - Section 7

The proposed improvement was reviewed in fulfillment of our obligation under Section 7(a)2 of the Endangered Species Act. Our review included use of the US Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) web-based review tool. Through IPaC, an official species

list was received and is saved to the project folder. The list contains the endangered, threatened, proposed and candidate species and proposed and designated critical habitat that may be present within or in the vicinity of the proposed improvement. The following species are listed: Indiana bat (Ibat), Northern long-eared bat (NLEB), Eastern massasauga, Pallid sturgeon, Spectaclecase and Higgins eye mussels, Decurrent false aster, and Eastern prairie fringed orchid. No proposed or designated critical habitat is listed in Madison County. Under 50 CFR 402.12(e), **the accuracy of the species list is limited to 90 days.**

Within IPaC there is a Determination Key for the NLEB- and Ibat. We used the key to determine applicability of the project with the USFWS revised programmatic biological opinion for transportation projects and to assess what effect the project would have on NLEB or Ibat. Our assessment is based on the results of the mist netting survey, bat bridge assessment, and bat habitat surveys which occurred in July and August of 2016. All surveys were conducted in accordance with USFWS regulations regarding the species. No bats were caught at either site in Illinois. Two big brown bats were caught in Missouri. No Ibat or NLEB were caught at any of the sites. Due to safety concerns and with approval from USFWS, only the Missouri side of the bridge was inspected. Neither bats nor signs of bats were found. Lastly, the habitat assessment indicated that there is suitable habitat for the Ibat and NLEB in the project vicinity. At this time, the amount of tree removal associated with the Preferred Alternative is unknown. We completed an IPaC qualification interview and determined that **the project is within the scope of the programmatic biological opinion and is <u>not likely to adversely affect</u> the NLEB or Ibat** provided the following conservation measure is implemented by the project sponsor:

All tree removal in Illinois and Missouri is subject to the following date restrictions:

All trees shall be removed between the dates of <u>November 1 and March 31</u> of any given year.

Please note that the above bat bridge assessment is expired. <u>An updated bat bridge assessment will be conducted in 2022 and the results coordinated with the USFWS prior to construction.</u>

The Illinois Natural Heritage Database contains records for the State and Federally listed Pallid sturgeon. The USFWS is aware of the species migrating through the area, but there is no existing data showing that this area is vital to its survival, not is there any documentation of the species spawning in this area. This office has made the determination that the project **may affect, but is <u>not likely to adversely affect</u>** the Pallid sturgeon provided the following conservation measures are implemented by the contractor:

1. **The use of explosives is prohibited on this construction contract as a method of demolition or construction.**

2. **During demolition, the superstructure shall not be dropped into the river.**

3. **Mechanical excavation is the preferred method of dredging and shall be utilized where feasible.**

4. **The use of a cutterhead shall be prohibited as a dredging method.**

5. **If it is discovered during construction that the use of a dust bin will be required for dredging, the area and amount of material to be dredged shall be coordinated with USFWS prior to the contractor starting and dredging activities.**

We cross-referenced the preferred habitat of each of the remaining listed species; the Least tern, Eastern massasauga, Spectaclecase mussel, Decurrent false aster, and Eastern prairie fringed orchid, with our knowledge of the project area and determined that the project will have **no effect** on those species.

Should the proposed improvement be modified or new information indicates listed or proposed species may be affected, consultation or additional coordination should be initiated.

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Avian surveys were conducted by the Illinois Natural History Survey in the project area in 2015 and 2016. No bald eagles were found within 1,000 feet of the bridge. Two adults and one juvenile were seen within 5,000 feet of the bridge. A total of 80 or more eagles were observed on the Missouri side of the river. There is a known roost approximately 7 miles upriver of the project and the eagles are likely using this roost and not the project area. If a bald eagle nest is found in the project area or vicinity of the project then USFWS should be notified and the National Bald Eagle Management Guidelines implemented. Additionally, Peregrine falcons were seen in the project area. Based on the structures present, the pair was likely nesting on the Chain of Rocks Bridge and not the I-270 bridge. Therefore, the proposed project will have no effect to migratory bird species, specifically the Peregrine falcon and Bald eagle.

KCB

January 11, 2022

Antidegradation Assessment for 401 Water Quality Certification for the following project:

FAI 270 (I-270)
Section 60B-1
Replacement of Structure # 060-0035 over the Mississippi River
Madison County

The proposed project is to replace the bridge carrying FAI 270 (I-270) over the Mississippi River connecting Madison County, Illinois with St. Louis, Missouri. The bridge is locally known as the Chain of Rocks Bridge and will be referred to as such throughout this project report. The project is located within unincorporated Madison County, the city of St. Louis, Missouri, and a portion within unincorporated St. Louis County, Missouri. East of the bridge in Illinois is an "island" referred to as Chouteau Island, lying between the Mississippi River and the Chain of Rocks Canal. From the bridge heading east, I-270 continues over the Chain of Rocks Canal and intersects with IL Route 3. Heading west from the Chain of the Rocks Bridge along I-270 is Riverview Drive in St. Louis, Missouri. See Exhibit 2 for a location map for the project. The study limits for the project extend along I-270 from east of Waterworks Road in Illinois to just west of the Riverview Drive interchange in Missouri. Please see Exhibit 3 for the locations of these roadways.

This project is being processed as a Federally Approved Categorical Exclusion (Project Report) which is the required NEPA document for this project.

The existing adjacent land use on the Illinois side is primarily agricultural ground. There are also two closed landfills located within the project study area; one directly south of I-270 and another one further south located south of Chain of Rocks Road. A private levee is located on Chouteau Island. This levee is located approximately a quarter mile east of the Mississippi River and runs parallel to the Mississippi River. In addition, there are two bicycle and pedestrian trails that exist on Chouteau Island. The first is a bicycle and pedestrian trail utilizing the historic Old Chain of Rocks Bridge located approximately a quarter mile south of the Chain of Rocks Bridge. The trail begins in Missouri where it connects into the St. Louis Riverfront Trail, crosses the Old Chain of Rocks Bridge, and then continues along Chain of Rocks Road, located on Chouteau Island. A second trail is located on the east side of Chouteau Island named the Metro East Parks and Recreation Department's (MEPRD) Eagle Points Trail which runs north-south along the Chain of Rocks Canal levee.

A. **Identification and Characterization of the Affected Water Body**

Mississippi River

- Hydrologic Unit Code (HUD): 0714010104
- AUID IL_J-02
- Layer: 305(b) Streams 2018
- Causes: 274, 348
    1. 274: Mercury
    2. 348: Polychlorinated biphenyls
- Sources: 10, 140

1. 10: Atmospheric deposition - toxics
2. 140: Source unknown

- Use attainment: F582, N583, F584, F585, X590
  1. F582: Fully supporting aquatic life
  2. N583: Not supporting fish consumption
  3. F584: Fully supporting public and food processing water supplies
  4. F585: Fully supporting primary contact recreation
  5. X590: Not assessed for aesthetic quality
- The Mississippi River is listed as fully supporting aquatic life but not supporting fish consumption. This may be caused by the water body affected by mercury and polychlorinated biphenyls.
- This segment of the Mississippi River is a medium priority for a TMDL to be developed for mercury and polychlorinated biphenyls.
- The Mississippi River at this location is not listed on the Nationwide Rivers Inventory (NRI) of Wild and Scenic River candidate streams by the National Park Service
- There is no rating for the Mississippi River at the project location for a biologically significant stream under the IDNR publication: Integrating Multiple Taxa in a Biological Stream Rating System
- The Mississippi River at the project location is not an Illinois Natural Areas Inventory site
- The drainage area for the Mississippi River is 697,000 square miles
- The following wetland sites will be impacted:

Site	Type of Wetland	Floristic Quality Index	Mean C
10A	Forested	15.9	2
10B	Forested	15.9	2
10C	Forested	15.9	2
12	Wet meadow	10.8	2.7
33	Wet meadow	6.3	1.3
37	Wet meadow	13.8	2.4
38	Wet meadow	14.4	2.7
50	Marsh	9.7	1.8

B (1) Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses

This project will not contribute mercury or biphenyls to the Mississippi River. It has been determined that there will be a total of 4.2225 acres of impact to wetlands. The following is a breakdown of wetland impacts:

Site	Type of Wetland	Floristic Quality Index (FQI)	Type of Impact	Impact in Acres	Mitigation Ratio	Calculated Acres of Mitigation
10A	Forested	15.9	Permanent	0.97	1.5	1.45
10B	Forested	15.9	Permanent	0.45	1.5	0.675
10C	Forested	15.9	Permanent	0.95	1.5	1.425
12	Wet meadow	10.8	Permanent	0.21	1.5	0.315
33	Wet meadow	6.3	Permanent	0.08	1.5	0.120
37	Wet meadow	13.8	Permanent	0.03	1.5	0.045
38	Wet meadow	14.4	Permanent	0.005	1.5	0.008
50	Marsh	9.7	Permanent	0.120	1.5	0.180
Total				2.815		4.2225

Wetland impacts are mitigated at the Fairmont City Wetland Mitigation Bank.

The following are environmental commitments for the proposed project:

- For any tree removal conducted in Illinois: Trees three (3) inches or greater in diameter at breast height shall be removed between the dates of November 1 and March 31 of any given year.

- The Illinois Natural Heritage Database contains records for the State and Federally listed Pallid sturgeon. The USFWS is aware of the species migrating through the area, but there is no existing data showing that this area is vital to its survival, nor is there any documentation of the species spawning in this area. The Illinois Department of Transportation Central Office had made the determination that the project **may affect, but is not likely to adversely affect** the Pallid sturgeon provided the following conservation measures are implemented by the contractor:

  1. The use of explosives is prohibited on this construction contract as a method of demolition or construction.

  2. During demolition, the superstructure shall not be dropped into the river.

  3. Mechanical excavation is the preferred method of dredging and shall be utilized where feasible.

4. **The use of a cutterhead shall be prohibited as a dredging method.**

5. **If it is discovered during construction that the use of a dust bin will be required for dredging, the area and amount of material to be dredged shall be coordinated with USFWS prior to the contractor starting and dredging activities.**

On January 10, 2022, the US Fish and Wildlife Service (USFWS) concurred with the IDOT Natural Resources Review and commitments listed above. In addition, on November 11, 2021 the Illinois Department of Natural Resources (IDNR) responded to the IDOT Natural Resources Review and provided their recommendations to complete IDOT's required coordination with IDNR (see attached letter from IDNR dated November 11, 2021).

B (2) Fate and Effect of Parameters Proposed for Increased Loading

To minimize the surface water impacts during construction appropriate erosion and sediment control Best Management Practices will be implemented in accordance with local, state, and federal regulations. With proper implementation of Best Management Practices and compliance with the National Pollution Discharge Elimination System construction permit, short-term construction-related water quality impacts will be avoided or minimized. Per the NPDES permit a uniform perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area must be established on all unpaved areas and areas not covered by permanent structure. The IDOT Resident Engineer will verify this occurs prior to closing out the contract.

IDOT implements the following Winter Operations Best Management Practices:

- ID Annual training for low operators to improve the efficiency of de-icing application and to reduce loss of de-icing chemicals.
- IDOT utilizes calibrated spreaders equipped with ground sensors that can accurately control the rate of spreading.
- Pre-wetting solid deicing chemicals/mixtures for better adhesion to the pavement surface and for melting of the ice/snow.
- Adjusting the application rates of de-icing chemicals according to pavement temperature and weather conditions.

C. Purpose and Social and Economic Benefits of the Proposed Activity

The purpose of the project is to replace the existing Chain of Rocks Bridge carrying I-270 over the Mississippi River. The structure must be replaced due to the age of the structure, condition of the structure, increasing traffic volumes, and safety issues associated with the narrow shoulders on the bridge.

The existing I-270 bridge over the Mississippi River was constructed in 1966 and the age of the Chain of Rocks Bridge has resulted in rising maintenance costs. The Bridge Condition Report (BCR) for the Chain of Rocks Bridge notes the existing structure needs numerous repairs. The deck and beams were reported in "fair" condition, with multiple cracks, spalling, and exposed rebar in the deck. Many steel repairs were reported for the beams. The expansion joints were recommended to be replaced. The abutments and piers yielded a "fair" rating as many cracks were observed. A majority of the river span piers have experienced scour at the bottom of the footings. The combination of these factors resulted in the determination that the reuse of the existing substructure was not feasible.

D. Assessment of Alternatives

Concept Alternates were developed to be investigated.

A design charrette was held November 14-16, 2016 with staff from IDOT District 8, IDOT Bureau of Bridges and Structures (IDOT-BBS), IDOT-BDE, FHWA-IL Division, FHWA-US, and MoDOT and the consultant team. The meeting goal was to discuss the alternatives developed to date and identify any additional alternatives not previously considered. The concept alternatives investigated include five river crossing alternatives. These five alternatives are: North Alt A; Adjacent North Alt B; Existing Alignment (utilizing existing substructure elements) Alt C; Adjacent South Alt D; and South Alt E. Three new bridge typical sections were considered. They are: one large structure (S1), two new smaller structures (S2), and two structures; one on existing alignment using part of existing structure (S3) Six interchange concepts were developed to provide geometric continuity between the structure and interchange. They include: Alt 1 - diamond; Alt 2 - PARCLO with Riverview Dr. intersection; Alt 3 – Single Point Urban Interchange (SPUI); Alt 4 - PARCLO with Dunn Rd. intersection; Alt 5 - PARCLO with a roundabout at Dunn Rd.; and Alt 6 – diamond with dual roundabouts at ramps.

Alignment options North Alt A and South Alt E were eliminated due to potential impacts to the Welcome Center on the Missouri side of the river (North Alt), potentially impacting the landfill on the Illinois side of the river (South Alt), the geometric difficulties presented with the new alignment and the Riverview Drive interchange (North Alt) and the probable curved structure that would be necessary to tie in on the Illinois side (South Alt). Interchange options Alt 2, Alt 3, Alt 4, and Alt 5 were eliminated due to either

being operationally deficient, would negatively affect Dunn Road, or the cost was too high. The result of the meeting was the alternatives to be carried forward for further study.

The consensus from the charrette was to continue studying: Adjacent North Alt B; Existing Alignment Alt (using existing substructure elements) C, Adjacent South Alt D, Alt 1 - diamond, and Alt 6 – diamond with dual roundabouts. All three structure typical sections were continued for further study as well.

Alternates From the concepts remaining from the charrette, twelve alternates were created and studied.

It was determined that no part of the original structure could be used as part of the new structure. Therefore, all elements including Alt C, utilizing portions of the existing structure on existing alignment, were eliminated. Also, as part of this evaluation of alternates, a "hybrid" alignment was developed. This hybrid alignment proposes two new structures, with one structure utilizing the existing alignment. Thirdly, after the charrette, it was determined by MoDOT, that the structures carrying I-270 over Riverview Dr. would need to be replaced due their age.

Therefore, no alignments utilizing the existing I-270 alignment at the Riverview Drive structures were considered from this point on. The 6 alternates to be studied further were:

- B-S1-1,6: North Alignment, Single Structure, Diamond Interchange or Roundabout Interchange
- B-S2-1,6: North Alignment, Twin Structures, Diamond or Roundabout Interchange
- B-S3-1,6: North Hybrid Alignment, Twin Structures, Diamond or Roundabout Interchange
- D-S1-1,6: South Alignment, Single Structure, Diamond or Roundabout Interchange
- D-S2-1,6: South Alignment, Twin Structures, Diamond or Roundabout Interchange
- D-S3-1,6: South Hybrid Alignment, Twin Structures, Diamond or Roundabout Interchange

There were several aspects that were considered when analyzing these alternates. Factors included in the analysis were: span configuration in relationship to cost; structure design that complies with the Illinois Department of Natural Resources (IDNR)'s no-rise requirement for the water surface elevation; shoulder width in terms of safety; interchange traffic operations; concept interchanges at Riverview Drive and how they relate to each alignment; ability to access the structure for maintenance and inspection, and overall costs of each alternative. All alternatives include replacing the Riverview Drive interchange with a diamond design, so that the interchange ramps would be compatible with the interstate mainline. See Appendix D (Appendix taken from the project report)-Design Charrette Meeting Minutes for maps of the alternatives.

Preferred Alternate

The preferred alternate has been determined. It will include twin structures, with the northern structure utilizing the existing I-270 alignment and the southern structure constructed adjacent to the northern structure. This alternative is labeled Alternative D-S3. This alternative was chosen for the following reasons:

- Twin structures will be more easily accessed for inspection than one structure
- Twin structures are less expensive than a single structure, in part because a single structure would require more cross bracing, and would require an additional drilled shaft at each river pier
- The southern alignment provides the best geometric solution of the alternatives studied
- Will have the least impacts to the Visitor's Center property
- Possible to avoid the landfill on the Illinois side

The main reasons the other alternatives were not selected were varied. The alternates including one single structure were eliminated because the structure was inaccessible with current equipment for inspection. The alternates north of the existing structure were eliminated because of the possible impact to the Missouri Visitor's Center by requiring large retaining walls, the possibility of Dunn Road needing to be realigned and thus, ROW would be included, and lastly because the geometrics would be problematic with the Riverview Drive interchange. The alternates that were further south than the south hybrid option (Alternative D-S3) would most likely impact the landfill that is just south of the current I-270 on the Illinois side. To read the detailed reasons why alternates were eliminated, please refer to the Discussion of Alternative Analysis and Findings Meeting Minutes dated June 13, 2017 in Appendix C. Please see Exhibit 4 for the preferred alternative typical sections and Exhibit 8 for the preferred alternative plan and profile.

E. Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, and Other Entities

The Illinois Department of Transportation has had various meetings with various groups throughout the project. Enclosed is a list of groups that IDOT met with during the studies phase of the project to introduce the project to those groups.

MODOT	12/15/2015	Establish coordination and the approval process for MODOT
FHWA Pre-Design Charette	4/20/2016	Establish how to conduct the Charrette
Great Rivers Greenway (GRG)	5/23/2016	Project Introduction
Lighthouse St. Louis Development	5/24/2016	Understand details of the Lighthouse Development
Madison County Board Chairman	5/24/2016	Project Introduction
St. Louis Regional Freightway	6/16/2016	Project Introduction
St. Louis Board of Public Service & City of St. Louis	6/21/2016	Project Introduction
HeartLands Conservancy	6/28/2016	Project Introduction
U.S. Army Corps of Engineers	7/12/2016	Project Introduction
U.S. Army Corps of Engineers	8/9/2016	Section 408
U.S. Coast Guard	10/6/2016	Project Introduction
City of Madison	11/9/2016	Access to Chouteau Island
IDNR	1/18/2017	Access to Chouteau Island/Old Chain of Rocks Canal Bridge
MEPRD	2/15/2017	Old Chain of Rocks Bridges
MSD	3/23/2017	Discuss MSD existing infrastructure in project area
St. Louis Water Division	4/20/2017	Discuss St. Louis Water's intake
Waste Management	5/11/2017	Discuss closed landfill on Chouteau Island
Madison Co Board Chairman& Madison Co Hwy Dept.	8/15/2017	Project Status

In addition, the Illinois Department of Transportation sent an updated Natural Resources Review memo to the USFWS, IDNR, and Missouri Department of Conservation. Please note that the above bat bridge assessment is valid for two years and that an expired assessment will need to be updated prior to construction.

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959

January 10, 2022

Kimberly Burkwald
Bureau of Design and Environment
IL Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

Dear Kim:

Thank you for your email dated January 4, 2022, requesting additional review of the proposed Illinois Department of Transportation (IDOT) Project #19320. The proposed project is located in Madison County, Illinois, and involves removal and replacement of the existing I-270 bridge over the Mississippi River. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act; the Endangered Species Act of 1973, as amended; the Migratory Bird Treaty Act and, the National Environmental Policy Act.

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed, or proposed to be listed, which may be present in the area of a proposed action. The list for the proposed project area includes the endangered Higgins eye mussel (*Lampsilis higginsii*), endangered Indiana bat (*Myotis sodalis*), endangered pallid sturgeon (*Scaphirhynchus albus*), endangered spectaclecase mussel (*Cumberlandia monodonta*), threatened decurrent false aster (*Boltonia decurrens*), threatened eastern massasauga (*Sistrurus catenatus*), threatened eastern prairie fringed orchid (*Platanthera leucophaea*), threatened northern long-eared bat (*Myotis septentrionalis*), and candidate monarch butterfly (*Danaus plexippus*). There is no designated critical habitat in the project area at this time.

Information in the NRR dated January 4, 2022, indicates that the proposed project would have no effect on the decurrent false aster, eastern massasauga, eastern prairie fringed orchid, least tern, and spectaclecase mussel. The least tern is no longer a federally listed species and the Higgins eye mussel is not known to occur within this portion of the Upper Mississippi River. This precluded the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended, for these species. Information in the NRR indicates that no bats or signs of bats were observed under the bridge and Indiana and northern long-eared bats were not captured during mist netting efforts for the proposed project. Based on this information and implementation of the proposed conservation measure (no tree clearing

April 1 through October 31), IDOT has determined that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Based on this information, the Service concurs that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat.

Information in the NRR indicates that pallid sturgeon may migrate through the proposed project area and the proposed project involves in-river work. To avoid and minimize impacts to the pallid sturgeon, IDOT has developed several conservation measures including no explosives shall be used during demolition of the existing structures or during construction of the new structures, the superstructure shall not be dropped into the river during demolition, mechanical excavation shall be utilized where feasible and if dredging is necessary a dustpan or similar dredge will be used and additional coordination with our office will occur. Based on the information provided, the Service concurs that the proposed project is not likely to adversely affect pallid sturgeon. The Service recommends that bridge demolition and construction activities avoid the primary spawning season of April 15 to June 30 if possible. Specifically, any mechanical excavation, dredging, or pile driving activities. Should this project be modified, or new information indicate listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. The Service is unaware of any bald eagle nests in the proposed project area; however, if a bald eagle nest is found in the project area or vicinity of the project area then our office should be contacted and the guidelines implemented. A copy of the guidelines is available at:

http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf

Thank you for the opportunity to provide information concerning threatened and endangered species. For additional coordination, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

Illinois Department of
Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

11 November 2021

Kimberly Burkwald
Illinois Department of Transportation BDE Central Office
Ecological Resource Specialist
2300 South Dirksen Parkway
Springfield, IL 62764

RE: I 270 over the Mississippi Update Coordination
Consultation Program
EcoCAT Review #2113150
Madison County

Dear Mrs. Burkwald,

The Department has received your submission for this project for the purposes of consultation pursuant to the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 860 and Part 1075. Additionally, the Department may offer advice and recommendations for species covered under the *Fish & Aquatic Life Code* [515 ILCS 5, et seq.]; the *Illinois Wildlife Code* [520 ILCS 5, et seq.]; and the *Herptiles-Herps Act* [510 ILCS 69].

The proposed action being reviewed in this letter consists of the removal and replacement of SN 060-0035, I 270 over the Mississippi River, along with improvements to the existing interchange at Riverview Drive in Missouri (38.765, -90.175). Roadway reconfigurations may also occur east of the existing structure.

The Department has reviewed the Natural Resource Review dated November 5, 2021; and based on the lack of spawning habitat in the project area the Department concurs that adverse impacts to the state-listed pallid sturgeon are unlikely.

However, due to the proximity of this project to known hibernacula, the Department recommends removing trees between November 15th and March 31st to avoid impacts to the state-listed Indiana bat (*Myotis sodalis*).

In accordance with 17 Ill. Adm. Code 1075.40(h), please notify the Department of your decision regarding these recommendations. The Department has also determined that this project is

unlikely to have adverse impacts on any other state-listed plant or animal species, or protected lands.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal and should not be regarded as a final statement on the project being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are unexpectedly encountered during the project's implementation, the applicant must comply with the applicable statutes and regulations.

The Department also offers the following conservation measures be considered to help protect native wildlife and enhance natural areas in the project area:

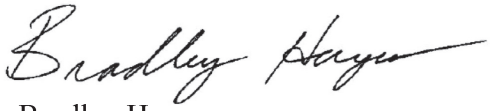
If temporary or permanent lighting is required, the Department recommends the following to minimize adverse effects to wildlife:

- All lighting should be fully shielded fixtures that emit no light upward.
- Only "warm-white" or filtered LEDs (CCT < 3,000 K; S/P ratio < 1.2) should be used to minimize blue emission.
- Only light the exact space with the amount (lumens) needed to meet highway safety requirements.
- If LEDs are to be used, avoid the temptation to over-light based on the higher luminous efficiency of LEDs.

If erosion control blanket is to be used, the Department recommends that wildlife-friendly plastic-free blanket by used to prevent the entanglement of native wildlife. If wildlife-friendly plastic-free blanket cannot be used, then the plastic erosion control blanket should be removed once vegetation is established.

The Department also recommends that all disturbed areas be reseeded with an appropriate native seed mix that contains forbs as well as grasses (such as IDOT Class 4A, 5, 5A, and 5 B seed mix), where feasible.

Please contact me with any questions about this review.
Sincerely,



Bradley Hayes
Resource Planner
Office of Realty & Capital Planning
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271
Bradley.Hayes@Illinois.gov
Phone: (217) 782-0031

Illinois Department of Transportation
Division of Highways / District 8
1102 Eastport Plaza Drive / Collinsville, Illinois / 62234-6198

November 8, 2021

Route: FAI 270
Section: 60B-1, 61-1WRS-4
County: Madison
Existing SN: 060-0350
Dual SN: 060-0351
Contract #: 76J90

ADVERTISEMENT DATE: May 13, 2022
RESPONSE DATE: March 1, 2022
CONTACT PERSON(S):
Philip Coppernoll (618) 346-3181

I-270 over Mississippi River – Structure replacement, Riverview Drive interchange reconstruction, and widening on Chouteau Island

Mr. Keith McMullen
Department of the Army
Corps of Engineers
1222 Spruce Street
St. Louis, MO 63103-2833

Dear Mr. McMullen:

IDOT has prepared a request for authorization pursuant to Sections 10 of the Rivers and Harbors Act or Section 404 and Section 10 of the Clean Water Act. The 404 permit application and associated cultural, biological, and environmental clearances are attached for your reference. It is anticipated that an individual permit is necessary due to the wetland impacts. If a Nationwide Permit is applicable, please inform IDOT so that coordination with appropriate State Environmental Protection Agencies can occur. In addition, IDOT has prepared and submitted a Coast Guard Permit. The approval of the Coast Guard Permit requires approval of this permit and is noted as “pending” in the Coast Guard Permit documents.

The proposed dual structures are 5,456’-6” long and 58’-10” wide but are wider at the western abutments to accommodate the Riverview Drive interchange ramps. The proposed structures are comprised of 5 units each with each unit being separated by expansion joints. There are a total of 26 proposed spans for each structure ranging from 117’-2” to 236’-0” and the substructure units are skewed at 12 degrees. Spans 14-16 are navigational spans with 220’-0” openings. The abutments are founded on three rows of driven piles with the front row battered. The abutment piles are driven to rock. The piers are founded on drilled shafts socketed into rock. The drilled shafts extend to 1’-0” below grade for the piers in the floodplain and extend to just above the estimated water surface elevation for the piers in the water. Transfer beams tie the multi-column piers together at the tops of the drilled shafts and the pier columns are tied together with concrete pier caps that support the superstructure. The proposed steel plate girder superstructure varies in web depth from 60” to 80” and the six beams support an 8” reinforced concrete bridge deck.

The existing four lane interstate on Chouteau Island will be widened to six lanes. The existing median ditch will be filled-in and replaced with storm sewer and a double-sided concrete barrier and pavement to accomplish the widening, except near the east abutment on the west side of Chouteau Island. Storm sewer will outlet to the south side of the proposed alignment and has been designed to minimize exit velocity with appropriate slope protection provided. The alignment of the proposed structures and roadway will shift to the south of the current alignment in order to allow for safe and efficient maintenance of traffic during construction. Additional fill will be required in this location which will be minimized by removing excess fill near the west abutment of the recently constructed Chain of Rocks Canal bridge. Compensatory storage will be incorporated to the ditch along the south side of the interstate to ensure that stormwater discharge will be no worse than the original conditions.

The Riverview Drive interchange and associated structure will be replaced and re-configured to a diamond interchange to accommodate the new Mississippi River Bridges and six lanes of traffic in the future. Staged construction of the interchange and structure will be utilized to maintain two lanes of traffic in each direction with only minor closures or reduced capacity for tie-ins and shifts in traffic control.

Riprap will be placed on the slope leading up to the west abutment on the Missouri side of the river. Class A6 riprap with a 10'-6" x 10'-6" thrust block will cover the embankment cone of the west abutment. A similar A6 riprap slope protection will be wrapped around the embankment cone of the east abutment. The riprap will continue west from the abutment and around pier 26 of both structures. An omission on top of the existing levee will allow for the construction of the access route, but the riprap area will act as armor to protect the levee. Additional riprap will be placed along the southern side of the roadway embankment to provide slope protection. A 2:1 slope was chosen to minimize wetland and property impacts along the south side of the road where the proposed alignment is shifted south of the existing east abutments.

During construction, erosion control measures are provided to limit risk of erodible materials from entering stormwater. See the attached storm water pollution prevention plan. Final plan details and quantities are still being developed. Monitoring of the storm water prevention system will occur throughout construction in accordance with the stormwater prevention plan.

The purpose for the improvements is to replace obsolete and deteriorating bridges, to increase capacity, and to increase safety along this important transportation facility. The impacts to the hydraulics from this improvement have been modeled for existing, in-construction, and proposed conditions. The results are provided in the attached Hydraulic Report and are discussed in the supporting 408 information.

Wetland impacts were assessed and were minimized through the analysis of alignment alternatives, by making the footprint of the alignment shift as small as possible, and by incorporating compensatory storage into roadside ditch design. IDOT anticipates a total of 0.325 acres of permanent wet mead wetland impacts, 0.120 acres of marsh impacts, and 2.37 acres of forested wetland impacts, both of which will be mitigated at a 1.5:1 ratio at the Fairmont City Wetland Mitigation site in Fairmont City, IL. The total impacted acres in Illinois is 2.815 acres with 4.223 acres of mitigation. Missouri anticipates a total of 0.29 acres of Permanent-Emergent wetland impacts which will be mitigated at a 1:1 ratio and 0.90 acres of Conversion-

Forested wetlands which will be mitigated at a 2:1 ratio at the Big Rivers Wetland Mitigation Bank located within the watershed in Missouri. Temporary wetland impacts of 2.24 acres of Forested wetland impacts are anticipated in Missouri. Temporary wetland impacts in Missouri will not be mitigated, except that any trees removed from the temporarily impacted wetlands will be mitigated as discussed in the next paragraph.

Tree impacts were studied and IDOT anticipates tree removal of approximately 6 acres in Illinois. IDOT will mitigate tree removal at a 1:1 ratio in accordance with an Intergovernmental Agreement for tree planting between IDOT and the Illinois Department of Natural Resources (IDNR). Tree mitigation will occur at the Burning Star site in Jackson County, IL. Missouri anticipates tree removal of approximately 6 acres in Missouri. Missouri will mitigate tree removal at 30 x 30 foot spacing for a total of 48 trees per acre. See the attached Tree and Shrub Establishment document from NRCS Missouri.

The project is currently on the June 17, 2022 letting. The anticipated start date for construction would be in August of 2022 and the estimated duration of the project is three construction seasons. Completion is estimated in 2025. IDOT is still waiting for the Natural Resources Review with anticipated commitments for natural resources such as the Pallid Sturgeon. Pending receipt of the Natural Resources Review, IDOT will be able to finalize the antidegradation analysis. In addition, the SHPO signoff has not be obtained as IDOT is awaiting the review of the vibration study. IDOT will forward the Natural Resources Review, antidegradation analysis, and SHPO signoff as well as any resulting commitments to the Corps of Engineers as soon as they are available.

The Illinois Department of Transportation hereby requests a 404 Permit as described in the regulations adopted by the Corps of Engineers. Please note, IDOT has prepared this Federal application on behalf of Missouri and Illinois. IDOT will coordinate additional permitting with the appropriate Illinois State agencies. Additional coordination with State of Missouri agencies will be done by others. Contact Phil Coppernoll at (618) 346-3181 if you have questions or need additional information.

Sincerely,

Keith Roberts, P.E.
Acting Region Five Engineer

Kirk H. Brown

Kirk Brown, P.E.
Program Development Engineer

Attachments

Joint Permit Application – Environmental and Cultural Resources Compliance Clearances
Plans and Specifications

JOINT APPLICATION FORM FOR ILLINOIS

ITEMS 1 AND 2 FOR AGENCY USE

1. Application Number	2. Date Received

3. and 4. (SEE SPECIAL INSTRUCTIONS) NAME, MAILING ADDRESS AND TELEPHONE NUMBERS

3a. Applicant's Name	3b. Co-Applicant/Property Owner Name (if needed or if different from applicant)	4. Authorized Agent (an agent is not required)
Keith Roberts, PE Acting Region 5 Engineer Illinois Department of Transportation District 8 1102 Eastport Plaza Drive Collinsville, IL 62234-6198		Philip Coppernoll, PE Illinois Department of Transportation District 8 1102 Eastport Plaza Drive Collinsville, IL 62234-6198 philip.coppernoll@illinois.gov
Applicant's Phone Nos. w/area code Business: 618-346-3100 Residence: Cell: Fax:	Applicant's Phone Nos. w/area code Business: Residence: Cell: Fax:	Agent's Phone Nos. w/area code Business: 618-346-3181 Residence: Cell: 314-704-7654 Fax: 618-346-3203

STATEMENT OF AUTHORIZATION

I hereby authorize, _____Philip Coppernoll_____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

Applicant's Signature Date

5. ADJOINING PROPERTY OWNERS (Upstream and Downstream of the water body and within Visual Reach of Project)

Name	Mailing Address	Phone No. w/area code
a. b. c. d.	See Attached	

6. PROJECT TITLE: New I-270 over Mississippi River Bridges and 6-lane interstate construction between Mississippi River and Chain of Rocks Canal and Riverview Drive Interchange reconstruction

7. PROJECT LOCATION

LATITUDE: 38.764475 LONGITUDE: -90.172529	UTMs 15S Northing: 4294449 N Easting: 745624 E

STREET, ROAD, OR OTHER DESCRIPTIVE LOCATION	LEGAL DESCRIPT	QUARTER	SECTION	TOWNSHIP NO.	RANGE
I-270		25	NW	T3N	R10W

☒ IN OR ☐ NEAR CITY OF TOWN (check appropriate box)
Municipality Name
Granite City

COUNTY	STATE	ZIP CODE	WATERWAY	RIVER MILE (if applicable)
Madison	IL	62040	Mississippi River	191

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

8. PROJECT DESCRIPTION (Include all features) This project consists of the removal and replacement of the structures carrying I-270 over the Mississippi River, the reconfiguration and reconstruction of the Riverview Drive interchange and highway structure in Missouri, as well as the widening of the existing 4 lane highway to a 6 lane highway from the Mississippi River to the Chain of Rocks Canal in Illinois. In order to provide future access to maintain and inspect the proposed structures, an access route is proposed on top of the Chouteau Island Levee on the west side of Chouteau Island.

9. PURPOSE AND NEED OF PROJECT:

The project's purpose is to replace structurally and functionally deficient structures and provide additional roadway capacity to increase safety and mobility for this important roadway.

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

10. REASON(S) FOR DISCHARGE:

None anticipated. Storm water prevention measures will be utilized in accordance with Standard Specifications and plan documents.

11. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS FOR WATERWAYS:

TYPE: Non anticipated. Storm water prevention measures will be utilized in accordance with Standard Specifications and plan documents.

AMOUNT IN CUBIC YARDS:

12. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (See Instructions)

6.27 acres (2.84 acres permanent in IL; 2.24 acres temporary in MO, 1.19 acres permanent in MO)

13. DESCRIPTION OF AVOIDANCE, MINIMIZATION AND COMPENSATION (See instructions)

Alignment analysis was performed to minimize wetland impacts while allowing for safe maintenance of traffic throughout construction, proper drainage throughout construction, and allows proper maintenance throughout the service life of the facility. Compensation for IDOT impacted wetlands will occur at a XX ratio for 0.92 acres of Permanent-Emergent wetlands and 1.92 acres of Forested wetlands at the XXXXXX wetland bank site in Illinois. Compensation for Missouri impacted wetlands will occur at 1:1 ratio for 0.29 acres of Permanent-Emerganent wetlands and a 2:1 ratio for 0.90 acres of Conversion-Forested Wetlands for a total of 2.15 acres of mitigation at the Big Rivers Wetland Mitigation Bank located within the watershed in Missouri. Temporary wetland impacts of 2.24 acres of Forested wetlands in Missouri are anticipated. Temporary wetland impacts in Missouri will not be mitigated, however if trees are removed they will be replaced in accordance with the tree mitigation policy in the respective state.

14. Date activity is proposed to commence: March 2023 — Date activity is expected to be completed: March 2025

15. Is any portion of the activity for which authorization is sought now complete? Yes ☐ No ☒ NOTE: If answer is "YES" give reasons in the Project Description and Remarks section. Indicate the existing work on drawings.
Month and Year the activity was completed

16. List all approvals or certification and denials received from other Federal, interstate, state, or local agencies for structures, construction, discharges or other activities described in this application.

Issuing Agency	Type of Approval	Identification No.	Date of Application	Date of Approval	Date of Denial
US Coast Guard			October 19, 2021	Pending approval of this permit	

17. CONSENT TO ENTER PROPERTY LISTED IN PART 7 ABOVE IS HEREBY GRANTED. ☒ Yes ☐ No

18. APPLICATION VERIFICATION (SEE SPECIAL INSTRUCTIONS)

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

Signature of Applicant or Authorized Agent — Date

Signature of Applicant or Authorized Agent — Date

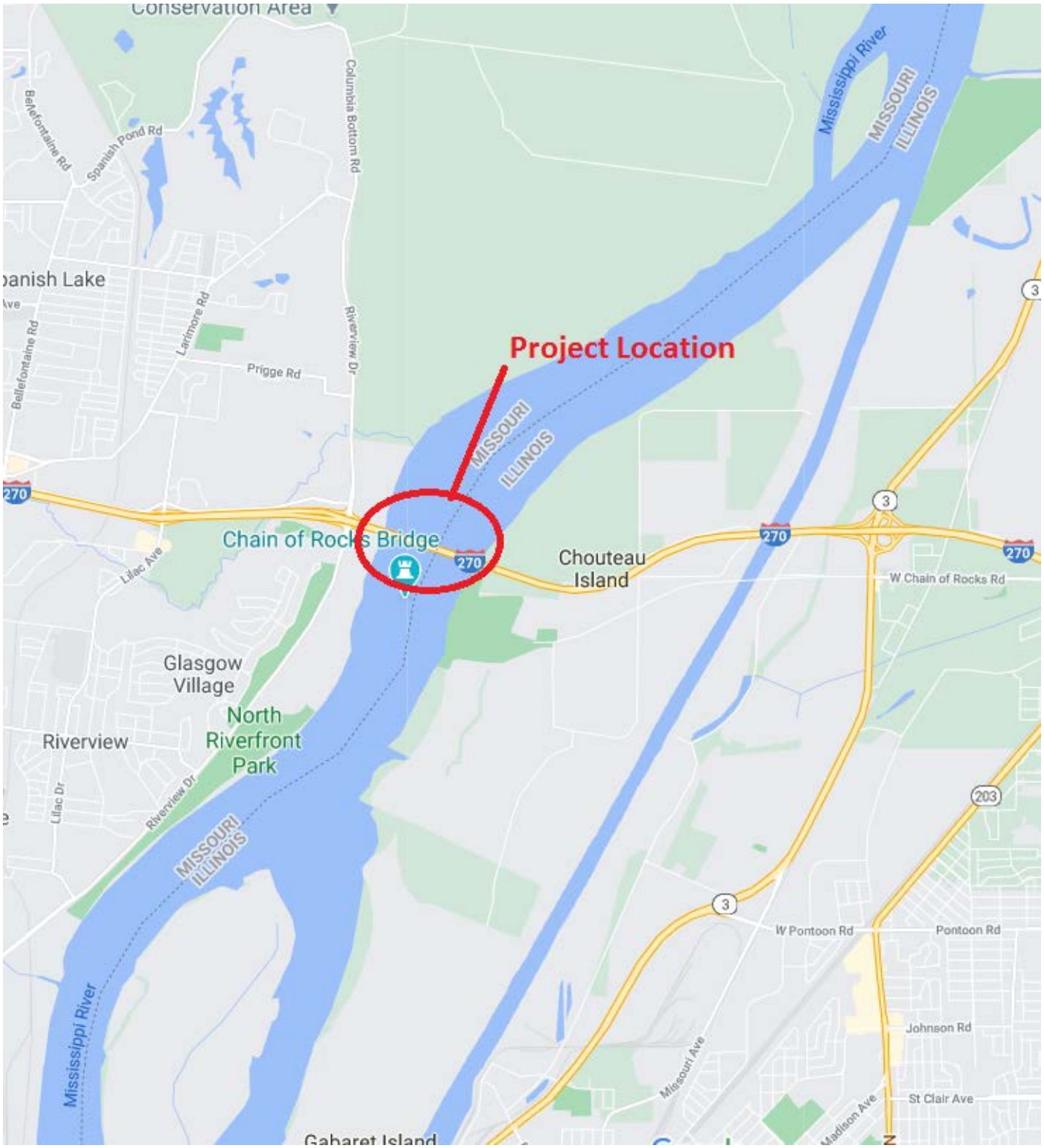
Signature of Applicant or Authorized Agent — Date

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

Revised 2011

SEE INSTRUCTIONS FOR ADDRESS

LOCATION MAP



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PLAN VIEW

See attached plan details.

Property Owner List for I-270 over Mississippi River Project

Missouri Side:

State of Missouri	Michelle Voegel	314-453-1799
Riverfront Development	Mark Repking	314-869-6867
Metropolitan Park and Recreation District – Great Rivers Greenway	3745 Foundry Way Suite 253 St. Louis, MO 63110	314-436-7009

Illinois Side:

Cionko Trust	Joel Cionko PO Box 1082 Granite City, IL 62040	618-550-8091
Chouteau Island Drainage And Levee District	Billy Dillard 19329 Roberta Ave Granite City, IL 62040	
Waste Management of Illinois, Inc.	700 E. Ste 400 Butterfield Rd Lombard, IL 60148	855-430-0047
The City of Madison, Illinois	Mayor John W. Hamm III 615 Madison Ave Madison, IL 62060	618-876-6268

FOR AGENCY USE ONLY

Revised 2011

☐ Corps of Engineers ☐ IL Dept of Natural Resources ☐ IL Environmental Protection Agency ☐ Applicant's Copy

Illinois Department of Transportation

Memorandum

To:	Jeffrey L. Keirn	Attn: Kirk Brown
From:	Scott Stitt	By: Thomas C. Brooks
Subject:	Natural Resources Review	
Date:	February 20, 2018	Thomas C Brooks

FAI 270 (I-270)
T 4N, R 10W, Sec 25, 36, 30
Seq.: 19320 B
Madison County

This Natural Resource Review Memo is for the Preferred Alignment for the replacement of I-270 over the Mississippi River. The project length is approximately 0.5 miles and extends from west of Levee Road to the Missouri River Bank. At this time, the amount of right-of-way is unknown. There will be an unknown amount of tree removal. There will be in stream work to the Mississippi River. Land cover in the project area is open water and forested floodplain. The project is being processed as a Categorical Exclusion.

A Technical Memorandum dated June 12, 2017 described the general process of how pier removal is likely to occur. The following is from that document:

Once the superstructure is completely removed, construction barges containing excavators and concrete breakers will be placed around the piers. Broken pieces from above the barge will be captured and will not be allowed to drop in the river. Removal from below the water will utilize the same equipment; however, broken pieces of concrete will be allowed to settle to the bottom of the river where they will then be removed. For piers where there is significant scour, if deemed acceptable, the broken pieces of concrete may be used to fill in these voids so long as they do not exceed the height of the pier to be left in place. If this is not acceptable, cofferdams would have to be constructed to ensure the complete removal of the broken concrete.

Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

The Illinois Natural Heritage Database contains records of State-listed American eel and the State and Federally-listed Pallid sturgeon in the project vicinity. The American eel is a highly migratory species and will likely move to other areas of the river during construction activities. Therefore, there will be no impact to this species. For further discussion of the Pallid sturgeon refer to the Review for Endangered Species Act Section 7 in this document. The Illinois Department of Natural Resources concurred with the commitments discussed in the abovementioned section on October 24, 2017. There are no Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and

Water Reserves in the vicinity of the project location. **Therefore, consultation under Part 1075 is terminated.**

This review for compliance with 17 Ill. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

For a discussion of Missouri state listed species please see the February 14, 2018 memorandum issued by the Missouri Department of Transportation subject "J6I3264; I-270 Over Mississippi River; Impacts to T&E Species in Missouri".

Review for Illinois Interagency Wetland Policy Act – Part 1090

The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, plan sheets, USDA soil maps, and topographic quadrangle maps were examined. A wetland survey was conducted between June 21 and September 2, 2016. Multiple sites were determined to be wetlands. The Wetland Delineation Report and spatial information (ArcGIS shapefile) are saved in the project folder.

A Wetland Impact Evaluation (WIE) was sent in. There will be 1.742 acres of wetland impacts. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. The project sponsor will purchase 2.613 acres of wetland credits at one of the following mitigation banks: Cahokia, Eckman-Bischoff, or Fairmont City. **Therefore, review for Part 1090 is complete.**

Review for Endangered Species Act - Section 7

The proposed improvement was reviewed in fulfillment of our obligation under Section 7(a)2 of the Endangered Species Act. Our review included use of the US Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) web-based review tool. Through IPaC, an official species list was received and is saved to the project folder. The list contains the endangered, threatened, proposed and candidate species and proposed and designated critical habitat that may be present within or in the vicinity of the proposed improvement. The following species are listed: Indiana bat (Ibat), Northern long-eared bat (NLEB), Least tern, Eastern massasauga, Pallid sturgeon, Spectaclecase mussel, Decurrent false aster, and Eastern prairie fringed orchid. No proposed or designated critical habitat is listed in Madison County. Under 50 CFR 402.12(e), **the accuracy of the species list is limited to 90 days.**

Within IPaC there is a Determination Key for the NLEB- and Ibat. We used the key to determine applicability of the project with the USFWS revised programmatic biological opinion for transportation projects dated 12-15-2016 and to assess what effect the project would have on NLEB or Ibat. Our assessment

is based on the results of the mist netting survey, bat bridge assessment, and bat habitat surveys which occurred in July and August of 2016. All surveys were conducted in accordance with USFWS regulations regarding the species. No bats were caught at either site in Illinois. Two big brown bats were caught in Missouri. No Ibat or NLEB were caught at any of the sites. Due to safety concerns and with approval from USFWS, only the Missouri side of the bridge was inspected. Neither bats nor signs of bats were found. Lastly, the habitat assessment indicated that there is suitable habitat for the Ibat and NLEB in the project vicinity. At this time, the amount of tree removal associated with the Preferred Alternative is unknown. We completed an IPaC qualification interview and determined that **the project is within the scope of the programmatic biological opinion and is <u>not likely to adversely affect</u> the NLEB or Ibat** provided the following conservation measure is implemented by the project sponsor:

For any tree removal conducted in Illinois: Trees three (3) inches or greater in diameter at breast height will not be cleared April 1 through September 30.

For any tree clearing conducted in Missouri:
Tree surveys will be conducted prior to the start of construction to identify any trees that could serve as a maternity roost for the Indiana Bat. Those trees identified within the construction zone will be removed between November 1 and March 31 to eliminate any potential impact to the Indiana Bat during the non-hibernation period. All other tree removal will be conducted as necessary to complete the construction.

Please note that the above bat bridge assessment is valid for two years and that an expired assessment will need to be updated prior to construction. Per email discussion with Mr. Matt Mangan with the USFWS, "Once the dates of construction are known, the USFWS will be contacted to discuss whether an additional survey is warranted."

The Illinois Natural Heritage Database contains records for the State and Federally listed Pallid sturgeon. The USFWS is aware of the species migrating through the area, but there is no existing data showing that this area is vital. We have made the determination that the project **may affect, but is <u>not likely to adversely affect</u>** the Pallid sturgeon provided the following conservation measure is implemented by the contractor:

1. **No explosives shall be used during demolition of the existing structures or during construction of the new structures.**

2. **During demolition, the superstructure shall not be dropped into the river.**

3. **To avoid the spawning season for the Pallid sturgeon, piles shall not be driven between April 15 and June 30.**

We cross-referenced the preferred habitat of each of the remaining listed species with our knowledge of the project area and determined that the project will have no effect on those species.

Should the proposed improvement be modified or new information indicates listed or proposed species may be affected, consultation or additional coordination should be initiated.

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Avian surveys were conducted by the Illinois Natural History Survey in the project area in 2015 and 2016. No bald eagles were found within 1,000 feet of the bridge. Two adults and one juvenile were seen within 5,000 feet of the bridge. A total of 80 or more eagles were observed on the Missouri side of the river. There is a known roost approximately 7 miles upriver of the project and the eagles are likely using this roost and not the project area. If a bald eagle nest is found in the project area or vicinity of the project then USFWS should be notified and the National Bald Eagle Management Guidelines implemented. Additionally, Peregrine falcons were seen in the project area. Based on the structures present, the pair was likely nesting on the Chain of Rocks Bridge and not the I-270 bridge. Therefore, the proposed project will have no effect to migratory bird species, specifically the Peregrine falcon and Bald eagle.

KCK

Wetlands

Submittal Date: 05/04/2015 **Sequence No:** 19320
District: 8 **Requesting Agency:** DOH **Project No:**
Contract #: **Job No.:** P- 98-001-15
Counties: Madison
Route: FAI 270 **Marked:** I-270
Street: **Section:** 60B-1
Municipality(ies): **Project Length:** 5.6327 **km** 3.5 **miles**
FromTo (At): 2000' west of Riverview Drive in Missouri to 500' west of IL 3
Quadrangle: Columbia Bottoms **Township-Range-Section:** T4N - R9,10W - Sec 25,36,30,29
Anticipated Design Approval: 12/01/2015 **Cleared for Design Approval:** 03/19/2018
Cleared for Letting: 03/19/2018 **Mitigation:** Yes **Mitigation Completed:**

Wetland Impacts Evaluation

Submittal Date: 01/25/2018 **Submitted By:**

Does the project have wetland impacts? Yes **Type:** Permanent

Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands: Shifting alignment where possible to the othe side of roadway, any geometric changes to minimize impacts

Summarize briefly why there are no practicable alternatives to the use of the wetland(s): The design is currently using a 3:1 slope that would minimize impacts. Also, there are impacts due to the profile being wider for this project to improve safety.

Wetland mitigation is being proposed: wetland bank site ☑ **Reviewed**

Memo Date: 10/02/2020 **Memo By:** Kimberly Burkwald
Memo: Wetland impacts have been reduced. Impacts to site 20 have been eliminated. The total impacts are now 1.22 acres of wetlands. The mitigation ratio is 1.5:1 as mitigation will occur off site but in basin at Eckman Bischoff. IDOT District 8 will deduct 1.83 acres of wetland credits from the ledger.

Memo Date: 02/22/2018 **Memo By:** Kimberly Kessinger
Memo: A Wetland Impact Evaluation (WIE) was sent in. There will be 1.742 acres of wetland impacts. There will be impacts to wetland sites 10, 20, 33, 37, and 38. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. The project sponsor will purchase 2.613 acres of wetland credits at one of the following mitigation banks: Cahokia, Eckman-Bischoff, or Fairmont City. Therefore, review for Part 1090 is complete.

Memo Date: 01/25/2018 **Memo By:** Jennifer M. Hunt
Memo: The District is requesting mitigating wetland impacts at the Eckmann-Bischoff wetland mitigation site.

Wetland Impacts and Mitigation Required

Site No.	Type	T&E	Nature Preserve	Natural Area	Essential Habitat	Size (acres)	Acres of Impact	Ratio	Acres of Compensation
10	Forested	No	No	No	No	88.1	1.020	1.5	1.530
Basin		**Quadrangle**			**FQI**	15.9	**Addendum**		
Describe the work:									
20	Wet Mead	No	No	No	No	2.0	.000	1.5	.000
Basin		**Quadrangle**			**FQI**	9.8	**Addendum**		
Describe the work:									
33	Wet Mead	No	No	No	No	0.26	.110	1.5	.165
Basin		**Quadrangle**			**FQI**	6.3	**Addendum**		
Describe the work:									
37	Wet Mead	No	No	No	No	.6	.050	1.5	.075
Basin		**Quadrangle**			**FQI**	13.8	**Addendum**		
Describe the work:									

38	Wet Mead	No	No	No	No	.21	.040	1.5	.060
Basin		**Quadrangle**		**FQI**	14.4	**Addendum**			
Describe the work:									
				Total		1.220		1.830	

Wetlands

Submittal Date: 05/04/2015 **Sequence No:** 19320
District: 8 **Requesting Agency:** DOH **Project No:**
Contract #: **Job No.:** P- 98-001-15
Counties: Madison
Route: FAI 270 **Marked:** I-270
Street: **Section:** 60B-1
Municipality(ies): **Project Length:** 5.6327 **km** 3.5 **miles**
FromTo (At): 2000' west of Riverview Drive in Missouri to 500' west of IL 3
Quadrangle: Columbia Bottoms **Township-Range-Section:** T4N - R9,10W - Sec 25,36,30,29
Anticipated Design Approval: 12/01/2015 **Cleared for Design Approval:** 03/19/2018
Cleared for Letting: 03/19/2018 **Mitigation:** Yes **Mitigation Completed:**

Wetland Impacts Evaluation

Submittal Date: 01/25/2018 **Submitted By:**

Does the project have wetland impacts? Yes **Type:** Permanent

Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands: Shifting alignment where possible to the othe side of roadway, any geometric changes to minimize impacts

Summarize briefly why there are no practicable alternatives to the use of the wetland(s): The design is currently using a 3:1 slope that would minimize impacts. Also, there are impacts due to the profile being wider for this project to improve safety.

Wetland mitigation is being proposed: wetland bank site ☑ **Reviewed**

Memo Date: 11/02/2021 **Memo By:** Kimberly Burkwald

Memo: The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, plan sheets, USDA soil maps, and topographic quadrangle maps were examined. A wetland survey was conducted between June 21 and September 2, 2016. Multiple sites were determined to be wetlands.
The Wetland Delineation Report and spatial information (ArcGIS shapefile) are saved in the project folder.

A Wetland Impact Evaluation (WIE) was sent in. There will be 2.815 acres of wetland impacts. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. 4.1625 acres of in kind wetland credits has been deducted from the IDOT District 8 Fairmont City Wetland Mitigation Site ledger. Therefore, review for Part 1090 is complete.

Memo Date: 10/02/2020 **Memo By:** Kimberly Burkwald

Memo: Wetland impacts have been reduced. Impacts to site 20 have been eliminated. The total impacts are now 1.22 acres of wetlands. The mitigation ratio is 1.5:1 as mitigation will occur off site but in basin at Eckman Bischoff. IDOT District 8 will deduct 1.83 acres of wetland credits from the ledger. Review for wetlands under Part 1090 is complete.

Memo Date: 02/22/2018 **Memo By:** Kimberly Kessinger

Memo: A Wetland Impact Evaluation (WIE) was sent in. There will be 1.742 acres of wetland impacts. There will be impacts to wetland sites 10, 20, 33, 37, and 38. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. The project sponsor will purchase 2.613 acres of wetland credits at one of the following mitigation banks: Cahokia, Eckman-Bischoff, or Fairmont City. Therefore, review for Part 1090 is complete.

Memo Date: 01/25/2018 **Memo By:** Jennifer M. Hunt

Memo: The District is requesting mitigating wetland impacts at the Eckmann-Bischoff wetland mitigation site.

Wetland Impacts and Mitigation Required

Site No.	Type	T&E	Nature Preserve	Natural Area	Essential Habitat	Size (acres)	Acres of Impact	Ratio	Acres of Compensation
10A	Forested	No	No	No	No	88.1	.970	1.5	1.455

Basin **Quadrangle** **FQI** 15.9
Describe the work:

10B	Forested	No	No	No	No	88.1	.450	1.5	.675
Basin		**Quadrangle**			**FQI**	15.9			
Describe the work:									
10c	Forested	No	No	No	No	88.1	.950	1.5	1.425
Basin		**Quadrangle**			**FQI**	15.9			
Describe the work:									
12	Wet Mead	No	No	No	No	1.38	.210	1.5	.315
Basin		**Quadrangle**			**FQI**	10.8			
Describe the work:									
33	Wet Mead	No	No	No	No	0.26	.080	1.5	.120
Basin		**Quadrangle**			**FQI**	6.3			
Describe the work:									
37	Wet Mead	No	No	No	No	.6	.030	1.5	.045
Basin		**Quadrangle**			**FQI**	13.8			
Describe the work:									
38	Wet Mead	No	No	No	No	.21	.005	1.5	.008
Basin		**Quadrangle**			**FQI**	14.4			
Describe the work:									
50	Marsh	No	No	No	No	9.98	.120	1.5	.180
Basin		**Quadrangle**			**FQI**	9.7			
Describe the work:									
						Total	2.815		4.223

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

WETLAND DETERMINATION REPORT

I-270 (FAI 270) over Mississippi River
Madison County, Illinois and
Saint Louis County, Missouri

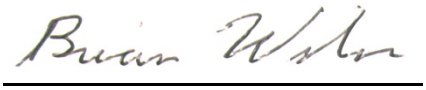
IDOT Sequence Number: 19320A

Prepared by:
Brian Wilm, David Ketzner, Ian Kenney, Brad Zercher, Scott Wiesbrook,
Jenwei Tsai, and Susan McIntyre

INHS/IDOT Wetland Science Program
October 2016

Project Summary

A wetland survey was conducted for proposed work on I-270 (FAI 270) over the Mississippi River in Madison County, Illinois and Saint Louis County, Missouri. All potential wetlands within the specified project area were examined. Thirty-four sites met the three criteria of a wetland established in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* [U.S. Army Corps of Engineers (USACE) 2010] and were, therefore, determined to be wetlands. Summary information regarding the wetland determination sites is presented in the wetland project report. Wetland determination forms are found in Appendix A and wetland plant species lists are included in Appendix B. Wetland boundaries were recorded using a Trimble Global Navigation Satellite System (GNSS). The spatial data have been digitally uploaded to the Illinois Site Assessment Tracking System (http://frostycap.isgs.uiuc.edu/idot_extranet). Locations of determination sites were overlaid on a digital aerial orthophoto using ArcGIS; the resulting figure is included in Appendix C. Additional maps and figures are also included in Appendix C.

Signed:  Date: October 5, 2016

Brian W. Wilm
Wetland Science Program
INHS/IDOT Project Coordinator

Conducted By:

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Cover Photo: Entrance to the Old Chain of Rocks Bridge, Illinois side.

I-270 (FAI 270) over Mississippi River
Madison County, Illinois and Saint Louis County, Missouri

Introduction

A wetland survey was conducted between 21 June and 2 September, 2016 for the proposed work on I-270 (FAI 270) over the Mississippi River in Madison County, Illinois and Saint Louis County, Missouri. Construction work will consist of the removal and replacement of the I-270 bridge across the Mississippi River, along with associated road work on both the Illinois and Missouri sides.

Methods

All potential wetlands within the specified study area were examined. Characteristics of vegetation, soils, hydrology, and topography were evaluated during field investigation and on-site wetland determination. Locations of observation points for wetland determinations were selected based on plant community borders and topographic changes. The following sources were examined while surveying the project corridor to determine wetland locations and boundaries: aerial photographs; U.S. Geological Survey topographic map (Columbia Bottom 7.5 minute quadrangle); National Wetlands Inventory (NWI) map (Columbia Bottom 7.5 minute quadrangle) (U.S. Fish and Wildlife Service); Illinois Wetlands Inventory (U.S. Fish and Wildlife Service, Illinois Department of Natural Resources, Illinois Natural History Survey 1996); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010); the USDA-NRCS *Official Series Descriptions*; and the USDA-NRCS *Web Soil Survey*. Positional inaccuracies are known to occur with downloaded sources of digital data listed above. As presented on maps and figures in this report, data can be shifted from their actual position when compared to modern aerial photography.

Wetland determinations were conducted using definitions and guidelines established in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010). Data from these determinations were recorded on U.S. Army Corps of Engineers' Wetland Determination Data Forms – Midwest Region (Appendix A); a data form was completed for each wetland sampling point. All potential wetlands, including all areas mapped as wetlands by the NWI, were described using at least one sampling point. Results of these determinations are summarized in the following text. Adjacent upland areas were also investigated; forms were not completed for these areas. Comprehensive plant species lists were compiled for each wetland site and are presented in Appendix B.

Wetland boundaries were recorded using a Trimble Global Navigation Satellite System (model GeoExplorer 6000 Series GeoXT), with a presumed accuracy of +/- 0.5 m under optimal field conditions. Spatial data were digitally uploaded to the Illinois Site Assessment Tracking System (http://frostycap.isgs.uiuc.edu/idot_extranet). Locations of determination sites were overlaid on a digital aerial orthophoto and approximate area was determined for each wetland site

using ArcGIS 10.3 software (ESRI 2014). Resulting areas are calculated in acres, reported to two decimal places. Site location, with respect to the nearest road, was measured from the edge of the pavement and is reported to the nearest foot.

Each native plant species was assigned a "coefficient of conservatism" (C) (Taft et al. 1997), a subjective rating of species fidelity to undegraded natural communities, ranging from zero to ten. Conservative species - those more likely to be found in "pristine" natural areas - were assigned high numbers, whereas non-conservative species - those that occur in anthropogenically disturbed areas - were given lower numbers. Non-native species and those not identifiable to species level were not assigned a rating. The Floristic Quality Index (FQI) is computed as FQI = (mean C) X (√N), where mean C is the mean coefficient of conservatism for all native plant species at a site and N is the total number of native plant species at the site. In very general terms, higher FQI values for plant communities indicate more similarity to "pristine" natural areas, as compared to those communities with lower FQI values. Botanical nomenclature follows *Vascular Flora of Illinois* (Mohlenbrock 2002), while wetland indicator status for each species follows *National Wetland Plant List, version 3.3* (USACE 2016, Lichvar et al. 2016).

Wetland Determination Site Summaries

Site Number: 1
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 147 feet east of Riverview Drive to sampling point 1A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 2
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 175 feet west of Riverview Drive to sampling point 2A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 3
Community type: **Marsh**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 126 feet east of Riverview Drive**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.49 ac**
Total site area: **0.49 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **10.6**
Additional remarks: **This site functions as a drainageway.**

Site Number: 4
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Bordering the west side of the Mississippi River, both north and south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **13.18 ac**
Total site area: **13.18 ac**
Mean Coefficient of Conservatism (mean C): **2.3** Floristic Quality Index (FQI): **15.7**

Site Number: 5
Community type: **Barren land**
National Wetlands Inventory code**: PUBG (intermittently exposed, unconsolidated bottom, palustrine wetland) and PEMAd (partially drained/ditched, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 960 feet east of Riverview Drive to sampling point 5A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.**

Site Number: 6
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PUBGh (diked/impounded, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 785 feet north of Coal Bank Road to sampling point 6A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is located on a terrace above a small stream.**

Site Number: 7
Community type: **Upland forest**
National Wetlands Inventory code**: PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 317 feet east of Riverview Drive to sampling point 7A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 8
Community type: **Forbland**
National Wetlands Inventory code**: PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 427 feet east of Riverview Drive to sampling point 8A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 9
Community type: **Upland forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 265 feet east of Riverview Drive to sampling point 9A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 10
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland); PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland)**
Site location: **Bordering the east side of the Mississippi River, under and both north and south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **88.18 ac**
Total site area: **Undetermined**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **15.9**

Site Number: 11
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 109 feet north of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 12
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Under and on both sides of I -270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.38 ac**
Total site area: **1.38 ac**
Mean Coefficient of Conservatism (mean C): **2.7** Floristic Quality Index (FQI): **10.8**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 13
Community type: **Cropland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 763 feet north of I-270 to sampling point 13A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **The site is a soybean field.**

Site Number: 14
Community type: **Wet meadow**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 2300 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.18 ac**
Total site area: **0.18 ac**
Mean Coefficient of Conservatism (mean C): **1.2** Floristic Quality Index (FQI): **3.9**
Additional remarks: **This site is a depression in a planted soybean field.**

Site Number: 15
Community type: **Forbland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 2625 feet north of I-270 to sampling point 15A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 16
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 2620 feet north of I-270 to sampling point 16A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 17
Community type: **Wet meadow**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 2368 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.15 ac**
Total site area: **0.15 ac**
Mean Coefficient of Conservatism (mean C): **2.2** Floristic Quality Index (FQI): **9.0**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 18
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 2025 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.29 ac**
Total site area: **0.29 ac**
Mean Coefficient of Conservatism (mean C): **0.3** Floristic Quality Index (FQI): **0.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 19
Community type: **Cropland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 245 feet north of I-270 to sampling point 19A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is soybean field**.

Site Number: 20
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and U (upland)**
Site location: **Approximately 121 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **2.00 ac**
Total site area: **2.00 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **9.8**
Additional remarks: **This ditched/drained site occurs partially within a planted soybean field.**

Site Number: 21
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 460 feet south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.73 ac**
Total site area: **0.73 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **8.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 22
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 65 feet north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.14 ac**
Total site area: **0.14 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **7.8**

Site Number: 23
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 62 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **4.01 ac**
Total site area: **4.24 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **18.3**
Additional remarks: **This site is wooded fringe around an excavated deepwater lake (Site 24).**

Site Number: 24
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 121 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 25
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland), PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland), and U (upland)**
Site location: **Approximately 294 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 26
Community type: **Wet forbland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland), PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland), and PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 496 feet east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.75 ac**
Total site area: **0.75 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **8.5**
Additional remarks: **This site has been altered by landfill operations.**

Number: 27
Community type: **Non-native grassland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 941 feet south of Chain of Rocks Road to sampling point 27A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 28
Community type: **Forbland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 692 feet south of Chain of Rocks Road to sampling point 28A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 29
Community type: **Non-native grassland**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 375 feet south of Chain of Rocks Road to sampling point 29A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 30
Community type: **Wet shrubland/wetland pond**
National Wetlands Inventory code**: PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland), PEMCx (excavated, seasonally flooded, emergent, palustrine wetland), PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland) and U (upland)**
Site location: **Approximately 93 feet west of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **5.99 ac**
Total site area: **6.54 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **10.4**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 31
Community type: **Shrubland/forbland**
National Wetlands Inventory code**: PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland)**
Site location: **Approximately 248 feet west of Roman Road to sampling point 31A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 32
Community type: **Shrubland**
National Wetlands Inventory code**: PFO1Ax (excavated, temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 42 feet north of Chain of Rocks Road to sampling point 32A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is a wooded ditch**.

Site Number: 33
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland) and U (upland)**
Site location: **Approximately 125 feet south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.26 ac**
Total site area: **0.26 ac**
Mean Coefficient of Conservatism (mean C): **1.3** Floristic Quality Index (FQI): **6.3**
Additional remarks: **This site is partially ditched and functions as a drainageway**.

Site Number: 34
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland), PEMCf (farmed, seasonally flooded, emergent, palustrine wetland), and PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 214 feet west of Waterwarks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **7.02 ac**
Total site area: **7.33 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **8.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 35
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 75 feet west of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.29 ac**
Total site area: **1.29 ac**
Mean Coefficient of Conservatism (mean C): **2.9** Floristic Quality Index (FQI): **15.0**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 36
Community type: **Forested wetland**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 120 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.24 ac**
Total site area: **0.24 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **10.3**

Site Number: 37
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 112 and138 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.60 ac**
Total site area: **0.60 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **13.8**
Additional remarks: **The wetland is comprised of two parcels that are connected hydrologically.**

Site Number: 38
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 108 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.21 ac**
Total site area: **0.21 ac**
Mean Coefficient of Conservatism (mean C): **2.7** Floristic Quality Index (FQI): **14.4**
Additional remarks: **This site is a culvert outlet from beneath I-270.**

Site Number: 39
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 93 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.70 ac**
Total site area: **0.70 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **6.6**

Site Number: 40
Community type: **Wetland pond**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 130 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **1.6** Floristic Quality Index (FQI): **6.5**

Site Number: 41
Community type: **Forested wetland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 178 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **1.5** Floristic Quality Index (FQI): **6.3**

Site Number: 42
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 204 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.20 ac**
Total site area: **0.20 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **11.7**
Additional remarks: **This excavated depression appears to be the result of earth moving activities.**

Site Number: 43
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 440 ft south of I-270 to sampling point 43A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **Soils at this site have been irregularly mounded throughout as a result of earth moving activities.**

Site Number: 44
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 292 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.22 ac**
Total site area: **0.22 ac**
Mean Coefficient of Conservatism (mean C): **1.3** Floristic Quality Index (FQI): **4.3**

Site Number: 45
Community type: **Forested wetland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 50 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.49 ac**
Total site area: **0.49 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **10.2**

Site Number: 46
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 12 ft east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.50 ac**
Total site area: **0.50 ac**
Mean Coefficient of Conservatism (mean C): **0.8** Floristic Quality Index (FQI): **1.8**
Additional remarks: **This site is a depression in a agricultural field that is farmed when conditions are suitable and was at least partially planted to soybeans in 2016.**

Site Number: 47
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland); PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland); PEMA (temporarily flooded, emergent, palustrine wetland); PEMC (seasonally flooded, emeregent, palustrine wetland), and U (upland)**
Site location: **Approximately 88 ft east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **36.48 ac**
Total site area: **38.03 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **15.0**
Additional remarks: **The site is an open wet floodplain forest with patches dominated by herbacious vegetation.**

Site Number: 48
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Under and on both sides of Chain of Rocks Road and U (upland)**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.63 ac**
Total site area: **1.05 ac**
Mean Coefficient of Conservatism (mean C): **1.1** Floristic Quality Index (FQI): **5.7**

Site Number: 49
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 13 feet south of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **13.91 ac**
Total site area: **13.91 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **12.3**

Site Number: 50
Community type: **Marsh**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 12 feet south and 13 ft north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **9.98 ac**
Total site area: **9.98 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **9.7**

Site Number: 51
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 150 feet north of Chain of Rocks Road to sampling point 51A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is primarily an upland parcel within Site 49 (wetland).**

Site Number: 52
Community type: **Marsh**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 18 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.59 ac**
Total site area: **1.59 ac**
Mean Coefficient of Conservatism (mean C): **2.9** Floristic Quality Index (FQI): **15.7**

Site Number: 53
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 80 feet north of Waterworks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 54
Community type: **Wetland pond**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 320 feet east of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **8.5**

Site Number: 55
Community type: **Marsh**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 33 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **3.69 ac**
Total site area: **3.69 ac**
Mean Coefficient of Conservatism (mean C): **2.6** Floristic Quality Index (FQI): **10.8**

Site Number: 56
Community type: **Forbland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 67 feet north of Waterworks Road to sampling point 56A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 57
Community type: **Forbland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 680 feet east of Waterworks Road to sampling point 57A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 58
Community type: **Forested wetland**
National Wetlands Inventory code**: PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1Cx (excavated, seasonally flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 625 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **15.71 ac**
Total site area: **15.71 ac**
Mean Coefficient of Conservatism (mean C): **2.3** Floristic Quality Index (FQI): **15.8**
Additional remarks: **This site also includes herbaceous wetland fringe exposed due to low water levels.**

Site Number: 59
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: L1UBHx (excavated, permanently flooded, unconsolidated bottom, limnetic, lacustrine wetland), PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1Cx (excavated, seasonally flooded, broad leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 30 feet east of Waterworks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Wetland Site Summary Table

Site no.	NWI code	Community type	Area (ac.)[1]	>50%[2]	FQI	Mean C
3	U	Marsh	0.49	Yes	10.6	2.0
4	PFO1A and PEMA	Wet floodplain forest	13.18	Yes	15.7	2.3
10	PfO1A and PSS1C	Wet floodplain forest	88.18	Yes	15.9	2.1
12	PEMAf	Wet meadow	1.38	Yes	10.8	2.7
14	U	Wet meadow	0.18	Yes	3.9	1.2
17	U	Wet meadow	0.15	Yes	9.0	2.2
18	PEMAf	Wet meadow	0.29	Yes	0.6	0.3
20	PEMC and U	Wet meadow	2.00	Yes	9.8	2.1
21	PEMC	Wet meadow	0.73	Yes	8.6	2.4
22	PEMC	Forested wetland	0.14	Yes	7.8	1.9
23	PEMC and PFO1A	Forested wetland	4.01	Yes	17.9	2.4
26	PFO1A, PEMFx, and PUBFx	Wet forbland	0.75	Yes	8.5	1.9
30	PEMFx, PEMCx, PUBFx and U	Wet shrubland/wetland pond	5.99	Yes	10.4	2.1
33	PEMCx and U	Wet meadow	0.26	Yes	6.3	1.3
34	PEMAf, PEMCf, and PUBGx	Wet meadow	7.02	Yes	8.6	1.8
35	PEMAf	Wet meadow	1.29	Yes	15.0	2.9
36	U	Forested wetland	0.24	Yes	10.3	2.4
37	PFO1A and U	Wet meadow	0.60	Yes	13.8	2.4
38	PFO1A and U	Wet meadow	0.21	Yes	14.4	2.7
39	PEMCx	Forested wetland	0.70	Yes	6.6	2.0
40	PEMCx	Wetland pond	0.17	Yes	6.5	1.6
41	PFO1A	Forested wetland	0.17	Yes	6.3	1.5
42	PFO1A and U	Wet meadow	0.20	Yes	11.7	1.9
44	PFO1A	Wet meadow	0.22	Yes	4.3	1.3
45	PFO1A	Forested wetland	0.49	Yes	10.2	1.8
46	PEMAf	Wet meadow	0.50	Yes	1.8	0.8
47	PFO1A, PSS1C, PEMA, PEMC, and U	Wet floodplain forest	36.48	Yes	15.0	2.0
48	PEMC and U	Wet meadow	0.63	Yes	5.7	1.1
49	PFO1A and U	Wet floodplain forest	13.91	Yes	11.9	2.2
50	PEMC and PFO1A	Marsh	9.98	Yes	9.7	1.8
52	PFO1A and U	Marsh	1.59	Yes	15.7	2.9
54	PEMC	Wetland pond	0.17	Yes	8.5	2.1
55	PEMC	Marsh	3.69	Yes	10.8	2.6
58	PSS1C, PEMC and PFO1Cx	Forested wetland	15.71	Yes	15.8	2.3

[1] Area within the ESR project limits. [2] In our best professional judgment is more than 50% of the total site area within the ESR project limits?

Stream Description

Site name: **Mississippi River**
Site location: **Center of project corridor**
Community type: **River**
National Wetlands Inventory code: **R2UBH (permanently flooded, unconsolidated bottom, lower perennial, riverine)**
USGS 8-Digit Hydrologic Unit Code (HUC): **07140101 (Upper Mississippi River, Cahokia-Joachim Watershed)**
Watershed area: **697,000 mi^2 measured at St. Louis, MO (U.S. Geological Survey 2016)**
Riffles observed? **No** Pools observed? **No**
Mussel shell material observed? **No**
Is the stream or body of water permanent? **Yes**
Is the stream identified by IDNR (2008) as a biologically significant stream? **No**
Stream Integrity Rating: **None** Stream Diversity Rating: **None**

Threatened/Endangered Species and Natural Communities of Special Interest

No species listed as threatened or endangered federally or in Illinois were found during our wetland survey within the project corridor. Also, no natural communities of special interest were noted.

INHS Biotic Surveys are conducting studies of the project corridor for the presence of mammals (bat mist netting and habitat assessment) and birds (surveys including peregrine falcon and bald eagle). Please see forthcoming reports by senior authors for more information (Mengelkoch mammals and Schelsky birds).

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APPENDIX A

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 6/21/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 1A

Investigator(s): Wilm, Ketzner, Wiesbrook Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): <2 Lat: 38.77399 Long: -90.18154 Datum: NAD 83

Soil Map Unit Name: See remarks NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is mesic floodplain forest.
NRCS mapped as Booker SIC, freq. ponded, 0-2% slopes, occasionally flooded; revised to Fishpot SIL

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	25	Yes	FAC
2. *Populus deltoides*	20	Yes	FAC
3. *Ulmus americana*	15	Yes	FACW
4. *Celtis occidentalis*	12	No	FAC
5.			
	72	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	95	Yes	UPL
2. *Cornus drummondii*	12	No	FAC
3.			
4.			
5.			
	107	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	2	No	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	2	No	FAC
2. *Campsis radicans*	2	No	FACU
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/2	100					SIL	
7-12+	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 6/21/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 2A

Investigator(s): Wilm, Ketzner, Wiesbrook Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.77424 Long: -90.18275 Datum: NAD 83

Soil Map Unit Name: Haymond SIL, 0-3% slopes, freq. flooded NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Yes	FAC
2. *Morus alba*	30	Yes	FAC
3. *Populus deltoides*	25	No	FAC
4. *Ulmus americana*	20	No	FACW
5. *Celtis laevigata*	12	No	FACW
	137	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	8	Yes	FAC
2. *Acer negundo*	4	Yes	FAC
3. *Ulmus americana*	2	No	FACW
4.			
5.			
	14	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Impatiens capensis*	40	Yes	FACW
2. *Toxicodendron radicans*	5	No	FAC
3. *Smilax tamnoides*	4	No	FAC
4. *Acer negundo*	3	No	FAC
5. *Aster lanceolatus*	2	No	FAC
6. *Carex sp.*	2	No	-
7. *Pilea pumila*	2	No	FACW
8. *Acer saccharinum*	1	No	FACW
9. *Ambrosia trifida*	1	No	FAC
10. *Humulus japonicus*	1	No	FACU
	61	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	7	Yes	FACW
2. *Ampelopsis cordata*	5	Yes	FAC
	14	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 2A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-13+	10YR 5/1	95	10YR 4/6	5	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? **No**

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

Remarks: This is located at least 15 feet above the stream below.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 3A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76765 Long: -90.18161 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: U

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Populus deltoides*	2	No	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex hyalinolepis*	85	Yes	OBL
2. *Leersia oryzoides*	5	No	OBL
3. *Lycopus americanus*	3	No	OBL
4. *Ampelopsis cordata*	1	No	FAC
5. *Rumex crispus*	1	No	FAC
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-10	10YR 4/1	90	7.5YR 4/6	10	C	M	SIL	
10-12	10YR 4/1	80	7.5YR 4/6	20	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 4A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76526 Long: -90.17989 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?** **Yes**
Hydric Soil Present?	Yes	
Wetland Hydrology Present?	Yes	

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	60	Yes	FAC
3. *Morus alba*	4	No	FAC
4.			
5.			
	144	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Acer saccharinum*	1	No	FACW
3. *Pilea pumila*	1	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	1	No	FACW
2.			
	1	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					SIL	
3-12	10YR 4/1	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 4B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76205 Long: -90.18126 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	90	Yes	FACW
2. *Populus deltoides*	15	No	FAC
3.			
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Acer saccharinum*	1	No	FACW
2. *Diospyros virginiana*	1	No	FAC
3. *Euonymus fortunei*	1	No	UPL
4. *Impatiens capensis*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	100					SIL	
8-12	10YR 4/2	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 5A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0-2 Lat: 38.76935 Long: -90.17841 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PEMAd

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is barren land.
This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)
This site is unvegetated.

SOIL

Sampling Point: 5A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 5B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0-2 Lat: 38.76880 Long: -90.17822 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PUBG

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is barren land.
This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)
This site is unvegetated.

SOIL

Sampling Point: 5B

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 6A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.77443 Long: -90.18661 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Haymond silt loam, 0-3% slopes; revised to Orthent NWI classification: PUBGh

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	25	Yes	FACW
2. *Salix nigra*	20	Yes	OBL
3. *Ulmus americana*	20	Yes	FACW
4. *Acer negundo*	15	No	FAC
5. *Maclura pomifera*	8	No	FACU
	94	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Sambucus canadensis*	2	No	FACW
2. *Acer negundo*	1	No	FAC
3. *Celtis occidentalis*	1	No	FAC
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Laportea canadensis*	20	Yes	FACW
2. *Pilea pumila*	20	Yes	FACW
3. *Rubus sp.*	10	No	-
4. *Amphicarpaea bracteata*	7	No	FAC
5. *Sanicula odorata*	2	No	FAC
6. *Antenoron virginianum*	1	No	FAC
7. *Hackelia virginiana*	1	No	FACU
8. *Persicaria cespitosa*	1	No	FAC
9.			
10.			
	62	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 6A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	
2-12	10YR 5/3	93	7.5YR 4/6	7	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 7A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <1 Lat: 38.76505 Long: -90.18154 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMA

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is upland forest.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Orthent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	40	Yes	FAC
2. *Platanus occidentalis*	20	Yes	FACW
3. *Diospyros virginiana*	15	No	FAC
4. *Populus deltoides*	15	No	FAC
5. *Salix nigra*	10	No	OBL
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	60	Yes	UPL
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	20	Yes	UPL
2. *Diospyros virginiana*	5	No	FAC
3. *Geum canadense*	1	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	26	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	5	Yes	FAC
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 7A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3.5	10YR 3/2	100					SIL	
3.5-9	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Compacted filled material

Depth (inches): 9

Hydric Soil Present? **No**

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted fill material. Gravel was also present at the surface; wetland hydrology was absent.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 8A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76382 Long: -90.18166 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PEMA

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia artemisiifolia*	25	Yes	FACU
2. *Plantago lanceolata*	20	Yes	FACU
3. *Sporobolus cryptandrus*	10	No	FACU
4. *Setaria viridis*	8	No	UPL
5. *Medicago lupulina*	3	No	FACU
6. *Chamaesyce maculata*	2	No	FACU
7. *Cichorium intybus*	2	No	FACU
8. *Convolvulus arvensis*	2	No	UPL
9. *Potentilla recta*	1	No	UPL
10.			
	73 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 8A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Compacted filled material/concrete

Depth (inches): 2

Hydric Soil Present? **No**

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted filled material and concrete fragments. Broken asphalt, concrete, and gravel were also present at the surface; wetland hydrology and hydrophytic vegetation were not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 9A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76353 Long: -90.18240 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is upland forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Diospyros virginiana*	40	Yes	FAC
2. *Acer saccharinum*	15	Yes	FACW
3. *Ailanthus altissima*	12	No	FACU
4.			
5.			
	67	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	70	Yes	UPL
2. *Ulmus americana*	5	No	FACW
3.			
4.			
5.			
	75	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phytolacca americana*	25	Yes	FACU
2. *Acer saccharinum*	2	No	FACW
3. *Ambrosia artemisiifolia*	2	No	FACU
4. *Erechtites hieracifolia*	2	No	FAC
5. *Lonicera maackii*	2	No	UPL
6. *Morus alba*	2	No	FAC
7. *Solanum ptychanthum*	2	No	FACU
8. *Ampelopsis cordata*	1	No	FAC
9. *Lepidium sp.*	1	No	-
10. *Parthenocissus quinquefolia*	1	No	FACU
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Toxicodendron radicans*	15	Yes	FAC
2. *Ampelopsis cordata*	10	Yes	FAC
	32	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 9A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Compacted filled material

Depth (inches): 2

Hydric Soil Present? **No**

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted filled material and concrete fragments. Broken asphalt, concrete, and gravel were also present at the surface; wetland hydrology was absent.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/14/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75622 Long: -90.16579 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PSS1C

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	65	Yes	FACW
2. *Populus deltoides*	10	No	FAC
3. *Salix amygdaloides*	7	No	FACW
4. *Salix nigra*	2	No	OBL
5.			
	84	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	5	Yes	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Carex sp.*	1	No	-
3. *Erechtites hieracifolia*	1	No	FAC
4. *Morus alba*	1	No	FAC
5. *Vitis riparia*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
	9	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	3	No	FACW
2.			
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	88	7.5YR 4/6	12	C	M	SIL	
6-12	10YR 3/1	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/14/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75765 Long: -90.17049 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	85	Yes	FACW
2. *Forestiera acuminata*	20	No	OBL
3.			
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	8	Yes	FAC
2.			
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	2	Yes	FAC
2. *Bidens frondosa*	2	Yes	FACW
3. *Aster lanceolatus*	1	No	FAC
4. *Leersia virginica*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10B

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	88	10YR 4/6	12	C	M	SIL	
6-12	10YR 3/1	90	10YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76001 Long: -90.16405 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	70	Yes	FACW
2. *Populus deltoides*	35	Yes	FAC
3. *Morus alba*	7	No	FAC
4.			
5.			
	112	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	10	Yes	FACW
2. *Morus alba*	2	No	FAC
3.			
4.			
5.			
	12	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Solanum ptychanthum*	2	Yes	FACU
3. *Aster lanceolatus*	1	No	FAC
4. *Cyperus sp.*	1	No	-
5. *Leersia virginica*	1	No	FACW
6. *Phytolacca americana*	1	No	FACU
7.			
8.			
9.			
10.			
	11	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10C

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	93	10YR 5/6	7	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10D

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76012 Long: -90.16963 Datum: NAD 83

Soil Map Unit Name: Rocher loam, 2-5% slopes, frequently flooded; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Morus alba*	5	No	FAC
3.			
4.			
5.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Leersia virginica*	4	Yes	FACW
2. *Persicaria cespitosa*	3	Yes	FAC
3. *Aster lanceolatus*	1	No	FAC
4. *Fraxinus lanceolata*	1	No	FACW
5. *Pilea pumila*	1	No	FACW
6. *Viola pratincola*	1	No	FACW
7.			
8.			
9.			
10.			
	11	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10D

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	93	7.5YR 4/6	7	C	M	LFS	
6-12	10YR 4/1	93	7.5YR 4/6	7	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10E

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75916 Long: -90.16957 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	10	No	FAC
3.			
4.			
5.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	3	No	FAC
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Aster lanceolatus*	5	Yes	FAC
2. *Laportea canadensis*	1	No	FACW
3. *Solanum ptychanthum*	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10E

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					SIL	
4-12	10YR 4/2	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 11A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75985 Long: -90.16512 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 11A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 12A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-4 Lat: 38.76173 Long: -90.16435 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, frq. fld., revised to Aquent NWI classification: PEMAf

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This site is a vegetated depression within a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Phyla lanceolata*	50	Yes	OBL
2. *Persicaria lapathifolia*	6	No	FACW
3. *Rumex crispus*	4	No	FAC
4. *Xanthium strumarium*	4	No	FAC
5. *Carex sp.*	3	No	-
6. *Persicaria coccinea*	3	No	OBL
7. *Aster lanceolatus*	2	No	FAC
8.			
9.			
10.			
	72 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 12A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	92	10YR 4/6	8	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <8

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 13A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76406 Long: -90.16229 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PEMAf

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

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation Yes , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is cropland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Glycine max*	80	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Excluding planted soybeans (Glycine max), no vegetation is present.

SOIL

Sampling Point: 13A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 14A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76851 Long: -90.16054 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld; revised to Aquent NWI classification: U

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point was located within a depression in a soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Iva annua*	17	Yes	FAC
2. *Acer saccharinum*	8	Yes	FACW
3. *Aster lanceolatus*	5	No	FAC
4. *Persicaria punctata*	3	No	OBL
5. *Persicaria lapathifolia*	1	No	FACW
6. *Rumex crispus*	1	No	FAC
7.			
8.			
9.			
10.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 14A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/2	88	7.5YR 4/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 15A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76898 Long: -90.16023 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PEMAf

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Aster lanceolatus*	95	Yes	FAC
2. *Xanthium strumarium*	5	No	FAC
3. *Acer saccharinum*	4	No	FACW
4. *Phyla lanceolata*	4	No	OBL
5. *Ipomoea lacunosa*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
	109	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 15A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					SIL	
8-12	10YR 4/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 16A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76878 Long: -90.15962 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	75	Yes	FACW
2. *Populus deltoides*	15	No	FAC
3. *Morus alba*	10	No	FAC
4. *Salix nigra*	8	No	OBL
5.			
	108	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	7	Yes	FACW
2.			
3.			
4.			
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	12	Yes	FACW
2. *Ambrosia trifida*	7	Yes	FAC
3. *Campsis radicans*	5	No	FACU
4. *Elymus virginicus*	4	No	FACW
5. *Artemisia annua*	2	No	FACU
6. *Aster lanceolatus*	2	No	FAC
7. *Acalypha rhomboidea*	1	No	FACU
8. *Ipomoea lacunosa*	1	No	FACW
9. *Oxalis stricta*	1	No	FACU
10.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 16A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/1	100					SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 17A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76836 Long: -90.15990 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: U

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Leptochloa fascicularis*	15	Yes	OBL
2. *Leptochloa panicoides*	15	Yes	OBL
3. *Ludwigia palustris var. americana*	15	Yes	OBL
4. *Amaranthus tuberculatus*	5	No	OBL
5. *Eclipta prostrata*	4	No	FACW
6. *Rumex crispus*	4	No	FAC
7. *Echinochloa muricata*	3	No	OBL
8. *Ammannia coccinea*	2	No	OBL
9. *Xanthium strumarium*	2	No	FAC
10. *Sida spinosa*	1	No	FACU
	66 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 17A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/1	88	10YR 5/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 18A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76695 Long: -90.15848 Datum: NAD 83

Soil Map Unit Name: Beaucoup SICL, 0-2% slopes, frequently flooded, long duration NWI classification: PEMAf

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	45	Yes	OBL
2. *Glycine max*	5	No	UPL
3. *Amaranthus tuberculatus*	1	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	46 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)
Planted soybeans (Glycine max) not included in quantitative vegetation calculations.

SOIL

Sampling Point: 18A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					SIL	
6-12	10YR 3/2	90	10YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 19A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76186 Long: -90.15867 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

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

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation Yes , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is cropland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Glycine max*	70	No	UPL
2. *Leptochloa fascicularis*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	1 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Excluding planted soybeans (Glycine max), no dominant vegetation is present.

SOIL

Sampling Point: 19A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/1	95	10YR 4/6	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 20A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 38.76270 Long: -90.15643 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMC

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Amaranthus tuberculatus*	20	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 20A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/1	98	10YR 4/4	2	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks: This site is partially drained/ditched.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 21A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76042 Long: -90.16345 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PEMC

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Rumex crispus*	35	Yes	FAC
2. *Persicaria coccinea*	30	Yes	OBL
3. *Ambrosia trifida*	10	No	FAC
4. *Aster lanceolatus*	10	No	FAC
5. *Bidens comosa*	10	No	OBL
6. *Bidens frondosa*	7	No	FACW
7. *Elymus virginicus*	4	No	FACW
8. *Ipomoea lacunosa*	1	No	FACW
9. *Phyla lanceolata*	1	No	OBL
10.			
	108 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 21A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	88	7.5YR 4/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 22A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.75673 Long: -90.16218 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMC

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	60	Yes	FACW
2. *Acer negundo*	20	Yes	FAC
3.			
4.			
5.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	20	Yes	FACU
2. *Forestiera acuminata*	2	No	OBL
3. *Acalypha rhomboidea*	1	No	FACU
4. *Acer saccharinum*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	24	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 22A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					SICL	Disturbed throughout profile
1-6	10YR 4/2	95	7.5YR 4/6	5	C	M	SICL	
6-12+	2.5Y 3/1	98	10YR 4/4	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 23A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 38.75624 Long: -90.16450 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMC

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	4	Yes	FAC
2. *Acer saccharinum*	1	No	FACW
3. *Forestiera acuminata*	1	No	OBL
4. *Ulmus americana*	1	No	FACW
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Rubus trivialis*	50	Yes	FACU
2. *Carex hyalinolepis*	30	Yes	OBL
3. *Apocynum cannabinum*	8	No	FAC
4. *Persicaria coccinea*	8	No	OBL
5. *Vitis riparia*	5	No	FACW
6. *Ambrosia artemisiifolia*	4	No	FACU
7. *Ulmus americana*	3	No	FACW
8. *Ambrosia trifida*	2	No	FAC
9. *Ipomoea lacunosa*	2	No	FACW
10. *Forestiera acuminata*	1	No	OBL
	113	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	1	No	FACW
2.			
	1	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 23A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 3/1	95	10YR 4/4	5	C	M	SICL	
6-13	2.5Y 3/1	98	10YR 4/4	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 23B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <6 Lat: 38.75621 Long: -90.16240 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PEMC

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	40	Yes	OBL
2. *Xanthium strumarium*	20	Yes	FAC
3. *Carex hyalinolepis*	15	No	OBL
4. *Desmanthus illinoensis*	5	No	FACU
5. *Bidens frondosa*	4	No	FACW
6. *Ambrosia artemisiifolia*	3	No	FACU
7. *Acalypha rhomboidea*	2	No	FACU
8. *Asclepias incarnata*	2	No	OBL
9. *Ipomoea lacunosa*	2	No	FACW
10. *Lycopus americanus*	1	No	OBL
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 23B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 5/1	100					L	
5-12+	2.5Y 5/1	90	10YR 5/6	10	C	M/PL	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 24A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75628 Long: -90.16377 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, frequently flooded, long duration NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 24A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 25A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75555 Long: -90.16084 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 25A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 26A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.75311 Long: -90.15795 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMFx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	40	Yes	FACW
2. *Bidens comosa*	35	Yes	OBL
3. *Poa pratensis*	10	No	FAC
4. *Carex sp.*	5	No	-
5. *Iva annua*	5	No	FAC
6. *Rumex crispus*	5	No	FAC
7. *Ambrosia artemisiifolia*	3	No	FACU
8. *Lindernia dubia*	3	No	OBL
9.			
10.			
	106 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 26A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	N 4/	95	7.5YR 4/4	5	C	M	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 27A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75383 Long: -90.15953 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PEMCx

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is non-native grassland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Sorghum halepense*	80	Yes	FACU
2. *Bromus japonicus*	20	No	FACU
3. *Morus alba*	5	No	FAC
4. *Croton monanthogynus*	3	No	UPL
5. *Torilis japonica*	3	No	UPL
6. *Campsis radicans*	2	No	FACU
7. *Erigeron annuus*	2	No	FACU
8. *Lactuca serriola*	2	No	FACU
9.			
10.			
	117 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 27A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1	100					CL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: Densely packed gravel

Depth (inches): 5

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 28A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <2 Lat: 38.75477 Long: -90.15775 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PEMCx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Bromus inermis*	75	Yes	FACU
2. *Melilotus alba*	25	Yes	FACU
3. *Torilis japonica*	3	No	UPL
4. *Fallopia scandens*	2	No	FAC
5. *Strophostyles helvula*	2	No	FAC
6. *Trifolium pratense*	2	No	FACU
7.			
8.			
9.			
10.			
	109 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 28A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/1	98	10YR 5/6	2	C	M	SICL	Human placed materials
6-13+	N 4/	95	10YR 5/6	5	C	M	SICL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 29A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <1 Lat: 38.75554 Long: -90.15828 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PUBGx

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is non-native grassland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Festuca pratensis*	40	Yes	FACU
2. *Poa pratensis*	25	Yes	FAC
3. *Bromus inermis*	10	No	FACU
4. *Melilotus alba*	5	No	FACU
5. *Persicaria coccinea*	5	No	OBL
6. *Setaria glauca*	5	No	FAC
7. *Strophostyles helvula*	4	No	FAC
8. *Torilis japonica*	4	No	UPL
9. *Daucus carota*	3	No	UPL
10. *Fallopia scandens*	3	No	FAC
	111 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 29A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 5/1	95	7.5YR 4/6	5	C	M	SICL	Human placed materials
8-14+	N 4/	92	7.5YR 4/6	8	C	M	SICL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 30A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.75388 Long: -90.15439 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher L; revised to Aquents NWI classification: PUBFx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	40	Yes	FACW
2. *Xanthium strumarium*	25	Yes	FAC
3. *Bidens frondosa*	8	No	FACW
4. *Ammannia coccinea*	2	No	OBL
5. *Cyperus acuminatus*	2	No	OBL
6. *Eclipta prostrata*	2	No	FACW
7. *Populus deltoides*	2	No	FAC
8. *Amaranthus tuberculatus*	1	No	OBL
9. *Rorippa palustris*	1	No	OBL
10. *Salix nigra*	1	No	OBL
	84 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 30A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/1	100					LFS	
2-13+	2.5Y 5/1	95	10YR 4/4	5	C	M/PL	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 30B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <5 Lat: 38.75527 Long: -90.15116 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher L; revised to Aquents NWI classification: PEMCx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet shrubland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix interior*	90	Yes	FACW
2.			
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Xanthium strumarium*	60	Yes	FAC
2. *Bidens frondosa*	8	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	68 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 30B

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13+	2.5Y 4/1	97	10YR 5/6	3	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <24

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 31A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 4 Lat: 38.75547 Long: -90.15126 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL; revised to Orthents NWI classification: PEMFx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is shrubland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix interior*	60	Yes	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Daucus carota*	40	Yes	UPL
2. *Ambrosia trifida*	10	No	FAC
3. *Ambrosia artemisiifolia*	4	No	FACU
4. *Ampelamus albidus*	3	No	FAC
5. *Bidens frondosa*	2	No	FACW
6. *Persicaria punctata*	2	No	OBL
7. *Aster pilosus*	1	No	FACU
8. *Solanum ptychanthum*	1	No	FACU
9.			
10.			
	63	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	2	No	FAC
2.			
	2	= Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 31A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	95	10YR 4/3	5	C	M	SICL	
7-12+	10YR 6/2	100					SI	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 31B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.75556 Long: -90.15137 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL; revised to Aquents NWI classification: PEMFx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix nigra*	5	Yes	OBL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Humulus japonicus*	90	Yes	FACU
2. *Ambrosia trifida*	10	No	FAC
3. *Bromus japonicus*	5	No	FACU
4. *Persicaria coccinea*	4	No	OBL
5. *Ambrosia artemisiifolia*	3	No	FACU
6. *Trifolium pratense*	1	No	FACU
7.			
8.			
9.			
10.			
	113 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 31B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 6/2	100					SI	
2-13+	2.5Y 4/2	93	10YR 4/6	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 32A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated ditch Local relief (concave, convex, none): Concave

Slope (%): 50% Lat: 38.75663 Long: -90.15924 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PFO1Ax

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is shrubland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	60	Yes	FAC
2. *Prunus serotina*	10	No	FACU
3.			
4.			
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	95	Yes	UPL
2.			
3.			
4.			
5.			
	95	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	1	No	UPL
2. *Toxicodendron radicans*	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	20	Yes	FACW
2. *Ampelopsis cordata*	10	Yes	FAC
	30	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 32A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10+	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 33A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76060 Long: -90.15906 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki; revised to Beaucoup SICL, 0-2% slopes NWI classification: PEMCx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	40	Yes	OBL
2. *Carex hyalinolepis*	25	Yes	OBL
3. *Bidens frondosa*	10	No	FACW
4. *Persicaria coccinea*	6	No	OBL
5. *Phyla lanceolata*	5	No	OBL
6. *Humulus japonicus*	4	No	FACU
7. *Ipomoea lacunosa*	4	No	FACW
8. *Eclipta prostrata*	3	No	FACW
9. *Lycopus americanus*	2	No	OBL
10. *Xanthium strumarium*	2	No	FAC
	101 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 33A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11+	2.5Y 3/1	93	7.5YR 3/4	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 34A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76815 Long: -90.15245 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Amaranthus tuberculatus*	15	Yes	OBL
2. *Leptochloa fascicularis*	10	Yes	OBL
3. *Ammannia coccinea*	7	No	OBL
4. *Digitaria sanguinalis*	5	No	FACU
5. *Echinochloa muricata*	5	No	OBL
6. *Mollugo verticillata*	4	No	FAC
7. *Phyla lanceolata*	2	No	OBL
8.			
9.			
10.			
	48 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 34A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 6/2	100					FS	Recent overwash
2-13+	2.5Y 3/1	98	10YR 4/4	2	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <6

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 35A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76414 Long: -90.15055 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Xanthium strumarium*	55	Yes	FAC
2. *Eclipta prostrata*	4	No	FACW
3. *Echinochloa muricata*	2	No	OBL
4. *Ludwigia peploides var. glabrescens*	1	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	62 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 35A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 3/1	97	10YR 4/4	3	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 36A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76214 Long: -90.15296 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki; revised to Darwin SIC NWI classification: U

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2. *Morus alba*	40	Yes	FAC
3. *Populus deltoides*	40	Yes	FAC
4.			
5.			
	130	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	5	Yes	FAC
2. *Acer saccharinum*	3	Yes	FACW
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	15	Yes	FACU
2. *Toxicodendron radicans*	4	No	FAC
3. *Persicaria punctata*	2	No	OBL
4. *Acer saccharinum*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Campsis radicans*	1	No	FACU
2. *Toxicodendron radicans*	1	No	FAC
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 36A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/1	85	7.5YR 4/6	15	C	M	SICL	
4-8	2.5Y 3/1	85	7.5YR 4/6	15	C	M	SICL	
8-12	2.5Y 4/1	80	7.5YR 4/6	10	C	M	SICL	
8-12			7.5YR 4/4	10	C	M		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 37A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76057 Long: -90.15419 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	25	Yes	OBL
2. *Populus deltoides*	15	Yes	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Diospyros virginiana*	2	No	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	50	Yes	OBL
2. *Persicaria coccinea*	10	No	OBL
3. *Sium suave*	5	No	OBL
4. *Alisma subcordatum*	3	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	68	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 37A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SICL	
3-12	10YR 4/1	93	7.5YR 4/6	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 38A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76133 Long: -90.15211 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquoll NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria punctata*	50	Yes	OBL
2. *Carex frankii*	20	Yes	OBL
3. *Iva annua*	20	Yes	FAC
4. *Phalaris arundinacea*	8	No	FACW
5. *Typha angustifolia*	6	No	OBL
6. *Aster lanceolatus*	5	No	FAC
7. *Sagittaria latifolia*	2	No	OBL
8.			
9.			
10.			
	111 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 38A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	87	7.5YR 4/6	13	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <6

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 39A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-4 Lat: 38.75862 Long: -90.15466 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMCx

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	75	Yes	OBL
2.			
3.			
4.			
5.			
	75	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria punctata*	85	Yes	OBL
2. *Bidens frondosa*	15	No	FACW
3. *Persicaria coccinea*	10	No	OBL
4. *Xanthium strumarium*	8	No	FAC
5. *Ipomoea lacunosa*	3	No	FACW
6.			
7.			
8.			
9.			
10.			
	121	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 39A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/1	85	7.5YR 4/6	15	C	M	L	
3-12	10YR 5/1	85	7.5YR 4/6	15	C	M	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 40A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75883 Long: -90.15377 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMCx

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wetland pond.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cephalanthus occidentalis*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	45	Yes	FACW
2. *Persicaria lapathifolia*	30	Yes	FACW
3. *Bidens frondosa*	10	No	FACW
4. *Echinodorus berteroi*	6	No	OBL
5. *Iva annua*	5	No	FAC
6. *Amaranthus tuberculatus*	2	No	OBL
7. *Ipomoea lacunosa*	1	No	FACW
8.			
9.			
10.			
	99 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 40A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/1	90	7.5YR 4/6	10	C	M	SIL	
4-12	2.5Y 4/2	80	7.5YR 4/6	20	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 41A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-3 Lat: 38.76142 Long: -90.15116 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	60	Yes	FAC
2. *Populus deltoides*	30	Yes	FAC
3. *Morus alba*	15	No	FAC
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer negundo*	65	Yes	FAC
2. *Fraxinus lanceolata*	5	No	FACW
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Vitis riparia*	3	No	FACW
2. *Campsis radicans*	1	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	3	No	FACW
2.			
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)
Prevalence Index = B/A =	

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 41A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	92	10YR 4/6	8	C	M	SICL	
3-12	10YR 4/2	88	10YR 4/6	12	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 42A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76139 Long: -90.15070 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: U

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	12	Yes	FAC
2. *Persicaria punctata*	10	Yes	OBL
3. *Iva annua*	7	Yes	FAC
4. *Bidens frondosa*	5	Yes	FACW
5. *Carex frankii*	4	No	OBL
6. *Prunella vulgaris var. elongata*	4	No	FAC
7. *Ambrosia artemisiifolia*	3	No	FACU
8. *Acalypha rhomboidea*	2	No	FACU
9. *Elymus virginicus*	2	No	FACW
10. *Oxalis stricta*	2	No	FACU
	59 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 42A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					SICL	
4-12	10YR 4/1	88	10YR 4/6	12	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 43A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.76084 Long: -90.15111 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2. *Populus deltoides*	40	Yes	FAC
3. *Acer negundo*	10	No	FAC
4.			
5.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	50	Yes	FAC
2. *Morus alba*	5	No	FAC
3.			
4.			
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Fraxinus lanceolata*	5	Yes	FACW
2. *Microstegium vimineum*	5	Yes	FAC
3. *Cornus drummondii*	2	Yes	FAC
4. *Impatiens capensis*	2	Yes	FACW
5. *Lindera benzoin*	2	Yes	FACW
6. *Pilea pumila*	2	Yes	FACW
7. *Celtis occidentalis*	1	No	FAC
8. *Hackelia virginiana*	1	No	FACU
9. *Perilla frutescens*	1	No	FAC
10. *Sanicula odorata*	1	No	FAC
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 43A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	98	7.5YR 4/6	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 43B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.76119 Long: -90.15150 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PFO1A

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

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

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Community type is upland forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	30	Yes	FAC
3.			
4.			
5.			
	110	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	35	Yes	UPL
2.			
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phytolacca americana*	10	Yes	FACU
2. *Celtis occidentalis*	1	No	FAC
3. *Physalis subglabrata*	1	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	12	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 43B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/3	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 44A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76109 Long: -90.15101 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

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

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

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Iva annua*	70	Yes	FAC
2. *Persicaria punctata*	20	Yes	OBL
3. *Acer saccharinum*	2	No	FACW
4. *Ipomoea lacunosa*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	93 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

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

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

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 44A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					SICL	
4-12	10YR 4/1	90	7.5YR 5/6	10	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two is required)

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

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 45A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75965 Long: -90.15063 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2.			
3.			
4.			
5.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus lanceolata*	2	No	FACW
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	65	Yes	FACW
2. *Iva annua*	15	No	FAC
3. *Carex sp.*	12	No	-
4. *Impatiens capensis*	7	No	FACW
5. *Carex crus-corvi*	5	No	OBL
6. *Phyla lanceolata*	5	No	OBL
7. *Sium suave*	4	No	OBL
8. *Fraxinus lanceolata*	2	No	FACW
9. *Humulus japonicus*	2	No	FACU
10. *Oxalis stricta*	2	No	FACU
	119	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 45A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 4/2	85	10YR 4/6	15	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 46A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75600 Long: -90.14982 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquoll NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located in a depression within an agricultural field; the site has been at least partially planted to soybeans.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	15	Yes	OBL
2. *Amaranthus tuberculatus*	7	Yes	OBL
3. *Portulaca oleracea*	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 46A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	85	7.5YR 4/6	15	C	M	SIL	
12								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75856 Long: -90.14403 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	50	Yes	FAC
2. *Persicaria coccinea*	40	Yes	OBL
3. *Campsis radicans*	20	No	FACU
4. *Ampelopsis cordata*	5	No	FAC
5. *Apocynum cannabinum*	5	No	FAC
6. *Solanum carolinense*	5	No	FACU
7. *Fallopia scandens*	3	No	FAC
8. *Viola pratincola*	1	No	FACW
9.			
10.			
	129 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1	90	10YR 4/6	10	C	M	SICL	
5-12	10YR 5/2	80	7.5YR 4/4	20	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75848 Long: -90.14455 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	30	Yes	FAC
2. *Morus alba*	10	Yes	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus lanceolata*	3	No	FACW
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Apocynum cannabinum*	18	Yes	FAC
2. *Fraxinus lanceolata*	15	Yes	FACW
3. *Elymus virginicus*	10	Yes	FACW
4. *Eupatorium serotinum*	10	Yes	FAC
5. *Campsis radicans*	7	No	FACU
6. *Ambrosia trifida*	4	No	FAC
7. *Vitis aestivalis*	3	No	FACU
8. *Ampelopsis cordata*	2	No	FAC
9. *Cirsium discolor*	2	No	FACU
10. *Physalis subglabrata*	1	No	UPL
	74	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Campsis radicans*	2	No	FACU
2. *Toxicodendron radicans*	2	No	FAC
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					SIL	
6-12	10YR 5/2	85	10YR 5/6	15	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75809 Long: -90.14563 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	80	Yes	FAC
2. *Persicaria coccinea*	70	Yes	OBL
3. *Ambrosia artemisiifolia*	10	No	FACU
4. *Melilotus sp.*	3	No	D
5. *Strophostyles helvula*	3	No	FAC
6. *Solanum carolinense*	2	No	FACU
7. *Acalypha rhomboidea*	1	No	FACU
8. *Bidens frondosa*	1	No	FACW
9. *Chamaecrista fasciculata*	1	No	FACU
10. *Chenopodium album*	1	No	FACU
	175 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

When possible the wetland indicator status has been determined for taxa identified only to the genus level (D=non-hydrophytic; H=hydrophytic). Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 5/2	80	10YR 5/6	20	C	M	FSL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47D

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75702 Long: -90.14748 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	35	Yes	FAC
2.			
3.			
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cephalanthus occidentalis*	20	Yes	OBL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ammannia coccinea*	30	Yes	OBL
2. *Xanthium strumarium*	30	Yes	FAC
3. *Lindernia dubia*	20	Yes	OBL
4. *Persicaria hydropiperoides*	8	No	OBL
5. *Echinochloa muricata*	2	No	OBL
6. *Echinodorus berteroi*	2	No	OBL
7. *Eleocharis ovata var. obtusa*	2	No	OBL
8. *Rorippa palustris*	2	No	OBL
9. *Cyperus esculentus*	1	No	FACW
10. *Leersia oryzoides*	1	No	OBL
	99	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-12	10YR 4/1	87	7.5YR 4/6	13	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47E

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75744 Long: -90.14747 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PSS1C

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Potentilla norvegica*	65	Yes	FAC
2. *Ambrosia trifida*	50	Yes	FAC
3. *Carex hyalinolepis*	12	No	OBL
4. *Persicaria coccinea*	10	No	OBL
5. *Strophostyles helvula*	10	No	FAC
6. *Apocynum cannabinum*	2	No	FAC
7. *Rumex sp.*	1	No	-
8. *Solanum carolinense*	1	No	FACU
9.			
10.			
	151 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 5/1	82	10YR 5/6	18	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47F

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75865 Long: -90.14496 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PSS1C

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus lanceolata*	10	Yes	FACW
2. *Salix nigra*	10	Yes	OBL
3.			
4.			
5.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Elymus virginicus*	40	Yes	FACW
2. *Apocynum cannabinum*	30	Yes	FAC
3. *Persicaria coccinea*	25	Yes	OBL
4. *Vitis riparia*	15	No	FACW
5. *Carex hyalinolepis*	10	No	OBL
6. *Carex molesta*	5	No	FAC
7.			
8.			
9.			
10.			
	125	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Toxicodendron radicans*	2	No	FAC
2. *Vitis riparia*	1	No	FACW
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47F

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-12	10YR 4/2	17	7.5YR 4/6	83	C	M	FSL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 48A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76141 Long: -90.14190 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	50	Yes	FACW
2. *Rumex crispus*	25	Yes	FAC
3. *Iva annua*	10	No	FAC
4. *Carex tribuloides*	5	No	OBL
5. *Ampelamus albidus*	3	No	FAC
6. *Sonchus asper*	3	No	FACU
7. *Acalypha rhomboidea*	2	No	FACU
8. *Calystegia sepium*	2	No	FAC
9. *Humulus japonicus*	2	No	FACU
10.			
	102 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 48A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					SICL	
3-12	10YR 4/1	85	7.5YR 4/6	15	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76171 Long: -90.14987 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.
NRCS mapped as Namoki SICL, 0-2% slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FACW
2. *Acer negundo*	10	Yes	FAC
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	40	Yes	FAC
2. *Toxicodendron radicans*	5	No	FAC
3.			
4.			
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Elymus virginicus*	15	Yes	FACW
2. *Toxicodendron radicans*	15	Yes	FAC
3. *Viola pratincola*	6	No	FACW
4. *Campsis radicans*	5	No	FACU
5. *Carex sp.*	4	No	-
6. *Ageratina altissima*	3	No	FACU
7. *Cornus drummondii*	3	No	FAC
8. *Lonicera maackii*	2	No	UPL
9. *Hackelia virginiana*	1	No	FACU
10.			
	54	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis cinerea*	15	Yes	FACW
2. *Vitis riparia*	15	Yes	FACW
	35	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 49A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	95	10YR 4/4	5	C	M	SICL	
6-12+	10YR 4/1	88	10YR 4/4	12	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76161 Long: -90.14575 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	55	Yes	FACW
2. *Populus deltoides*	40	Yes	FAC
3. *Fraxinus lanceolata*	7	No	FACW
4.			
5.			
	102	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	2	No	FACW
2. *Diospyros virginiana*	2	No	FAC
3.			
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	15	Yes	FACW
2. *Acer saccharinum*	5	No	FACW
3. *Ambrosia trifida*	3	No	FAC
4. *Ageratina altissima*	2	No	FACU
5. *Eupatorium serotinum*	2	No	FAC
6. *Fraxinus lanceolata*	1	No	FACW
7. *Persicaria punctata*	1	No	OBL
8.			
9.			
10.			
	29	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 49B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	92	10YR 4/4	8	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76190 Long: -90.14280 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer negundo*	15	Yes	FAC
2. *Cornus drummondii*	4	Yes	FAC
3.			
4.			
5.			
	19	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	40	Yes	FACU
2. *Ampelopsis cordata*	20	Yes	FAC
3. *Cornus drummondii*	10	No	FAC
4. *Chamaecrista fasciculata*	7	No	FACU
5. *Toxicodendron radicans*	6	No	FAC
6. *Desmodium canescens*	5	No	UPL
7. *Conyza canadensis*	2	No	FACU
8. *Eupatorium serotinum*	2	No	FAC
9. *Morus alba*	2	No	FAC
10. *Acalypha rhomboidea*	1	No	FACU
	97	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	15	Yes	FAC
2. *Vitis cinerea*	1	No	FACW
	16	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 49C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					SIL	
5-12	10YR 4/2	95	7.5YR 4/6	5	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 50A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76100 Long: -90.14903 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	85	Yes	OBL
2. *Lemna minor*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	86 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 50A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 4/1	92	10YR 4/4	8	C	M	MKSIL	
2-6	2.5Y 4/1	92	10YR 5/6	5	C	M	SICL	
2-6			7.5YR 4/4	3	C	M		
6-12	2.5Y 4/1	95	10YR 4/4	5	C	M	SICL	
12-15+	N 4/	95	10YR 4/4	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <48

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 51A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76115 Long: -90.14695 Datum: NAD 83

Soil Map Unit Name: Rocher L, 2-5% slopes, frequently flooded NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25	Yes	FACW
2.			
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	35	Yes	FAC
2. *Celtis occidentalis*	15	Yes	FAC
3. *Diospyros virginiana*	10	No	FAC
4. *Rubus discolor*	10	No	UPL
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex tribuloides*	60	Yes	OBL
2. *Toxicodendron radicans*	15	No	FAC
3. *Sanicula canadensis*	5	No	FACU
4. *Ageratina altissima*	4	No	FACU
5. *Carex sp.*	2	No	-
6. *Celtis occidentalis*	2	No	FAC
7.			
8.			
9.			
10.			
	88	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	15	Yes	FAC
2. *Toxicodendron radicans*	10	Yes	FAC
	25	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 51A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **No**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 52A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76250 Long: -90.14527 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	3	No	FACW
2. *Fraxinus lanceolata*	1	No	FACW
3.			
4.			
5.			
	4	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	75	Yes	OBL
2. *Leersia oryzoides*	30	Yes	OBL
3. *Persicaria punctata*	4	No	OBL
4. *Bidens frondosa*	2	No	FACW
5. *Ipomoea lacunosa*	2	No	FACW
6. *Ammannia coccinea*	1	No	OBL
7.			
8.			
9.			
10.			
	114	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 52A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/1	90	10YR 4/4	10	C	M, PL	SICL	
16-20	2.5Y 5/1	95	10YR 4/4	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 53A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76278 Long: -90.14274 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 53A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 54A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76483 Long: -90.14909 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wetland pond.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ludwigia peploides var. glabrescens*	70	Yes	OBL
2. *Lemna minor*	20	No	OBL
3. *Wolffia columbiana*	20	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 54A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 3/1	100					SICL	
3-12+	5B 4/1	95	10YR 4/6	5	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <48

Water Table Present? Yes Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes Depth (inches): 4

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 55A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Enclosed depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76583 Long: -90.14528 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	40	Yes	OBL
2. *Lemna minor*	5	No	OBL
3. *Cyperus esculentus*	1	No	FACW
4. *Echinochloa muricata*	1	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	47 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 55A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/1	100					MK	
2-12	2.5Y 4/1	90	10YR 4/4	5	C	M	SICL	
2-12			7.5YR 4/4	5	C	M, PL		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☑ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☑ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <1

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 56A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76563 Long: -90.14498 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	70	Yes	OBL
2. *Ambrosia artemisiifolia*	40	Yes	FACU
3. *Humulus japonicus*	35	Yes	FACU
4. *Bidens frondosa*	4	No	FACW
5. *Chenopodium album*	1	No	FACU
6. *Phyla lanceolata*	1	No	OBL
7. *Sida spinosa*	1	No	FACU
8.			
9.			
10.			
	152 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 56A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 4/1	93	10YR 4/4	5	C	M	SICL	
0-12+			2.5Y 4/3	2	C	M		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 57A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76770 Long: -90.14776 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.
NRCS mapped as Fishpot-Urban land comlex, 0-5% slopes, rarely flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia artemisiifolia*	60	Yes	FACU
2. *Chaiturus marrubiastrum*	35	Yes	UPL
3. *Bidens frondosa*	12	No	FACW
4. *Ambrosia trifida*	5	No	FAC
5. *Persicaria coccinea*	3	No	OBL
6. *Campsis radicans*	2	No	FACU
7. *Morus alba*	2	No	FAC
8. *Trifolium repens*	2	No	FACU
9. *Ipomoea lacunosa*	1	No	FACW
10. *Solanum carolinense*	1	No	FACU
	123 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 57A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/1	90	7.5YR 4/6	10	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 58A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Man-made sand pile Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76911 Long: -90.14535 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1Cx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.
NRCS mapped as Nameoki silty clay loam, 0 to 2 percent slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	75	Yes	OBL
2. *Populus deltoides*	10	No	FAC
3.			
4.			
5.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	25	Yes	FACW
2. *Apocynum cannabinum*	15	Yes	FAC
3. *Aster lanceolatus*	15	Yes	FAC
4. *Ambrosia trifida*	8	No	FAC
5. *Campsis radicans*	5	No	FACU
6. *Desmodium sp.*	3	No	D
7. *Vitis riparia*	2	No	FACW
8.			
9.			
10.			
	73	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	4	No	FACW
2.			
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)
When possible the wetland indicator status has been determined for taxa identified only to the genus level (D=non-hydrophytic; H=hydrophytic).

SOIL

Sampling Point: 58A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 4/2	95	10YR 4/45	5	C	M, PL	FSL	
5-12+	2.5Y 4/2	97	10YR 4/4	3	C	M	LS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 58B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavation Local relief (concave, convex, none): Concave

Slope (%): < 1 Lat: 38.76911 Long: -90.14351 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1Cx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet forbland.
NRCS mapped as Nameoki silty clay loam, 0 to 2 percent slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	7	Yes	OBL
2.			
3.			
4.			
5.			
	7	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lindernia dubia*	65	Yes	OBL
2. *Xanthium strumarium*	50	Yes	FAC
3. *Persicaria lapathifolia*	12	No	FACW
4. *Ammannia coccinea*	8	No	OBL
5. *Phyla lanceolata*	7	No	OBL
6. *Cyperus esculentus*	5	No	FACW
7. *Amaranthus tuberculatus*	1	No	OBL
8. *Bidens frondosa*	1	No	FACW
9.			
10.			
	149	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 58B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8.5	2.5Y 4/1	92	10YR 4/4	8	C	M, PL	FSL	
8.5-12	2.5Y 5/1	95	10YR 4/4	5	C	M	SL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Enclosed depression Local relief (concave, convex, none): Convex

Slope (%): 0-2 Lat: 38.76927 Long: -90.14947 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76901 Long: -90.14637 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher loam, 2-5% slopes, frequently flooded NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59C

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.77000 Long: -90.14149 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: L1UBHx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

Wetland Plant Species Lists

Project Title: I-270 (FAI 270) over Mississippi River **Sequence No: 19320A**
Site 3 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Typha angustifolia*	**narrow-leaved cattail**	**H**	OBL	-
Acer negundo	box elder	HS	FAC	1
Agrostis gigantea	red top	H	FACW	0
Ambrosia trifida	giant ragweed	H	FAC	0
Amorpha fruticosa	false indigo bush	S	FACW	6
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Bidens frondosa	common beggar's ticks	H	FACW	1
*Bromus japonicus**	Japanese chess	H	FACU	-
Calystegia sepium	American bindweed	H	FAC	1
Carex vulpinoidea	brown fox sedge	H	FACW	3
Elymus virginicus	Virginia wild rye	H	FACW	4
Erigeron strigosus	daisy fleabane	H	FACU	2
Fraxinus lanceolata	green ash	HS	FACW	2
Iva annua	marsh elder	H	FAC	0
Juncus torreyi	Torrey's rush	H	FACW	3
Leersia oryzoides	rice cut grass	H	OBL	3
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lotus corniculatus**	birdsfoot trefoil	H	FACU	-
Lycopus americanus	common water horehound	H	OBL	3
*Morus alba**	white mulberry	HS	FAC	-
Oenothera biennis	common evening primrose	H	FACU	1
*Persicaria vulgaris**	lady's thumb	H	FACW	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Populus deltoides	eastern cottonwood	S	FAC	2
Rumex altissimus	pale dock	H	FACW	2
*Rumex crispus**	curly dock	H	FAC	-
Salix amygdaloides	peach-leaved willow	S	FACW	4
Salix interior	sandbar willow	HS	FACW	1
Salix nigra	black willow	ST	OBL	3
Solidago canadensis	Canada goldenrod	H	FACU	1
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Teucrium canadense	germander	H	FACW	3
*Torilis japonica**	Japanese hedge parsley	H	UPL	-
Toxicodendron radicans	poison ivy	H	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.6

Site 4 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	HS**T**	FACW	1
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Impatiens capensis	**spotted touch-me-not**	**H**	FACW	2
Populus deltoides	**eastern cottonwood**	S**T**	FAC	2
Acer negundo	box elder	HST	FAC	1
Agrostis gigantea	red top	H	FACW	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Amorpha fruticosa	false indigo bush	S	FACW	6
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
*Atriplex patula**	fat-hen saltbush	H	FACW	-
Bidens comosa	swamp tickseed	H	OBL	2
Boehmeria cylindrica	false nettle	H	OBL	3
Calystegia sepium	American bindweed	H	FAC	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex hyalinolepis	southern lake sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Conyza canadensis	horseweed	H	FACU	0
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Diospyros virginiana	persimmon	H	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Erigeron strigosus	daisy fleabane	H	FACU	2
*Euonymus fortunei**	wintercreeper	H	UPL	-
Fraxinus lanceolata	green ash	HST	FACW	2
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
*Humulus japonicus**	Japanese hops	H	FACU	-
Iva annua	marsh elder	H	FAC	0
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
Lycopus americanus	common water horehound	H	OBL	3
*Morus alba**	white mulberry	HST	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria sp.	smartweed	H	-	-
*Persicaria vulgaris**	lady's thumb	H	FACW	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Pilea pumila	Canada clearweed	H	FACW	3

(Species list concludes on following page.)

Site 4 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Platanus occidentalis	sycamore	T	FACW	3
Quercus palustris	pin oak	H	FACW	4
Ranunculus sceleratus	cursed crowfoot	H	OBL	3
*Rumex crispus**	curly dock	H	FAC	-
Rumex verticillatus	swamp dock	H	OBL	5
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Saururus cernuus	lizard's tail	H	OBL	5
Senecio glabellus	butterweed	H	FACW	0
Sicyos angulatus	bur cucumber	H	FACW	3
*Sonchus asper**	prickly sow thistle	H	FACU	-
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.3

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.7

Site 10 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	HS**T**	FACW	1
Aster lateriflorus	**side-flowering aster**	**H**	FACW	2
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Sicyos angulatus	**bur cucumber**	**H**	FACW	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
*Alliaria petiolata**	garlic mustard	H	FAC	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Aster lanceolatus	panicled aster	H	FAC	3
Bidens comosa	swamp tickseed	H	OBL	2
Campsis radicans	trumpet creeper	HSW	FACU	2
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
*Chenopodium album**	lamb's quarters	H	FACU	-
*Commelina communis**	common day flower	H	FACU	-
Conyza canadensis	horseweed	H	FACU	0
Cyperus sp.	nut sedge	H	-	-
Diospyros virginiana	persimmon	H	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Eupatorium serotinum	late boneset	H	FAC	1
Forestiera acuminata	swamp privet	ST	OBL	6
Fraxinus lanceolata	green ash	HST	FACW	2
Gleditsia triacanthos	honey locust	HST	FACU	2
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Juncus tenuis	path rush	H	FAC	0
Laportea canadensis	Canada wood nettle	H	FACW	2
Leersia virginica	white grass	H	FACW	4
*Melilotus sp.**	sweet clover	H	D	-
Mimulus ringens	monkey flower	H	OBL	5
*Morus alba**	white mulberry	HST	FAC	-
Oxalis stricta	common wood sorrel	H	FACU	0

(Species list concludes on following page.)

Site 10 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
*Perilla frutescens**	beefsteak plant	H	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Phytolacca americana	pokeweed	H	FACU	1
Pilea pumila	Canada clearweed	H	FACW	3
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa annua**	annual blue grass	H	FACU	-
Populus deltoides	eastern cottonwood	ST	FAC	2
Ranunculus sceleratus	cursed crowfoot	H	OBL	3
Rorippa palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	HS	FACU	5
*Rumex crispus**	curly dock	H	FAC	-
Rumex verticillatus	swamp dock	H	OBL	5
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	HS	OBL	3
Senecio glabellus	butterweed	H	FACW	0
*Sisymbrium loeselii**	tall hedge mustard	H	UPL	-
Solanum carolinense	horse nettle	H	FACU	0
Solanum ptychanthum	black nightshade	H	FACU	0
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Stachys tenuifolia	smooth hedge nettle	H	OBL	5
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
Ulmus americana	American elm	HST	FACW	5
Urtica gracilis	stinging nettle	H	FACW	2
*Verbascum thapsus**	woolly mullein	H	UPL	-
Verbena urticifolia	white vervain	H	FAC	3
Veronica peregrina	purslane speedwell	H	FACW	0
Viola pratincola	common blue violet	H	FACW	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.9

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 12 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Phyla lanceolata	**fog fruit**	**H**	OBL	1
Rumex crispus*	**curly dock**	**H**	FAC	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
*Atriplex patula**	fat-hen saltbush	H	FACW	-
Carex sp.	sedge	H	-	-
Cephalanthus occidentalis	buttonbush	H	OBL	4
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Forestiera acuminata	swamp privet	H	OBL	6
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Leptochloa attenuata	sprangle top	H	FACW	7
Leptochloa panicoides	salt meadow grass	H	OBL	9
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Populus deltoides	eastern cottonwood	H	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.7

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.8

Site 14 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	**H**	FACW	1
Iva annua	**marsh elder**	**H**	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Glycine max (p)*	soybean	H	UPL	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Polygonum buxiforme	boxwood knotweed	H	FAC	0
*Rorippa sylvestris**	creeping yellow cress	H	OBL	-
*Rumex crispus**	curly dock	H	FAC	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.2

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 3.9

Planted species (p) are not included in mean C or FQI calculations.

Site 17 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leptochloa panicoides	**salt meadow grass**	**H**	OBL	9
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Phyla lanceolata	**fog fruit**	**H**	OBL	1
Acer saccharinum	silver maple	H	FACW	1
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Iva annua	marsh elder	H	FAC	0
Leptochloa attenuata	sprangle top	H	FACW	7
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Ludwigia palustris var. americana	marsh purslane	H	OBL	4
Plantago rugelii	red-stalked plantain	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
*Sida spinosa**	prickly sida	H	FACU	-
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.2
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.0

Site 18 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Cyperus esculentus	field nut sedge	H	FACW	0
Glycine max (p)*	soybean	H	UPL	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 0.3
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 0.6
Planted species (p) are not included in mean C or FQI calculations.

Site 20 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Humulus japonicus*	**Japanese hops**	**H**	FACU	-
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
Carex normalis	spreading oval sedge	H	FACW	4
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Leptochloa panicoides	salt meadow grass	H	OBL	9
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
*Mollugo verticillata**	carpet weed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
*Rumex crispus**	curly dock	H	FAC	-
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.8

Site 21 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Rumex crispus*	**curly dock**	**H**	FAC	-
Ambrosia trifida	giant ragweed	H	FAC	0
Aster lanceolatus	panicled aster	H	FAC	3
Bidens comosa	swamp tickseed	H	OBL	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Elymus virginicus	Virginia wild rye	H	FACW	4
Glycine max (p)*	soybean	H	UPL	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Leptochloa panicoides	salt meadow grass	H	OBL	9
Phyla lanceolata	fog fruit	H	OBL	1
Senecio glabellus	butterweed	H	FACW	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.6

Planted species (p) are not included in mean C or FQI calculations.

Site 22 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	**three-seeded mercury**	**H**	FACU	0
Acer saccharinum	**silver maple**	H**ST**	FACW	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Campsis radicans	**trumpet creeper**	**H**	FACU	2
Acer negundo	box elder	ST	FAC	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Asclepias incarnata	swamp milkweed	H	OBL	4
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex hyalinolepis	southern lake sedge	H	OBL	4
Circaea lutetiana ssp. canadensis	enchanter's nightshade	H	FACU	2
*Commelina communis**	common day flower	H	FACU	-
Erigeron sp.	fleabane	H	-	-
Eupatorium serotinum	late boneset	H	FAC	1
Forestiera acuminata	swamp privet	HST	OBL	6
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Persicaria punctata	smartweed	H	OBL	3
Physalis subglabrata	smooth ground cherry	H	UPL	0
Sium suave	water parsnip	H	OBL	5

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 7.8

Site 23 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer negundo	**box elder**	HS**T**	FAC	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Campsis radicans	**trumpet creeper**	**H**W	FACU	2
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Cornus drummondii	**rough-leaved dogwood**	H**S**	FAC	2
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Salix interior	**sandbar willow**	H**S**	FACW	1
Toxicodendron radicans	**poison ivy**	**HW**	FAC	1
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HST	FACW	1
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Asclepias incarnata	swamp milkweed	H	OBL	4
Aster lanceolatus	panicled aster	H	FAC	3
Bidens aristosa	swamp marigold	H	FACW	1
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Celtis laevigata	sugarberry	T	FACW	5
Celtis occidentalis	hackberry	S	FAC	3
Chamaecrista fasciculata	golden cassia	H	FACU	1
Cirsium discolor	pasture thistle	H	FACU	3
*Commelina communis**	common day flower	H	FACU	-
Cornus obliqua	pale dogwood	S	FACW	4
Cuscuta gronovii	common dodder	H	UPL	2
Cyperus esculentus	field nut sedge	H	FACW	0
Desmanthus illinoensis	Illinois bundle flower	H	FACU	4
Desmodium sp.	tick trefoil	H	D	-
Elymus virginicus	Virginia wild rye	H	FACW	4
Equisetum hyemale var. affine	tall scouring rush	H	FACW	2
Eragrostis hypnoides	creeping love grass	H	OBL	5
*Euonymus fortunei**	wintercreeper	H	UPL	-
Eupatorium serotinum	late boneset	H	FAC	1
*Festuca pratensis**	meadow fescue	H	FACU	-
Forestiera acuminata	swamp privet	HST	OBL	6
Gleditsia triacanthos	honey locust	T	FACU	2
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Liquidambar styraciflua	sweet gum	S	FACW	6
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-

(Species list concludes on following page.)

Site 23 - Forested wetland (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
*Morus alba**	white mulberry	HST	FAC	-
Panicum virgatum	prairie switch grass	H	FAC	4
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Potentilla norvegica	rough cinquefoil	H	FAC	0
Pyrrhopappus carolinianus	false dandelion	H	UPL	1
*Pyrus calleryana**	ornamental pear	S	UPL	-
Rorippa palustris var. palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	HS	FACU	5
*Rumex crispus**	curly dock	H	FAC	-
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix nigra	black willow	ST	OBL	3
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Tripsacum dactyloides	gama grass	H	FAC	4
Ulmus americana	American elm	HST	FACW	5
Verbena urticifolia	white vervain	H	FAC	3
Vitis aestivalis	summer grape	HW	FACU	4
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 18.3

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 26 - Wet forbland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Bidens comosa	**swamp tickseed**	**H**	OBL	2
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Melilotus alba*	**white sweet clover**	**H**	FACU	-
Salix interior	**sandbar willow**	H**S**	FACW	1
Strophostyles helvula	**trailing wild bean**	**H**	FAC	3
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Carex sp.	sedge	H	-	-
Conyza canadensis	horseweed	H	FACU	0
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
*Helianthus annuus**	common sunflower	H	FACU	-
Iva annua	marsh elder	H	FAC	0
Leersia oryzoides	rice cut grass	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Lycopus americanus	common water horehound	H	OBL	3
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
*Poa pratensis**	Kentucky blue grass	H	FAC	-
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4
Salix nigra	black willow	S	OBL	3
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.5

Site 30 - Wet shrubland/wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Salix interior	**sandbar willow**	H**S**	FACW	1
Salix nigra	**black willow**	H**S**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.4

Site 33 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Eclipta prostrata	yerba de tajo	H	FACW	2
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
*Poa pratensis**	Kentucky blue grass	H	FAC	-
*Rumex crispus**	curly dock	H	FAC	-
*Setaria faberi**	giant foxtail	H	FACU	-
Solanum carolinense	horse nettle	H	FACU	0
Solanum ptychanthum	black nightshade	H	FACU	0
*Sonchus arvensis**	field sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	H	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Verbena urticifolia	white vervain	H	FAC	3
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.3

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.3

Site 34 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Xanthium strumarium	**cocklebur**	**H**	FAC	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Acalypha ostryifolia	three-seeded mercury	H	UPL	1
Amaranthus rudis	tamarisk waterhemp	H	OBL	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
*Artemisia annua**	annual wormwood	H	FACU	-
Chamaesyce humistrata	spreading spurge	H	FACW	1
Conyza canadensis	horseweed	H	FACU	0
Cyperus esculentus	field nut sedge	H	FACW	0
*Digitaria sanguinalis**	hairy crab grass	H	FACU	-
Eclipta prostrata	yerba de tajo	H	FACW	2
*Eriochloa villosa**	Chinese cup grass	H	UPL	-
*Humulus japonicus**	Japanese hops	H	FACU	-
*Ipomoea hederacea**	ivy-leaved morning glory	H	FAC	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
*Mollugo verticillata**	carpet weed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
*Portulaca oleracea**	purslane	H	FACU	-
Rorippa palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	H	FACU	5
Salix nigra	black willow	ST	OBL	3
*Sorghum halepense**	Johnson grass	H	FACU	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.6

Site 35 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Leptochloa panicoides	**salt meadow grass**	**H**	OBL	9
Xanthium strumarium	**cocklebur**	**H**	FAC	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Aster lateriflorus	side-flowering aster	H	FACW	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Cyperus erythrorhizos	red-rooted nut sedge	H	OBL	1
Cyperus esculentus	field nut sedge	H	FACW	0
Diodia teres	buttonweed	H	FACU	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Gratiola neglecta	clammy hedge hyssop	H	OBL	5
Ipomoea lacunosa	small morning glory	H	FACW	1
Leptochloa attenuata	sprangle top	H	FACW	7
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria sp.	smartweed	H	-	-
Physalis subglabrata	smooth ground cherry	H	UPL	0
*Sida spinosa**	prickly sida	H	FACU	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.0

Site 36 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex crus-corvi	**crowfoot fox sedge**	**H**	OBL	6
Morus alba*	**white mulberry**	**ST**	FAC	-
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Acer saccharinum	silver maple	HST	FACW	1
Ambrosia trifida	giant ragweed	H	FAC	0
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Celtis occidentalis	hackberry	H	FAC	3
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Diospyros virginiana	persimmon	H	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Gleditsia triacanthos	honey locust	H	FACU	2
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria punctata	smartweed	H	OBL	3
Sanicula odorata	clustered black snakeroot	H	FAC	2
Solidago canadensis	Canada goldenrod	H	FACU	1
Toxicodendron radicans	poison ivy	HSW	FAC	1
Ulmus americana	American elm	HST	FACW	5
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.3

Site 37 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Leersia oryzoides	**rice cut grass**	**H**	OBL	3
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HT	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex molesta	field oval sedge	H	FAC	2
Carex stipata	common fox sedge	H	OBL	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Diospyros virginiana	persimmon	S	FAC	2
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eleocharis palustris	marsh spike rush	H	OBL	5
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
*Morus alba**	white mulberry	T	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Polygonum buxiforme	boxwood knotweed	H	FAC	0
Populus deltoides	eastern cottonwood	T	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Salix nigra	black willow	T	OBL	3
Schoenoplectus tabernaemontani	soft-stem bulrush	H	OBL	4
*Setaria faberi**	giant foxtail	H	FACU	-
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 13.8

Site 38 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Aster lanceolatus	**panicled aster**	**H**	FAC	3
Carex frankii	**bristly cattail sedge**	**H**	OBL	4
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Agrostis gigantea	red top	H	FACW	0
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex lurida	bottlebrush sedge	H	OBL	7
Carex molesta	field oval sedge	H	FAC	2
Carex vulpinoidea	brown fox sedge	H	FACW	3
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Elymus virginicus	Virginia wild rye	H	FACW	4
*Festuca arundinacea**	tall fescue	H	FACU	-
Fraxinus lanceolata	green ash	S	FACW	2
Leersia oryzoides	rice cut grass	H	OBL	3
Penthorum sedoides	ditch stonecrop	H	OBL	2
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Plantago rugelii	red-stalked plantain	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4
Scirpus atrovirens	dark green rush	H	OBL	4
Solidago canadensis	Canada goldenrod	H	FACU	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Verbena urticifolia	white vervain	H	FAC	3
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.7

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 14.4

Site 39 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Persicaria punctata	**smartweed**	**H**	OBL	3
Salix nigra	**black willow**	**T**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Bidens frondosa	common beggar's ticks	H	FACW	1
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Leersia virginica	white grass	H	FACW	4
Rorippa palustris	marsh yellow cress	H	OBL	4
Teucrium canadense	germander	H	FACW	3

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.6

Site 40 - Wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia artemisiifolia	**common ragweed**	**H**	FACU	0
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Iva annua	**marsh elder**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Campsis radicans	trumpet creeper	H	FACU	2
Cephalanthus occidentalis	buttonbush	S	OBL	4
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
*Commelina communis**	common day flower	H	FACU	-
Diospyros virginiana	persimmon	S	FAC	2
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Ipomoea lacunosa	small morning glory	H	FACW	1
Lemna minor	small duckweed	H	OBL	3
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	T	OBL	3

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.6

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.5

Site 41 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer negundo	**box elder**	**ST**	FAC	1
Campsis radicans	**trumpet creeper**	**H**W	FACU	2
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Acer saccharinum	silver maple	T	FACW	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelopsis cordata	raccoon grape	HW	FAC	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Cryptotaenia canadensis	honewort	H	FAC	1
Diospyros virginiana	persimmon	H	FAC	2
Fraxinus lanceolata	green ash	ST	FACW	2
Hackelia virginiana	stickseed	H	FACU	1
*Morus alba**	white mulberry	ST	FAC	-
Persicaria punctata	smartweed	H	OBL	3
Pilea pumila	Canada clearweed	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.5

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.3

Site 42 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	H	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	H	FACU	2
Carex frankii	bristly cattail sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Chamaecrista fasciculata	golden cassia	H	FACU	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
*Commelina communis**	common day flower	H	FACU	-
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Cyperus sp.	nut sedge	H	-	-
*Daucus carota**	Queen Anne's lace	H	UPL	-
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Fraxinus lanceolata	green ash	HS	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Oxalis stricta	common wood sorrel	H	FACU	0
*Perilla frutescens**	beefsteak plant	H	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Plantago rugelii	red-stalked plantain	H	FAC	0
Polygonum buxiforme	boxwood knotweed	H	FAC	0
Prunella vulgaris var. elongata	self-heal	H	FAC	1
Rorippa palustris	marsh yellow cress	H	OBL	4
Scirpus atrovirens	dark green rush	H	OBL	4
Senecio glabellus	butterweed	H	FACW	0
*Sida spinosa**	prickly sida	H	FACU	-

(Species list concludes on following page.)

Site 42 - Wet meadow (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Toxicodendron radicans	poison ivy	H	FAC	1
*Trifolium hybridum**	Alsike clover	H	FACU	-
*Verbascum blattaria**	moth mullein	H	FACU	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.7

Site 44 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Acer negundo	box elder	ST	FAC	1
Acer saccharinum	silver maple	H	FACW	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Cuscuta gronovii	common dodder	H	UPL	2
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
*Microstegium vimineum**	Japanese stiltgrass	H	FAC	-
Phytolacca americana	pokeweed	H	FACU	1
Pilea pumila	Canada clearweed	H	FACW	3
Solanum carolinense	horse nettle	H	FACU	0
Viola pratincola	common blue violet	H	FACW	1

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.3
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 4.3

Site 45 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	H**T**	FACW	1
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Carex sp.	**sedge**	**H**	-	-
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelopsis cordata	raccoon grape	HW	FAC	2
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex frankii	bristly cattail sedge	H	OBL	4
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
*Commelina communis**	common day flower	H	FACU	-
Cornus drummondii	rough-leaved dogwood	S	FAC	2
Cuscuta gronovii	common dodder	H	UPL	2
*Daucus carota**	Queen Anne's lace	H	UPL	-
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Erigeron philadelphicus	marsh fleabane	H	FACW	3
Eupatorium serotinum	late boneset	H	FAC	1
Fraxinus lanceolata	green ash	HST	FACW	2
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
*Melilotus alba**	white sweet clover	H	FACU	-
*Microstegium vimineum**	Japanese stiltgrass	H	FAC	-
*Morus alba**	white mulberry	H	FAC	-
Oxalis stricta	common wood sorrel	H	FACU	0
Phyla lanceolata	fog fruit	H	OBL	1
Phytolacca americana	pokeweed	H	FACU	1
Potentilla norvegica	rough cinquefoil	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
Senecio glabellus	butterweed	H	FACW	0
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	H	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.2

Site 46 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Glycine max (p)*	soybean	H	UPL	-
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
*Portulaca oleracea**	purslane	H	FACU	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 0.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 1.8

Planted species (p) are not included in mean C or FQI calculations.

Site 47 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Aster lanceolatus	**panicled aster**	**H**	FAC	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Vitis riparia	**riverbank grape**	**H**W	FACW	2
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HST	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Asclepias incarnata	swamp milkweed	H	OBL	4
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex hyalinolepis	southern lake sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Chamaecrista fasciculata	golden cassia	H	FACU	1
*Chenopodium album**	lamb's quarters	H	FACU	-
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Cyperus esculentus	field nut sedge	H	FACW	0
*Daucus carota**	Queen Anne's lace	H	UPL	-
Desmodium sp.	tick trefoil	H	D	-
Diospyros virginiana	persimmon	HST	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Eupatorium serotinum	late boneset	H	FAC	1
Fallopia scandens	climbing false buckwheat	H	FAC	2
Fraxinus lanceolata	green ash	HST	FACW	2
Hordeum pusillum	little barley	H	FAC	0
*Humulus japonicus**	Japanese hops	H	FACU	-
Leersia oryzoides	rice cut grass	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
*Melilotus sp.**	sweet clover	H	D	-
*Morus alba**	white mulberry	HST	FAC	-
*Najas minor**	lesser naiad	H	OBL	-
Parietaria pensylvanica	Pennsylvania pellitory	H	FACU	2
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1

(Species list concludes on following page.)

Site 47 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Physalis subglabrata	smooth ground cherry	H	UPL	0
Potentilla norvegica	rough cinquefoil	H	FAC	0
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rubus discolor**	Himalaya berry	S	UPL	-
Rumex sp.	dock	H	-	-
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Solanum carolinense	horse nettle	H	FACU	0
Solidago canadensis	Canada goldenrod	H	FACU	1
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Trifolium pratense**	red clover	H	FACU	-
Verbena urticifolia	white vervain	H	FAC	3
Viola pratincola	common blue violet	H	FACW	1
Vitis aestivalis	summer grape	HW	FACU	4
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.0

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 48 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Iva annua	**marsh elder**	**H**	FAC	0
Trifolium pratense*	**red clover**	**H**	FACU	-
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Apocynum cannabinum	dogbane	H	FAC	2
Aster pilosus	hairy aster	H	FACU	0
*Bromus commutatus**	hairy brome	H	UPL	-
Calystegia sepium	American bindweed	H	FAC	1
Campsis radicans	trumpet creeper	H	FACU	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Chamaesyce maculata	spotted creeping spurge	H	FACU	0
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Cuscuta campestris	field dodder	H	UPL	2
*Daucus carota**	Queen Anne's lace	H	UPL	-
Eleocharis palustris	marsh spike rush	H	OBL	5
Elymus virginicus	Virginia wild rye	H	FACW	4
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
Hordeum pusillum	little barley	H	FAC	0
*Humulus japonicus**	Japanese hops	H	FACU	-
*Lepidium campestre**	field cress	H	UPL	-
Lepidium virginicum	common peppergrass	H	FACU	0
*Medicago lupulina**	black medic	H	FACU	-
*Melilotus sp.**	sweet clover	H	D	-
*Morus alba**	white mulberry	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Phyla lanceolata	fog fruit	H	OBL	1
Physalis subglabrata	smooth ground cherry	H	UPL	0
*Plantago lanceolata**	English plantain	H	FACU	-
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Potentilla norvegica	rough cinquefoil	H	FAC	0
Rumex altissimus	pale dock	H	FACW	2
*Rumex crispus**	curly dock	H	FAC	-
*Setaria glauca**	pigeon grass	H	FAC	-
Solanum carolinense	horse nettle	H	FACU	0
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
*Thlaspi arvense**	field penny cress	H	FACU	-

(Species list concludes on the following page.)

Site 48 - Wet meadow (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
*Torilis japonica**	Japanese hedge parsley	H	UPL	-
Toxicodendron radicans	poison ivy	H	FAC	1
*Tragopogon pratensis**	common goat's beard	H	UPL	-
*Vicia villosa**	winter vetch	H	UPL	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 5.7

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 49 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Ampelopsis cordata	**raccoon grape**	H**W**	FAC	2
Cornus drummondii	**rough-leaved dogwood**	H**S**	FAC	2
Fraxinus lanceolata	**green ash**	S**T**	FACW	2
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Vitis cinerea	**winter grape**	**H**W	FACW	4
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer negundo	box elder	ST	FAC	1
Acer saccharinum	silver maple	ST	FACW	1
Ageratina altissima	white snakeroot	H	FACU	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HSW	FACU	2
Carex frankii	bristly cattail sedge	H	OBL	4
Carex sp.	sedge	H	-	-
Celtis occidentalis	hackberry	HST	FAC	3
Chamaecrista fasciculata	golden cassia	H	FACU	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cirsium discolor	pasture thistle	H	FACU	3
*Conium maculatum**	poison hemlock	H	FACW	-
Conyza canadensis	horseweed	H	FACU	0
*Daucus carota**	Queen Anne's lace	H	UPL	-
Desmodium canescens	hoary tick trefoil	H	UPL	4
Desmodium paniculatum	panicled tick trefoil	H	FACU	2
Desmodium sp.	tick trefoil	H	D	-
Diospyros virginiana	persimmon	HST	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Eupatorium serotinum	late boneset	H	FAC	1
Fallopia scandens	climbing false buckwheat	H	FAC	2
Gleditsia triacanthos	honey locust	H	FACU	2
Hackelia virginiana	stickseed	H	FACU	1
Leersia virginica	white grass	H	FACW	4
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
*Morus alba**	white mulberry	ST	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria punctata	smartweed	H	OBL	3
*Prunella vulgaris**	lawn prunella	H	FAC	-
*Rubus discolor**	Himalaya berry	H	UPL	-
*Securigera varia**	crown vetch	H	UPL	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Strophostyles helvula	trailing wild bean	H	FAC	3
Toxicodendron radicans	poison ivy	HSW	FAC	1
Tridens flavus	common purpletop	H	UPL	1
Ulmus americana	American elm	ST	FACW	5
Verbena urticifolia	white vervain	H	FAC	3
Viola pratincola	common blue violet	H	FACW	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 12.3

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 50 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Fraxinus lanceolata	green ash	ST	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Lemna minor	small duckweed	H	OBL	3
Persicaria bicornis	long-styled knotweed	H	FACW	2
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria punctata	smartweed	H	OBL	3
Populus deltoides	eastern cottonwood	T	FAC	2
*Rumex crispus**	curly dock	H	FAC	-
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.7

Site 52 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leersia oryzoides	**rice cut grass**	**H**	**OBL**	**3**
Persicaria coccinea	**scarlet smartweed**	**H**	**OBL**	**3**
Acer saccharinum	silver maple	HST	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cyperus esculentus	field nut sedge	H	FACW	0
Diospyros virginiana	persimmon	S	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis erythropoda	red-rooted spike rush	H	OBL	3
Fraxinus lanceolata	green ash	ST	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Lemna minor	small duckweed	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Persicaria bicornis	long-styled knotweed	H	FACW	2
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Sagittaria calycina	thick-stalked arrowhead	H	OBL	6
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix nigra	black willow	S	OBL	3
Sium suave	water parsnip	H	OBL	5
Vitis riparia	riverbank grape	H	FACW	2
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.7

Site 54 - Wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Lemna minor	**small duckweed**	**H**	OBL	3
Ludwigia peploides var. glabrescens	**creeping primrose willow**	**H**	OBL	5
Wolffia columbiana	**water meal**	**H**	OBL	5
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex hyalinolepis	southern lake sedge	H	OBL	4
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Leersia oryzoides	rice cut grass	H	OBL	3
Persicaria coccinea	scarlet smartweed	H	OBL	3
Vitis riparia	riverbank grape	H	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.5

Site 55 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Salix nigra	**black willow**	**T**	OBL	3
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Bidens frondosa	common beggar's ticks	H	FACW	1
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eleocharis palustris	marsh spike rush	H	OBL	5
Ipomoea lacunosa	small morning glory	H	FACW	1
Leersia oryzoides	rice cut grass	H	OBL	3
Lemna minor	small duckweed	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Rorippa palustris	marsh yellow cress	H	OBL	4
Sagittaria latifolia	common arrowhead	H	OBL	4
Sium suave	water parsnip	H	OBL	5
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.6

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.8

Site 58 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Persicaria lapathifolia	**curttop lady's thumb**	**H**	FACW	0
Salix nigra	**black willow**	**ST**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Aster pilosus	hairy aster	H	FACU	0
Bergia texana	bergia	H	OBL	10
Bidens connata	purple-stemmed tickseed	H	OBL	2
Campsis radicans	trumpet creeper	H	FACU	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Conyza canadensis	horseweed	H	FACU	0
Cyperus erythrorhizos	red-rooted nut sedge	H	OBL	1
Desmodium sp.	tick trefoil	H	D	-
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eragrostis hypnoides	creeping love grass	H	OBL	5
*Helianthus annuus**	common sunflower	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Kyllinga pumila	tufted flat sedge	H	FACW	0
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
*Melilotus alba**	white sweet clover	H	FACU	-
*Morus alba**	white mulberry	HT	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Physalis subglabrata	smooth ground cherry	H	UPL	0
Populus deltoides	eastern cottonwood	HT	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4

(Species list concludes on following page.)

Site 58 - Forested wetland (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Senecio glabellus	butterweed	H	FACW	0
Sium suave	water parsnip	H	OBL	5
*Sorghum halepense**	Johnson grass	H	FACU	-
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Vitis riparia	riverbank grape	HW	FACW	2
Zizania aquatica	wild rice	H	OBL	9

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.3

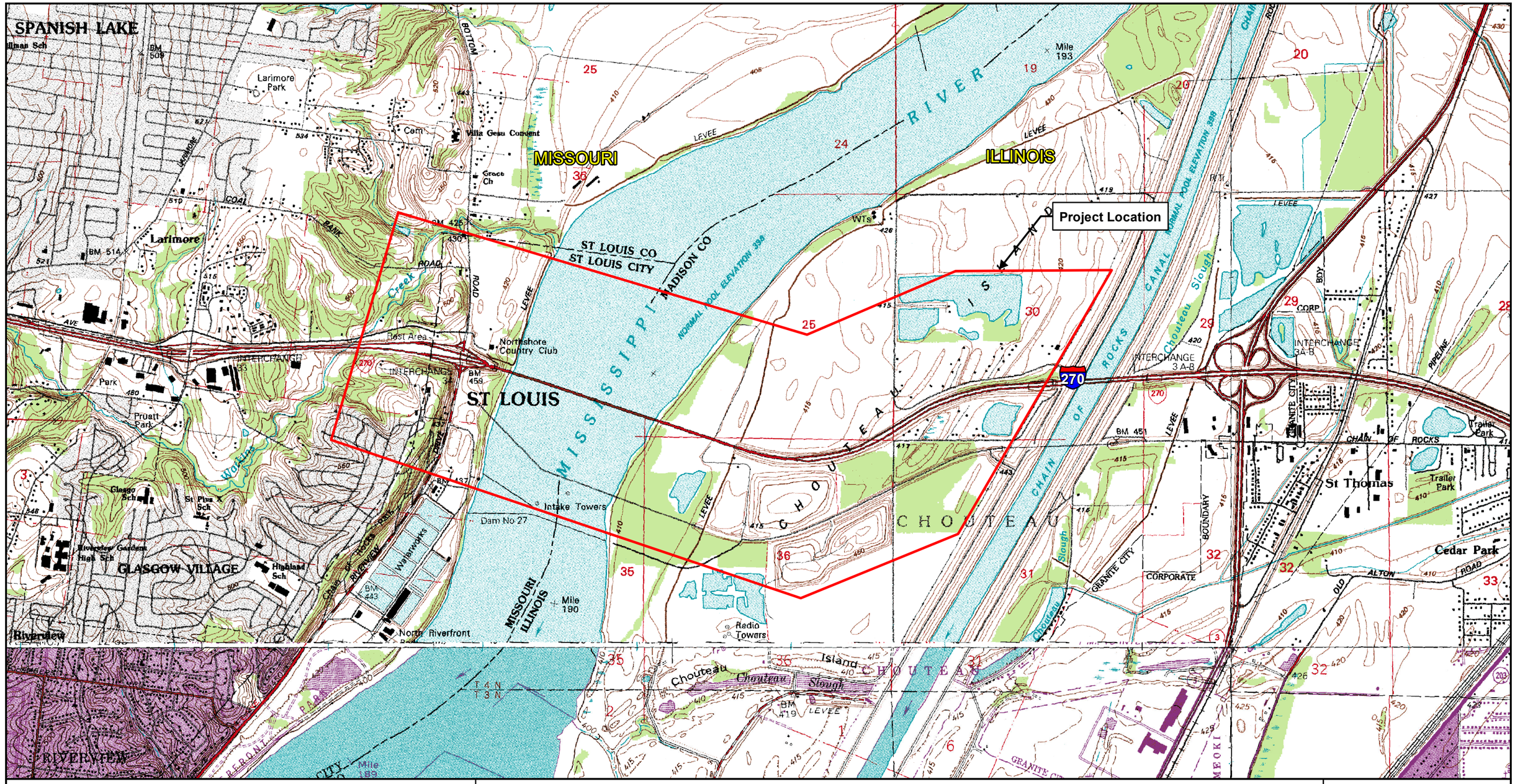
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.8

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

APPENDIX C

Figures

Figure 1 – Project Location Map
Figure 2 – National Wetlands Inventory Map
Figure 3 – Wetland Determination Overview Map
Figure 4 – Wetland Determination Maps



University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 1
Project Location Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

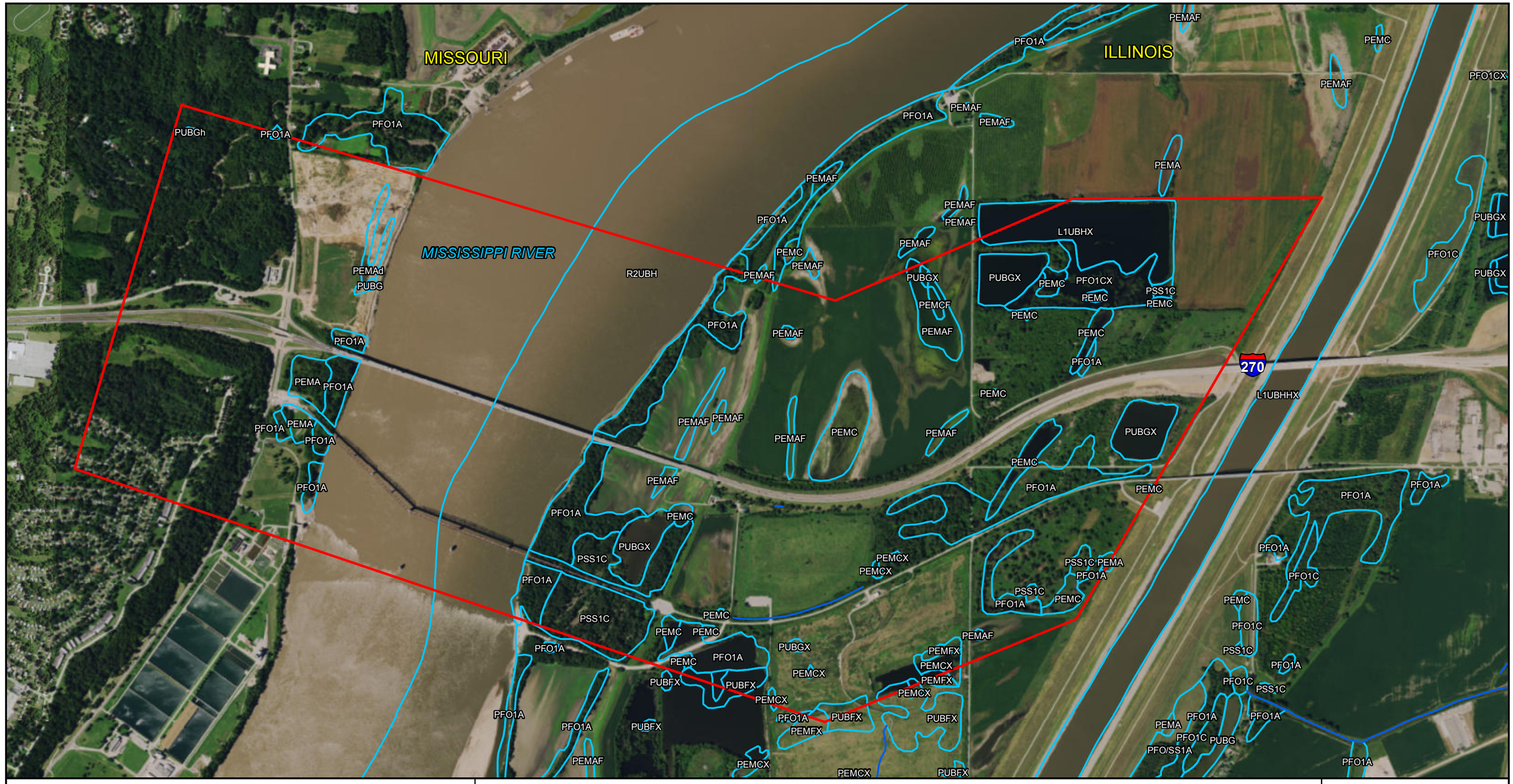
Seq. No: 19320A

Meters 0 500

Feet 0 2,000

October 2016

N W E S



University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 2
National Wetlands Inventory Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

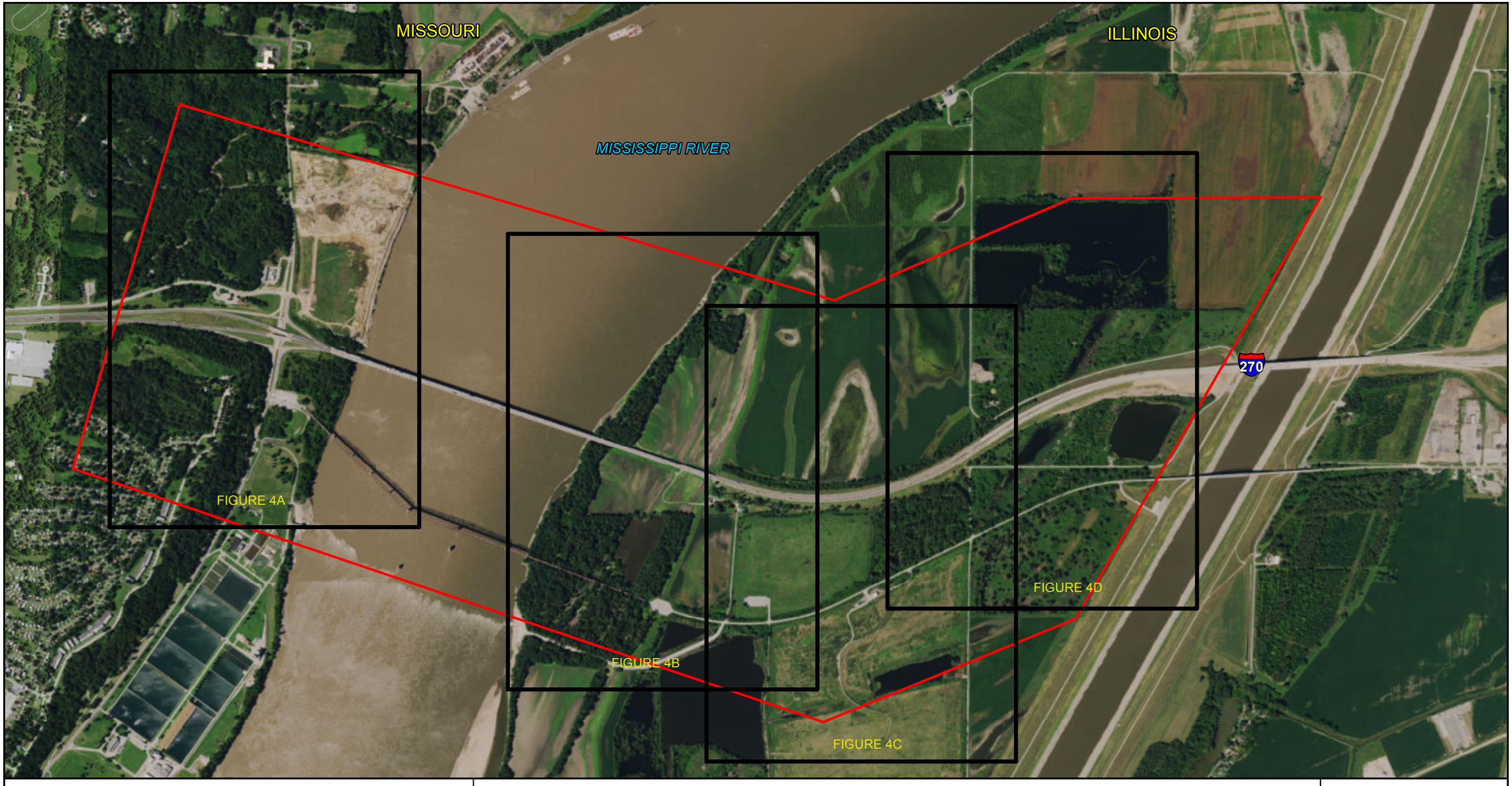
Seq. No: 19320A

Meters 0 400

Feet 0 1,250

October 2016

N W E S



University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 3
Wetland Determination Overview Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

Seq. No: 19320A

Meters 0 400

Feet 0 1,250

October 2016

N W E S

University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 4A
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

Meters 0 100
Feet 0 400

October 2016

N W E S

University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 4B
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

Meters 0 100 Feet 0 400

October 2016

N W E S

University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

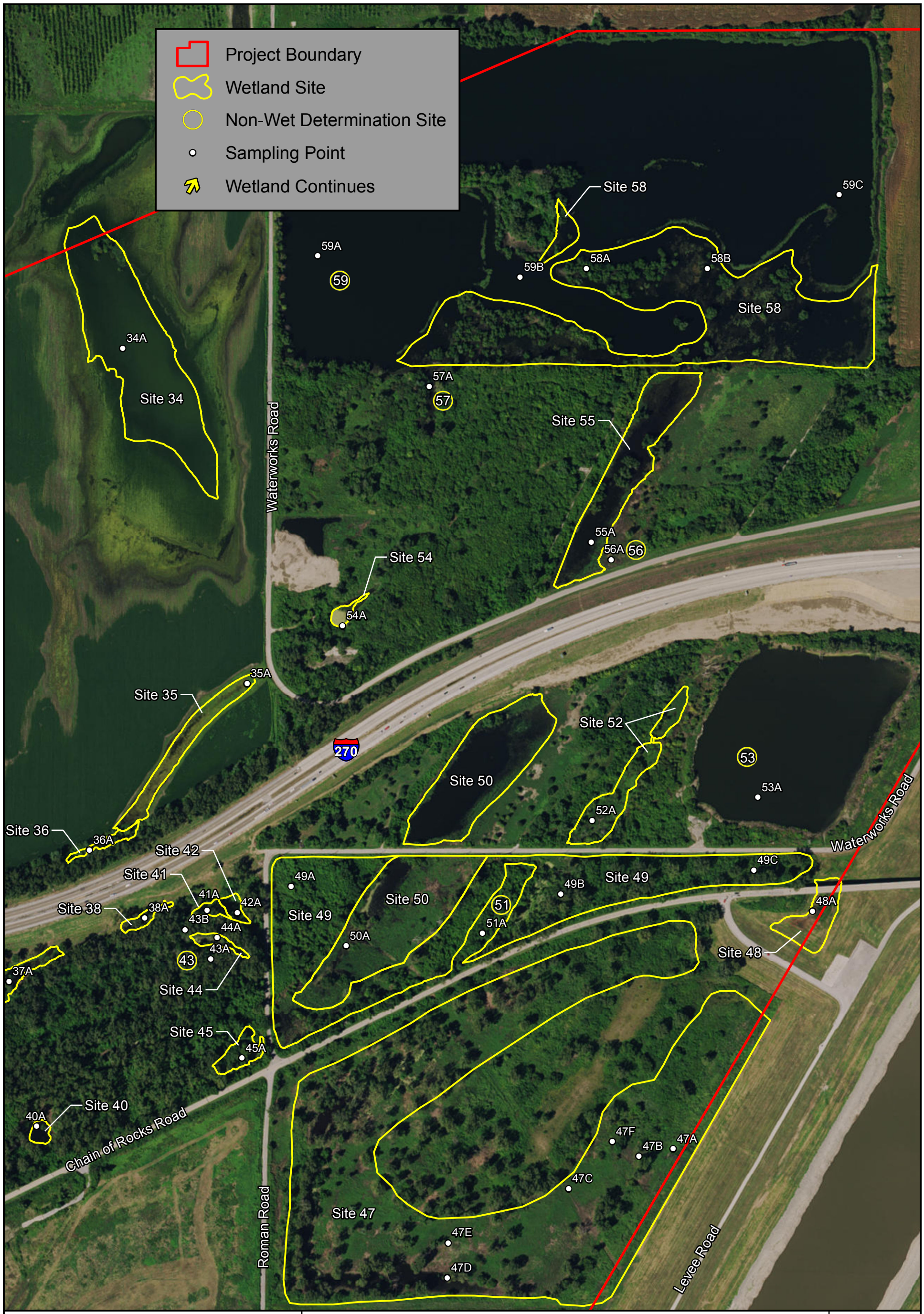
Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 4C
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

Meters 0 100
Feet 0 400

October 2016

N W E S



University of Illinois at Urbana-Champaign

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 4D
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

Meters 0 100 Feet 0 400

October 2016

HORNER SHIFRIN

604 PIERCE BLVD., STE. 300 ● O'FALLON, ILLINOIS 62269-2588
618-622-3040 ● FAX 844-339-2910 ● www.HornerShifrin.com

Memorandum

TO: Army Corps of Engineers – Regulatory Division – St. Louis District

FROM: IDOT/MoDOT/Horner & Shifrin,

SUBJECT: IDOT I-270 over the Mississippi River Bridge Replacement/MoDOT Riverview Drive & I-270 Interchange Modification, Madison County, IL and St. Louis, Missouri

DATE: August 17, 2021

The purpose of this memo is to provide the U.S. Army Corp of Engineers-St. Louis District (USACE) with the wetland impacts associated IDOT's I- 270 over the Mississippi River Bridge Replacement (Chain of Rocks Bridge) and the MoDOT Riverview Dr. & I-270 interchange projects.

The USACE has been coordinating with IDOT, MoDOT, and their consultant team regarding these projects and how to process the Section 404 permit required for the projects. A meeting was held on June 24, 2021 with the USACE to discuss the Section 404 permit processing. The following is general project information and the highlights from the June 24th meeting:

- The project limits of the MoDOT Riverview Dr./I-270 interchange project and the IDOT Chain of Rocks bridge replacement project overlap.
- The projects will be let at the same time next summer (anticipated June 2022) and constructed concurrently.
- There will be permanent wetland impacts with the installation of piers and placement of riprap.
- It was discussed a majority of wetland impacts that occur in the forested wetlands could be considered temporary impacts as these areas are being used essentially as laydown yards for the construction equipment and materials.
- Travis (Parsons) stated the construction for these projects is anticipated to be two to three years.
- Tyson (USACE) stated there is no defined "time" as to what the USACE considers "temporary" wetland impacts. The USACE stated they will review whether these impacts can be considered temporary once they receive an overall project impact map and data.
- Tyson stated that the forest is relatively low quality and that a mitigation method could be to replace the forest with higher quality trees after construction is completed.
- In Missouri, it is difficult to accurately separate the wetland impacts of Riverview Dr project and the impacts of the Chain of Rocks project.
- The USACE views these two projects as ONE PROJECT and have stated that they want only ONE INDIVIDUAL SECTION 404 permit submitted.
- This permit will be submitted by the Lead DOT for the Chain of Rocks Bridge project, which

is IDOT and processed under the Chain of Rocks Bridge project, not Riverview.

- In the conditions of the Section 404 permit, it will be stated MoDOT will be responsible for mitigation within Missouri and IDOT will be responsible for mitigation in Illinois.
- Mitigation will have to be provided for in each DOT's respective States within the same watershed as the wetland impacts.
- The next step in the process will be for the consultant team to work with MoDOT and IDOT to determine what the wetland impacts are in both in Missouri and Illinois and if these impacts are considered permanent or temporary and submit to the USACE for their review and concurrence. This will be submitted to the USACE.
- IDOT will be handling the Section 10 permit as part of the Section 404 permit.

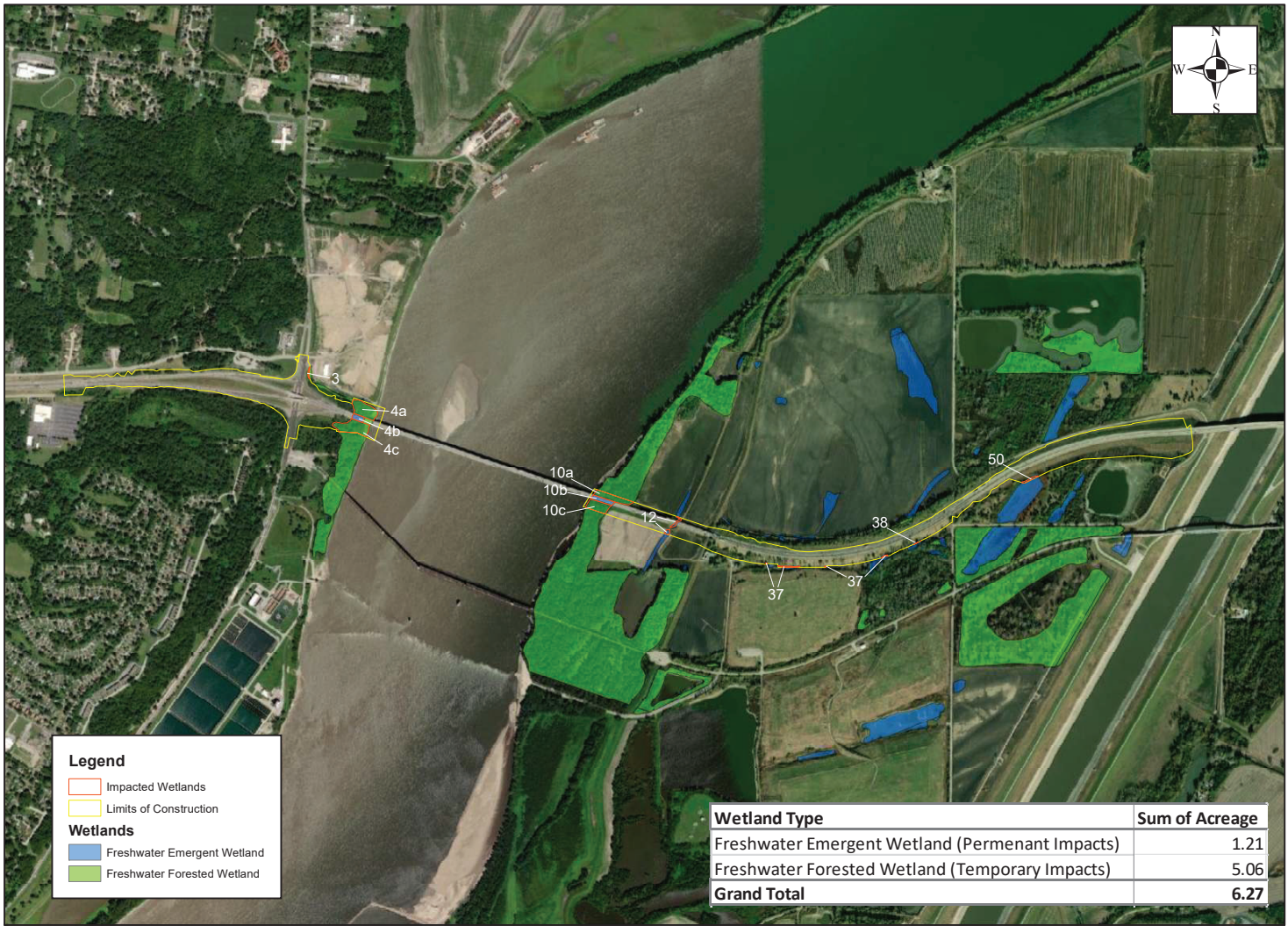
WETLAND IMPACTS

- A Wetland Determination Report was completed by IDOT and the Illinois Natural History Survey (INHS) in October 2016 for the I-270 over the Mississippi River Bridge replacement project. This bridge connects Madison, IL to St. Louis, MO. The limits for this wetland delineation included the area for the Riverview Drive & I-270 interchange modification project in Missouri. The Wetland Delineation Report is attached to this memo.
- In May of 2021 Horner & Shifrin environmental scientist delineated the area and found that under the Chain of Rocks bridge in Missouri there was a lack of forested vegetation and identified it as an emergent wetland. The areas to the north and south of the Chain of Rocks bridge in Missouri are still forested wetland. It is assumed this is also the same situation in Illinois under the bridge.
- The following are wetland impacts associated with the IDOT and MoDOT project

WETLAND #	WETLAND TYPE	WETLAND IMPACTS				
		Temporary		Permanent		
		IL	MO	IL	MO	
3	Forested		0.06			
4a*	Forested		1.41			
4b*	Emergent				0.29	
4c*	Forested		1.67			
10a*	Forested	0.97				
10b*	Emergent			0.45		
10c*	Forested	0.95				
12	Emergent			0.21		
33	Emergent			0.08		
37	Emergent			0.03		
38	Emergent			0.01		
50	Emergent			0.14		
TOTAL		**1.92**	**3.14**	**0.92**	**0.29**	**6.27**

DRAFT

I-270/Riverview Dr. - Overall Wetland Impact Exhibit



Wetland Type	Sum of Acreage
Freshwater Emergent Wetland (Permenant Impacts)	1.21
Freshwater Forested Wetland (Temporary Impacts)	5.06
Grand Total	**6.27**

0 1,250 2,500 5,000 Feet

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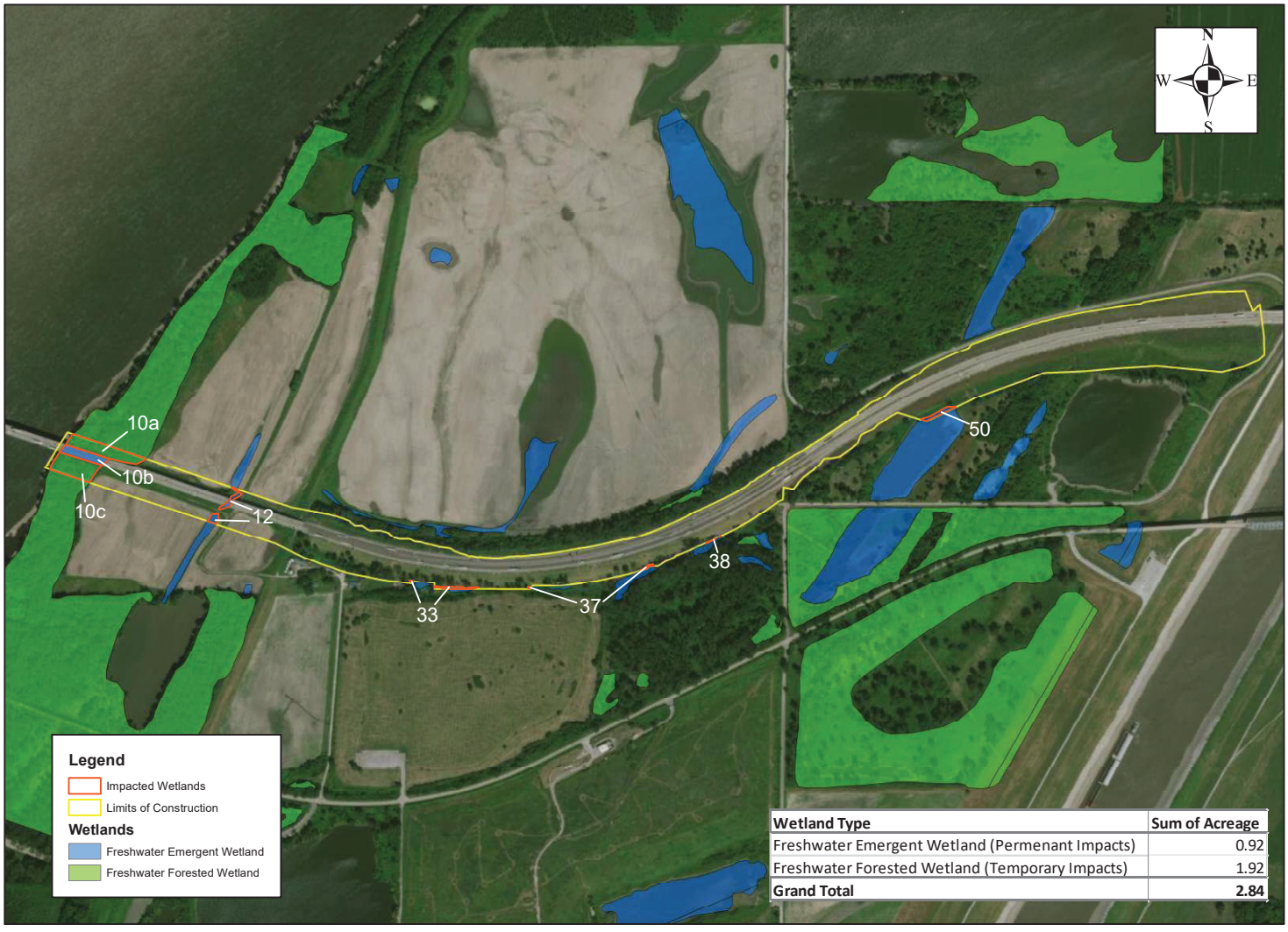
I-270/Riverview Dr. - Illinois Wetland Impact Exhibit

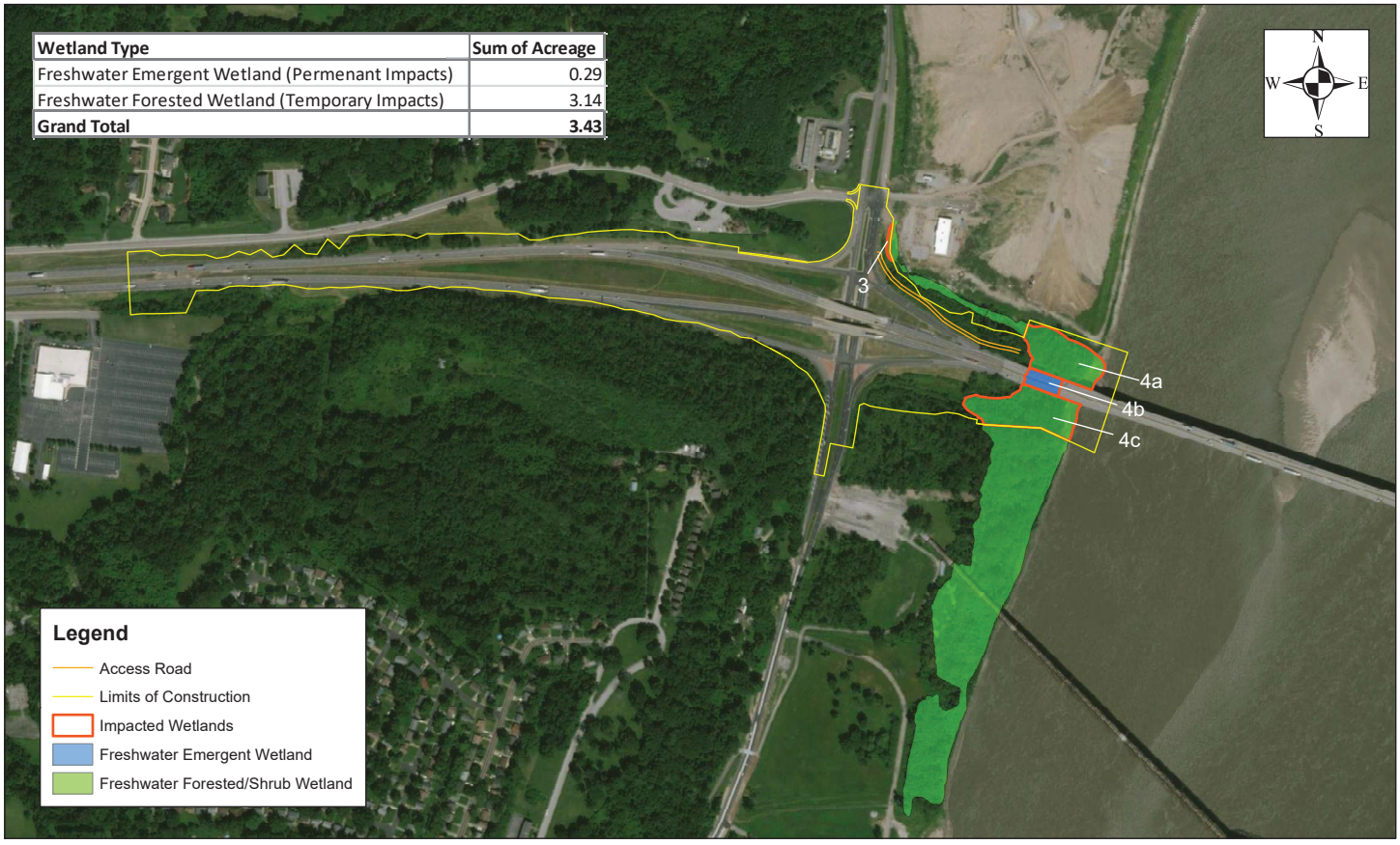


Wetland Type	Sum of Acreage
Freshwater Emergent Wetland (Permenant Impacts)	0.92
Freshwater Forested Wetland (Temporary Impacts)	1.92
Grand Total	**2.84**

0 500 1,000 2,000 Feet

HORNER SHIFRIN

I-270/Riverview - Missouri Wetland Impact Map



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604 PIERCE BLVD., STE. 300 ● O'FALLON, ILLINOIS 62269-2588
618-622-3040 ● FAX 844-339-2910 ● www.HornerShifrin.com

Memorandum

TO: MODOT

FROM: Horner & Shifrin, Inc.

SUBJECT: I-270/Riverview Dr. Interchange Wetland Delineation Memo

DATE: 5/5/2021

H&S JOB NO.: 1822600

Horner & Shifrin, Inc. conducted a wetland delineation on May 5th, 2021. The delineation was conducted in Missouri within the proposed boundary of the MoDOT Riverview Drive & I-270 interchange modification project in St. Louis, Missouri and IDOT's I-270 over the Mississippi River Bridge (Chain of Rocks Bridge) Replacement project connecting Madison County, Illinois and St. Louis, Missouri (**Exhibit 1**). The limits of these projects overlap.

A Wetland Delineation Survey was conducted by IDOT in September of 2016 and classified the wetland within the proposed project boundary under the Chain of Rocks Bridge in Missouri and to the north and south of the bridge as a forested wetland. During a recent site visit, it was discovered the area under the bridge was no longer forested and most likely had converted to an emergent wetland. Therefore, the purpose of conducting the updated wetland delineation on the Missouri side of the project was to determine if in fact the wetland was now an emergent wetland.

Wetland Delineation Survey

The purpose of the survey was to identify, delineate, and classify any wetlands, streams, and other waterbodies located within the Missouri proposed project boundaries. Data sources were used to aid in preparation of the delineation were:

- U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) Database
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI)
- Historical aerial imagery from Google Earth

These sources were used in preparation for the survey and to develop an in-depth plan to efficiently conduct the fieldwork. Available data was reviewed in identification of plant communities, cover types, saturation from imagery, hydric soils, and NWI wetlands.

Horner & Shifrin environmental scientists surveyed the study area for potential wetlands in accordance with the routine on site determination methodology described in the U.S. Army Corps of Engineers (USACE) Wetland

Delineation Manual (Environmental Laboratory 1987). Supplemented data was added using the following guidance documents:

- The Globe Professional Soil Color Book
- Field Indicators of Hydric Soils in the United States (USDA-NRCS 2017).

The wetland delineation was based on Horner & Shifrin's professional judgement and interpretation of the delineation methodology and criteria presented in the technical guidance documents. The entire proposed project boundary was walked by Horner & Shifrin scientists and sample point data was collected at representative locations at areas of interest. All data that was collected at each sample point was recorded on a Wetland Determination Data Form. At each sample point the following parameters were used in assessing the potential wetland: vegetation, soils, and hydrology. All three parameters had to be met for an area to be classified as a wetland. When determining hydric vegetation visual estimates of percent absolute cover for four stratums: trees, sapling/shrubs, herbaceous, and woody vines. The soils were sampled to a depth of at least 12 inches to determine whether the soil profile had hydric characteristics. Then the hydrology of the sample point was observed to note any wetland hydrology indicators. If there was an area that was determined to be significantly disturbed or naturally problematic, then the procedures described in the USACE Manual and Regional Supplement for atypical and problematic situation were applied. Site pictures were also taken. Please see **Exhibits 3 & 4.**

The area being surveyed consisted of the area on the Missouri side of the Mississippi River and included the area north of the Chain of Rocks Bridge, under the bridge, and to the south of the bridge. Two dense forests exist to the north and south of the bridge. The only waterbody near the site was the Mississippi River (R2UBH) to the east.

The following tables show the soil type, wetlands identified, and the anticipated wetland impacts.

Table 1 SSURGO Soil Mapping Units Found within the Survey Area

Soil Map Unit Symbol	Soil Map Unit Name	Hydric Rating
68001	Fishpot-Urban land-Freeburg complex, 0-2% slope, frequently flooded	Hydric
60223	Urban land-Harvester complex 9-20% slope	Non-Hydric

Table 2 Wetlands Identified and Delineated within the Survey Area

Wetland ID	Acreage by Cowardin Classification		Total Acreage	Sampling Point(s)	HS's Opinion of Jurisdictional Status
	PEM	PFO			
WTL-1		11.05	11.05	SP-1	Jurisdictional
WTL-2	0.29		0.29	SP-2 SP-3	Jurisdictional
WTL-3		2.11	2.11	SP-4	Jurisdictional
TOTAL	**0.29**	**13.16**	**13.45**		

Table 3 Wetland Impacts within the Survey Area

Wetland ID	Acreage by Cowardin Classification (Acres)		Total (Acres)
	PEM	PFO	
WTL-1		1.66	1.66
WTL-2	0.29		0.29
WTL-3		1.48	1.48
TOTAL	**0.29**	**3.14**	**3.43**

After data collection in the field and reviewing the data, it has been determined that there are three wetlands within the study area (**Exhibit 2**). WTL-1 is a 11.05-acre freshwater forested wetland located to the south of the Chain of Rocks bridge. WTL-2 is a 0.29-acre freshwater emergent wetland located under the New Chain of Rocks bridge. WTL-3 is a 2.11-acre freshwater forested wetland north of the Chain of Rocks bridge. The freshwater forested wetlands have the same boundaries as the original September 2016 wetland delineation completed by the Illinois Natural History Survey (INHS) and IDOT. The freshwater emergent wetland is not under "normal circumstances" because of the bridge. The bridge limits the vegetation and hydrology to the wetland. It is in H&S belief that this wetland would be a freshwater forested wetland if the bridge were not there. Since there is a lack of forested vegetation this area has been converted from a forested wetland to an emergent wetland. There is anticipated to be about a 3.43-acre impact to the wetlands. **The wetlands are considered jurisdictional because they abut territorial waters. These wetlands are known as adjacent wetlands and would be considered a "water of the United States".**

The identification and delineation of this study was based on field observations and H&S' professional judgement and interpretation of the criteria in the USACE Manual and Regional Supplement at the time of the survey. The wetland determination may change from H&S' opinion based on the changes in regulatory criteria, seasonal variations in hydrology, drainage patterns, and human interference. All exhibits and data forms are attached below.

A wetland and stream jurisdictional determination meeting (related to this delineation memo) with regulatory agencies has not occurred at the site. Wetlands, streams, and other waters that meet the guidelines contained in the USACE Manual, Regional Supplement, and Regulatory Guidance Letter No. 05-05 are subject to regulation by USACE as "waters of the U.S.", as defined by 33 CFR 328.3(a) (U.S. Congress 1986). USACE has authority to permit the discharge of dredged or fill material into waters of the U.S. under Section 404 of the federal Clean Water Act

(U.S. Congress 1977), and to permit work and the placement of structures 12 in navigable waters under Sections 9 and 10 of the Rivers and Harbors Appropriation Act of 1899 (U.S. Congress 1899). Additionally, Section 401 of the Clean Water Act requires state agencies to evaluate whether discharges to these waters comply with state water quality standards (U.S. Congress 1977). A Section 401 Water Quality Certification is required for activities that require federal permits or authorizations.

Exhibit 1 - Location Exhibit

Legend

Study Areas

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Exhibit 2 - Wetland Delineation Exhibit

Legend

- Sampling Point
- Study Areas
- Riprap
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland

0 250 500 1,000 Feet

HORNER SHIFRIN

Exhibit 3 - Photo Location Exhibit

Legend

- Photo Location
- Study Areas
- Riprap
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland

0 250 500 1,000 Feet

HORNER SHIFRIN

Exhibit 4

Photos Taken on Site

SP-2 in the freshwater emergent wetland under the New Chain of Rocks Bridge

Soil surface cracking in the freshwater emergent wetland under the New Chain of Rocks Bridge

Freshwater forested wetland to the north of the New Chain of Rocks Bridge

Freshwater forested wetland to the north of the New Chain of Rocks Bridge

Freshwater emergent wetland under the New Chain of Rocks Bridge

Freshwater forested wetland to the south of the New Chain of Rocks Bridge

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-270/Riverview Dr | City/County: St. Louis / St. Louis City | Sampling Date: 5/5/21

Applicant/Owner: MODOT | State: MO | Sampling Point: SP-1

Investigator(s): Xavier Diggs & Jane Farrington | Section, Township, Range:

Landform (hillside, terrace, etc.): Flat | Local relief (concave, convex, none): None

Slope (%): 0-2 | Lat: 38.766505 | Long: 90.179965 | Datum: WGS 1984

Soil Map Unit Name: Fishpot-Urban land-Freeburg complex | NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	15	Yes	FAC
2. *Acer negundo*	15	Yes	FAC
3. *Acer saccharinum*	15	Yes	FACW
4. *Morus alba*	15	Yes	FAC
5. *Salix nigra*	15	Yes	OBL
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Impatiens capensis*	50	Yes	FACW
2. *Scutellaria lateriflora*	50	Yes	OBL
3. *Boehmeria cylindrica*	20	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	120	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	65	x 2 =	130
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	195 (A)		350 (B)

Prevalence Index = B/A = 1.79

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

VEGETATION Continued – Use scientific names of plants. Sampling Point: SP-1

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
6. *Populus deltoides15*	15	Yes	
7.			
8.			
9.			
10.			
11.			
12.			
13.			
	90	=Total Cover	
Sapling/Shrub Stratum			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
		=Total Cover	
Herb Stratum			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
	120	=Total Cover	
Woody Vine Stratum			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vine – All woody vines greater than 3.28 ft in height.

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- x Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes x No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-270/Riverview Dr | City/County: St. Louis / St. Louis City | Sampling Date: 5/5/21

Applicant/Owner: MODOT | State: MO | Sampling Point: SP-2

Investigator(s): Xavier Diggs & Jane Farrington | Section, Township, Range:

Landform (hillside, terrace, etc.): Flat | Local relief (concave, convex, none): None

Slope (%): 0-2 | Lat: 38.766505 | Long: 90.179965 | Datum: WGS 1984

Soil Map Unit Name: Fishpot-Urban land-Freeburg complex | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No x

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Area is currently under the New Chain of Rocks bridge. This site is not under "normal circumstances" because the bridge limits vegatation and hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Chenopodium album*	5	Yes	FACU
2. *Artemisia annua*	5	Yes	FACU
3. *Humulus japonicus*	5	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	15 (A)		60 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Limited vegetation growth due to limited access to sunlight and water under the New Chain of Rocks bridge.

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- x Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-270/Riverview Dr | City/County: St. Louis / St. Louis City | Sampling Date: 5/5/21

Applicant/Owner: MODOT | State: MO | Sampling Point: SP-3

Investigator(s): Xavier Diggs & Jane Farrington | Section, Township, Range:

Landform (hillside, terrace, etc.): Flat | Local relief (concave, convex, none): None

Slope (%): 0-2 | Lat: 38.766505 | Long: 90.179965 | Datum: WGS 1984

Soil Map Unit Name: Fishpot-Urban land-Freeburg complex | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Area is currently under the New Chain of Rocks bridge. This site is not under "normal circumstances" because the bridge limits vegatation and hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	____ =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)

Total Number of Dominant Species Across All Strata: ____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: ____ (A)		____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
No vegetation growth due to limited access to sunlight and water under the New Chain of Rocks bridge.

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- x Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- x Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: I-270/Riverview Dr | City/County: St. Louis / St. Louis City | Sampling Date: 5/5/21

Applicant/Owner: MODOT | State: MO | Sampling Point: SP-4

Investigator(s): Xavier Diggs & Jane Farrington | Section, Township, Range:

Landform (hillside, terrace, etc.): Flat | Local relief (concave, convex, none): None

Slope (%): 0-2 | Lat: 38.766505 | Long: 90.179965 | Datum: WGS 1984

Soil Map Unit Name: Fishpot-Urban land-Freeburg complex | NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *Acer saccharinum*	5	Yes	FACW
2. *Fraxinus pennsylvanica*	5	Yes	FACW
3.			
4.			
5.			
	10 =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Impatiens capensis*	15	Yes	FACW
2. *Rumex altissimus*	15	Yes	FACW
3. *Boehmeria cylindrica*	15	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	45 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	40	x 2 =	80
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	55 (A)		95 (B)

Prevalence Index = B/A = 1.73

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	95	10YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ? Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ? Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___

Water Table Present? Yes ___ No x Depth (inches): ___

Saturation Present? Yes x No ___ Depth (inches): 4

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

WETLAND DETERMINATION REPORT

I-270 (FAI 270) over Mississippi River
Madison County, Illinois and
Saint Louis County, Missouri

IDOT Sequence Number: 19320A

Prepared by:
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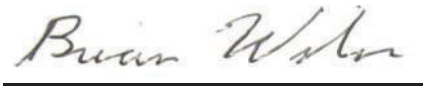
INHS/IDOT Wetland Science Program

October 2016

Project Summary

A wetland survey was conducted for proposed work on I-270 (FAI 270) over the Mississippi River in Madison County, Illinois and Saint Louis County, Missouri. All potential wetlands within the specified project area were examined. Thirty-four sites met the three criteria of a wetland established in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* [U.S. Army Corps of Engineers (USACE) 2010] and were, therefore, determined to be wetlands. Summary information regarding the wetland determination sites is presented in the wetland project report. Wetland determination forms are found in Appendix A and wetland plant species lists are included in Appendix B. Wetland boundaries were recorded using a Trimble Global Navigation Satellite System (GNSS). The spatial data have been digitally uploaded to the Illinois Site Assessment Tracking System (http://frostycap.isgs.uiuc.edu/idot_extranet). Locations of determination sites were overlaid on a digital aerial orthophoto using ArcGIS; the resulting figure is included in Appendix C. Additional maps and figures are also included in Appendix C.

Signed:  Date: October 5, 2016

Brian W. Wilm
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Cover Photo: Entrance to the Old Chain of Rocks Bridge, Illinois side.

I-270 (FAI 270) over Mississippi River
Madison County, Illinois and Saint Louis County, Missouri

Introduction

A wetland survey was conducted between 21 June and 2 September, 2016 for the proposed work on I-270 (FAI 270) over the Mississippi River in Madison County, Illinois and Saint Louis County, Missouri. Construction work will consist of the removal and replacement of the I-270 bridge across the Mississippi River, along with associated road work on both the Illinois and Missouri sides.

Methods

All potential wetlands within the specified study area were examined. Characteristics of vegetation, soils, hydrology, and topography were evaluated during field investigation and on-site wetland determination. Locations of observation points for wetland determinations were selected based on plant community borders and topographic changes. The following sources were examined while surveying the project corridor to determine wetland locations and boundaries: aerial photographs; U.S. Geological Survey topographic map (Columbia Bottom 7.5 minute quadrangle); National Wetlands Inventory (NWI) map (Columbia Bottom 7.5 minute quadrangle) (U.S. Fish and Wildlife Service); Illinois Wetlands Inventory (U.S. Fish and Wildlife Service, Illinois Department of Natural Resources, Illinois Natural History Survey 1996); the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010); the USDA-NRCS *Official Series Descriptions*; and the USDA-NRCS *Web Soil Survey*. Positional inaccuracies are known to occur with downloaded sources of digital data listed above. As presented on maps and figures in this report, data can be shifted from their actual position when compared to modern aerial photography.

Wetland determinations were conducted using definitions and guidelines established in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010). Data from these determinations were recorded on U.S. Army Corps of Engineers' Wetland Determination Data Forms – Midwest Region (Appendix A); a data form was completed for each wetland sampling point. All potential wetlands, including all areas mapped as wetlands by the NWI, were described using at least one sampling point. Results of these determinations are summarized in the following text. Adjacent upland areas were also investigated; forms were not completed for these areas. Comprehensive plant species lists were compiled for each wetland site and are presented in Appendix B.

Wetland boundaries were recorded using a Trimble Global Navigation Satellite System (model GeoExplorer 6000 Series GeoXT), with a presumed accuracy of +/- 0.5 m under optimal field conditions. Spatial data were digitally uploaded to the Illinois Site Assessment Tracking System (http://frostycap.isgs.uiuc.edu/idot_extranet). Locations of determination sites were overlaid on a digital aerial orthophoto and approximate area was determined for each wetland site

using ArcGIS 10.3 software (ESRI 2014). Resulting areas are calculated in acres, reported to two decimal places. Site location, with respect to the nearest road, was measured from the edge of the pavement and is reported to the nearest foot.

Each native plant species was assigned a "coefficient of conservatism" (C) (Taft et al. 1997), a subjective rating of species fidelity to undegraded natural communities, ranging from zero to ten. Conservative species - those more likely to be found in "pristine" natural areas - were assigned high numbers, whereas non-conservative species - those that occur in anthropogenically disturbed areas - were given lower numbers. Non-native species and those not identifiable to species level were not assigned a rating. The Floristic Quality Index (FQI) is computed as FQI = (mean C) X (√N), where mean C is the mean coefficient of conservatism for all native plant species at a site and N is the total number of native plant species at the site. In very general terms, higher FQI values for plant communities indicate more similarity to "pristine" natural areas, as compared to those communities with lower FQI values. Botanical nomenclature follows *Vascular Flora of Illinois* (Mohlenbrock 2002), while wetland indicator status for each species follows *National Wetland Plant List, version 3.3* (USACE 2016, Lichvar et al. 2016).

Wetland Determination Site Summaries

Site Number: 1
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 147 feet east of Riverview Drive to sampling point 1A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 2
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 175 feet west of Riverview Drive to sampling point 2A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 3
Community type: **Marsh**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 126 feet east of Riverview Drive**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.49 ac**
Total site area: **0.49 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **10.6**
Additional remarks: **This site functions as a drainageway.**

Site Number: 4
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Bordering the west side of the Mississippi River, both north and south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **13.18 ac**
Total site area: **13.18 ac**
Mean Coefficient of Conservatism (mean C): **2.3** Floristic Quality Index (FQI): **15.7**

Site Number: 5
Community type: **Barren land**
National Wetlands Inventory code**: PUBG (intermittently exposed, unconsolidated bottom, palustrine wetland) and PEMAd (partially drained/ditched, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 960 feet east of Riverview Drive to sampling point 5A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.**

Site Number: 6
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PUBGh (diked/impounded, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 785 feet north of Coal Bank Road to sampling point 6A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is located on a terrace above a small stream.**

Site Number: 7
Community type: **Upland forest**
National Wetlands Inventory code**: PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 317 feet east of Riverview Drive to sampling point 7A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 8
Community type: **Forbland**
National Wetlands Inventory code**: PEMA (temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 427 feet east of Riverview Drive to sampling point 8A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 9
Community type: **Upland forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 265 feet east of Riverview Drive to sampling point 9A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site had been covered with several feet of fill.**

Site Number: 10
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland); PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland)**
Site location: **Bordering the east side of the Mississippi River, under and both north and south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **88.18 ac**
Total site area: **Undetermined**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **15.9**

Site Number: 11
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 109 feet north of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 12
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Under and on both sides of I -270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.38 ac**
Total site area: **1.38 ac**
Mean Coefficient of Conservatism (mean C): **2.7** Floristic Quality Index (FQI): **10.8**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 13
Community type: **Cropland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 763 feet north of I-270 to sampling point 13A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **The site is a soybean field.**

Site Number: 14
Community type: **Wet meadow**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 2300 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.18 ac**
Total site area: **0.18 ac**
Mean Coefficient of Conservatism (mean C): **1.2** Floristic Quality Index (FQI): **3.9**
Additional remarks: **This site is a depression in a planted soybean field.**

Site Number: 15
Community type: **Forbland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 2625 feet north of I-270 to sampling point 15A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 16
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 2620 feet north of I-270 to sampling point 16A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 17
Community type: **Wet meadow**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 2368 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.15 ac**
Total site area: **0.15 ac**
Mean Coefficient of Conservatism (mean C): **2.2** Floristic Quality Index (FQI): **9.0**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 18
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 2025 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.29 ac**
Total site area: **0.29 ac**
Mean Coefficient of Conservatism (mean C): **0.3** Floristic Quality Index (FQI): **0.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 19
Community type: **Cropland**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 245 feet north of I-270 to sampling point 19A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is soybean field**.

Site Number: 20
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and U (upland)**
Site location: **Approximately 121 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **2.00 ac**
Total site area: **2.00 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **9.8**
Additional remarks: **This ditched/drained site occurs partially within a planted soybean field.**

Site Number: 21
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 460 feet south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.73 ac**
Total site area: **0.73 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **8.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 22
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 65 feet north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.14 ac**
Total site area: **0.14 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **7.8**

Site Number: 23
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 62 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **4.01 ac**
Total site area: **4.24 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **18.3**
Additional remarks: **This site is wooded fringe around an excavated deepwater lake (Site 24).**

Site Number: 24
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 121 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 25
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland), PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland), and U (upland)**
Site location: **Approximately 294 feet south of Chain of Rocks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 26
Community type: **Wet forbland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland), PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland), and PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 496 feet east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.75 ac**
Total site area: **0.75 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **8.5**
Additional remarks: **This site has been altered by landfill operations.**

Number: 27
Community type: **Non-native grassland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 941 feet south of Chain of Rocks Road to sampling point 27A**
Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 28
Community type: **Forbland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 692 feet south of Chain of Rocks Road to sampling point 28A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 29
Community type: **Non-native grassland**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 375 feet south of Chain of Rocks Road to sampling point 29A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 30
Community type: **Wet shrubland/wetland pond**
National Wetlands Inventory code**: PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland), PEMCx (excavated, seasonally flooded, emergent, palustrine wetland), PUBFx (excavated, semipermanently flooded, unconsolidated bottom, palustrine wetland) and U (upland)**
Site location: **Approximately 93 feet west of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **5.99 ac**
Total site area: **6.54 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **10.4**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 31
Community type: **Shrubland/forbland**
National Wetlands Inventory code**: PEMFx (excavated, semipermanently flooded, emergent, palustrine wetland)**
Site location: **Approximately 248 feet west of Roman Road to sampling point 31A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site has been altered by landfill operations.**

Site Number: 32
Community type: **Shrubland**
National Wetlands Inventory code**: PFO1Ax (excavated, temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 42 feet north of Chain of Rocks Road to sampling point 32A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is a wooded ditch**.

Site Number: 33
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland) and U (upland)**
Site location: **Approximately 125 feet south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.26 ac**
Total site area: **0.26 ac**
Mean Coefficient of Conservatism (mean C): **1.3** Floristic Quality Index (FQI): **6.3**
Additional remarks: **This site is partially ditched and functions as a drainageway**.

Site Number: 34
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland), PEMCf (farmed, seasonally flooded, emergent, palustrine wetland), and PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 214 feet west of Waterwarks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **7.02 ac**
Total site area: **7.33 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **8.6**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 35
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 75 feet west of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.29 ac**
Total site area: **1.29 ac**
Mean Coefficient of Conservatism (mean C): **2.9** Floristic Quality Index (FQI): **15.0**
Additional remarks: **This site is a vegetated depression within a planted soybean field.**

Site Number: 36
Community type: **Forested wetland**
National Wetlands Inventory code**: U (upland)**
Site location: **Approximately 120 feet north of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.24 ac**
Total site area: **0.24 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **10.3**

Site Number: 37
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 112 and138 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.60 ac**
Total site area: **0.60 ac**
Mean Coefficient of Conservatism (mean C): **2.4** Floristic Quality Index (FQI): **13.8**
Additional remarks: **The wetland is comprised of two parcels that are connected hydrologically.**

Site Number: 38
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 108 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.21 ac**
Total site area: **0.21 ac**
Mean Coefficient of Conservatism (mean C): **2.7** Floristic Quality Index (FQI): **14.4**
Additional remarks: **This site is a culvert outlet from beneath I-270.**

Site Number: 39
Community type: **Forested wetland**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 93 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.70 ac**
Total site area: **0.70 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **6.6**

Site Number: 40
Community type: **Wetland pond**
National Wetlands Inventory code**: PEMCx (excavated, seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 130 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **1.6** Floristic Quality Index (FQI): **6.5**

Site Number: 41
Community type: **Forested wetland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 178 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **1.5** Floristic Quality Index (FQI): **6.3**

Site Number: 42
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 204 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.20 ac**
Total site area: **0.20 ac**
Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **11.7**
Additional remarks: **This excavated depression appears to be the result of earth moving activities.**

Site Number: 43
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 440 ft south of I-270 to sampling point 43A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **Soils at this site have been irregularly mounded throughout as a result of earth moving activities.**

Site Number: 44
Community type: **Wet meadow**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 292 ft south of I-270**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.22 ac**
Total site area: **0.22 ac**
Mean Coefficient of Conservatism (mean C): **1.3** Floristic Quality Index (FQI): **4.3**

Site Number: 45
Community type: **Forested wetland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 50 ft north of Chain of Rocks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.49 ac**
Total site area: **0.49 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **10.2**

Site Number: 46
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMAf (farmed, temporarily flooded, emergent, palustrine wetland)**
Site location: **Approximately 12 ft east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.50 ac**
Total site area: **0.50 ac**
Mean Coefficient of Conservatism (mean C): **0.8** Floristic Quality Index (FQI): **1.8**
Additional remarks: **This site is a depression in a agricultural field that is farmed when conditions are suitable and was at least partially planted to soybeans in 2016.**

Site Number: 47
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland); PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland); PEMA (temporarily flooded, emergent, palustrine wetland); PEMC (seasonally flooded, emeregent, palustrine wetland), and U (upland)**
Site location: **Approximately 88 ft east of Roman Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **36.48 ac**
Total site area: **38.03 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **15.0**
Additional remarks: **The site is an open wet floodplain forest with patches dominated by herbacious vegetation.**

Site Number: 48
Community type: **Wet meadow**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Under and on both sides of Chain of Rocks Road and U (upland)**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.63 ac**
Total site area: **1.05 ac**
Mean Coefficient of Conservatism (mean C): **1.1** Floristic Quality Index (FQI): **5.7**

Site Number: 49
Community type: **Wet floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 13 feet south of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **13.91 ac**
Total site area: **13.91 ac**
Mean Coefficient of Conservatism (mean C): **2.0** Floristic Quality Index (FQI): **12.3**

Site Number: 50
Community type: **Marsh**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1A (temporarily flooded, broad leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 12 feet south and 13 ft north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **9.98 ac**
Total site area: **9.98 ac**
Mean Coefficient of Conservatism (mean C): **1.8** Floristic Quality Index (FQI): **9.7**

Site Number: 51
Community type: **Mesic floodplain forest**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 150 feet north of Chain of Rocks Road to sampling point 51A**
Hydrophytic Vegetation? **Yes** Hydric Soils? **No** Wetland Hydrology? **No**
Is this site a wetland? **No**
Additional remarks: **This site is primarily an upland parcel within Site 49 (wetland).**

Site Number: 52
Community type: **Marsh**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) and U (upland)**
Site location: **Approximately 18 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **1.59 ac**
Total site area: **1.59 ac**
Mean Coefficient of Conservatism (mean C): **2.9** Floristic Quality Index (FQI): **15.7**

Site Number: 53
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland)**
Site location: **Approximately 80 feet north of Waterworks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Site Number: 54
Community type: **Wetland pond**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 320 feet east of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **0.17 ac**
Total site area: **0.17 ac**
Mean Coefficient of Conservatism (mean C): **2.1** Floristic Quality Index (FQI): **8.5**

Site Number: 55
Community type: **Marsh**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 33 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **3.69 ac**
Total site area: **3.69 ac**
Mean Coefficient of Conservatism (mean C): **2.6** Floristic Quality Index (FQI): **10.8**

Site Number: 56
Community type: **Forbland**
National Wetlands Inventory code**: PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 67 feet north of Waterworks Road to sampling point 56A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 57
Community type: **Forbland**
National Wetlands Inventory code**: PEMC (seasonally flooded, emergent, palustrine wetland)**
Site location: **Approximately 680 feet east of Waterworks Road to sampling point 57A**
Hydrophytic Vegetation? **No** Hydric Soils? **Yes** Wetland Hydrology? **No**
Is this site a wetland? **No**

Site Number: 58
Community type: **Forested wetland**
National Wetlands Inventory code**: PSS1C (seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1Cx (excavated, seasonally flooded, broad-leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 625 feet north of Waterworks Road**
Hydrophytic Vegetation? **Yes** Hydric Soils? **Yes** Wetland Hydrology? **Yes**
Is this site a wetland? **Yes**
Area of site occurring within the project corridor: **15.71 ac**
Total site area: **15.71 ac**
Mean Coefficient of Conservatism (mean C): **2.3** Floristic Quality Index (FQI): **15.8**
Additional remarks: **This site also includes herbaceous wetland fringe exposed due to low water levels.**

Site Number: 59
Community type: **Deepwater aquatic habitat**
National Wetlands Inventory code**: L1UBHx (excavated, permanently flooded, unconsolidated bottom, limnetic, lacustrine wetland), PUBGx (excavated, intermittently exposed, unconsolidated bottom, palustrine wetland), PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1Cx (excavated, seasonally flooded, broad leaved deciduous, forested, palustrine wetland)**
Site location: **Approximately 30 feet east of Waterworks Road**
Hydrophytic Vegetation? Hydric Soils? Wetland Hydrology?
Is this site a wetland? **No**
Additional remarks: **This site is aquatic habitat with an average depth greater than 2 meters. According to the U. S. Army Corps of Engineers Delineation Manual (Environmental Laboratory 1987), it is therefore not a wetland.**

Wetland Site Summary Table

Site no.	NWI code	Community type	Area (ac.)[1]	>50%[2]	FQI	Mean C
3	U	Marsh	0.49	Yes	10.6	2.0
4	PFO1A and PEMA	Wet floodplain forest	13.18	Yes	15.7	2.3
10	PfO1A and PSS1C	Wet floodplain forest	88.18	Yes	15.9	2.1
12	PEMAf	Wet meadow	1.38	Yes	10.8	2.7
14	U	Wet meadow	0.18	Yes	3.9	1.2
17	U	Wet meadow	0.15	Yes	9.0	2.2
18	PEMAf	Wet meadow	0.29	Yes	0.6	0.3
20	PEMC and U	Wet meadow	2.00	Yes	9.8	2.1
21	PEMC	Wet meadow	0.73	Yes	8.6	2.4
22	PEMC	Forested wetland	0.14	Yes	7.8	1.9
23	PEMC and PFO1A	Forested wetland	4.01	Yes	17.9	2.4
26	PFO1A, PEMFx, and PUBFx	Wet forbland	0.75	Yes	8.5	1.9
30	PEMFx, PEMCx, PUBFx and U	Wet shrubland/wetland pond	5.99	Yes	10.4	2.1
33	PEMCx and U	Wet meadow	0.26	Yes	6.3	1.3
34	PEMAf, PEMCf, and PUBGx	Wet meadow	7.02	Yes	8.6	1.8
35	PEMAf	Wet meadow	1.29	Yes	15.0	2.9
36	U	Forested wetland	0.24	Yes	10.3	2.4
37	PFO1A and U	Wet meadow	0.60	Yes	13.8	2.4
38	PFO1A and U	Wet meadow	0.21	Yes	14.4	2.7
39	PEMCx	Forested wetland	0.70	Yes	6.6	2.0
40	PEMCx	Wetland pond	0.17	Yes	6.5	1.6
41	PFO1A	Forested wetland	0.17	Yes	6.3	1.5
42	PFO1A and U	Wet meadow	0.20	Yes	11.7	1.9
44	PFO1A	Wet meadow	0.22	Yes	4.3	1.3
45	PFO1A	Forested wetland	0.49	Yes	10.2	1.8
46	PEMAf	Wet meadow	0.50	Yes	1.8	0.8
47	PFO1A, PSS1C, PEMA, PEMC, and U	Wet floodplain forest	36.48	Yes	15.0	2.0
48	PEMC and U	Wet meadow	0.63	Yes	5.7	1.1
49	PFO1A and U	Wet floodplain forest	13.91	Yes	11.9	2.2
50	PEMC and PFO1A	Marsh	9.98	Yes	9.7	1.8
52	PFO1A and U	Marsh	1.59	Yes	15.7	2.9
54	PEMC	Wetland pond	0.17	Yes	8.5	2.1
55	PEMC	Marsh	3.69	Yes	10.8	2.6
58	PSS1C, PEMC and PFO1Cx	Forested wetland	15.71	Yes	15.8	2.3

[1] Area within the ESR project limits. [2] In our best professional judgment is more than 50% of the total site area within the ESR project limits?

Stream Description

Site name: **Mississippi River**
Site location: **Center of project corridor**
Community type: **River**
National Wetlands Inventory code: **R2UBH (permanently flooded, unconsolidated bottom, lower perennial, riverine)**
USGS 8-Digit Hydrologic Unit Code (HUC): **07140101 (Upper Mississippi River, Cahokia-Joachim Watershed)**
Watershed area: **697,000 mi^2 measured at St. Louis, MO (U.S. Geological Survey 2016)**
Riffles observed? **No** Pools observed? **No**
Mussel shell material observed? **No**
Is the stream or body of water permanent? **Yes**
Is the stream identified by IDNR (2008) as a biologically significant stream? **No**
Stream Integrity Rating: **None** Stream Diversity Rating: **None**

Threatened/Endangered Species and Natural Communities of Special Interest

No species listed as threatened or endangered federally or in Illinois were found during our wetland survey within the project corridor. Also, no natural communities of special interest were noted.

INHS Biotic Surveys are conducting studies of the project corridor for the presence of mammals (bat mist netting and habitat assessment) and birds (surveys including peregrine falcon and bald eagle). Please see forthcoming reports by senior authors for more information (Mengelkoch mammals and Schelsky birds).

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APPENDIX A

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 6/21/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 1A

Investigator(s): Wilm, Ketzner, Wiesbrook Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): <2 Lat: 38.77399 Long: -90.18154 Datum: NAD 83

Soil Map Unit Name: See remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.
NRCS mapped as Booker SIC, freq. ponded, 0-2% slopes, occasionally flooded; revised to Fishpot SIL

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	25	Yes	FAC
2. *Populus deltoides*	20	Yes	FAC
3. *Ulmus americana*	15	Yes	FACW
4. *Celtis occidentalis*	12	No	FAC
5.			
	72	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	95	Yes	UPL
2. *Cornus drummondii*	12	No	FAC
3.			
4.			
5.			
	107	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	2	No	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	2	No	FAC
2. *Campsis radicans*	2	No	FACU
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/2	100					SIL	
7-12+	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 6/21/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 2A

Investigator(s): Wilm, Ketzner, Wiesbrook Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.77424 Long: -90.18275 Datum: NAD 83

Soil Map Unit Name: Haymond SIL, 0-3% slopes, freq. flooded NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Yes	FAC
2. *Morus alba*	30	Yes	FAC
3. *Populus deltoides*	25	No	FAC
4. *Ulmus americana*	20	No	FACW
5. *Celtis laevigata*	12	No	FACW
	137	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	8	Yes	FAC
2. *Acer negundo*	4	Yes	FAC
3. *Ulmus americana*	2	No	FACW
4.			
5.			
	14	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Impatiens capensis*	40	Yes	FACW
2. *Toxicodendron radicans*	5	No	FAC
3. *Smilax tamnoides*	4	No	FAC
4. *Acer negundo*	3	No	FAC
5. *Aster lanceolatus*	2	No	FAC
6. *Carex sp.*	2	No	-
7. *Pilea pumila*	2	No	FACW
8. *Acer saccharinum*	1	No	FACW
9. *Ambrosia trifida*	1	No	FAC
10. *Humulus japonicus*	1	No	FACU
	61	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	7	Yes	FACW
2. *Ampelopsis cordata*	5	Yes	FAC
	14	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-13+	10YR 5/1	95	10YR 4/6	5	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: This is located at least 15 feet above the stream below.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 3A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76765 Long: -90.18161 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Populus deltoides*	2	No	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex hyalinolepis*	85	Yes	OBL
2. *Leersia oryzoides*	5	No	OBL
3. *Lycopus americanus*	3	No	OBL
4. *Ampelopsis cordata*	1	No	FAC
5. *Rumex crispus*	1	No	FAC
6.			
7.			
8.			
9.			
10.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-10	10YR 4/1	90	7.5YR 4/6	10	C	M	SIL	
10-12	10YR 4/1	80	7.5YR 4/6	20	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 4A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76526 Long: -90.17989 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	60	Yes	FAC
3. *Morus alba*	4	No	FAC
4.			
5.			
	144	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Acer saccharinum*	1	No	FACW
3. *Pilea pumila*	1	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	1	No	FACW
2.			
	1	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	100					SIL	
3-12	10YR 4/1	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 4B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76205 Long: -90.18126 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	90	Yes	FACW
2. *Populus deltoides*	15	No	FAC
3.			
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Acer saccharinum*	1	No	FACW
2. *Diospyros virginiana*	1	No	FAC
3. *Euonymus fortunei*	1	No	UPL
4. *Impatiens capensis*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 4B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/1	100					SIL	
8-12	10YR 4/2	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 5A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0-2 Lat: 38.76935 Long: -90.17841 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PEMAd

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks: Community type is barren land.
This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)
This site is unvegetated.

SOIL

Sampling Point: 5A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 5B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0-2 Lat: 38.76880 Long: -90.17822 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PUBG

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks: Community type is barren land.
This area is an active construction site where several feet of fill is in the process of being deposited; sampling was not possible.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)
This site is unvegetated.

SOIL

Sampling Point: 5B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 6A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.77443 Long: -90.18661 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Haymond silt loam, 0-3% slopes; revised to Orthent NWI classification: PUBGh

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Platanus occidentalis*	25	Yes	FACW
2. *Salix nigra*	20	Yes	OBL
3. *Ulmus americana*	20	Yes	FACW
4. *Acer negundo*	15	No	FAC
5. *Maclura pomifera*	8	No	FACU
	94	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Sambucus canadensis*	2	No	FACW
2. *Acer negundo*	1	No	FAC
3. *Celtis occidentalis*	1	No	FAC
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Laportea canadensis*	20	Yes	FACW
2. *Pilea pumila*	20	Yes	FACW
3. *Rubus sp.*	10	No	-
4. *Amphicarpaea bracteata*	7	No	FAC
5. *Sanicula odorata*	2	No	FAC
6. *Antenoron virginianum*	1	No	FAC
7. *Hackelia virginiana*	1	No	FACU
8. *Persicaria cespitosa*	1	No	FAC
9.			
10.			
	62	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 6A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	
2-12	10YR 5/3	93	7.5YR 4/6	7	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 7A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <1 Lat: 38.76505 Long: -90.18154 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is upland forest.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Orthent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	40	Yes	FAC
2. *Platanus occidentalis*	20	Yes	FACW
3. *Diospyros virginiana*	15	No	FAC
4. *Populus deltoides*	15	No	FAC
5. *Salix nigra*	10	No	OBL
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	60	Yes	UPL
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	20	Yes	UPL
2. *Diospyros virginiana*	5	No	FAC
3. *Geum canadense*	1	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	26	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	5	Yes	FAC
2.			
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 7A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3.5	10YR 3/2	100					SIL	
3.5-9	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compacted filled material

Depth (inches): 9

Hydric Soil Present? No

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted fill material. Gravel was also present at the surface; wetland hydrology was absent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 8A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76382 Long: -90.18166 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia artemisiifolia*	25	Yes	FACU
2. *Plantago lanceolata*	20	Yes	FACU
3. *Sporobolus cryptandrus*	10	No	FACU
4. *Setaria viridis*	8	No	UPL
5. *Medicago lupulina*	3	No	FACU
6. *Chamaesyce maculata*	2	No	FACU
7. *Cichorium intybus*	2	No	FACU
8. *Convolvulus arvensis*	2	No	UPL
9. *Potentilla recta*	1	No	UPL
10.			
	73	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 8A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compacted filled material/concrete

Depth (inches): 2

Hydric Soil Present? No

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted filled material and concrete fragments. Broken asphalt, concrete, and gravel were also present at the surface; wetland hydrology and hydrophytic vegetation were not present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: St. Louis Sampling Date 8/11/2016

Applicant/Owner: IDOT District 8 State: MO Sampling Point 9A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Not applicable

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76353 Long: -90.18240 Datum: NAD 83

Soil Map Unit Name: Fishpot-Urban land complex, 0-5% slopes, rarely flooded NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks: Community type is upland forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Diospyros virginiana*	40	Yes	FAC
2. *Acer saccharinum*	15	Yes	FACW
3. *Ailanthus altissima*	12	No	FACU
4.			
5.			
	67	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	70	Yes	UPL
2. *Ulmus americana*	5	No	FACW
3.			
4.			
5.			
	75	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phytolacca americana*	25	Yes	FACU
2. *Acer saccharinum*	2	No	FACW
3. *Ambrosia artemisiifolia*	2	No	FACU
4. *Erechtites hieracifolia*	2	No	FAC
5. *Lonicera maackii*	2	No	UPL
6. *Morus alba*	2	No	FAC
7. *Solanum ptychanthum*	2	No	FACU
8. *Ampelopsis cordata*	1	No	FAC
9. *Lepidium sp.*	1	No	-
10. *Parthenocissus quinquefolia*	1	No	FACU
	40	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Toxicodendron radicans*	15	Yes	FAC
2. *Ampelopsis cordata*	10	Yes	FAC
	32	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 9A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Compacted filled material

Depth (inches): 2

Hydric Soil Present? No

Remarks: This soil sample was not taken as deeply as normal due to the presence of compacted filled material and concrete fragments. Broken asphalt, concrete, and gravel were also present at the surface; wetland hydrology was absent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/14/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75622 Long: -90.16579 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PSS1C

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	65	Yes	FACW
2. *Populus deltoides*	10	No	FAC
3. *Salix amygdaloides*	7	No	FACW
4. *Salix nigra*	2	No	OBL
5.			
	84	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	5	Yes	FACW
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Carex sp.*	1	No	-
3. *Erechtites hieracifolia*	1	No	FAC
4. *Morus alba*	1	No	FAC
5. *Vitis riparia*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
	9	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	3	No	FACW
2.			
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	88	7.5YR 4/6	12	C	M	SIL	
6-12	10YR 3/1	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/14/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75765 Long: -90.17049 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	85	Yes	FACW
2. *Forestiera acuminata*	20	No	OBL
3.			
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	8	Yes	FAC
2.			
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	2	Yes	FAC
2. *Bidens frondosa*	2	Yes	FACW
3. *Aster lanceolatus*	1	No	FAC
4. *Leersia virginica*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	6	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	88	10YR 4/6	12	C	M	SIL	
6-12	10YR 3/1	90	10YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76001 Long: -90.16405 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	70	Yes	FACW
2. *Populus deltoides*	35	Yes	FAC
3. *Morus alba*	7	No	FAC
4.			
5.			
	112	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	10	Yes	FACW
2. *Morus alba*	2	No	FAC
3.			
4.			
5.			
	12	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	5	Yes	FACW
2. *Solanum ptychanthum*	2	Yes	FACU
3. *Aster lanceolatus*	1	No	FAC
4. *Cyperus sp.*	1	No	-
5. *Leersia virginica*	1	No	FACW
6. *Phytolacca americana*	1	No	FACU
7.			
8.			
9.			
10.			
	11	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/2	93	10YR 5/6	7	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10D

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76012 Long: -90.16963 Datum: NAD 83

Soil Map Unit Name: Rocher loam, 2-5% slopes, frequently flooded; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Morus alba*	5	No	FAC
3.			
4.			
5.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Leersia virginica*	4	Yes	FACW
2. *Persicaria cespitosa*	3	Yes	FAC
3. *Aster lanceolatus*	1	No	FAC
4. *Fraxinus lanceolata*	1	No	FACW
5. *Pilea pumila*	1	No	FACW
6. *Viola pratincola*	1	No	FACW
7.			
8.			
9.			
10.			
	11	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	93	7.5YR 4/6	7	C	M	LFS	
6-12	10YR 4/1	93	7.5YR 4/6	7	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 10E

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 35, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75916 Long: -90.16957 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	10	No	FAC
3.			
4.			
5.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	3	No	FAC
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Aster lanceolatus*	5	Yes	FAC
2. *Laportea canadensis*	1	No	FACW
3. *Solanum ptychanthum*	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	7	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 10E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					SIL	
4-12	10YR 4/2	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 11A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75985 Long: -90.16512 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 11A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 12A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-4 Lat: 38.76173 Long: -90.16435 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, frq. fld., revised to Aquent NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This site is a vegetated depression within a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Phyla lanceolata*	50	Yes	OBL
2. *Persicaria lapathifolia*	6	No	FACW
3. *Rumex crispus*	4	No	FAC
4. *Xanthium strumarium*	4	No	FAC
5. *Carex sp.*	3	No	-
6. *Persicaria coccinea*	3	No	OBL
7. *Aster lanceolatus*	2	No	FAC
8.			
9.			
10.			
	72 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 12A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	92	10YR 4/6	8	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <8

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 13A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76406 Long: -90.16229 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation Yes, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is cropland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Glycine max*	80	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)
Prevalence Index =B/A =			

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Excluding planted soybeans (Glycine max), no vegetation is present.

SOIL

Sampling Point: 13A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 14A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76851 Long: -90.16054 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld; revised to Aquent NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point was located within a depression in a soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Iva annua*	17	Yes	FAC
2. *Acer saccharinum*	8	Yes	FACW
3. *Aster lanceolatus*	5	No	FAC
4. *Persicaria punctata*	3	No	OBL
5. *Persicaria lapathifolia*	1	No	FACW
6. *Rumex crispus*	1	No	FAC
7.			
8.			
9.			
10.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 14A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/2	88	7.5YR 4/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 15A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76898 Long: -90.16023 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Aster lanceolatus*	95	Yes	FAC
2. *Xanthium strumarium*	5	No	FAC
3. *Acer saccharinum*	4	No	FACW
4. *Phyla lanceolata*	4	No	OBL
5. *Ipomoea lacunosa*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
	109 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 15A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					SIL	
8-12	10YR 4/2	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 16A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76878 Long: -90.15962 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Beaucoup SICL, 0-2% slopes, freq. fld.; revised to Orthent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	75	Yes	FACW
2. *Populus deltoides*	15	No	FAC
3. *Morus alba*	10	No	FAC
4. *Salix nigra*	8	No	OBL
5.			
	108	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	7	Yes	FACW
2.			
3.			
4.			
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	12	Yes	FACW
2. *Ambrosia trifida*	7	Yes	FAC
3. *Campsis radicans*	5	No	FACU
4. *Elymus virginicus*	4	No	FACW
5. *Artemisia annua*	2	No	FACU
6. *Aster lanceolatus*	2	No	FAC
7. *Acalypha rhomboidea*	1	No	FACU
8. *Ipomoea lacunosa*	1	No	FACW
9. *Oxalis stricta*	1	No	FACU
10.			
	35	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 16A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/1	100					SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 17A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76836 Long: -90.15990 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Leptochloa fascicularis*	15	Yes	OBL
2. *Leptochloa panicoides*	15	Yes	OBL
3. *Ludwigia palustris var. americana*	15	Yes	OBL
4. *Amaranthus tuberculatus*	5	No	OBL
5. *Eclipta prostrata*	4	No	FACW
6. *Rumex crispus*	4	No	FAC
7. *Echinochloa muricata*	3	No	OBL
8. *Ammannia coccinea*	2	No	OBL
9. *Xanthium strumarium*	2	No	FAC
10. *Sida spinosa*	1	No	FACU
	66 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 17A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 5/1	88	10YR 5/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 18A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76695 Long: -90.15848 Datum: NAD 83

Soil Map Unit Name: Beaucoup SICL, 0-2% slopes, frequently flooded, long duration NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	45	Yes	OBL
2. *Glycine max*	5	No	UPL
3. *Amaranthus tuberculatus*	1	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	46 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)
Planted soybeans (Glycine max) not included in quantitative vegetation calculations.

SOIL

Sampling Point: 18A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					SIL	
6-12	10YR 3/2	90	10YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 19A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76186 Long: -90.15867 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? No

Are Vegetation Yes, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is cropland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Glycine max*	70	No	UPL
2. *Leptochloa fascicularis*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	1	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Excluding planted soybeans (Glycine max), no dominant vegetation is present.

SOIL

Sampling Point: 19A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/1	95	10YR 4/6	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 20A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 38.76270 Long: -90.15643 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Amaranthus tuberculatus*	20	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 20A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	2.5Y 3/1	98	10YR 4/4	2	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **Yes**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: This site is partially drained/ditched.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 21A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76042 Long: -90.16345 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Rumex crispus*	35	Yes	FAC
2. *Persicaria coccinea*	30	Yes	OBL
3. *Ambrosia trifida*	10	No	FAC
4. *Aster lanceolatus*	10	No	FAC
5. *Bidens comosa*	10	No	OBL
6. *Bidens frondosa*	7	No	FACW
7. *Elymus virginicus*	4	No	FACW
8. *Ipomoea lacunosa*	1	No	FACW
9. *Phyla lanceolata*	1	No	OBL
10.			
	108 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 21A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	88	7.5YR 4/6	12	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 22A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.75673 Long: -90.16218 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	60	Yes	FACW
2. *Acer negundo*	20	Yes	FAC
3.			
4.			
5.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	20	Yes	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	20	Yes	FACU
2. *Forestiera acuminata*	2	No	OBL
3. *Acalypha rhomboidea*	1	No	FACU
4. *Acer saccharinum*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	24	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 22A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 2/1	100					SICL	Disturbed throughout profile
1-6	10YR 4/2	95	7.5YR 4/6	5	C	M	SICL	
6-12+	2.5Y 3/1	98	10YR 4/4	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 23A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0 Lat: 38.75624 Long: -90.16450 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	15	Yes	FAC
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Morus alba*	4	Yes	FAC
2. *Acer saccharinum*	1	No	FACW
3. *Forestiera acuminata*	1	No	OBL
4. *Ulmus americana*	1	No	FACW
5.			
	7	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Rubus trivialis*	50	Yes	FACU
2. *Carex hyalinolepis*	30	Yes	OBL
3. *Apocynum cannabinum*	8	No	FAC
4. *Persicaria coccinea*	8	No	OBL
5. *Vitis riparia*	5	No	FACW
6. *Ambrosia artemisiifolia*	4	No	FACU
7. *Ulmus americana*	3	No	FACW
8. *Ambrosia trifida*	2	No	FAC
9. *Ipomoea lacunosa*	2	No	FACW
10. *Forestiera acuminata*	1	No	OBL
	113	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	1	No	FACW
2.			
	1	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 23A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 3/1	95	10YR 4/4	5	C	M	SICL	
6-13	2.5Y 3/1	98	10YR 4/4	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 23B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <6 Lat: 38.75621 Long: -90.16240 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	40	Yes	OBL
2. *Xanthium strumarium*	20	Yes	FAC
3. *Carex hyalinolepis*	15	No	OBL
4. *Desmanthus illinoensis*	5	No	FACU
5. *Bidens frondosa*	4	No	FACW
6. *Ambrosia artemisiifolia*	3	No	FACU
7. *Acalypha rhomboidea*	2	No	FACU
8. *Asclepias incarnata*	2	No	OBL
9. *Ipomoea lacunosa*	2	No	FACW
10. *Lycopus americanus*	1	No	OBL
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 23B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 5/1	100					L	
5-12+	2.5Y 5/1	90	10YR 5/6	10	C	M/PL	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 24A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75628 Long: -90.16377 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Darwin SIC, 0-2% slopes, frequently flooded, long duration NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 24A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/2/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 25A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75555 Long: -90.16084 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 25A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 26A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.75311 Long: -90.15795 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Darwin SIC; revised to Aquents NWI classification: PEMFx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	40	Yes	FACW
2. *Bidens comosa*	35	Yes	OBL
3. *Poa pratensis*	10	No	FAC
4. *Carex sp.*	5	No	-
5. *Iva annua*	5	No	FAC
6. *Rumex crispus*	5	No	FAC
7. *Ambrosia artemisiifolia*	3	No	FACU
8. *Lindernia dubia*	3	No	OBL
9.			
10.			
	106 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 26A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12+	N 4/	95	7.5YR 4/4	5	C	M	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 27A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.75383 Long: -90.15953 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is non-native grassland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Sorghum halepense*	80	Yes	FACU
2. *Bromus japonicus*	20	No	FACU
3. *Morus alba*	5	No	FAC
4. *Croton monanthogynus*	3	No	UPL
5. *Torilis japonica*	3	No	UPL
6. *Campsis radicans*	2	No	FACU
7. *Erigeron annuus*	2	No	FACU
8. *Lactuca serriola*	2	No	FACU
9.			
10.			
	117 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 27A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1	100					CL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Densely packed gravel

Depth (inches): 5

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 28A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <2 Lat: 38.75477 Long: -90.15775 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Bromus inermis*	75	Yes	FACU
2. *Melilotus alba*	25	Yes	FACU
3. *Torilis japonica*	3	No	UPL
4. *Fallopia scandens*	2	No	FAC
5. *Strophostyles helvula*	2	No	FAC
6. *Trifolium pratense*	2	No	FACU
7.			
8.			
9.			
10.			
	109 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 28A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 4/1	98	10YR 5/6	2	C	M	SICL	Human placed materials
6-13+	N 4/	95	10YR 5/6	5	C	M	SICL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 29A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): <1 Lat: 38.75554 Long: -90.15828 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquents NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is non-native grassland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Festuca pratensis*	40	Yes	FACU
2. *Poa pratensis*	25	Yes	FAC
3. *Bromus inermis*	10	No	FACU
4. *Melilotus alba*	5	No	FACU
5. *Persicaria coccinea*	5	No	OBL
6. *Setaria glauca*	5	No	FAC
7. *Strophostyles helvula*	4	No	FAC
8. *Torilis japonica*	4	No	UPL
9. *Daucus carota*	3	No	UPL
10. *Fallopia scandens*	3	No	FAC
	111 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 29A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 5/1	95	7.5YR 4/6	5	C	M	SICL	Human placed materials
8-14+	N 4/	92	7.5YR 4/6	8	C	M	SICL	Human placed materials

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 30A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.75388 Long: -90.15439 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher L; revised to Aquents NWI classification: PUBFx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	40	Yes	FACW
2. *Xanthium strumarium*	25	Yes	FAC
3. *Bidens frondosa*	8	No	FACW
4. *Ammannia coccinea*	2	No	OBL
5. *Cyperus acuminatus*	2	No	OBL
6. *Eclipta prostrata*	2	No	FACW
7. *Populus deltoides*	2	No	FAC
8. *Amaranthus tuberculatus*	1	No	OBL
9. *Rorippa palustris*	1	No	OBL
10. *Salix nigra*	1	No	OBL
	84 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 30A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/1	100					LFS	
2-13+	2.5Y 5/1	95	10YR 4/4	5	C	M/PL	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 30B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <5 Lat: 38.75527 Long: -90.15116 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher L; revised to Aquents NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet shrubland.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix interior*	90	Yes	FACW
2.			
3.			
4.			
5.			
	90 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Xanthium strumarium*	60	Yes	FAC
2. *Bidens frondosa*	8	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	68 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index =B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 30B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13+	2.5Y 4/1	97	10YR 5/6	3	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <24

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 31A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): None

Slope (%): 4 Lat: 38.75547 Long: -90.15126 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL; revised to Orthents NWI classification: PEMFx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	
Hydric Soil Present?	No	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	No	

Remarks: Community type is shrubland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix interior*	60	Yes	FACW
2.			
3.			
4.			
5.			
	60	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Daucus carota*	40	Yes	UPL
2. *Ambrosia trifida*	10	No	FAC
3. *Ambrosia artemisiifolia*	4	No	FACU
4. *Ampelamus albidus*	3	No	FAC
5. *Bidens frondosa*	2	No	FACW
6. *Persicaria punctata*	2	No	OBL
7. *Aster pilosus*	1	No	FACU
8. *Solanum ptychanthum*	1	No	FACU
9.			
10.			
	63	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	2	No	FAC
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 31A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/2	95	10YR 4/3	5	C	M	SICL	
7-12+	10YR 6/2	100					SI	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 31B

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.75556 Long: -90.15137 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL; revised to Aquents NWI classification: PEMFx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix nigra*	5	Yes	OBL
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Humulus japonicus*	90	Yes	FACU
2. *Ambrosia trifida*	10	No	FAC
3. *Bromus japonicus*	5	No	FACU
4. *Persicaria coccinea*	4	No	OBL
5. *Ambrosia artemisiifolia*	3	No	FACU
6. *Trifolium pratense*	1	No	FACU
7.			
8.			
9.			
10.			
	113 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 31B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 6/2	100					SI	
2-13+	2.5Y 4/2	93	10YR 4/6	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 32A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated ditch Local relief (concave, convex, none): Concave

Slope (%): 50% Lat: 38.75663 Long: -90.15924 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PFO1Ax

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is shrubland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Morus alba*	60	Yes	FAC
2. *Prunus serotina*	10	No	FACU
3.			
4.			
5.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	95	Yes	UPL
2.			
3.			
4.			
5.			
	95	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Lonicera maackii*	1	No	UPL
2. *Toxicodendron radicans*	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	20	Yes	FACW
2. *Ampelopsis cordata*	10	Yes	FAC
	30	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 32A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10+	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 33A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76060 Long: -90.15906 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki; revised to Beaucoup SICL, 0-2% slopes NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	40	Yes	OBL
2. *Carex hyalinolepis*	25	Yes	OBL
3. *Bidens frondosa*	10	No	FACW
4. *Persicaria coccinea*	6	No	OBL
5. *Phyla lanceolata*	5	No	OBL
6. *Humulus japonicus*	4	No	FACU
7. *Ipomoea lacunosa*	4	No	FACW
8. *Eclipta prostrata*	3	No	FACW
9. *Lycopus americanus*	2	No	OBL
10. *Xanthium strumarium*	2	No	FAC
	101 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 33A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11+	2.5Y 3/1	93	7.5YR 3/4	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/4/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 34A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76815 Long: -90.15245 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Amaranthus tuberculatus*	15	Yes	OBL
2. *Leptochloa fascicularis*	10	Yes	OBL
3. *Ammannia coccinea*	7	No	OBL
4. *Digitaria sanguinalis*	5	No	FACU
5. *Echinochloa muricata*	5	No	OBL
6. *Mollugo verticillata*	4	No	FAC
7. *Phyla lanceolata*	2	No	OBL
8.			
9.			
10.			
	48 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 34A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 6/2	100					FS	Recent overwash
2-13+	2.5Y 3/1	98	10YR 4/4	2	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <6

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 35A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76414 Long: -90.15055 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located within a depression in a planted soybean field.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Xanthium strumarium*	55	Yes	FAC
2. *Eclipta prostrata*	4	No	FACW
3. *Echinochloa muricata*	2	No	OBL
4. *Ludwigia peploides var. glabrescens*	1	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	62 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 35A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 3/1	97	10YR 4/4	3	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <3

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 36A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 25, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76214 Long: -90.15296 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki; revised to Darwin SIC NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2. *Morus alba*	40	Yes	FAC
3. *Populus deltoides*	40	Yes	FAC
4.			
5.			
	130	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	5	Yes	FAC
2. *Acer saccharinum*	3	Yes	FACW
3.			
4.			
5.			
	8	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	15	Yes	FACU
2. *Toxicodendron radicans*	4	No	FAC
3. *Persicaria punctata*	2	No	OBL
4. *Acer saccharinum*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Campsis radicans*	1	No	FACU
2. *Toxicodendron radicans*	1	No	FAC
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 36A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/1	85	7.5YR 4/6	15	C	M	SICL	
4-8	2.5Y 3/1	85	7.5YR 4/6	15	C	M	SICL	
8-12	2.5Y 4/1	80	7.5YR 4/6	10	C	M	SICL	
8-12			7.5YR 4/4	10	C	M		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 37A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76057 Long: -90.15419 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	25	Yes	OBL
2. *Populus deltoides*	15	Yes	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Diospyros virginiana*	2	No	FAC
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	50	Yes	OBL
2. *Persicaria coccinea*	10	No	OBL
3. *Sium suave*	5	No	OBL
4. *Alisma subcordatum*	3	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	68	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 37A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SICL	
3-12	10YR 4/1	93	7.5YR 4/6	7	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <2

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 38A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76133 Long: -90.15211 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquoll NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria punctata*	50	Yes	OBL
2. *Carex frankii*	20	Yes	OBL
3. *Iva annua*	20	Yes	FAC
4. *Phalaris arundinacea*	8	No	FACW
5. *Typha angustifolia*	6	No	OBL
6. *Aster lanceolatus*	5	No	FAC
7. *Sagittaria latifolia*	2	No	OBL
8.			
9.			
10.			
	111 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 38A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	87	7.5YR 4/6	13	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <6

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 39A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-4 Lat: 38.75862 Long: -90.15466 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	75	Yes	OBL
2.			
3.			
4.			
5.			
	75	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria punctata*	85	Yes	OBL
2. *Bidens frondosa*	15	No	FACW
3. *Persicaria coccinea*	10	No	OBL
4. *Xanthium strumarium*	8	No	FAC
5. *Ipomoea lacunosa*	3	No	FACW
6.			
7.			
8.			
9.			
10.			
	121	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 39A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/1	85	7.5YR 4/6	15	C	M	L	
3-12	10YR 5/1	85	7.5YR 4/6	15	C	M	L	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 40A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75883 Long: -90.15377 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMCx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wetland pond.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cephalanthus occidentalis*	15	Yes	OBL
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	45	Yes	FACW
2. *Persicaria lapathifolia*	30	Yes	FACW
3. *Bidens frondosa*	10	No	FACW
4. *Echinodorus berteroi*	6	No	OBL
5. *Iva annua*	5	No	FAC
6. *Amaranthus tuberculatus*	2	No	OBL
7. *Ipomoea lacunosa*	1	No	FACW
8.			
9.			
10.			
	99 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 40A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 4/1	90	7.5YR 4/6	10	C	M	SIL	
4-12	2.5Y 4/2	80	7.5YR 4/6	20	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 41A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-3 Lat: 38.76142 Long: -90.15116 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	60	Yes	FAC
2. *Populus deltoides*	30	Yes	FAC
3. *Morus alba*	15	No	FAC
4.			
5.			
	105	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer negundo*	65	Yes	FAC
2. *Fraxinus lanceolata*	5	No	FACW
3.			
4.			
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Vitis riparia*	3	No	FACW
2. *Campsis radicans*	1	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	4	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	3	No	FACW
2.			
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 41A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	92	10YR 4/6	8	C	M	SICL	
3-12	10YR 4/2	88	10YR 4/6	12	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 42A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76139 Long: -90.15070 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	12	Yes	FAC
2. *Persicaria punctata*	10	Yes	OBL
3. *Iva annua*	7	Yes	FAC
4. *Bidens frondosa*	5	Yes	FACW
5. *Carex frankii*	4	No	OBL
6. *Prunella vulgaris var. elongata*	4	No	FAC
7. *Ambrosia artemisiifolia*	3	No	FACU
8. *Acalypha rhomboidea*	2	No	FACU
9. *Elymus virginicus*	2	No	FACW
10. *Oxalis stricta*	2	No	FACU
	59	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 42A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					SICL	
4-12	10YR 4/1	88	10YR 4/6	12	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 43A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.76084 Long: -90.15111 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2. *Populus deltoides*	40	Yes	FAC
3. *Acer negundo*	10	No	FAC
4.			
5.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	50	Yes	FAC
2. *Morus alba*	5	No	FAC
3.			
4.			
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Fraxinus lanceolata*	5	Yes	FACW
2. *Microstegium vimineum*	5	Yes	FAC
3. *Cornus drummondii*	2	Yes	FAC
4. *Impatiens capensis*	2	Yes	FACW
5. *Lindera benzoin*	2	Yes	FACW
6. *Pilea pumila*	2	Yes	FACW
7. *Celtis occidentalis*	1	No	FAC
8. *Hackelia virginiana*	1	No	FACU
9. *Perilla frutescens*	1	No	FAC
10. *Sanicula odorata*	1	No	FAC
	22	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 43A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	98	7.5YR 4/6	2	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 43B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Upland Local relief (concave, convex, none): Convex

Slope (%): 2 Lat: 38.76119 Long: -90.15150 Datum: NAD 83

Soil Map Unit Name: Orthents, loamy, undulating NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is upland forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	80	Yes	FACW
2. *Populus deltoides*	30	Yes	FAC
3.			
4.			
5.			
	110	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lonicera maackii*	35	Yes	UPL
2.			
3.			
4.			
5.			
	35	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phytolacca americana*	10	Yes	FACU
2. *Celtis occidentalis*	1	No	FAC
3. *Physalis subglabrata*	1	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	12	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 43B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 4/3	90	7.5YR 4/6	10	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 44A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76109 Long: -90.15101 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Iva annua*	70	Yes	FAC
2. *Persicaria punctata*	20	Yes	OBL
3. *Acer saccharinum*	2	No	FACW
4. *Ipomoea lacunosa*	1	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	93	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 44A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100					SICL	
4-12	10YR 4/1	90	7.5YR 5/6	10	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/13/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 45A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 36, T4N, R10W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75965 Long: -90.15063 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	50	Yes	FACW
2.			
3.			
4.			
5.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus lanceolata*	2	No	FACW
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	65	Yes	FACW
2. *Iva annua*	15	No	FAC
3. *Carex sp.*	12	No	-
4. *Impatiens capensis*	7	No	FACW
5. *Carex crus-corvi*	5	No	OBL
6. *Phyla lanceolata*	5	No	OBL
7. *Sium suave*	4	No	OBL
8. *Fraxinus lanceolata*	2	No	FACW
9. *Humulus japonicus*	2	No	FACU
10. *Oxalis stricta*	2	No	FACU
	119	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 45A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 4/2	85	10YR 4/6	15	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 46A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75600 Long: -90.14982 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquoll NWI classification: PEMAf

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.
This point is located in a depression within an agricultural field; the site has been at least partially planted to soybeans.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa muricata*	15	Yes	OBL
2. *Amaranthus tuberculatus*	7	Yes	OBL
3. *Portulaca oleracea*	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 46A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	85	7.5YR 4/6	15	C	M	SIL	
12								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☑ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <4

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75856 Long: -90.14403 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMA

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	50	Yes	FAC
2. *Persicaria coccinea*	40	Yes	OBL
3. *Campsis radicans*	20	No	FACU
4. *Ampelopsis cordata*	5	No	FAC
5. *Apocynum cannabinum*	5	No	FAC
6. *Solanum carolinense*	5	No	FACU
7. *Fallopia scandens*	3	No	FAC
8. *Viola pratincola*	1	No	FACW
9.			
10.			
	129	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/1	90	10YR 4/6	10	C	M	SICL	
5-12	10YR 5/2	80	7.5YR 4/4	20	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47B

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75848 Long: -90.14455 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	30	Yes	FAC
2. *Morus alba*	10	Yes	FAC
3.			
4.			
5.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus lanceolata*	3	No	FACW
2.			
3.			
4.			
5.			
	3	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Apocynum cannabinum*	18	Yes	FAC
2. *Fraxinus lanceolata*	15	Yes	FACW
3. *Elymus virginicus*	10	Yes	FACW
4. *Eupatorium serotinum*	10	Yes	FAC
5. *Campsis radicans*	7	No	FACU
6. *Ambrosia trifida*	4	No	FAC
7. *Vitis aestivalis*	3	No	FACU
8. *Ampelopsis cordata*	2	No	FAC
9. *Cirsium discolor*	2	No	FACU
10. *Physalis subglabrata*	1	No	UPL
	74	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Campsis radicans*	2	No	FACU
2. *Toxicodendron radicans*	2	No	FAC
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					SIL	
6-12	10YR 5/2	85	10YR 5/6	15	C	M	LFS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75809 Long: -90.14563 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia trifida*	80	Yes	FAC
2. *Persicaria coccinea*	70	Yes	OBL
3. *Ambrosia artemisiifolia*	10	No	FACU
4. *Melilotus sp.*	3	No	D
5. *Strophostyles helvula*	3	No	FAC
6. *Solanum carolinense*	2	No	FACU
7. *Acalypha rhomboidea*	1	No	FACU
8. *Bidens frondosa*	1	No	FACW
9. *Chamaecrista fasciculata*	1	No	FACU
10. *Chenopodium album*	1	No	FACU
	175	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

When possible the wetland indicator status has been determined for taxa identified only to the genus level (D=non-hydrophytic; H=hydrophytic). Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 5/2	80	10YR 5/6	20	C	M	FSL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47D

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75702 Long: -90.14748 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	35	Yes	FAC
2.			
3.			
4.			
5.			
	35	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cephalanthus occidentalis*	20	Yes	OBL
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Ammannia coccinea*	30	Yes	OBL
2. *Xanthium strumarium*	30	Yes	FAC
3. *Lindernia dubia*	20	Yes	OBL
4. *Persicaria hydropiperoides*	8	No	OBL
5. *Echinochloa muricata*	2	No	OBL
6. *Echinodorus berteroi*	2	No	OBL
7. *Eleocharis ovata var. obtusa*	2	No	OBL
8. *Rorippa palustris*	2	No	OBL
9. *Cyperus esculentus*	1	No	FACW
10. *Leersia oryzoides*	1	No	OBL
	99	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals	(A)	(B)
Prevalence Index = B/A =		

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 47D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-12	10YR 4/1	87	7.5YR 4/6	13	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47E

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75744 Long: -90.14747 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PSS1C

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Potentilla norvegica*	65	Yes	FAC
2. *Ambrosia trifida*	50	Yes	FAC
3. *Carex hyalinolepis*	12	No	OBL
4. *Persicaria coccinea*	10	No	OBL
5. *Strophostyles helvula*	10	No	FAC
6. *Apocynum cannabinum*	2	No	FAC
7. *Rumex sp.*	1	No	-
8. *Solanum carolinense*	1	No	FACU
9.			
10.			
	151 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100					SIL	
3-12	10YR 5/1	82	10YR 5/6	18	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 47F

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.75865 Long: -90.14496 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PSS1C

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus lanceolata*	10	Yes	FACW
2. *Salix nigra*	10	Yes	OBL
3.			
4.			
5.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Elymus virginicus*	40	Yes	FACW
2. *Apocynum cannabinum*	30	Yes	FAC
3. *Persicaria coccinea*	25	Yes	OBL
4. *Vitis riparia*	15	No	FACW
5. *Carex hyalinolepis*	10	No	OBL
6. *Carex molesta*	5	No	FAC
7.			
8.			
9.			
10.			
	125	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Toxicodendron radicans*	2	No	FAC
2. *Vitis riparia*	1	No	FACW
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 47F

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/1	100					SIL	
5-12	10YR 4/2	17	7.5YR 4/6	83	C	M	FSL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☑ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 7/12/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 48A

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76141 Long: -90.14190 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Orthents, loamy, undulating; revised to Aquent NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet meadow.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Cyperus esculentus*	50	Yes	FACW
2. *Rumex crispus*	25	Yes	FAC
3. *Iva annua*	10	No	FAC
4. *Carex tribuloides*	5	No	OBL
5. *Ampelamus albidus*	3	No	FAC
6. *Sonchus asper*	3	No	FACU
7. *Acalypha rhomboidea*	2	No	FACU
8. *Calystegia sepium*	2	No	FAC
9. *Humulus japonicus*	2	No	FACU
10.			
	102 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 48A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					SICL	
3-12	10YR 4/1	85	7.5YR 4/6	15	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76171 Long: -90.14987 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: U

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.
NRCS mapped as Namoki SICL, 0-2% slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	15	Yes	FACW
2. *Acer negundo*	10	Yes	FAC
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	40	Yes	FAC
2. *Toxicodendron radicans*	5	No	FAC
3.			
4.			
5.			
	45	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Elymus virginicus*	15	Yes	FACW
2. *Toxicodendron radicans*	15	Yes	FAC
3. *Viola pratincola*	6	No	FACW
4. *Campsis radicans*	5	No	FACU
5. *Carex sp.*	4	No	-
6. *Ageratina altissima*	3	No	FACU
7. *Cornus drummondii*	3	No	FAC
8. *Lonicera maackii*	2	No	UPL
9. *Hackelia virginiana*	1	No	FACU
10.			
	54	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis cinerea*	15	Yes	FACW
2. *Vitis riparia*	15	Yes	FACW
	35	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 49A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	95	10YR 4/4	5	C	M	SICL	
6-12+	10YR 4/1	88	10YR 4/4	12	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76161 Long: -90.14575 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	55	Yes	FACW
2. *Populus deltoides*	40	Yes	FAC
3. *Fraxinus lanceolata*	7	No	FACW
4.			
5.			
	102	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	2	No	FACW
2. *Diospyros virginiana*	2	No	FAC
3.			
4.			
5.			
	4	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	15	Yes	FACW
2. *Acer saccharinum*	5	No	FACW
3. *Ambrosia trifida*	3	No	FAC
4. *Ageratina altissima*	2	No	FACU
5. *Eupatorium serotinum*	2	No	FAC
6. *Fraxinus lanceolata*	1	No	FACW
7. *Persicaria punctata*	1	No	OBL
8.			
9.			
10.			
	29	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	2	No	FACW
2.			
	2	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 49B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	92	10YR 4/4	8	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 9/1/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 49C

Investigator(s): Wilm, Kenney, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression on floodplain Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76190 Long: -90.14280 Datum: NAD 83

Soil Map Unit Name: NRCS mapped Nameoki SICL, 0-2% slopes, freq. fld.; revised to Aquent NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	10	Yes	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer negundo*	15	Yes	FAC
2. *Cornus drummondii*	4	Yes	FAC
3.			
4.			
5.			
	19	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Campsis radicans*	40	Yes	FACU
2. *Ampelopsis cordata*	20	Yes	FAC
3. *Cornus drummondii*	10	No	FAC
4. *Chamaecrista fasciculata*	7	No	FACU
5. *Toxicodendron radicans*	6	No	FAC
6. *Desmodium canescens*	5	No	UPL
7. *Conyza canadensis*	2	No	FACU
8. *Eupatorium serotinum*	2	No	FAC
9. *Morus alba*	2	No	FAC
10. *Acalypha rhomboidea*	1	No	FACU
	97	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	15	Yes	FAC
2. *Vitis cinerea*	1	No	FACW
	16	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

Additional species are present in one or more strata, therefore the total cover may be greater than the sum of the individual cover values listed on this form.

SOIL

Sampling Point: 49C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					SIL	
5-12	10YR 4/2	95	7.5YR 4/6	5	C	M	SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 50A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76100 Long: -90.14903 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	85	Yes	OBL
2. *Lemna minor*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	86	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 50A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 4/1	92	10YR 4/4	8	C	M	MKSIL	
2-6	2.5Y 4/1	92	10YR 5/6	5	C	M	SICL	
2-6			7.5YR 4/4	3	C	M		
6-12	2.5Y 4/1	95	10YR 4/4	5	C	M	SICL	
12-15+	N 4/	95	10YR 4/4	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☑ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <48

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/9/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 51A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 31, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76115 Long: -90.14695 Datum: NAD 83

Soil Map Unit Name: Rocher L, 2-5% slopes, frequently flooded NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	No		
Wetland Hydrology Present?	No		

Remarks: Community type is mesic floodplain forest.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	25	Yes	FACW
2.			
3.			
4.			
5.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus drummondii*	35	Yes	FAC
2. *Celtis occidentalis*	15	Yes	FAC
3. *Diospyros virginiana*	10	No	FAC
4. *Rubus discolor*	10	No	UPL
5.			
	70	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex tribuloides*	60	Yes	OBL
2. *Toxicodendron radicans*	15	No	FAC
3. *Sanicula canadensis*	5	No	FACU
4. *Ageratina altissima*	4	No	FACU
5. *Carex sp.*	2	No	-
6. *Celtis occidentalis*	2	No	FAC
7.			
8.			
9.			
10.			
	88	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Ampelopsis cordata*	15	Yes	FAC
2. *Toxicodendron radicans*	10	Yes	FAC
	25	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 51A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	100					SIL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 52A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76250 Long: -90.14527 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	3	No	FACW
2. *Fraxinus lanceolata*	1	No	FACW
3.			
4.			
5.			
	4	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	75	Yes	OBL
2. *Leersia oryzoides*	30	Yes	OBL
3. *Persicaria punctata*	4	No	OBL
4. *Bidens frondosa*	2	No	FACW
5. *Ipomoea lacunosa*	2	No	FACW
6. *Ammannia coccinea*	1	No	OBL
7.			
8.			
9.			
10.			
	114	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 52A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5Y 4/1	90	10YR 4/4	10	C	M, PL	SICL	
16-20	2.5Y 5/1	95	10YR 4/4	5	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☑ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 53A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76278 Long: -90.14274 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 53A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/3/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 54A

Investigator(s): Wilm, Wiesbrook, McIntyre Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): <2 Lat: 38.76483 Long: -90.14909 Datum: NAD 83

Soil Map Unit Name: Darwin SIC, 0- 2% slopes, freq. flooded, long duration NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wetland pond.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ludwigia peploides var. glabrescens*	70	Yes	OBL
2. *Lemna minor*	20	No	OBL
3. *Wolffia columbiana*	20	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 54A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5Y 3/1	100					SICL	
3-12+	5B 4/1	95	10YR 4/6	5	C	M	SIC	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☑ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <48

Water Table Present? Yes Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes Depth (inches): 4

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 55A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Enclosed depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76583 Long: -90.14528 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is marsh.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	40	Yes	OBL
2. *Lemna minor*	5	No	OBL
3. *Cyperus esculentus*	1	No	FACW
4. *Echinochloa muricata*	1	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
	47 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators

- [x] 1-Rapid Test for Hydrophytic Vegetation
- [ ] 2-Dominance Test is >50%
- [ ] 3-Prevalence Index is < or =3.0[1]
- [ ] 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 55A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5Y 3/1	100					MK	
2-12	2.5Y 4/1	90	10YR 4/4	5	C	M	SICL	
2-12			7.5YR 4/4	5	C	M, PL		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☑ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☑ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☑ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☑ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): <1

Water Table Present? Yes Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes Depth (inches): 0

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 56A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76563 Long: -90.14498 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.
NRCS mapped as Darwin SIC, 0-2% slopes, frequently flooded, long duration; revised to Aquent

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Persicaria coccinea*	70	Yes	OBL
2. *Ambrosia artemisiifolia*	40	Yes	FACU
3. *Humulus japonicus*	35	Yes	FACU
4. *Bidens frondosa*	4	No	FACW
5. *Chenopodium album*	1	No	FACU
6. *Phyla lanceolata*	1	No	OBL
7. *Sida spinosa*	1	No	FACU
8.			
9.			
10.			
	152 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 56A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12+	2.5Y 4/1	93	10YR 4/4	5	C	M	SICL	
0-12+			2.5Y 4/3	2	C	M		

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 57A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave

Slope (%): <1 Lat: 38.76770 Long: -90.14776 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	No	**Is the Sampled Area within a Wetland?**	**No**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	No		

Remarks: Community type is forbland.
NRCS mapped as Fishpot-Urban land comlex, 0-5% slopes, rarely flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Ambrosia artemisiifolia*	60	Yes	FACU
2. *Chaiturus marrubiastrum*	35	Yes	UPL
3. *Bidens frondosa*	12	No	FACW
4. *Ambrosia trifida*	5	No	FAC
5. *Persicaria coccinea*	3	No	OBL
6. *Campsis radicans*	2	No	FACU
7. *Morus alba*	2	No	FAC
8. *Trifolium repens*	2	No	FACU
9. *Ipomoea lacunosa*	1	No	FACW
10. *Solanum carolinense*	1	No	FACU
	123 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 57A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 4/1	90	7.5YR 4/6	10	C	M	SICL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):

Water Table Present? No Depth (inches):

Saturation Present? (includes capillary fringe) No Depth (inches):

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 58A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Man-made sand pile Local relief (concave, convex, none): None

Slope (%): 0 Lat: 38.76911 Long: -90.14535 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1Cx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is forested wetland.
NRCS mapped as Nameoki silty clay loam, 0 to 2 percent slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	75	Yes	OBL
2. *Populus deltoides*	10	No	FAC
3.			
4.			
5.			
	85	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bidens frondosa*	25	Yes	FACW
2. *Apocynum cannabinum*	15	Yes	FAC
3. *Aster lanceolatus*	15	Yes	FAC
4. *Ambrosia trifida*	8	No	FAC
5. *Campsis radicans*	5	No	FACU
6. *Desmodium sp.*	3	No	D
7. *Vitis riparia*	2	No	FACW
8.			
9.			
10.			
	73	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Vitis riparia*	4	No	FACW
2.			
	4	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)
When possible the wetland indicator status has been determined for taxa identified only to the genus level (D=non-hydrophytic; H=hydrophytic).

SOIL

Sampling Point: 58A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 4/2	95	10YR 4/45	5	C	M, PL	FSL	
5-12+	2.5Y 4/2	97	10YR 4/4	3	C	M	LS	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☑ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 58B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavation Local relief (concave, convex, none): Concave

Slope (%): < 1 Lat: 38.76911 Long: -90.14351 Datum: NAD 83

Soil Map Unit Name: See Remarks NWI classification: PFO1Cx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area within a Wetland?**	**Yes**
Hydric Soil Present?	Yes		
Wetland Hydrology Present?	Yes		

Remarks: Community type is wet forbland.
NRCS mapped as Nameoki silty clay loam, 0 to 2 percent slopes, frequently flooded; revised to Aquent

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	7	Yes	OBL
2.			
3.			
4.			
5.			
	7 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft radius)			
1. *Lindernia dubia*	65	Yes	OBL
2. *Xanthium strumarium*	50	Yes	FAC
3. *Persicaria lapathifolia*	12	No	FACW
4. *Ammannia coccinea*	8	No	OBL
5. *Phyla lanceolata*	7	No	OBL
6. *Cyperus esculentus*	5	No	FACW
7. *Amaranthus tuberculatus*	1	No	OBL
8. *Bidens frondosa*	1	No	FACW
9.			
10.			
	149 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals (A)	(B)	

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☑ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 58B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8.5	2.5Y 4/1	92	10YR 4/4	8	C	M, PL	FSL	
8.5-12	2.5Y 5/1	95	10YR 4/4	5	C	M	SL	

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): _____

Water Table Present? No Depth (inches): _____

Saturation Present? (includes capillary fringe) No Depth (inches): _____

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59A

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Enclosed depression Local relief (concave, convex, none): Convex

Slope (%): 0-2 Lat: 38.76927 Long: -90.14947 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: PUBGx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59B

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.76901 Long: -90.14637 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Rocher loam, 2-5% slopes, frequently flooded NWI classification: PEMC

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	
Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
Wetland Hydrology Present?	

Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ 1-Rapid Test for Hydrophytic Vegetation
- ☐ 2-Dominance Test is >50%
- ☐ 3-Prevalence Index is < or =3.0[1]
- ☐ 4-Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2] Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-270 (FAI 270) over Mississippi River City/County: Madison Sampling Date 8/10/2016

Applicant/Owner: IDOT District 8 State: IL Sampling Point 59C

Investigator(s): Wilm, Tsai, Ketzner Section, Township, Range: Sec. 30, T4N, R9W

Landform (hillslope, terrace, etc.): Excavated depression Local relief (concave, convex, none): Concave

Slope (%): 0-2 Lat: 38.77000 Long: -90.14149 Datum: NAD 83

Soil Map Unit Name: NRCS mapped as Water NWI classification: L1UBHx

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

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SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

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Hydric Soil Present?	**Is the Sampled Area within a Wetland?** **No**
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Remarks: Community type is deepwater aquatic habitat.
This site is a deepwater aquatic habitat with an average water depth greater than 2 m. According to the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) it is therefore not a wetland and the remaining fields on this form are not appropriate to describe this site.

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Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: (B)

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Column Totals	(A)		(B)

Prevalence Index = B/A =

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Hydrophytic Vegetation Present?

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: 59C

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

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- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
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- ☐ Depleted Matrix (F3)
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- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required: check all that apply)

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- ☐ High Water Table (A2)
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- ☐ Water Marks (B1)
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- ☐ Presence of Reduced Iron (C4)
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- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two is required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
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- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? _____ Depth (inches): _____

Water Table Present? _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) _____ Depth (inches): _____

Wetland Hydrology Present? _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX B

Wetland Plant Species Lists

Project Title: I-270 (FAI 270) over Mississippi River **Sequence No: 19320A**
Site 3 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Typha angustifolia*	**narrow-leaved cattail**	**H**	OBL	-
Acer negundo	box elder	HS	FAC	1
Agrostis gigantea	red top	H	FACW	0
Ambrosia trifida	giant ragweed	H	FAC	0
Amorpha fruticosa	false indigo bush	S	FACW	6
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Bidens frondosa	common beggar's ticks	H	FACW	1
*Bromus japonicus**	Japanese chess	H	FACU	-
Calystegia sepium	American bindweed	H	FAC	1
Carex vulpinoidea	brown fox sedge	H	FACW	3
Elymus virginicus	Virginia wild rye	H	FACW	4
Erigeron strigosus	daisy fleabane	H	FACU	2
Fraxinus lanceolata	green ash	HS	FACW	2
Iva annua	marsh elder	H	FAC	0
Juncus torreyi	Torrey's rush	H	FACW	3
Leersia oryzoides	rice cut grass	H	OBL	3
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lotus corniculatus**	birdsfoot trefoil	H	FACU	-
Lycopus americanus	common water horehound	H	OBL	3
*Morus alba**	white mulberry	HS	FAC	-
Oenothera biennis	common evening primrose	H	FACU	1
*Persicaria vulgaris**	lady's thumb	H	FACW	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Populus deltoides	eastern cottonwood	S	FAC	2
Rumex altissimus	pale dock	H	FACW	2
*Rumex crispus**	curly dock	H	FAC	-
Salix amygdaloides	peach-leaved willow	S	FACW	4
Salix interior	sandbar willow	HS	FACW	1
Salix nigra	black willow	ST	OBL	3
Solidago canadensis	Canada goldenrod	H	FACU	1
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Teucrium canadense	germander	H	FACW	3
*Torilis japonica**	Japanese hedge parsley	H	UPL	-
Toxicodendron radicans	poison ivy	H	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.6

Site 4 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	HS**T**	FACW	1
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Impatiens capensis	**spotted touch-me-not**	**H**	FACW	2
Populus deltoides	**eastern cottonwood**	S**T**	FAC	2
Acer negundo	box elder	HST	FAC	1
Agrostis gigantea	red top	H	FACW	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Amorpha fruticosa	false indigo bush	S	FACW	6
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
*Atriplex patula**	fat-hen saltbush	H	FACW	-
Bidens comosa	swamp tickseed	H	OBL	2
Boehmeria cylindrica	false nettle	H	OBL	3
Calystegia sepium	American bindweed	H	FAC	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex hyalinolepis	southern lake sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Conyza canadensis	horseweed	H	FACU	0
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Diospyros virginiana	persimmon	H	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Erigeron strigosus	daisy fleabane	H	FACU	2
*Euonymus fortunei**	wintercreeper	H	UPL	-
Fraxinus lanceolata	green ash	HST	FACW	2
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
*Humulus japonicus**	Japanese hops	H	FACU	-
Iva annua	marsh elder	H	FAC	0
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
Lycopus americanus	common water horehound	H	OBL	3
*Morus alba**	white mulberry	HST	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria sp.	smartweed	H	-	-
*Persicaria vulgaris**	lady's thumb	H	FACW	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Pilea pumila	Canada clearweed	H	FACW	3

(Species list concludes on following page.)

Site 4 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Platanus occidentalis	sycamore	T	FACW	3
Quercus palustris	pin oak	H	FACW	4
Ranunculus sceleratus	cursed crowfoot	H	OBL	3
*Rumex crispus**	curly dock	H	FAC	-
Rumex verticillatus	swamp dock	H	OBL	5
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Saururus cernuus	lizard's tail	H	OBL	5
Senecio glabellus	butterweed	H	FACW	0
Sicyos angulatus	bur cucumber	H	FACW	3
*Sonchus asper**	prickly sow thistle	H	FACU	-
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.3

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.7

Site 10 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	HS**T**	FACW	1
Aster lateriflorus	**side-flowering aster**	**H**	FACW	2
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Sicyos angulatus	**bur cucumber**	**H**	FACW	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
*Alliaria petiolata**	garlic mustard	H	FAC	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
*Artemisia annua**	annual wormwood	H	FACU	-
Aster lanceolatus	panicled aster	H	FAC	3
Bidens comosa	swamp tickseed	H	OBL	2
Campsis radicans	trumpet creeper	HSW	FACU	2
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
*Chenopodium album**	lamb's quarters	H	FACU	-
*Commelina communis**	common day flower	H	FACU	-
Conyza canadensis	horseweed	H	FACU	0
Cyperus sp.	nut sedge	H	-	-
Diospyros virginiana	persimmon	H	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Eupatorium serotinum	late boneset	H	FAC	1
Forestiera acuminata	swamp privet	ST	OBL	6
Fraxinus lanceolata	green ash	HST	FACW	2
Gleditsia triacanthos	honey locust	HST	FACU	2
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Juncus tenuis	path rush	H	FAC	0
Laportea canadensis	Canada wood nettle	H	FACW	2
Leersia virginica	white grass	H	FACW	4
*Melilotus sp.**	sweet clover	H	D	-
Mimulus ringens	monkey flower	H	OBL	5
*Morus alba**	white mulberry	HST	FAC	-
Oxalis stricta	common wood sorrel	H	FACU	0

(Species list concludes on following page.)

Site 10 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
*Perilla frutescens**	beefsteak plant	H	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Phytolacca americana	pokeweed	H	FACU	1
Pilea pumila	Canada clearweed	H	FACW	3
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa annua**	annual blue grass	H	FACU	-
Populus deltoides	eastern cottonwood	ST	FAC	2
Ranunculus sceleratus	cursed crowfoot	H	OBL	3
Rorippa palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	HS	FACU	5
*Rumex crispus**	curly dock	H	FAC	-
Rumex verticillatus	swamp dock	H	OBL	5
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	HS	OBL	3
Senecio glabellus	butterweed	H	FACW	0
*Sisymbrium loeselii**	tall hedge mustard	H	UPL	-
Solanum carolinense	horse nettle	H	FACU	0
Solanum ptychanthum	black nightshade	H	FACU	0
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Stachys tenuifolia	smooth hedge nettle	H	OBL	5
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
Ulmus americana	American elm	HST	FACW	5
Urtica gracilis	stinging nettle	H	FACW	2
*Verbascum thapsus**	woolly mullein	H	UPL	-
Verbena urticifolia	white vervain	H	FAC	3
Veronica peregrina	purslane speedwell	H	FACW	0
Viola pratincola	common blue violet	H	FACW	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.9

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 12 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Phyla lanceolata	**fog fruit**	**H**	OBL	1
Rumex crispus*	**curly dock**	**H**	FAC	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
*Atriplex patula**	fat-hen saltbush	H	FACW	-
Carex sp.	sedge	H	-	-
Cephalanthus occidentalis	buttonbush	H	OBL	4
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Forestiera acuminata	swamp privet	H	OBL	6
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Leptochloa attenuata	sprangle top	H	FACW	7
Leptochloa panicoides	salt meadow grass	H	OBL	9
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Populus deltoides	eastern cottonwood	H	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.7

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.8

Site 14 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	**H**	FACW	1
Iva annua	**marsh elder**	**H**	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Glycine max (p)*	soybean	H	UPL	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Polygonum buxiforme	boxwood knotweed	H	FAC	0
*Rorippa sylvestris**	creeping yellow cress	H	OBL	-
*Rumex crispus**	curly dock	H	FAC	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.2

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 3.9

Planted species (p) are not included in mean C or FQI calculations.

Site 17 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leptochloa panicoides	**salt meadow grass**	**H**	OBL	9
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Phyla lanceolata	**fog fruit**	**H**	OBL	1
Acer saccharinum	silver maple	H	FACW	1
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Iva annua	marsh elder	H	FAC	0
Leptochloa attenuata	sprangle top	H	FACW	7
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Ludwigia palustris var. americana	marsh purslane	H	OBL	4
Plantago rugelii	red-stalked plantain	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
*Sida spinosa**	prickly sida	H	FACU	-
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.2
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.0

Site 18 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Cyperus esculentus	field nut sedge	H	FACW	0
Glycine max (p)*	soybean	H	UPL	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 0.3
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 0.6
Planted species (p) are not included in mean C or FQI calculations.

Site 20 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Humulus japonicus*	**Japanese hops**	**H**	FACU	-
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
Carex normalis	spreading oval sedge	H	FACW	4
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Leptochloa panicoides	salt meadow grass	H	OBL	9
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
*Mollugo verticillata**	carpet weed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
*Rumex crispus**	curly dock	H	FAC	-
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.8

Site 21 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Rumex crispus*	**curly dock**	**H**	FAC	-
Ambrosia trifida	giant ragweed	H	FAC	0
Aster lanceolatus	panicled aster	H	FAC	3
Bidens comosa	swamp tickseed	H	OBL	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Elymus virginicus	Virginia wild rye	H	FACW	4
Glycine max (p)*	soybean	H	UPL	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Leptochloa panicoides	salt meadow grass	H	OBL	9
Phyla lanceolata	fog fruit	H	OBL	1
Senecio glabellus	butterweed	H	FACW	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.6

Planted species (p) are not included in mean C or FQI calculations.

Site 22 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	**three-seeded mercury**	**H**	FACU	0
Acer saccharinum	**silver maple**	H**ST**	FACW	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Campsis radicans	**trumpet creeper**	**H**	FACU	2
Acer negundo	box elder	ST	FAC	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Asclepias incarnata	swamp milkweed	H	OBL	4
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex hyalinolepis	southern lake sedge	H	OBL	4
Circaea lutetiana ssp. canadensis	enchanter's nightshade	H	FACU	2
*Commelina communis**	common day flower	H	FACU	-
Erigeron sp.	fleabane	H	-	-
Eupatorium serotinum	late boneset	H	FAC	1
Forestiera acuminata	swamp privet	HST	OBL	6
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Persicaria punctata	smartweed	H	OBL	3
Physalis subglabrata	smooth ground cherry	H	UPL	0
Sium suave	water parsnip	H	OBL	5

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 7.8

Site 23 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer negundo	**box elder**	HS**T**	FAC	1
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Campsis radicans	**trumpet creeper**	**H**W	FACU	2
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Cornus drummondii	**rough-leaved dogwood**	H**S**	FAC	2
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Salix interior	**sandbar willow**	H**S**	FACW	1
Toxicodendron radicans	**poison ivy**	**HW**	FAC	1
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HST	FACW	1
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Asclepias incarnata	swamp milkweed	H	OBL	4
Aster lanceolatus	panicled aster	H	FAC	3
Bidens aristosa	swamp marigold	H	FACW	1
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Celtis laevigata	sugarberry	T	FACW	5
Celtis occidentalis	hackberry	S	FAC	3
Chamaecrista fasciculata	golden cassia	H	FACU	1
Cirsium discolor	pasture thistle	H	FACU	3
*Commelina communis**	common day flower	H	FACU	-
Cornus obliqua	pale dogwood	S	FACW	4
Cuscuta gronovii	common dodder	H	UPL	2
Cyperus esculentus	field nut sedge	H	FACW	0
Desmanthus illinoensis	Illinois bundle flower	H	FACU	4
Desmodium sp.	tick trefoil	H	D	-
Elymus virginicus	Virginia wild rye	H	FACW	4
Equisetum hyemale var. affine	tall scouring rush	H	FACW	2
Eragrostis hypnoides	creeping love grass	H	OBL	5
*Euonymus fortunei**	wintercreeper	H	UPL	-
Eupatorium serotinum	late boneset	H	FAC	1
*Festuca pratensis**	meadow fescue	H	FACU	-
Forestiera acuminata	swamp privet	HST	OBL	6
Gleditsia triacanthos	honey locust	T	FACU	2
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Liquidambar styraciflua	sweet gum	S	FACW	6
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-

(Species list concludes on following page.)

Site 23 - Forested wetland (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
*Morus alba**	white mulberry	HST	FAC	-
Panicum virgatum	prairie switch grass	H	FAC	4
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Potentilla norvegica	rough cinquefoil	H	FAC	0
Pyrrhopappus carolinianus	false dandelion	H	UPL	1
*Pyrus calleryana**	ornamental pear	S	UPL	-
Rorippa palustris var. palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	HS	FACU	5
*Rumex crispus**	curly dock	H	FAC	-
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix nigra	black willow	ST	OBL	3
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Tripsacum dactyloides	gama grass	H	FAC	4
Ulmus americana	American elm	HST	FACW	5
Verbena urticifolia	white vervain	H	FAC	3
Vitis aestivalis	summer grape	HW	FACU	4
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 18.3

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 26 - Wet forbland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Bidens comosa	**swamp tickseed**	**H**	OBL	2
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Melilotus alba*	**white sweet clover**	**H**	FACU	-
Salix interior	**sandbar willow**	H**S**	FACW	1
Strophostyles helvula	**trailing wild bean**	**H**	FAC	3
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Carex sp.	sedge	H	-	-
Conyza canadensis	horseweed	H	FACU	0
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
*Helianthus annuus**	common sunflower	H	FACU	-
Iva annua	marsh elder	H	FAC	0
Leersia oryzoides	rice cut grass	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Lycopus americanus	common water horehound	H	OBL	3
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
*Poa pratensis**	Kentucky blue grass	H	FAC	-
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4
Salix nigra	black willow	S	OBL	3
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.5

Site 30 - Wet shrubland/wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Salix interior	**sandbar willow**	H**S**	FACW	1
Salix nigra	**black willow**	H**S**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria punctata	smartweed	H	OBL	3
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.4

Site 33 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex hyalinolepis	**southern lake sedge**	**H**	OBL	4
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Eclipta prostrata	yerba de tajo	H	FACW	2
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Lycopus americanus	common water horehound	H	OBL	3
*Melilotus alba**	white sweet clover	H	FACU	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
*Persicaria vulgaris**	lady's thumb	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
*Poa pratensis**	Kentucky blue grass	H	FAC	-
*Rumex crispus**	curly dock	H	FAC	-
*Setaria faberi**	giant foxtail	H	FACU	-
Solanum carolinense	horse nettle	H	FACU	0
Solanum ptychanthum	black nightshade	H	FACU	0
*Sonchus arvensis**	field sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	H	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Verbena urticifolia	white vervain	H	FAC	3
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.3

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.3

Site 34 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Amaranthus tuberculatus	**tall waterhemp**	**H**	OBL	1
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Xanthium strumarium	**cocklebur**	**H**	FAC	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Acalypha ostryifolia	three-seeded mercury	H	UPL	1
Amaranthus rudis	tamarisk waterhemp	H	OBL	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
*Artemisia annua**	annual wormwood	H	FACU	-
Chamaesyce humistrata	spreading spurge	H	FACW	1
Conyza canadensis	horseweed	H	FACU	0
Cyperus esculentus	field nut sedge	H	FACW	0
*Digitaria sanguinalis**	hairy crab grass	H	FACU	-
Eclipta prostrata	yerba de tajo	H	FACW	2
*Eriochloa villosa**	Chinese cup grass	H	UPL	-
*Humulus japonicus**	Japanese hops	H	FACU	-
*Ipomoea hederacea**	ivy-leaved morning glory	H	FAC	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
*Mollugo verticillata**	carpet weed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Phyla lanceolata	fog fruit	H	OBL	1
Populus deltoides	eastern cottonwood	H	FAC	2
*Portulaca oleracea**	purslane	H	FACU	-
Rorippa palustris	marsh yellow cress	H	OBL	4
Rubus trivialis	southern dewberry	H	FACU	5
Salix nigra	black willow	ST	OBL	3
*Sorghum halepense**	Johnson grass	H	FACU	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.6

Site 35 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leptochloa fascicularis	**bearded sprangle top**	**H**	OBL	0
Leptochloa panicoides	**salt meadow grass**	**H**	OBL	9
Xanthium strumarium	**cocklebur**	**H**	FAC	0
*Abutilon theophrasti**	buttonweed	H	FACU	-
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Aster lateriflorus	side-flowering aster	H	FACW	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Cyperus erythrorhizos	red-rooted nut sedge	H	OBL	1
Cyperus esculentus	field nut sedge	H	FACW	0
Diodia teres	buttonweed	H	FACU	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Gratiola neglecta	clammy hedge hyssop	H	OBL	5
Ipomoea lacunosa	small morning glory	H	FACW	1
Leptochloa attenuata	sprangle top	H	FACW	7
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria sp.	smartweed	H	-	-
Physalis subglabrata	smooth ground cherry	H	UPL	0
*Sida spinosa**	prickly sida	H	FACU	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.0

Site 36 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Carex crus-corvi	**crowfoot fox sedge**	**H**	OBL	6
Morus alba*	**white mulberry**	**ST**	FAC	-
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Acer saccharinum	silver maple	HST	FACW	1
Ambrosia trifida	giant ragweed	H	FAC	0
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Celtis occidentalis	hackberry	H	FAC	3
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Diospyros virginiana	persimmon	H	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Gleditsia triacanthos	honey locust	H	FACU	2
*Lonicera japonica**	Japanese honeysuckle	H	FACU	-
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria punctata	smartweed	H	OBL	3
Sanicula odorata	clustered black snakeroot	H	FAC	2
Solidago canadensis	Canada goldenrod	H	FACU	1
Toxicodendron radicans	poison ivy	HSW	FAC	1
Ulmus americana	American elm	HST	FACW	5
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.3

Site 37 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Leersia oryzoides	**rice cut grass**	**H**	OBL	3
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HT	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex molesta	field oval sedge	H	FAC	2
Carex stipata	common fox sedge	H	OBL	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Diospyros virginiana	persimmon	S	FAC	2
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eleocharis palustris	marsh spike rush	H	OBL	5
*Humulus japonicus**	Japanese hops	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Lindernia dubia	false pimpernel	H	OBL	5
Ludwigia peploides var. glabrescens	creeping primrose willow	H	OBL	5
*Morus alba**	white mulberry	T	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Polygonum buxiforme	boxwood knotweed	H	FAC	0
Populus deltoides	eastern cottonwood	T	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Salix nigra	black willow	T	OBL	3
Schoenoplectus tabernaemontani	soft-stem bulrush	H	OBL	4
*Setaria faberi**	giant foxtail	H	FACU	-
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 13.8

Site 38 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Aster lanceolatus	**panicled aster**	**H**	FAC	3
Carex frankii	**bristly cattail sedge**	**H**	OBL	4
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Agrostis gigantea	red top	H	FACW	0
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex lurida	bottlebrush sedge	H	OBL	7
Carex molesta	field oval sedge	H	FAC	2
Carex vulpinoidea	brown fox sedge	H	FACW	3
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Elymus virginicus	Virginia wild rye	H	FACW	4
*Festuca arundinacea**	tall fescue	H	FACU	-
Fraxinus lanceolata	green ash	S	FACW	2
Leersia oryzoides	rice cut grass	H	OBL	3
Penthorum sedoides	ditch stonecrop	H	OBL	2
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
*Phalaris arundinacea**	reed canary grass	H	FACW	-
Phyla lanceolata	fog fruit	H	OBL	1
Plantago rugelii	red-stalked plantain	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4
Scirpus atrovirens	dark green rush	H	OBL	4
Solidago canadensis	Canada goldenrod	H	FACU	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Verbena urticifolia	white vervain	H	FAC	3
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.7

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 14.4

Site 39 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Persicaria punctata	**smartweed**	**H**	OBL	3
Salix nigra	**black willow**	**T**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Bidens frondosa	common beggar's ticks	H	FACW	1
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Leersia virginica	white grass	H	FACW	4
Rorippa palustris	marsh yellow cress	H	OBL	4
Teucrium canadense	germander	H	FACW	3

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.6

Site 40 - Wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia artemisiifolia	**common ragweed**	**H**	FACU	0
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Iva annua	**marsh elder**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Campsis radicans	trumpet creeper	H	FACU	2
Cephalanthus occidentalis	buttonbush	S	OBL	4
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
*Commelina communis**	common day flower	H	FACU	-
Diospyros virginiana	persimmon	S	FAC	2
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Ipomoea lacunosa	small morning glory	H	FACW	1
Lemna minor	small duckweed	H	OBL	3
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	T	OBL	3

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.6

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.5

Site 41 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer negundo	**box elder**	**ST**	FAC	1
Campsis radicans	**trumpet creeper**	**H**W	FACU	2
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Acer saccharinum	silver maple	T	FACW	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelopsis cordata	raccoon grape	HW	FAC	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Cryptotaenia canadensis	honewort	H	FAC	1
Diospyros virginiana	persimmon	H	FAC	2
Fraxinus lanceolata	green ash	ST	FACW	2
Hackelia virginiana	stickseed	H	FACU	1
*Morus alba**	white mulberry	ST	FAC	-
Persicaria punctata	smartweed	H	OBL	3
Pilea pumila	Canada clearweed	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.5

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 6.3

Site 42 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	H	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Aster lanceolatus	panicled aster	H	FAC	3
Aster lateriflorus	side-flowering aster	H	FACW	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	H	FACU	2
Carex frankii	bristly cattail sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Chamaecrista fasciculata	golden cassia	H	FACU	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
*Commelina communis**	common day flower	H	FACU	-
Cyperus acuminatus	short-pointed flat sedge	H	OBL	2
Cyperus sp.	nut sedge	H	-	-
*Daucus carota**	Queen Anne's lace	H	UPL	-
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Fraxinus lanceolata	green ash	HS	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Oxalis stricta	common wood sorrel	H	FACU	0
*Perilla frutescens**	beefsteak plant	H	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Plantago rugelii	red-stalked plantain	H	FAC	0
Polygonum buxiforme	boxwood knotweed	H	FAC	0
Prunella vulgaris var. elongata	self-heal	H	FAC	1
Rorippa palustris	marsh yellow cress	H	OBL	4
Scirpus atrovirens	dark green rush	H	OBL	4
Senecio glabellus	butterweed	H	FACW	0
*Sida spinosa**	prickly sida	H	FACU	-

(Species list concludes on following page.)

Site 42 - Wet meadow (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Solanum carolinense	horse nettle	H	FACU	0
*Sorghum halepense**	Johnson grass	H	FACU	-
Spermacoce glabra	smooth buttonweed	H	FACW	4
Toxicodendron radicans	poison ivy	H	FAC	1
*Trifolium hybridum**	Alsike clover	H	FACU	-
*Verbascum blattaria**	moth mullein	H	FACU	-
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.9
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.7

Site 44 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Iva annua	**marsh elder**	**H**	FAC	0
Persicaria punctata	**smartweed**	**H**	OBL	3
Acer negundo	box elder	ST	FAC	1
Acer saccharinum	silver maple	H	FACW	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Cuscuta gronovii	common dodder	H	UPL	2
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
*Microstegium vimineum**	Japanese stiltgrass	H	FAC	-
Phytolacca americana	pokeweed	H	FACU	1
Pilea pumila	Canada clearweed	H	FACW	3
Solanum carolinense	horse nettle	H	FACU	0
Viola pratincola	common blue violet	H	FACW	1

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.3
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 4.3

Site 45 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Acer saccharinum	**silver maple**	H**T**	FACW	1
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Carex sp.	**sedge**	**H**	-	-
Persicaria punctata	**smartweed**	**H**	OBL	3
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelopsis cordata	raccoon grape	HW	FAC	2
Carex crus-corvi	crowfoot fox sedge	H	OBL	6
Carex frankii	bristly cattail sedge	H	OBL	4
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
*Commelina communis**	common day flower	H	FACU	-
Cornus drummondii	rough-leaved dogwood	S	FAC	2
Cuscuta gronovii	common dodder	H	UPL	2
*Daucus carota**	Queen Anne's lace	H	UPL	-
Elymus virginicus	Virginia wild rye	H	FACW	4
Erechtites hieracifolia	fireweed	H	FAC	2
Erigeron philadelphicus	marsh fleabane	H	FACW	3
Eupatorium serotinum	late boneset	H	FAC	1
Fraxinus lanceolata	green ash	HST	FACW	2
Hackelia virginiana	stickseed	H	FACU	1
*Humulus japonicus**	Japanese hops	H	FACU	-
Impatiens capensis	spotted touch-me-not	H	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
*Melilotus alba**	white sweet clover	H	FACU	-
*Microstegium vimineum**	Japanese stiltgrass	H	FAC	-
*Morus alba**	white mulberry	H	FAC	-
Oxalis stricta	common wood sorrel	H	FACU	0
Phyla lanceolata	fog fruit	H	OBL	1
Phytolacca americana	pokeweed	H	FACU	1
Potentilla norvegica	rough cinquefoil	H	FAC	0
*Rumex crispus**	curly dock	H	FAC	-
Senecio glabellus	butterweed	H	FACW	0
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	H	FAC	1
Vitis riparia	riverbank grape	HW	FACW	2

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.2

Site 46 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Echinochloa muricata	**spiny barnyard grass**	**H**	OBL	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Glycine max (p)*	soybean	H	UPL	-
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
*Portulaca oleracea**	purslane	H	FACU	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 0.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 1.8

Planted species (p) are not included in mean C or FQI calculations.

Site 47 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Aster lanceolatus	**panicled aster**	**H**	FAC	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Vitis riparia	**riverbank grape**	**H**W	FACW	2
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer saccharinum	silver maple	HST	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Asclepias incarnata	swamp milkweed	H	OBL	4
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex hyalinolepis	southern lake sedge	H	OBL	4
Carex molesta	field oval sedge	H	FAC	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Chamaecrista fasciculata	golden cassia	H	FACU	1
*Chenopodium album**	lamb's quarters	H	FACU	-
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Cyperus esculentus	field nut sedge	H	FACW	0
*Daucus carota**	Queen Anne's lace	H	UPL	-
Desmodium sp.	tick trefoil	H	D	-
Diospyros virginiana	persimmon	HST	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Eupatorium serotinum	late boneset	H	FAC	1
Fallopia scandens	climbing false buckwheat	H	FAC	2
Fraxinus lanceolata	green ash	HST	FACW	2
Hordeum pusillum	little barley	H	FAC	0
*Humulus japonicus**	Japanese hops	H	FACU	-
Leersia oryzoides	rice cut grass	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
*Melilotus sp.**	sweet clover	H	D	-
*Morus alba**	white mulberry	HST	FAC	-
*Najas minor**	lesser naiad	H	OBL	-
Parietaria pensylvanica	Pennsylvania pellitory	H	FACU	2
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Phyla lanceolata	fog fruit	H	OBL	1

(Species list concludes on following page.)

Site 47 - Wet floodplain forest (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Physalis subglabrata	smooth ground cherry	H	UPL	0
Potentilla norvegica	rough cinquefoil	H	FAC	0
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rubus discolor**	Himalaya berry	S	UPL	-
Rumex sp.	dock	H	-	-
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Solanum carolinense	horse nettle	H	FACU	0
Solidago canadensis	Canada goldenrod	H	FACU	1
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Trifolium pratense**	red clover	H	FACU	-
Verbena urticifolia	white vervain	H	FAC	3
Viola pratincola	common blue violet	H	FACW	1
Vitis aestivalis	summer grape	HW	FACU	4
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.0

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 48 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Iva annua	**marsh elder**	**H**	FAC	0
Trifolium pratense*	**red clover**	**H**	FACU	-
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ampelamus albidus	blue vine	H	FAC	1
Apocynum cannabinum	dogbane	H	FAC	2
Aster pilosus	hairy aster	H	FACU	0
*Bromus commutatus**	hairy brome	H	UPL	-
Calystegia sepium	American bindweed	H	FAC	1
Campsis radicans	trumpet creeper	H	FACU	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Chamaesyce maculata	spotted creeping spurge	H	FACU	0
Cirsium discolor	pasture thistle	H	FACU	3
Conyza canadensis	horseweed	H	FACU	0
Cuscuta campestris	field dodder	H	UPL	2
*Daucus carota**	Queen Anne's lace	H	UPL	-
Eleocharis palustris	marsh spike rush	H	OBL	5
Elymus virginicus	Virginia wild rye	H	FACW	4
*Hordeum jubatum**	squirrel-tail grass	H	FAC	-
Hordeum pusillum	little barley	H	FAC	0
*Humulus japonicus**	Japanese hops	H	FACU	-
*Lepidium campestre**	field cress	H	UPL	-
Lepidium virginicum	common peppergrass	H	FACU	0
*Medicago lupulina**	black medic	H	FACU	-
*Melilotus sp.**	sweet clover	H	D	-
*Morus alba**	white mulberry	H	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Phyla lanceolata	fog fruit	H	OBL	1
Physalis subglabrata	smooth ground cherry	H	UPL	0
*Plantago lanceolata**	English plantain	H	FACU	-
Plantago rugelii	red-stalked plantain	H	FAC	0
*Poa pratensis**	Kentucky blue grass	H	FAC	-
Potentilla norvegica	rough cinquefoil	H	FAC	0
Rumex altissimus	pale dock	H	FACW	2
*Rumex crispus**	curly dock	H	FAC	-
*Setaria glauca**	pigeon grass	H	FAC	-
Solanum carolinense	horse nettle	H	FACU	0
*Sonchus asper**	prickly sow thistle	H	FACU	-
*Sorghum halepense**	Johnson grass	H	FACU	-
*Thlaspi arvense**	field penny cress	H	FACU	-

(Species list concludes on the following page.)

Site 48 - Wet meadow (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
*Torilis japonica**	Japanese hedge parsley	H	UPL	-
Toxicodendron radicans	poison ivy	H	FAC	1
*Tragopogon pratensis**	common goat's beard	H	UPL	-
*Vicia villosa**	winter vetch	H	UPL	-

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 5.7

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 49 - Wet floodplain forest

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Ampelopsis cordata	**raccoon grape**	H**W**	FAC	2
Cornus drummondii	**rough-leaved dogwood**	H**S**	FAC	2
Fraxinus lanceolata	**green ash**	S**T**	FACW	2
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Populus deltoides	**eastern cottonwood**	**T**	FAC	2
Vitis cinerea	**winter grape**	**H**W	FACW	4
Acalypha rhomboidea	three-seeded mercury	H	FACU	0
Acer negundo	box elder	ST	FAC	1
Acer saccharinum	silver maple	ST	FACW	1
Ageratina altissima	white snakeroot	H	FACU	2
Bidens frondosa	common beggar's ticks	H	FACW	1
Campsis radicans	trumpet creeper	HSW	FACU	2
Carex frankii	bristly cattail sedge	H	OBL	4
Carex sp.	sedge	H	-	-
Celtis occidentalis	hackberry	HST	FAC	3
Chamaecrista fasciculata	golden cassia	H	FACU	1
Chamaesyce humistrata	spreading spurge	H	FACW	1
Cirsium discolor	pasture thistle	H	FACU	3
*Conium maculatum**	poison hemlock	H	FACW	-
Conyza canadensis	horseweed	H	FACU	0
*Daucus carota**	Queen Anne's lace	H	UPL	-
Desmodium canescens	hoary tick trefoil	H	UPL	4
Desmodium paniculatum	panicled tick trefoil	H	FACU	2
Desmodium sp.	tick trefoil	H	D	-
Diospyros virginiana	persimmon	HST	FAC	2
Elymus virginicus	Virginia wild rye	H	FACW	4
Eupatorium serotinum	late boneset	H	FAC	1
Fallopia scandens	climbing false buckwheat	H	FAC	2
Gleditsia triacanthos	honey locust	H	FACU	2
Hackelia virginiana	stickseed	H	FACU	1
Leersia virginica	white grass	H	FACW	4
*Lonicera maackii**	Amur honeysuckle	HS	UPL	-
*Morus alba**	white mulberry	ST	FAC	-
*Persicaria cespitosa**	creeping smartweed	H	FAC	-
Persicaria punctata	smartweed	H	OBL	3
*Prunella vulgaris**	lawn prunella	H	FAC	-
*Rubus discolor**	Himalaya berry	H	UPL	-
*Securigera varia**	crown vetch	H	UPL	-
*Sorghum halepense**	Johnson grass	H	FACU	-
Strophostyles helvula	trailing wild bean	H	FAC	3
Toxicodendron radicans	poison ivy	HSW	FAC	1
Tridens flavus	common purpletop	H	UPL	1
Ulmus americana	American elm	ST	FACW	5
Verbena urticifolia	white vervain	H	FAC	3
Viola pratincola	common blue violet	H	FACW	1
Vitis riparia	riverbank grape	HW	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.0

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 12.3

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

Site 50 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	**giant ragweed**	**H**	FAC	0
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Alisma subcordatum	common water plantain	H	OBL	2
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ampelamus albidus	blue vine	H	FAC	1
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex sp.	sedge	H	-	-
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Fraxinus lanceolata	green ash	ST	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Iva annua	marsh elder	H	FAC	0
Lemna minor	small duckweed	H	OBL	3
Persicaria bicornis	long-styled knotweed	H	FACW	2
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria punctata	smartweed	H	OBL	3
Populus deltoides	eastern cottonwood	T	FAC	2
*Rumex crispus**	curly dock	H	FAC	-
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	ST	OBL	3
Sium suave	water parsnip	H	OBL	5
Solanum carolinense	horse nettle	H	FACU	0
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 1.8

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.7

Site 52 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Leersia oryzoides	**rice cut grass**	**H**	**OBL**	**3**
Persicaria coccinea	**scarlet smartweed**	**H**	**OBL**	**3**
Acer saccharinum	silver maple	HST	FACW	1
Alisma subcordatum	common water plantain	H	OBL	2
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Apocynum cannabinum	dogbane	H	FAC	2
Bacopa rotundifolia	water hyssop	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cyperus esculentus	field nut sedge	H	FACW	0
Diospyros virginiana	persimmon	S	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eclipta prostrata	yerba de tajo	H	FACW	2
Eleocharis erythropoda	red-rooted spike rush	H	OBL	3
Fraxinus lanceolata	green ash	ST	FACW	2
Ipomoea lacunosa	small morning glory	H	FACW	1
Lemna minor	small duckweed	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Persicaria bicornis	long-styled knotweed	H	FACW	2
Persicaria hydropiperoides	mild water pepper	H	OBL	4
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Sagittaria calycina	thick-stalked arrowhead	H	OBL	6
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix nigra	black willow	S	OBL	3
Sium suave	water parsnip	H	OBL	5
Vitis riparia	riverbank grape	H	FACW	2
Zosterella dubia	water star grass	H	OBL	7

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.9

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.7

Site 54 - Wetland pond

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Lemna minor	**small duckweed**	**H**	OBL	3
Ludwigia peploides var. glabrescens	**creeping primrose willow**	**H**	OBL	5
Wolffia columbiana	**water meal**	**H**	OBL	5
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Bidens frondosa	common beggar's ticks	H	FACW	1
Carex hyalinolepis	southern lake sedge	H	OBL	4
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Eclipta prostrata	yerba de tajo	H	FACW	2
Leersia oryzoides	rice cut grass	H	OBL	3
Persicaria coccinea	scarlet smartweed	H	OBL	3
Vitis riparia	riverbank grape	H	FACW	2
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.1

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.5

Site 55 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Persicaria coccinea	**scarlet smartweed**	**H**	OBL	3
Salix nigra	**black willow**	**T**	OBL	3
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Bidens frondosa	common beggar's ticks	H	FACW	1
*Chaiturus marrubiastrum**	lion's tail	H	UPL	-
Cyperus esculentus	field nut sedge	H	FACW	0
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eleocharis palustris	marsh spike rush	H	OBL	5
Ipomoea lacunosa	small morning glory	H	FACW	1
Leersia oryzoides	rice cut grass	H	OBL	3
Lemna minor	small duckweed	H	OBL	3
Lindernia dubia	false pimpernel	H	OBL	5
Persicaria lapathifolia	curttop lady's thumb	H	FACW	0
Rorippa palustris	marsh yellow cress	H	OBL	4
Sagittaria latifolia	common arrowhead	H	OBL	4
Sium suave	water parsnip	H	OBL	5
Xanthium strumarium	cocklebur	H	FAC	0

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.6

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 10.8

Site 58 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Bidens frondosa	**common beggar's ticks**	**H**	FACW	1
Cyperus esculentus	**field nut sedge**	**H**	FACW	0
Persicaria lapathifolia	**curttop lady's thumb**	**H**	FACW	0
Salix nigra	**black willow**	**ST**	OBL	3
Xanthium strumarium	**cocklebur**	**H**	FAC	0
Amaranthus tuberculatus	tall waterhemp	H	OBL	1
Ambrosia artemisiifolia	common ragweed	H	FACU	0
Ambrosia trifida	giant ragweed	H	FAC	0
Ammannia coccinea	long-leaved ammannia	H	OBL	5
Ampelamus albidus	blue vine	H	FAC	1
Ampelopsis cordata	raccoon grape	HW	FAC	2
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Aster pilosus	hairy aster	H	FACU	0
Bergia texana	bergia	H	OBL	10
Bidens connata	purple-stemmed tickseed	H	OBL	2
Campsis radicans	trumpet creeper	H	FACU	2
Carex tribuloides	awl-fruited oval sedge	H	OBL	3
Cephalanthus occidentalis	buttonbush	HS	OBL	4
Conyza canadensis	horseweed	H	FACU	0
Cyperus erythrorhizos	red-rooted nut sedge	H	OBL	1
Desmodium sp.	tick trefoil	H	D	-
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Echinodorus berteroi	lance-leaved burhead	H	OBL	6
Eleocharis ovata var. obtusa	blunt spike rush	H	OBL	2
Eragrostis hypnoides	creeping love grass	H	OBL	5
*Helianthus annuus**	common sunflower	H	FACU	-
Ipomoea lacunosa	small morning glory	H	FACW	1
Kyllinga pumila	tufted flat sedge	H	FACW	0
Leptochloa fascicularis	bearded sprangle top	H	OBL	0
Leucospora multifida	Obe-wan-Conobea	H	FACW	3
Lindernia dubia	false pimpernel	H	OBL	5
*Melilotus alba**	white sweet clover	H	FACU	-
*Morus alba**	white mulberry	HT	FAC	-
Persicaria coccinea	scarlet smartweed	H	OBL	3
Persicaria pensylvanica	pinkweed	H	FACW	1
Persicaria punctata	smartweed	H	OBL	3
Phyla lanceolata	fog fruit	H	OBL	1
Physalis subglabrata	smooth ground cherry	H	UPL	0
Populus deltoides	eastern cottonwood	HT	FAC	2
Rorippa palustris	marsh yellow cress	H	OBL	4
*Rumex crispus**	curly dock	H	FAC	-
Sagittaria latifolia	common arrowhead	H	OBL	4

(Species list concludes on following page.)

Site 58 - Forested wetland (continued)

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Salix amygdaloides	peach-leaved willow	ST	FACW	4
Salix interior	sandbar willow	S	FACW	1
Senecio glabellus	butterweed	H	FACW	0
Sium suave	water parsnip	H	OBL	5
*Sorghum halepense**	Johnson grass	H	FACU	-
Strophostyles helvula	trailing wild bean	H	FAC	3
Teucrium canadense	germander	H	FACW	3
Toxicodendron radicans	poison ivy	HW	FAC	1
*Typha angustifolia**	narrow-leaved cattail	H	OBL	-
Vitis riparia	riverbank grape	HW	FACW	2
Zizania aquatica	wild rice	H	OBL	9

*Non-native species **Bolded species is dominant in the denoted stratum** Mean C = 2.3

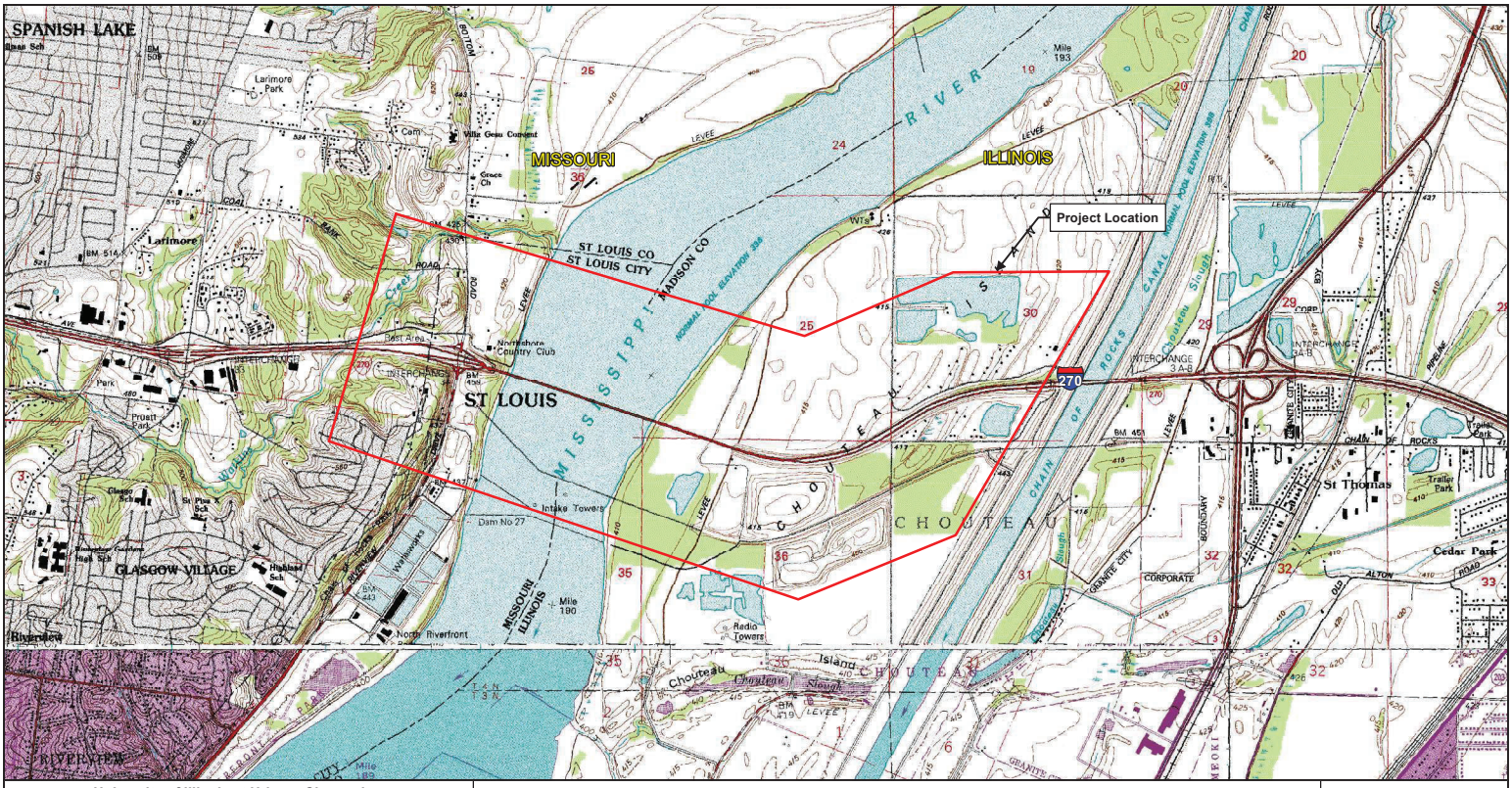
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.8

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = non-hydrophytic; H =hydrophytic).

APPENDIX C

Figures

Figure 1 – Project Location Map
Figure 2 – National Wetlands Inventory Map
Figure 3 – Wetland Determination Overview Map
Figure 4 – Wetland Determination Maps



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PRAIRIE RESEARCH INSTITUTE

Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 1
Project Location Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

Seq. No: 19320A

Meters 0 500

Feet 0 2,000

October 2016

N W E S

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Champaign, Illinois 61820

Figure 2
National Wetlands Inventory Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

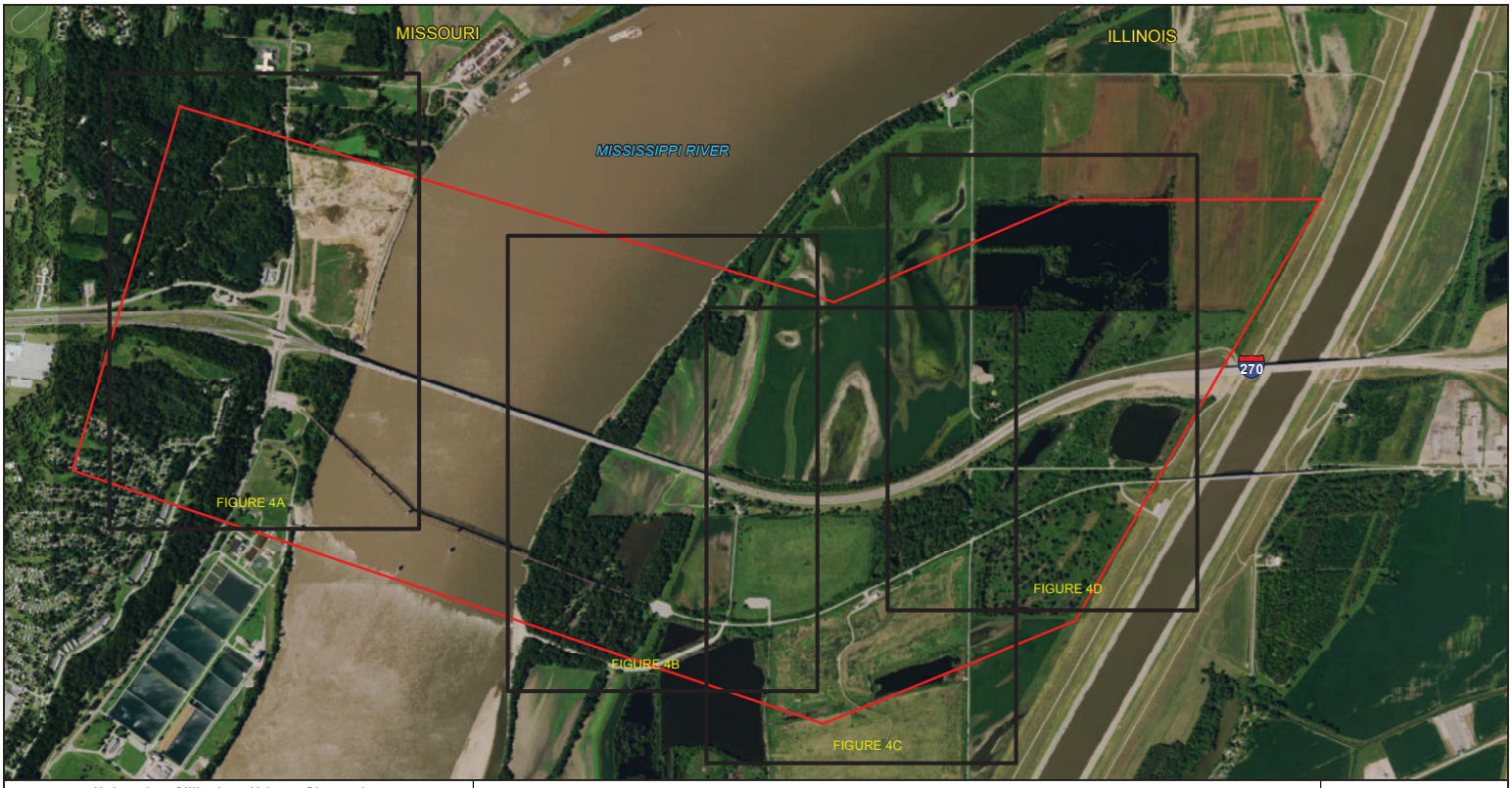
Seq. No: 19320A

Meters 0 400

Feet 0 1,250

October 2016

N W E S



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Wetland Science Program
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Champaign, Illinois 61820

Figure 3
Wetland Determination Overview Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO

Seq. No: 19320A

Meters 0 400

Feet 0 1,250

October 2016

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Wetland Science Program
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Champaign, Illinois 61820

Figure 4A
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

0 Meters 100 0 Feet 400

October 2016

N W E S

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Figure 4B
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

0 Meters 100
0 Feet 400

October 2016

N W E S

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Wetland Science Program
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Champaign, Illinois 61820

Figure 4C
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO **Seq. No: 19320A**

0 Meters 100 0 Feet 400

October 2016

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Wetland Science Program
1816 South Oak Street
Champaign, Illinois 61820

Figure 4D
Wetland Determination Map
I-270 (FAI 270) over Mississippi River
Madison County, IL and St. Louis County, MO
Seq. No: 19320A

Meters 0 100
Feet 0 400

October 2016

N W E S

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant:	Illinois Department of Transportation BDE Central Office	*IDNR Project Number:*	1802891
Contact:	Kimberly Kessinger	*Date:*	10/09/2017
Address:	2300 South Dirksen Parkway Springfield, IL 62764	*Alternate Number:*	19320 B
Project:	I 270 Bridge Replacement		
Address:	N/A, N/a		

Description: This project is a bridge replacement on I 270 over the Mississippi. there will be in stream work and an unknown amount of ROW and tree removal. This is coordination for the Preferred Alignment.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

American Eel *(Anguilla rostrata)*
Pallid Sturgeon *(Scaphirhynchus albus)*

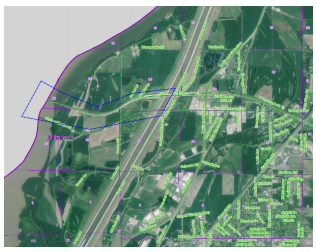
An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Madison

Township, Range, Section:
4N, 10W, 25
4N, 10W, 26
4N, 10W, 35
4N, 10W, 36
4N, 9W, 30
4N, 9W, 31



IL Department of Natural Resources Contact
Sheldon Fairfield
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Department of Transportation
Kimberly Kessinger
2300 South Dirksen Parkway
Springfield, Illinois 62764

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

October 24, 2017

Ms. Kimberly Kessinger
IDOT BDE
Natural Resources Unit
Illinois Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62674

Re: FAI 270 I-270 Bridge Replacement
Sequence Number: 19320B
IDNR EcoCAT Project Number: 1802891
Alternate Project Number(s):
County: Madison County

Dear Ms. Kessinger:

This letter concerns the Endangered Species Consultation for the FAI 270 I-270 Bridge Replacement, located in Madison County. This project was submitted for consultation in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The proposed action involves: "This project is a bridge replacement on I 270 over the Mississippi. there will be in stream work and an unknown amount of ROW and tree removal. This is coordination for the Preferred Alignment."

E&T Review
The following protected resources occur in the vicinity of the project area and proposed action:
Pallid Sturgeon (***Scaphirhynchus albus***)

Records for the state and federal listed endangered Pallid Sturgeon (*Scaphirhynchus albus*) occur in the vicinity of this project action. To avoid impacts to this species and disturbance during the spawning season, the Department recommends the following be included as commitments in the NRR:

1. No explosives shall be used during demolition of the existing structures or during construction of the new structures.

2. During demolition, the superstructure shall not be dropped into the river.

3. To avoid the spawning season for the Pallid Sturgeon, piles shall not be driven between April 15 and June 30.

The IDOT NRR Memorandum, dated 10/5/2017, indicates recommendations have been included as commitments for this project action. The Department concurs with the NRR. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Sincerely,

Sheldon R. Fairfield
Impact Assessment Section
Division of Ecosystems & Environment
Phone: (217) 782-0031
sheldon.fairfield@illinois.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Assistant Director-Ecological Services
5275 Leesburg Pike, Ms: Es
Falls Church, VA 22041-3803
Phone: (703) 358-2171 Fax: (703) 358-2171

In Reply Refer To: October 05, 2017
Consultation code: 03E14000-2018-I-0004
Consultation code: 03E18100-2018-I-0003
Event Code: 03E14000-2018-E-00085
Project Name: 19320 B I 270 over the Mississippi Preferred Alignment

Subject: Concurrence verification letter for the '19320 B I 270 over the Mississippi Preferred Alignment' project under the December 15, 2016 FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **19320 B I 270 over the Mississippi Preferred Alignment** (Proposed Action) may rely on the concurrence provided in the December 15, 2016, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Based on the information you provided (Project Description repeated below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat

and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, or any designated critical habitat, additional consultation is required. In either of these circumstances, please contact this Office.

The following species may occur in your project area and **are not** covered by this determination:

- Decurrent False Aster, *Boltonia decurrens* (Threatened)
- Eastern Massasauga (=rattlesnake), *Sistrurus catenatus* (Threatened)
- Eastern Prairie Fringed Orchid, *Platanthera leucophaea* (Threatened)
- Least Tern, *Sterna antillarum* (Endangered)
- Pallid Sturgeon, *Scaphirhynchus albus* (Endangered)
- Spectaclecase (mussel), *Cumberlandia monodonta* (Endangered)

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

19320 B I 270 over the Mississippi Preferred Alignment

Description

This is the Preferred Alignment for the replacement of I 270 over the Mississippi River. There will be in stream work to the Mississippi River. No explosives shall be used. At this time, the amount of right-of-way is unknown. The project length Is approximately 0.5 miles. There will be an unknown amount of tree removal.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect, the endangered Indiana bat and/or the threatened Northern long- eared bat; therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the December 15, 2016 FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the Northern long-eared bat[1] (NLEB)?

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, property inspections, planning and technical studies, property sales, property easements, and equipment purchases)

   No

5. Are *all* project activities completely within the existing road/rail surface[1] (e.g., road line painting)?

   [1] Road surface is defined as the driving surface and shoulders (may be pavement, gravel, etc.) and rail surface is defined as the edge of the rail ballast.

   No

6. Are *all* project activites limited to the maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

   No

7. Are *all* project activities limited to wetland or stream protection activities associated with compensatory wetland mitigation?

   No

8. Will the project raise the road profile **above the tree canopy** within 1,000 feet of known summer habitat (based on documented roosts and/or captures)?

   No

9. Does the project include percussives or other activities (not including the removal of trees) that will increase noise levels above existing traffic/background levels?

   Yes

10. Is there any suitable summer habitat[1] for Indiana Bat or NLEB within the project area? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

11. Will the project clear any suitable summer habitat[1]?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

12. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

13. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4]?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum(contact local Service Field Office for appropriate distance from hibernaculum) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    [4] negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

    SUBMITTED DOCUMENTS

    - *bat report.pdf*
      https://ecos.fws.gov/ipac/project/B3XNORD6NRGT7GG3DIP4666BQY/projectDocuments/9741743

14. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum(contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

15. Were the P/A summer surveys conducted within the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] contact the local Service Field Office for appropriate distance from hibernacula.

    No

16. Does the project include activities within documented **Indiana bat** habitat[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

17. Will the project remove any suitable **Indiana bat** roosting/foraging habitat or travel corridors that **has not** been documented as being used by Indiana bat?

    No

18. Does the project include activities within **documented NLEB** habitat[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

19. Will the project remove any suitable **NLEB** roosting/foraging habitat or travel corridors that have **not** been documented as being used by NLEB?

    No

20. Does the project include any ground disturbing activities?

    Yes

21. Is the project located within a karst area?

    No

22. Will the project include any type of activity that could impact a **known** hibernaculum[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

    [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

    No

23. Does the project include any activities **within** 0.5 miles of an Indiana bat and/or NLEB hibernaculum[1]?

    [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

    No

24. Does the project include any activities **greater than** 300 feet from existing road/rail surfaces?

    Yes

25. Does the project include slash pile burning?

    No

26. Does the project include any bridge removal and/or replacement activities?

    Yes

27. Does the project include any bridge maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    No

28. Has a Bridge Assessment[1] for use by bats been conducted within the last 12 months[2]?

    [1] See User Guide Appendix D for bridge/abandoned structure assessment guidance

    [2] Assessments must be completed a maximum of 1 year prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *bat report.pdf*
      https://ecos.fws.gov/ipac/project/B3XNORD6NRGT7GG3DIP4666BQY/projectDocuments/9741743

29. Did the bridge assessment detect bats or sign of bat roosting in/under the bridge?

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

30. Will the bridge related activities make the bridge no longer suitable for roosting?

    No

31. Does the project include the removal and/or replacement of any structures other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

32. Does the project include maintenance activities of any structures other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

33. Does the project include tree removal?

    Yes

34. Will the tree removal alter any documented Indiana bat or NLEB roosts and/or alter any surrounding summer habitat *within* 0.25 mile of a documented roost?

    No

35. Will *any* tree removal occur within 100 feet of existing road/rail surfaces[1]?

    [1] Road surface is defined as the driving surface and shoulders (may be pavement, gravel, etc.) and rail surface is defined as the edge of the rail ballast.

    Yes

36. Will *all* tree removal occur within 100 feet of existing road/rail surfaces?

    Yes

37. Are *all* trees that are being removed clearly demarcated?

    Yes

38. Will the project involve the use of **temporary** lighting during the construction/maintenance activities?

    No

39. Will the project install new (or replace existing) **permanent** lighting?

    No

40. **General AMM 1**

    Will the project ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

41. **Tree Removal AMM 1**
Can all phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is an avoidance measure, the full implementation of which may not always be practicable. In such cases, projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented

Yes

42. **Tree Removal AMM 2**
Can all tree removal activities be restricted to when bats are not likely to be present[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

43. **Tree Removal AMM 3**
Can tree removal be limited to that area specified in project plans, and assured through: (1) installation of bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits, and (2) confirmation that contractors understand clearing limits and how they are marked in the field?

Yes

44. **Tree Removal AMM 4**
Can the project avoid cutting down/removal of all 1) documented Indiana bat or NLEB roosts[1] (that are still suitable for roosting), and 2) trees within 0.25 miles of roosts?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Automatically answered
Yes - you indicated that tree removal for this project would not alter documented Indiana bat or NLEB roosts and/or summer habitat within 0.25 mile of a documented roost

Project Questionnaire

1. Please describe the proposed bridge work:
   Bridge Removal.

2. Please state the timing of all proposed bridge work:
   Unknown

3. Have you made a No Effect determination for all other species indicated on the FWS IPaC generated species list?
   No

4. Have you made a May Affect determination for any other species on the FWS IPaC generated species list?
   Yes

5. How many acres of trees are proposed for removal?
   1

6. **Please verify:**
   All tree removal will occur greater than 0.5 mile from any hibernaculum.

   Yes, I verify that all tree removal will occur greater than 0.5 miles from any hibernaculum.

7. The project location is 0-100 feet from the edge of existing road/rail surface.
   Yes

8. The project location is 100-300 feet from the edge of existing road/rail surface.
   Yes

Avoidance And Minimization Measures (AMMs)

These measures **were accepted** as part of this determination key result:

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely.

Note: Tree Removal AMM 1 is an avoidance measure, the full implementation of which may not always be practicable. In such cases, projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented.

TREE REMOVAL AMM 2

Apply time of year (TOY) restrictions for tree removal[1] when bats are not likely to be present.
[1] Coordinate with the local Service Field Office for appropriate dates.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans. Install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field.

TREE REMOVAL AMM 4

Do not cut down documented Indiana bat or NLEB roosts (that are still suitable for roosting) or trees within 0.25 miles of roosts, or documented foraging habitat at any time of year.

Additional Avoidance And Minimization Measures (AMMs)

These measures **are not required** for this project as described:

TREE REMOVAL AMM 5

Avoid conducting tree removal within documented Indiana bat roosting/foraging habitat[1] or travel corridors[2] from May 1-July 31.

[1] Documented roosting or foraging habitat – for the purposes of this BA, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.

[2] Documented travel corridor - for the purposes of this BA, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) tree corridors located directly between documented roosting and foraging habitat.

TREE REMOVAL AMM 6

Minimize tree removal within suitable Indiana bat habitat (no documented habitat) from May 1-July 31 in the following manner:
1) Limit clearing such that all trees can be visually assessed.
2a) Conduct visual emergence surveys if trees are greater than or equal to 9 inches diameter at breast height (dbh).

- If no bats are observed, proceed with clearing the following day.
- If bats observed, modify project to conduct tree removal after August 1.

OR
2b) If trees are <9 inches dbh, no emergence survey required.

TREE REMOVAL AMM 7

Avoid removing documented NLEB maternity roosts and trees within 150 feet of those roosts from June 1-July 31.

BRIDGE AMM 1

To completely avoid direct effects to roosting bats, perform any bridge repair, retrofit, maintenance, and/or rehabilitation work during the winter hibernation period[1].

[1] Coordinate with the local Service Field Office for appropriate dates.

BRIDGE AMM 2

If construction activity is planned during the active season, perform a bridge assessment[1] for presence of bats.

[1] See User Guide Appendix D for bridge assessment guidance

BRIDGE AMM 3

If bridge assessment for bats suggests presence of bats, ensure activity will not disturb bats.

BRIDGE AMM 4

If bridge assessment for bats suggests presence of a small number of bats (5)6, conduct bridge repair, retrofit, maintenance, and/or rehabilitation work (including activity with percussives) outside of pup season (June 1- July 31) AND keep the light localized in the evening while the bats are feeding, starting one hour after sunset and ending one hour before daylight, excluding the hours between 10 p.m. and midnight[1].

[1] Keeley and Tuttle (1999) indicated peak night roost usage is between 10:00 p.m. to midnight.

BRIDGE AMM 5

Ensure suitable roosting sites remain after any bridge work. Suitable roosting sites may be incorporated into the design of a new bridge.

STRUCTURE AMM 1

If the goal of the project is to exclude bats from the structure, coordinate with your local Service Field Office and follow the Acceptable Management Practices for Bat Control Activities in Structures guidance document (White-nose Syndrome Conservation and Recovery Working Group 2015).

STRUCTURE AMM 2

Perform *all* maintenance and/or repair work during the winter hibernation period[1] unless a hibernating colony of bats is present.

[1] Coordinate with the local Service Field Office for appropriate dates.

STRUCTURE AMM 3

If maintenance and/or repair work will be performed outside of the winter hibernation period, determine if work will occur in an area with roosting bats. If there is observed bat activity (or signs of frequent bat activity), Transportation Agencies/State Departments of Transportation (DOTs) will conduct maintenance activity or similar structure alteration when bats are not present (i.e., foraging) or in a manner that will not disturb them.

STRUCTURE AMM 4

If roosting bats or signs of roosting bats are observed, Transportation Agencies/State DOTs will avoid removing the structure.

Note: If there are concerns about human health/safety/property coordinate with a nuisance wildlife control officer and the local USFWS Field Office.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

LIGHTING AMM 2

Use downward-facing, full cut-off[1] lens lights, and direct lighting away from suitable habitat when installing new or replacing existing permanent lights; or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society[2][3], the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

[1] Refer to Luminaire classification for controlling stray light

[2] Refer to Fundamentals of Lighting - BUG Ratings

[3] Refer to The BUG System—A New Way To Control Stray Light

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

[1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 03, 2017. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's revised programmatic biological opinion for transportation projects dated December 15, 2016. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

U.S. Fish & Wildlife Service Contact List

Determination key office contact information

Assistant Director-Ecological Services
5275 Leesburg Pike, Ms: Es
Falls Church, VA 22041-3803
(703) 358-2171

Offices with jurisdiction over project area

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

Marion Ecological Services Sub-Office
Marion Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
(618) 997-3344

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SCI ENGINEERING, INC.
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Vibration Analysis Report

BRIDGE REPLACEMENT
I-270 OVER MISSISSIPPI RIVER AT CHAIN OF ROCKS
STRUCTURE NO. 060-0350
SECTION 60B-1
MADISON COUNTY, ILLINOIS

Thomas J. Casey, P.E.
(618) 624-6969
January 2021
Revised April 2021

Prepared for:
Horner & Shifrin, Inc.
Civil Engineer
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(618) 726-0307

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Thomas Casey
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Exp. 11/30/21

LICENSED PROFESSIONAL ENGINEER
THOMAS
JOSEPH CASEY
062-061853
STATE OF ILLINOIS

4/7/2021

SCI No. 2017-3167.10

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SCI ENGINEERING, INC.
EARTH • SCIENCE • SOLUTIONS
GEOTECHNICAL
ENVIRONMENTAL
NATURAL RESOURCES
CULTURAL RESOURCES
CONSTRUCTION SERVICES

April 1, 2021

Mr. Brad E. Riechmann, P.E.
Horner & Shifrin, Inc.
604 Pierce Boulevard #300
O'Fallon, Illinois 62269

RE: Vibration Analysis Report
Bridge Replacement
I-270 over Mississippi River at Chain of Rocks
Structure No. 060-0350
Section 60B-1
Madison County, Illinois
SCI No. 2017-3167.10

Dear Mr. Riechmann:

Enclosed is our *Vibration Analysis Report* dated January 4, 2021 and revised April 1, 2021. It should be read in its entirety, and our recommendations considered during the demolition of the existing bridge as well as the construction of the new bridge. Please call if you have any questions.

Respectfully,

SCI ENGINEERING, INC.

Prakash Paudel, E.I.
Staff Engineer

Thomas J. Casey, P.E.
Chief Geotechnical Engineer

PP/TJC/tlw

Enclosure

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Vibration Analysis Report

BRIDGE REPLACEMENT
I-270 OVER MISSISSIPPI RIVER AT CHAIN OF ROCKS
STRUCTURE NO. 060-0350
SECTION 60B-1
MADISON COUNTY, ILLINOIS

1.0 PROJECT DESCRIPTION

At the request of Mr. Brad Reichmann, P.E. from Horner & Shifrin, Inc., SCI performed a study on the potential impacts of demolition/construction vibrations to the Historic Chain of Rocks Bridge located approximately 800 to 1,600 feet downstream of the existing I-270 Bridge. The closest point is the western terminus of the bridge. The old Chain of Rocks Bridge is a cantilever through-truss bridge with a total length and width of approximately 5,300 feet and 24 feet, respectively, and spans the Mississippi River on the north edge of St. Louis, Missouri. The eastern end of the bridge is on Choteau Island (part of Madison, Illinois), while the western end is on the Missouri shoreline. Its most notable feature is a 22-degree bend occurring at the middle of the crossing. The bridge used to be part of Historic US Route 66 in the past, however, it now carries only walking and biking trails over the river.

SCI has already submitted the Preliminary SGR for the above-mentioned project dated May 2020. SCI understands that the scope of the current study is to evaluate and consider the attenuation relationships related to specific geology formations and determine if additional measures need to be taken to prevent damage to the existing structure.

Based on our current understanding of the project, the demolition of the existing I-270 bridge will be performed by removing existing elements piece by piece and explosives are not planned. Construction of the new structure will include driven H-piles at the abutments and drilled shafts bearing within the underlying bedrock for the interior bents. These sources of vibrations are included in the evaluation within this report, which are presented in Table 3.3.

2.0 LITERATURE REVIEW

SCI reviewed several relevant publications, manuals, and other online sources to develop the evaluation included within this report. Among all of them, *USBM-RI8507 Blasting Vibration 1989* and *USDOT FTA Transit Noise and Vibration Impact Assessment Manual 2018* are considered as the standard reference documents for this report. In addition, *Historical Building Limits (1983) Revised* and several peer reviewed articles with case studies were also reviewed for the presented study. The detailed list of bibliographies is shown under Section 5.0 of this report.

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3.0 VIBRATION DISCUSSIONS

Ground vibrations caused by construction/demolition operations such as blasting, pile driving, and compaction have a potential to cause damage to adjacent structures. The level of structure vibration depends on several factors such as characterized sources of vibrations, type and condition of geological formation, and susceptibility of structures.

3.1 Safe Vibration Levels and Impact Assessment

The safe vibration levels presented in this section are based on several sources included in the document review. The first two limits are based on the two leading publications typically used in the U.S. The first is discussed in *Federal Transit Association (FTA) Noise and Vibration Impact Assessment Manual 2018* which provides the maximum allowable PPVs based on Building/Structural Category as shown in Table 3.1 (Table 7-5 of *FTA Manual*).

Table 3.1 - Construction Vibration Damage Criteria

Building/Structural Category	Max. Allowable PPV (in/s)
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

The second primary is discussed in *USBM-RI8507 Blasting Vibration 1989* which provides the maximum allowable PPVs taking the Building/Structural Category and the Vibration Frequency into consideration. SCI understands that there has been a commitment to not use any explosives to demolish the bridge, however, the following Table 3.2 (Table 13 of *USBM-RI8507*) is presented, which provides an estimation of maximum allowable PPV if the frequency parameter is to be considered in the analysis. However, the potential frequencies anticipated is not fully understood at this time and is therefore a subject for potential further research if it is deemed necessary. At this stage of the evaluation, we recommend considering the worst-case scenario of the low frequency range. During construction, it may be possible to use frequency measurements to allow certain PPV if it occurs at a higher frequency range.

Table 3.2 - Safe Levels of Blasting Vibrations for Residential Type Structures

Type of Structure	Maximum allowable PPV (in/s)	
	At low frequency (< 40 Hz)	At high frequency (≥ 40 Hz)
Modern homes, Drywall interiors	0.75	2.0
Older homes, plaster on wood lath construction for interior walls	0.50	2.0

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An expanded summary of available additional data is presented in the following Figure 1, where the range of values is 0.08 to 2.0 in/s based on vibration type and type and condition of structure.

Figure 1 - Existing Vibration Criteria for Historic and Sensitive Structures

Reference	Maximum Peak Particle Velocity (in/sec)	(mm/sec)	Vibration Type	Type and Condition of Structure	Comments
German Vibration Standards (12)	0.08	2	Unspecified	Ruins, ancient and historic buildings	
	0.16	4	"	Buildings with visible damage and cracks in masonry	
Rudder (11)	0.10	2.5	Traffic	All	Threshold of structural damage
Esteves (7)	0.10	2.5	Blasting	Special care and historical monuments	Loose and soft soils and rubble mixtures
	0.20	5	"	"	Medium to hard soils, uniform and well-graded sand
	0.40	10	"	"	Hard soils and rock
Swiss Association of Standardization (5)	0.12	3	Machines, traffic	Objects of historic interest and other sensitive construction	Frequency, 10 to 30 Hertz
	0.12-0.2	3-5	"	"	Frequency, 30 to 60 Hertz
	0.3	8	Blasting	"	Frequency, 10 to 60 Hertz
	0.3-0.5	8-12	"	"	Frequency, 60 to 90 Hertz
Ashley (1)	0.3	8	Blasting	Ancient and historic monuments	
	0.5	13	"	Housing in poor repair	
Esrig and Ciancia (6)	0.5	13	Blasting and impact pile driving	Historic buildings in poor condition	Approximately 30 feet of soil cover over bedrock
Chae (3)	0.5	13	Blasting	Old residential structures in very poor condition	Scaled distance criterion: 50 ft/ $\sqrt{lb}$
	1.0	25	"	Relatively old residential structures in poor condition	Scaled distance criterion: 30 ft/ $\sqrt{lb}$
Siskind, Stagg, Kopp and Dowding (12)	0.5	13	Blasting	Older residences, plaster on wood lath construction for interior walls	Frequency less than 40 Hertz
	2.0	50	"	"	Frequency greater than 40 Hertz

3.2 Vibration Prediction Methodology

For this study, the FTA analytical/empirical vibration prediction model was used to estimate the vibration levels that might propagate from the construction equipment to the vibration sensitive locations. The fundamental equation used in the model is based on propagation relationships of vibration through hard soil conditions and is a function of distance from the source. The equation is as follows:

$$PPV_{equip} = PPV_{ref}\left(\frac{25}{D}\right)^{n}$$

where,

PPV_{equip} = Peak Particle Velocity of the equipment adjusted for distance, in/s

PPV_{ref} = Source reference vibration level at 25 feet, in/s

D = Distance from the equipment to the receiver, ft

n = 1.1 (the value related to the attenuation rate through hard soils and surface rock)

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Table 3.1 presents reference PPVs at 25 feet from I-270 Bridge for various construction equipment and calculated PPVs at Chain of Rocks Bridge 800 and 1,600 feet downstream of the existing I-270 Bridge. It should be noted that although the table gives one value for each piece of equipment, there is a considerable variation in the reported ground vibration levels from construction activities. The data in Table 3.3 provide a reasonable estimate for the two different distances for a typical hard soil condition. For comparison sake, SCI back-calculated what the vibration amplitude would need to be at the source to exceed the lower bound limit of 0.12 in/s at the historic structure. The values are 5.43 and 11.64 in/s, respectively for the two evaluated distances. These values are significantly higher than what would be anticipated for normal construction activities based on the Table below.

Table 3.3 - Vibration Levels for Construction Equipment

Equipment	Reference PPV at 25 ft (in/s)	Calculated PPV at COR Bridge 800 ft D/S of I-270 Bridge (in/s)	Calculated PPV at COR Bridge 1,600 ft D/S of I-270 Bridge (in/s)
Impact Pile Driver (upper range)	1.518	0.033	0.00035
Impact Pile Driver (typical)	0.644	0.014	0.00015
Sonic Pile Driver (upper range)	0.734	0.016	0.00017
Clam shovel drop (slurry wall)	0.202	0.004	0.00005
Vibratory Roller	0.210	0.005	0.00005
Mounted Hammer Hoe Ram	1.518	0.034	0.00035
Large Bulldozer	0.089	0.002	0.00002
Caisson Drilling	0.089	0.002	0.00002
Loaded Trucks	0.076	0.002	0.00002
Jackhammer	0.035	0.001	0.00001

4.0 CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

From analyzing the calculated peak particle velocities and various vibration criteria, it seems that the predicted peak particle velocity is much smaller than required to damage the existing Chain of Rocks bridge. ***Based on this analysis, it is unlikely that the demolition and construction techniques currently planned for the bridge replacement will affect the historical structure.***

Although the risk to the historical structure is anticipated to be ***very low***, we recommend that a Job Special Provision be included in the contract documents that sets a maximum allowable amplitude for vibrations during construction and demolition activities. We recommend a limiting amplitude PPV of

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0.12 in/s be used. Additionally, it may be prudent to require the contractor to perform a precondition survey of the existing historic bridge in order to identify any obvious cracks or distress that could be further aggravated by the potential vibrations.

Additionally, we recommend that the natural frequency of the Old Chain of Rocks Bridge be calculated in case vibration limits do approach potential damaging levels. That way the possibility of resonance can be evaluated as well. Resonance is when the vibration frequency matches with the natural frequency of the structure, which can result in amplification of the amplitude. While it's not anticipated to be an issue, we recommend this information be developed in advance to limit any delays that may develop during demolition or construction.

The calculated vibration levels for different equipment and the governing equations are all based on available information, unless stated otherwise. It must be understood that there is no unique solution to minimize the effects of construction vibrations at every site. Continuous monitoring and control of construction vibrations should be made in compliance with safe vibration criteria. Should blasting be required for demolition, SCI should reassess the anticipated vibration levels to provide a risk assessment and additional recommendations as needed.

On a final note, public concerns about construction noise and vibration increase considerably with lengthy periods of heavy construction on a major project like this. However, based on a review of the map, the closest residences appear to be greater than 1,000 feet from the closest point of the existing structure. At that distance, the vibrations would likely be perceptible (felt), however, the potential for damage is minimal.

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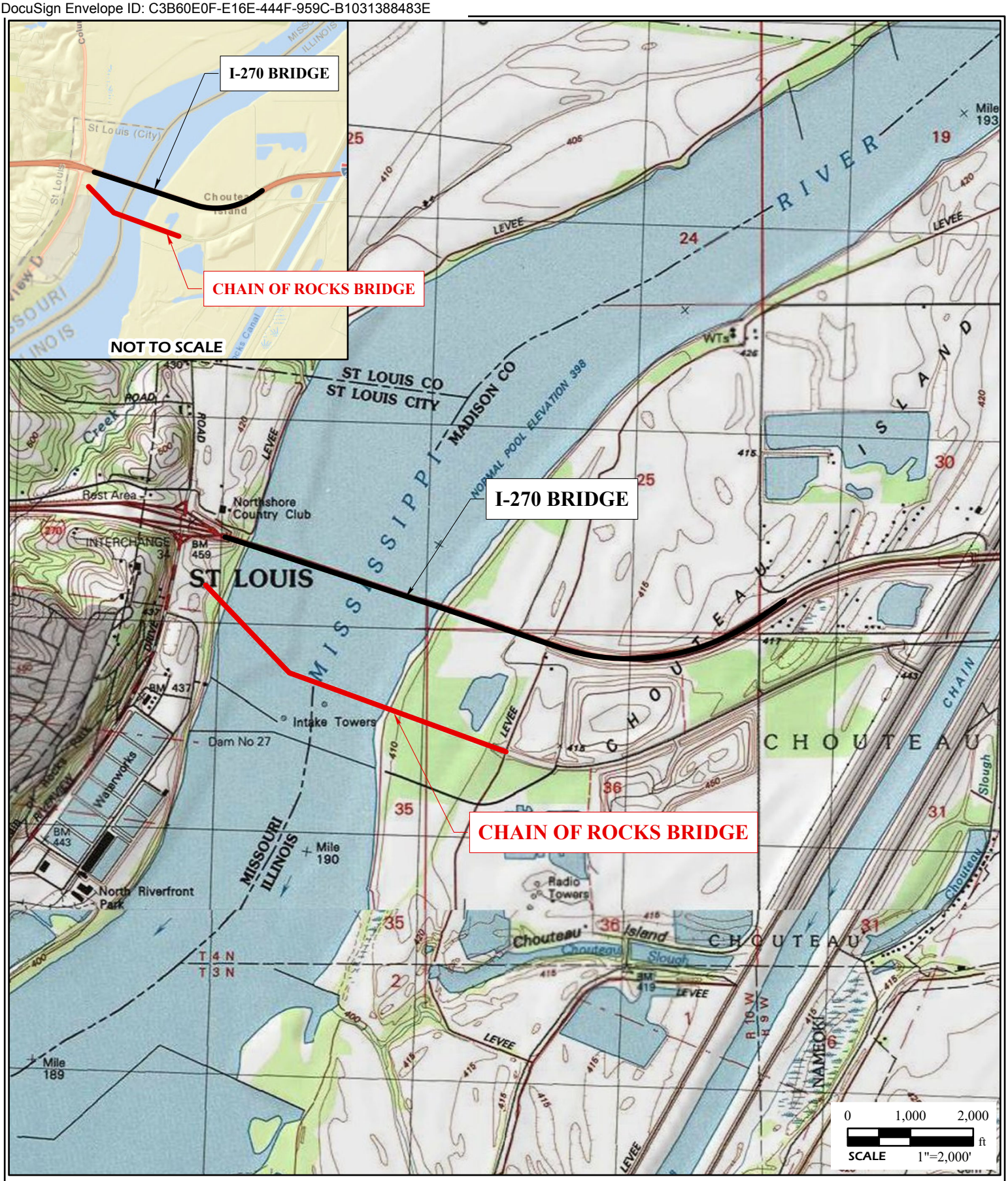

PROJECT NAME: I-270 OVER MISSISSIPPI RIVER ST. LOUIS CITY, MISSOURI AND MADISON COUNTY, ILLINOIS				GENERAL NOTES/LEGEND: USGS TOPOGRAPHIC MAP; COLUMBIA BOTTOM, MISSOURI - ILLINOIS QUADRANGLE; GRANITE CITY, ILLINOIS - MISSOURI QUADRANGLE; DATED 1998; 10' CONTOURS
VICINITY AND TOPOGRAPHIC MAP				STREET MAP HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_STREET_MAP
DRAWN BY: RCV	CHECKED BY: TJC	DATE: 04/2021	JOB NUMBER: 2017-3167.10	FIGURE: 2

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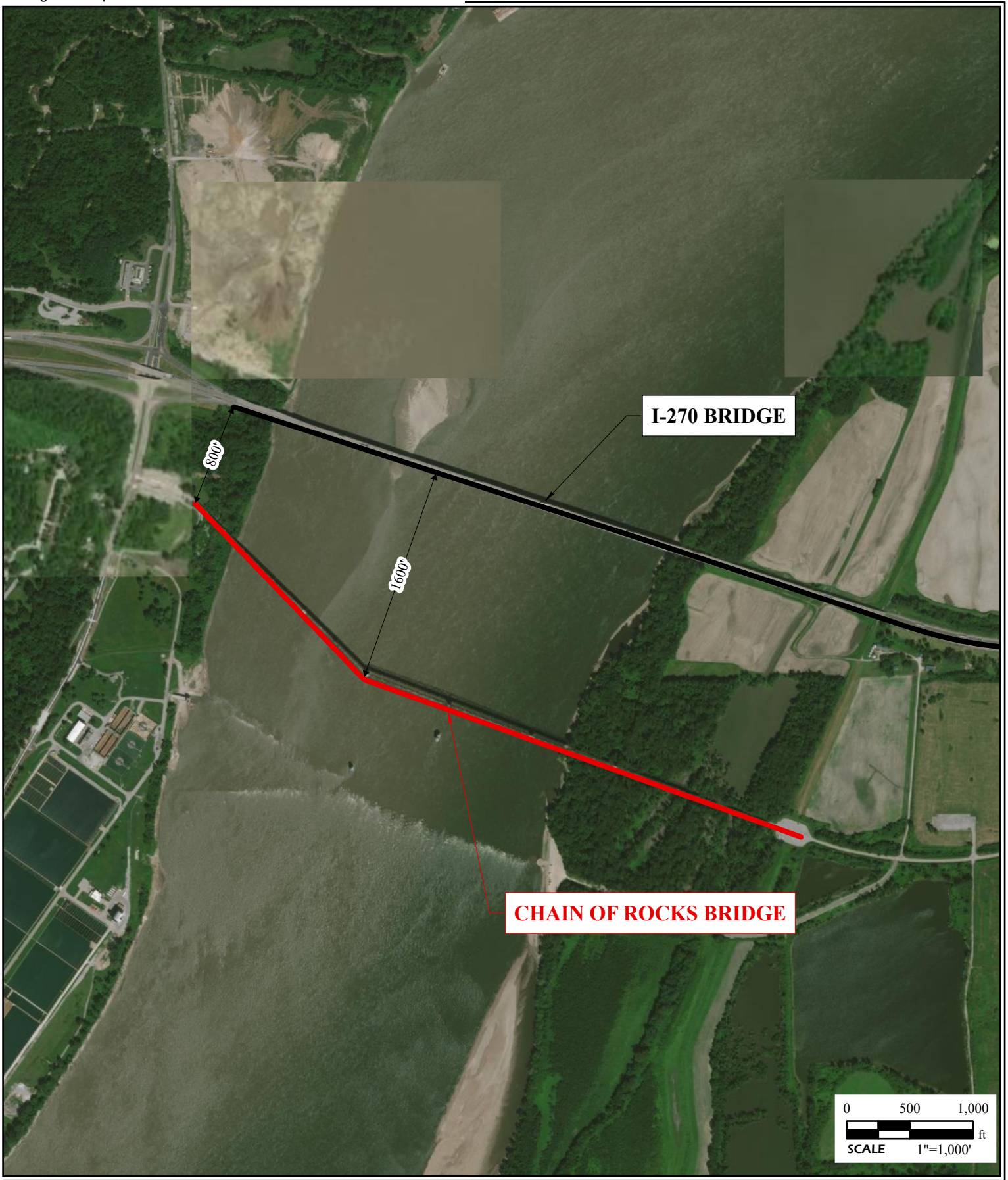

	PROJECT NAME I-270 OVER MISSISSIPPI RIVER ST. LOUIS CITY, MISSOURI AND MADISON COUNTY, ILLINOIS			GENERAL NOTES/LEGEND
	AERIAL PHOTOGRAPH			AERIAL PHOTOGRAPH OBTAINED FROM ARCGIS ONLINE, WORLD IMAGERY. DIMENSIONS AND LOCATIONS ARE APPROXIMATE; ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.
	DRAWN BY: RCV CHECKED BY: TJC	DATE 04/2021	JOB NUMBER 2017-3167.10	N W E S FIGURE 3

ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

AVIAN SURVEY REPORT

Bald Eagle and Peregrine Falcon Surveys at the I-270 (FAI 270) Bridge (SN 060-0035) over the Mississippi River, Madison County, Illinois

IDOT Sequence Numbers: 19320A

Prepared by:
Wendy Schelsky

INHS/IDOT Statewide Biological Survey & Assessment Program
2016 (142)
September 2016

Project Summary

The Illinois Department of Transportation is proposing work at the site of the bridge structure (SN 060-0035) carrying I-270 (FAI 270) over the Mississippi River, approximately 4.5 miles northwest of Granite City, Madison County, Illinois. The scope of the project includes replacement of the I-270 Bridge with revised survey limits from 2500 ft west of the I-270/Riverview Drive interchange to just west of Levee Road. IDOT requested an avian survey to determine whether Peregrine Falcons are breeding and Bald Eagles are breeding/roosting in or near the project area. We visited the site on January 30, February 24, and April 6, 2016 to search for nesting/roosting Bald Eagles and evidence of nesting Peregrine Falcons. We conducted surveys along a primary driving transect within and near the project area with multiple locations where we stopped to scan the river corridor searching for birds. We also conducted observations directly from the Chain of Rocks walking bridge that crosses over the Mississippi River in the project area. In total, we documented over 80 Bald Eagles perched both up- and downriver of the I-270 Bridge with the three closest Bald Eagles perched greater than 0.5 miles from the project area with one being a juvenile. Of the two adults, one flew over the Illinois side of the river just 2500 ft south of the project area and the second was perched in the forest approximately 4000 ft south of the bridge on the Illinois side of the river. We did not find any evidence of active Bald Eagle nests within or near the project area. The large sum of eagles were likely from a known roost on Ellis Island, approximately seven miles north of the project area on the Missouri side of the river, although other smaller roosts might be present on some of the forested islands. The most likely locations would be on Mosenthein Island, greater than one mile south of the project area and/or Gabaret Island, approximately 3.5 miles north of the bridge. We also observed a single adult Peregrine Falcon at the I-270 Bridge in the project area in June 2015, but it was unclear if this bird was nesting or simply hunting at this location. In April 2016, a pair of peregrines were observed moving around the project area both on the I-270 bridge structure and near the Chain of Rocks Bridge. It is likely that these birds were nesting in the project area possibly on the Chain of Rocks Bridge, but we could not confirm the exact location of their nest. On July 20, 2016, our mammalogists documented three adult Black-crowned Night-herons in a wetland south of Waterworks Road in the project area. There were no obvious signs of a heron rookery, although this could not be ruled out.

Surveys Conducted By: Steven D. Bailey, Ornithologist
GIS Layers: Janet Jarvis, Remote Sensing Specialist

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Cover Photo: Smithsonian

Introduction

The Illinois Department of Transportation is proposing work at the site of the bridge structure (SN 060-0035) carrying I-270 (FAI 270) over the Mississippi, approximately 4.5 miles northwest of Granite City, Madison County, Illinois. The scope of the project includes replacement of the I-270 Bridge with revised survey limits from 2500 ft west of the I-270/Riverview Drive interchange to just west of Levee Road. IDOT requested an avian survey to determine whether Peregrine Falcons (*Falco peregrinus*) are breeding and Bald Eagles (*Haliaeetus leucocephalus*) are breeding/roosting in or near the project area.

Project Area

The proposed I-270 Bridge project area includes the existing bridge structure over the Mississippi River and roadway work. The proposed project area spans the Mississippi River corridor and includes or is adjacent to large areas of floodplain forest and associated wetlands.

Records and Potential Habitat for Threatened or Endangered Species

I consulted the Illinois Natural Heritage Database (IDNR) to determine whether any records for any T&E species in or near the study area existed. There were no records of breeding Bald Eagles found in the Natural Heritage Database within five miles of the project area; however, the Mississippi River corridor is ideal habitat for nesting and roosting Bald Eagles. There was one historical record (1998) for Peregrine Falcons nesting on the bridge; however, there did not appear to be any nesting in 2005 when surveys were done. The expansion of Peregrine Falcons in Illinois in the last two decades and the historical presence of the birds makes this area suitable habitat for peregrines.

Bald Eagles are protected by the federal Bald and Golden Eagle Protection Act. Disturbance to them, their nests, or their roosts are prohibited. Bald Eagles will nest along river corridors throughout Illinois (Kleen 2004) and have been known to nest throughout the Illinois River Valley where significant floodplain forest exists. Bald Eagles typically like to nest in large, mature, emergent trees that border water (Buehler 2000) in areas that are relatively free of or buffered from human disturbances (U.S. Fish & Wildlife Service 2007). Nests typically take several months to construct and are used for several years (Buehler 2000). Given the nature of the habitat surrounding the project area Bald Eagles are likely nesting within or near the project area.

Peregrine Falcons were delisted as Threatened in Illinois in 2015 and were once federally protected by the Endangered Species Act. They are still protected under the Federal Migratory Bird Treaty Act. Successful recovery efforts rescued dwindling populations and resulted in the federal de-listing of peregrines in 1999 (Kleen 2004). In Illinois, Peregrine Falcons historically nested on rocky ledges along bluffs, primarily in major river valleys. Because of massive urbanization and elimination of much of their natural habitat, many of the recovery efforts have released birds in urban areas where they will readily use man-made structures such as bridges, nest boxes, building ledges and rooftops. Peregrines fledging from recovery efforts in Chicago, Illinois have been finding their way into the Illinois and Mississippi River valleys (Hennen 2016). A local birder claims to have been “harassed” by a pair of peregrines in 2014 on the Chain of Rocks Bridge (Figure 1). In most cases, in Illinois, peregrines nesting on bridge structures will use an opening in the structure that leads to an interior platform. Evidence of nesting peregrines is the presence of adult peregrines January through June/July, but they can be present year-round. There may also be splashes of whitewash outside the hole that they use for nesting which is evidence that they have or have had nestlings in the past.

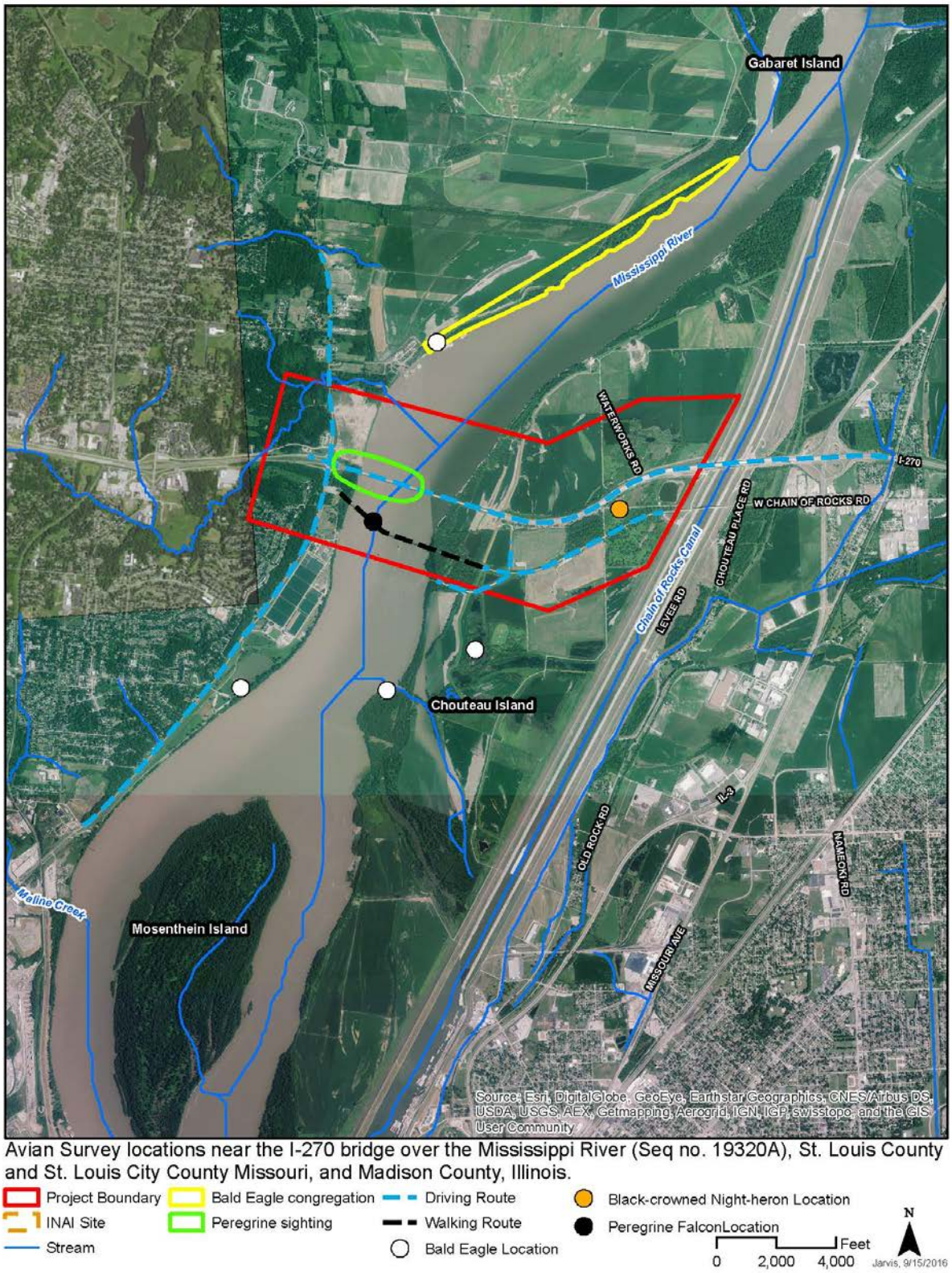

Figure 1. Map of survey routes, and Bald Eagle, Peregrine Falcon, and Black-crowned Night-heron locations in relation to the I-270 (FAI 270) Bridge study area northwest of Granite City, Madison County, Illinois (IDOT seq. 19320A).

Methods

Habitat was assessed using USGS topographic maps, aerial photographs of the study site, and visual assessment during field visits to the study site. I consulted the Illinois Natural Heritage Database for historical records of any listed bird species within one mile of the proposed corridor and within five miles for Bald Eagles. From this information, I recorded areas of suitable habitat for listed bird species and decided that a mixture of a driving and walking transects (Figure 1) with observations along the routes was the most suitable method for detecting listed bird species. I also contacted Mary Hennen of the Field Museum's Illinois Peregrine program regarding known pairs of nesting Peregrine Falcons in the area.

In 2015, I visited the project area on June 26 to check for the presence of Peregrine Falcons on or near the I-270 Bridge. In 2016, Steve Bailey visited the project area on January 30th, February 24th, and April 6th to look for nesting and/or roosting Bald Eagles and evidence of Peregrine Falcons nesting within or near the I-270 (FAI 270) Bridge (SN 060-0035) project area. In 2015, I walked the length of the Chain of Rocks Bridge and observed the surrounding areas for 30 minutes. During each visit in 2016, Steve drove the length of the driving transect and stopped in areas where the river corridor was most visible noting all Bald Eagle locations and any other T&E species. Steve also included observations within the bottomland forest adjacent to the bridge by walking the Chain of Rocks walking bridge within the project area where he scanned and did 60 minute observations of the river corridor, bridge structures and associated habitats (Figure 1). Because raptors are active throughout much of the day, we did not restrict our observations to any particular time of day. We made notes of any other species that we observed nesting on the bridge structures during our visits.

Results

Steve did not detect any eagles within 1000 ft of the I-270 Bridge. He did, however, see two adult and one juvenile Bald Eagles within 5000 ft of the bridge (Figure 1, Table 1). Steve also did not find any Bald Eagle nests or roosts within or near the project area. Despite not finding evidence of nesting eagles, he did see 80+ eagles between the February and January surveys with the majority perching along the Missouri side of the river north of the bridge (Figure 1). Additional birds of mixed age were also seen downriver to the south, beyond Chouteau Island (Figure 1). There is a known eagle roost on Ellis Island located approximately 7 mile upriver (not pictured, Table 1) and many of the birds seen in winter were likely using this roost. It is possible that a smaller roost exists outside of the project are either on Mosenthein Island downriver or Gabaret Island upriver (Figure 1). Eagles were so numerous that there were likely nests along the river corridor as well, however, he did not locate any within or near the project area.

On June 26, 2015 I was asked to check the I-270 Bridge for Peregrine Falcons. On this visit, I observed a single adult hunting and maneuvering under the I-270 Bridge with prey and landing on pylons (Figure 1, Table 1). It was unclear whether this bird was nesting within the project area or if it was from the pair known to be nesting near Alton approximately 11 miles north of the bridge (Table 1). Mary Hennen of the Illinois Peregrine Project did not have record of birds nesting at the I-270 Bridge in 2015 and she suspected that it was one from the known nesting pair given that it was late in the season. On April 6,' 2016, Steve observed two peregrines with one (presumably male given its size) in the same location under the I-270 Bridge with prey (Figure 1) and an additional larger bird, presumably a female, flying past the Chain of Rocks Bridge. He did not see either bird enter into a structure and was uncertain about their nesting status. Based on the structures present, if the pair was nesting in the project area, it was likely on the Chain of Rocks Bridge. A local cyclist stopped and told Steve that in 2014 he was seeing the birds a lot and had them "harass" him as he rode by on the Chain of Rocks Bridge, which is typically behavior of a territorial bird. I contacted Mary Hennen again in 2016, but she said they still had no

knowledge of a pair on the I-270 Bridge in 2015 or 2016 (https://www.fieldmuseum.org/science/special-projects/illinois-peregrines).

On July 2016, Jean Mengelkoch and Jocelyn Karsk observed three adult Black-crowned Night-herons in a marsh south of Waterworks Road (Figure 1, Table 1). There was no evidence of a rookery within sight nor did they see any juveniles with them. There are large numbers of Black-crowned Night Herons seen regularly approximately five miles southeast in and around the Horseshoe Lake State Park near the historic location of a heron rookery near Pontoon Beach, Illinois.

Table 1. Summary of records of Bald Eagles, Peregrine Falcons, and Black-crowned Night-heron at or near the I-270 Bridge over the Mississippi River, northwest of Granite City, Madison County, Illinois

Record Detail	Latitude	Longitude
Peregrine Falcon	38.761483°	-90.177418°
Juvenile Bald Eagle	38.746566°	-90.193535°
Juvenile Bald Eagle	38.777852°	-90.169215°
Adult Bald Eagle	38.749390°	-90.165865°
Adult Bald Eagle	38.745904°	-90.176361°
Black-crowned Night-heron	38.761926°	-90.148423°
Known Peregrine Falcon Nest	38.914829°	-90.218809°
Ellis Island Bald Eagle Roost	38.873562°	-90.171497°

Discussion

A total of 80+ Bald Eagles were seen in either January or February 2016 within ~ 5 miles of the I-270 Bridge project area, with all but two adults and one juvenile seen at distances greater than 5000 ft of the project area (Figure 1). There was no evidence of nesting or roosting Bald Eagles within or adjacent to the project area, however, there is a known eagle roost on Ellis Island, approximately seven miles north. It is possible, that a smaller, less well known roost occurs on either Gabaret or Mosenthein Islands given their isolated nature. Both of these islands are more than a mile away from the project area. We also documented a pair of Peregrine Falcons in April 2016. The pair appeared to be foraging and possibly nesting either on the I-270 structure or the Chain of Rocks Bridge. In Late July, other biologists from our group observed three adult Black-crowned Night-herons in the project area.

Home ranges of Bald Eagles during the breeding season vary widely (6-30 miles^2) and depend on various factors including, quality of food resources along the river, the nesting stage, and proximity of other nesting eagles (Gerrard et al. 1992). It is possible that nesting birds from forested areas along the Mississippi could use areas within the vicinity of the project for foraging throughout the nesting season and that construction of the new bridge could discourage them from using this area (U.S. Fish & Wildlife Service 2007). We don't have specific knowledge on nesting pairs in this stretch of the Mississippi River corridor near the project; however, there are likely eagles nesting within sight of the bridge. Given the unique vantage point from the Chain of Rocks Bridge, we feel reasonably certain, that eagles are not nesting within the project area or within 2000 ft of the bridge.

Bald Eagle roost sites are usually in forested areas with large trees that are sheltered from wind and generally located near reliable foraging areas. They may also serve some social purposes for pair bonding, but it is thought that communal roosts help to increase winter survival, particularly during the coldest winters in Illinois (U.S. Fish and Wildlife Service 2007). No formal records of roosts in the Illinois Natural Heritage Database exist within five miles of the I-270 Bridge project area. We do know that a long-standing roost exists approximately seven miles north on Ellis Island where the majority of birds

likely roost. It is possible, that if other satellite roosts exist, they occur on either Gabaret or Mosenthein Islands more than one mile from the project area.

We documented a pair of Peregrine Falcons possibly nesting on either the I-270 Bridge structure or the Chain of Rocks Bridge in 2016. A pair of birds was seen in early April, the period of time when peregrines would be laying eggs. An individual bird was seen on the I-270 Bridge in June 2015 and could have been an unpaired male seeking out a new territory or an adult from a pair nesting several miles upriver. There has been a known pair (South Alton pair) that has nested successfully upriver, approximately 11 miles in 2015 and 2016 (Hennen 2016). Mary Hennen of the Field Museum in Chicago said they have identified the pair nesting upriver; however, we were unable to confirm whether the birds that we saw at the I-270 Bridge had leg bands. There is an historical record (1998) of Peregrine Falcons nesting on the I-270 Bridge; however, no official sightings have been submitted since then. A cyclist on the Chain of Rocks Bridge had seen birds in 2014 and said that he had been "harassed" by a pair, suggesting that they were breeding in this locale. Nevertheless, Peregrine Falcons, protected by the Federal Migratory Bird Treaty Act are using the area with some regularity for at least foraging and possibly breeding. In Illinois, Peregrine Falcons historically nested on rocky ledges along bluffs, primarily in major river valleys. Because of massive urbanization and elimination of much of their natural habitat, much of the recovery effort has been to release birds in urban areas where they will readily use man-made structures such as bridges and building ledges and rooftops. Mary Hennen of the Chicago Peregrine Program with the Chicago Field Museum has been documenting Peregrine Falcons and their productivity throughout Illinois, since 1990 (Hennen 2016). Peregrine Falcons will be present in the area year-round, but they begin defending breeding territories and start courtship in January. Fledglings typically emerge from the nest in mid-June to July (Hennen 2016).

Although our surveys were specifically for Bald Eagles and Peregrine Falcons, we found no evidence of any additional migratory species or species of conservation concern nesting on the existing I-270 Bridge structure (e.g. Cliff and Barn swallows). The bridge structure seems adequate to support nesting swallows, however, there may be more desirable locations nearby.

Black-crowned Night-herons have historically occurred with regular frequency at Horseshoe Lake State Park near Pontoon Beach, IL, just five miles southeast of the project area. On July 20, 2016, our mammalogists, Jean Mengelkoch and Jocelyn Karsk, observed three adult Black-crowned Night-herons in a wetland south of Waterworks Road (Figure 1). Although we did not specifically survey for nesting Black-crowned Night-herons, there is significant wetland habitat in the eastern half of the project area that provides suitable foraging habitat for wading birds. These wetlands are much smaller than those available near Pontoon Beach where Black-crowned Night-herons are regularly seen and have historically bred in a colony of several hundred birds. It is likely that the adults seen in July 2016 did not breed in the project area and were using the wetlands, post-breeding, for foraging.

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ILLINOIS NATURAL HISTORY SURVEY
PRAIRIE RESEARCH INSTITUTE

MAMMAL SURVEY REPORT

Bridge Assessment, Bat Habitat Assessment, and Mist Netting at I-270 over the Mississippi River in Madison County, Illinois and St. Louis County and St. Louis City County, Missouri

IDOT Sequence Number: 19320A

Prepared by:
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INHS/IDOT Statewide Biological Survey & Assessment Program
Report 2016: 124

31 August 2016

Project Summary

The Illinois Department of Transportation (IDOT) requested the Illinois Natural History Survey (INHS) conduct a bridge assessment, bat habitat assessment, and mist netting for the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*) at I-270 over the Mississippi River in Madison County, Illinois and St. Louis and St Louis City counties, Missouri (Sequence no.: 19320A). Field work was conducted in July and August of 2016. Neither bats nor signs of bats were found under the bridge in Illinois or Missouri. No bats were observed emerging from the bridge at sunset. Suitable habitat for the Indiana bat and/or the northern long-eared bat was found in the project area. Two big brown bats (*Eptesicus fuscus*) were caught in Missouri; no bats were caught in Illinois. Neither Indiana bats nor northern long-eared bats were caught. The project location map can be found in Figure 1, the Bridge/Structure Assessment Forms can be found in Appendix A, the Phase 4 Emergence Surveys can be found in Appendix B, and the Phase 1 Summer Habitat Assessment forms are found in Appendix C. The INHS Summer Mist-netting Survey forms can be found in Appendix D. The site photos are found in Appendix E.

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Cover Photo: View of the bridge carrying I-270 over the Mississippi River in Madison County, Illinois and St. Louis County and St. Louis City County, Missouri, looking southeast taken on 10 August 2016.

Introduction

On 11 January 2016 the Bureau of Design & Environment at the Illinois Department of Transportation (IDOT) submitted a request of the Illinois Natural History Survey (INHS) to conduct a bat bridge assessment, habitat assessment, and mist netting survey for the presence or absence of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*) at I-270 and the Mississippi River in Madison County, Illinois and St. Louis and St. Louis City counties, Missouri (Sequence no.: 19320A). IDOT is planning on replacing the existing bridge over the Mississippi River and possibly moving the existing approach roadway.

Records and Previous Surveys

The Illinois Natural Heritage Database (INHD), which is maintained by the Illinois Department of Natural Resources (IDNR), has one record of Indiana bat (a hibernaculum) and no record of northern long-eared bat in Madison County, Illinois. According to the Missouri Natural Heritage Program, the Indiana bat and the northern long-eared bat are distributed throughout Missouri, but there are no records of them in St. Louis County or St. Louis City County.

Natural History of Indiana Bats and Northern-Long Eared Bats

Indiana bats congregate in caves or abandoned mines for hibernation, but are more widely dispersed during the summer (Barbour and Davis 1969). Maternity colonies primarily roost beneath slabs of exfoliating bark on dead trees, but also have been found beneath the "shaggy" bark of certain live hickories (*Carya*) and oaks (*Quercus*), and in tree crevices (Cope et al. 1973; Humphrey et al. 1977; Gardner et al. 1991; Kurta et al. 1993a, b, 1996, 2002; Callahan et al. 1997; Carter 2003). Maternity colonies, however, recently have been found roosting in buildings (a church, house, and barn), artificial roosting structures (e.g., bat houses), and utility poles (Carter et al. 2001; Butchkoski and Hassinger 2002; Chenger 2003; Hendricks et al. 2005; Kurta 2005; Ritzi et al. 2005). Males and non-reproductive females use caves, mines, bridges, and artificial roosting structures as well as trees for diurnal roosts during summer (Mumford and Cope 1958; Gardner et al. 1991; Salyers et al. 1996; Ford et al. 2002; INHD).

Northern-long eared bats also congregate in caves or abandoned mines for hibernation and are more widely dispersed during the summer (Caceres and Barclay 2000). Their maternity colonies roost under exfoliating bark like the Indiana bat, however they are more likely than Indiana bats to roost in cracks, crevices, and cavities in trees (Foster and Kurta 1999; Carter and Feldhamer 2005; Lacki et al. 2009). They are also known to use artificial structures, such as barns and sheds, for roosts and are more likely to use them than Indiana bats (Krochmal and Sparks 2007; Henderson and Broders 2008; Timpone et al. 2010).

Roost trees housing maternity colonies of Indiana bats are relatively large, with a DBH (diameter at breast height) of at least 12 in (e.g., Gardner et al. 1991; Kurta et al. 1993a, 1996; Callahan et al. 1997; Whitaker and Brack 2002). Female and juvenile Indiana bats have been documented roosting in more than 30 species of trees (Kurta 2005). Tree species known to have been used by Indiana bat maternity colonies in Illinois are northern red oak (*Q. rubra*), white oak (*Q. alba*), post oak (*Q. stellata*), pin oak (*Q. palustris*), slippery elm (*Ulmus rubra*), American elm (*U. americana*), shagbark hickory (*C.* o*vata*), bitternut hickory (*C. cordiformis*), silver maple (*Acer saccharinum*), eastern cottonwood (*Populus deltoides*), American sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), and sweetgum (*Liquidambar styraciflua*) (Gardner et al. 1991; Kurta et al. 1993a; Carter 2003). A maternity colony uses more than one tree during the summer (e.g., Gardner et al. 1991; Kurta et al. 1996; Callahan et al. 1997), but the number of roost trees a colony requires is variable (Menzel et al. 2001). A colony in Michigan roosted in 23 trees (Kurta et al. 1996) and four Missouri colonies used 10-20 roost trees each

(Callahan et al. 1997). In Michigan, members of a maternity colony occupied trees that were up to 5.1 mi apart during a summer and traveled as much as 3.6 mi between roost trees overnight (Kurta et al. 2002). Individual roost trees have a limited "lifespan," making them an ephemeral resource (Gardner et al. 1991).

Tree species used by northern long-eared bats are similar to those used by Indiana bats (U.S. FWS 2014). Northern long-eared bats use trees with a larger range of diameters than Indiana bats (Lacki et al 2009). In addition, as with Indiana bats, northern long-eared bats are known to switch roosts during the maternity season (Patriquin et al. 2010; Johnson et al. 2012).

Trees used by Indiana bats in Illinois have been located in upland and floodplain forests, a swamp, and pastures (Gardner et al. 1991; Kurta et al. 1993a; Carter 2003). There is a consensus that Indiana bat maternity colonies occupy primary roosts that are exposed to high levels of solar radiation (Menzel et al. 2001). The death of an overstory tree creates a light-gap in the forest canopy that exposes remaining trees to solar radiation. Dead trees along forest edges or in areas impacted by flooding also have high levels of exposure to sunlight. Some alternate maternity roosts, as well as roosts used by male Indiana bats, are in shaded locations (Gardner et al. 1991; Callahan et al. 1997). Most Indiana bat roost trees have been close to (or surrounded by) water (e.g., Humphrey et al. 1977; Gardner et al. 1991; Callahan et al. 1997; Kurta et al. 1996, 2002; Carter 2003), but some have been found more than 1.2 mi from a perennial stream (Gardner et al. 1991; Kurta et al. 1993a). Trees occupied by reproductively active female and juvenile Indiana bats in Illinois (n = 56) were rarely within 1637 ft of a paved highway (Gardner et al. 1991). In contrast, a maternity colony in Indiana was found roosting in trees near a major highway (J.M. Mengelkoch, personal observation). Some adult male Indiana bats roosted less than 786 ft from a paved highway in Illinois (Gardner et al. 1991) and an adult male in West Virginia occupied a tree only 43 ft from a road (Ford et al. 2002).

Northern long-eared bat summer habitat includes a large assortment of wooded areas. They appear to tolerate more canopy cover than Indiana bats (U.S. FWS 2014).

Most Indiana bat maternity colonies in the Midwest have been found in landscapes that were a mosaic of forest and agricultural areas (Cope et al. 1973; Humphrey et al. 1977; Gardner et al. 1991; Kurta et al. 1993a, b, 2002; Callahan et al. 1997; Carter 2003). Despite the fact that they roost in trees, the presence of Indiana bats does not seem to be correlated with forest cover. In Missouri, for example, the amount of forest cover did not differ significantly between sites where Indiana bats were captured and not captured (Miller et al. 2002). In Illinois, Carter et al. (2002) found significantly fewer and smaller patches of urban development in the vicinity of Indiana bat roosts than at random sites. There also was less residential land around Indiana bat capture sites than unsuccessful netting sites in Missouri (Miller et al. 2002). Belwood (2002), however, documented a maternity colony occupying trees in a wooded subdivision in Ohio and a colony near the Indianapolis Airport occupies a rural area surrounded by urban/suburban development (Whitaker et al. 2004; Sparks et al. 2005).

Although more needs to be learned about habitat requirements of Indiana bat maternity colonies at the landscape level (Menzel et al. 2001; U.S. Fish and Wildlife Service 2007), it seems reasonable that sustainable habitat for Indiana bat would include a variety of snags, hickories, and numerous large, senescent trees that would provide future roost sites. Given the similarities between northern long-eared bats and Indiana bats, suitable summer habitat is likely very similar with the northern long-eared bat being slightly more flexible in its requirements (U.S. FWS 2014).

Requirements for foraging habitat are less restrictive; habitats used by foraging Indiana bats include riparian corridors, wetlands, upland forests, ponds, and fields (Menzel et al. 2001). Northern long-eared bats will forage in upland forests and forested hillsides (LaVal et al. 1977; Caceres and Pybus 1998; Brack and Whitaker 2001) and occasionally over water, roads, and clearings in the forest (van Zyll de Jong 1985).

The Indiana bat was listed as a federally endangered species in 1967 and the northern long-eared bat was listed as federally threatened on 2 April 2015. Recently, a rapidly spreading bat disease (white-nose syndrome, WNS) spread by the cold-adapted ascomycete fungus, *Pseudogymnoascus destructans* has become a leading cause of mortality of several species of North American hibernating bats (Blehert et al. 2009; Frick et al. 2010). WNS was confirmed in Illinois bats by the Illinois Department of Natural Resources (IDNR) on 28 February 2013 (http://whitenosesyndrome.org/partner/illinois-department-natural-resources). Currently, 28 states, mostly in the eastern U.S., and five Canadian Provinces have been confirmed to exhibit WNS-infected bats; seven species are affected, namely, little brown bat (*M. lucifugus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat, tri-colored bat (*Perimyotis subflavus*), eastern small-footed bat (*M. leibii*), the endangered Indiana bat, and the endangered gray bat (*M. grisescens*). As of 31 March 2016, WNS was confirmed in fourteen Illinois counties (http://wwx.inhs.illinois.edu/research/bat-wns/). As of 4 August 2016, WNS was confirmed in over 40 Missouri counties (https://www.whitenosesyndrome.org/resources/map).

Methods

Bridge/Structure Assessment and Emergence Count

The bridge carrying I-270 over the Mississippi River within the project area was assessed for the presence of bats and/or bat sign by a combination of methods (Figure 1). Portions of the bridge that were over land were assessed by surveyors walking under the bridge looking for bats and/or signs of bats. All surfaces, crevices, and spaces that a bat might use were surveyed. Bridge/Structure Assessment Forms (Federal Highway Administration and Federal Railroad Administration 2016) were completed for the Missouri and Illinois portions of the bridge over land. Photos of the bridge were taken.

It was not possible to do a typical assessment for the portion of the bridge over the Mississippi River. Thus, after coordination with Matt Mangan at the United States Fish and Wildlife Service (USFWS), it was agreed that we would conduct an emergence count in order to assess the portion of the bridge over the water. The emergence count was conducted on 10 August 2016 by Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Mikko Moy, and Frank Sladek. Due to safety concerns on the Illinois side of the bridge (gun shots were heard the prior night while mist netting) and with USFWS approval, all surveyors were on the Missouri side of the bridge north of I-270 (Figure 1). Counters were spread out along the shore of the Mississippi River. The distance between the northernmost and southernmost counters was about 200 ft, so as to allow for different views of the bridge. The emergence survey started a half hour before sunset and continued until one hour after sunset, following the *2016 Range-wide Indiana Bat Summer Survey Guidelines* (U.S. Fish and Wildlife Service 2016) and a Phase 4 Emergence Survey form was completed.

Bat Habitat Assessment

Due to the size of the project area and the large stands of trees, it was assumed that all woodland patches possessed potential roost trees (all live or dead trees with exfoliating bark, cavities, cracks, crevices or hollows). Woodland patches were categorized by the dominant tree species. Woodlands with similar dominant tree species were consolidated as a single habitat type, even if the structure of the forest (i.e. canopy cover, tree size class) varied. A Phase 1 Summer Habitat Assessment form from the *2016 Range-wide Indiana Bat Summer Survey Guidelines* (U.S. Fish and Wildlife Service 2016) was completed for each habitat type.

Mist Netting

The survey followed the protocol in the *2016 Range-wide Indiana Bat Summer Survey Guidelines* (U.S. Fish and Wildlife Service 2016). Black nylon mist nets (1.5 in mesh) were used (Avinet, Inc., Dryden, NY). Two sets of mist nets were suspended over potential flyways. The nets were opened at dusk and monitored for five hours each night.

The following data were recorded for each bat captured: species, sex, age class (juvenile or adult), reproductive condition, and weight. Age class in bats is determined by the degree of closure of the phalangeal epiphyses; juveniles (i.e., young of the year) are recognizable because of the incomplete ossification of the epiphyses (Anthony 1988). The reproductive condition of male bats is determined by the size of the epididymides, which are covered by pigmented sheaths and located lateral to the tail. Sexually mature males have enlarged or distended epididymides that can be seen through the interfemoral membrane (Racey 1988). Pregnant females can be recognized by gently palpating the fetus through the abdomen, and lactating and post-lactating females by examination of the teats. Bats are weighed to the nearest 0.02 oz by placing them in paper bags and suspending the bags from a Pesola scale. Bats are released at the capture site immediately after examination.

Results and Conclusions

Bridge/Structure Assessment and Emergence Count

The bridge carrying I-270 over the Mississippi River in St. Louis City County, Missouri and Madison County, Illinois was assessed for the presence of bats and/or signs of bats (Figure 1). The section of the bridge over land in Missouri was assessed on 9 August by Jean Mengelkoch and Jocelyn Karsk; neither bats nor signs of bats were observed (Appendix A). The section of the bridge over land in Illinois was assessed on 10 August by Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Frank Sladek, and Mikko Moy; neither bats nor signs of bats were observed (Appendix A).

The emergence count was conducted on 10 August 2016 from the shore of the Mississippi River north of I-270 in Missouri (Figure 1). The count was made only from the Missouri side due to safety concerns and was approved by Matt Mangan (USFWS). Sunset was at 2000 hrs, so the survey started at 1930 hrs and ended at 2100 hrs. Silhouetted visibility of the far side of the bridge (near the Illinois shore) was lost at 2024 hrs, while the Missouri side remained visibly silhouetted throughout the survey. No bats were seen emerging from the bridge (Appendix B).

Photos of the underside of the bridge and the view of the bridge from the site of the emergence count can be seen in Appendix E.

Bat Habitat Assessment

The project area was assessed for bat habitat on 19-20 July by Jean Mengelkoch, Jocelyn Karsk, Mikko Moy, and Frank Sladek (Figure 1). The project area includes 170 acres of potential habitat in Missouri and 235 acres of potential habitat in Illinois. However, the potential impact for the preliminary alternative is 4.25 acres in Missouri and 3.50 acres in Illinois.

Six discrete wooded habitat types were found within the project area (Appendices C and E). Habitat 1 was dominated by American sycamore (*Platanus occidentalis*), box elder (Acer negundo), and black cherry (*Prunus serotina*). The dominant tree species in Habitat 2 were mixed oak (*Quercus* spp.) and elm (*Ulmus* sp.); these trees were most likely planted as they were part of the Chain of Rocks Welcome Center and Rest Area. Habitat 3 was dominated by black cherry (*Prunus serotina*) and black walnut (*Juglans nigra*). Habitat 4 was dominated by elm (*Ulmus* sp.). Habitat 5 was composed of predominantly mixed oak (*Quercus* spp.) with some black walnut (*Juglans nigra*) and American sycamore (*Platanus occidentalis*). Habitat 6 was floodplain forest with eastern cottonwood (*Populus deltoides*) and silver maple (*Acer saccharinum*) as dominant trees.

Woodlands in the uplands in Missouri had a dense understory of amur honeysuckle (*Lonicera maackii*). The floodplain forest in both Missouri and Illinois had abundant invasive vine species, such as Japanese hops (*Humulus japonicus*), raccoon grape (*Ampelopsis cordata*), and bur cucumber (*Sicyos angulatus*).

Mist Netting

In coordination with USFWS in Missouri and Illinois after our habitat assessment was completed, mist netting was conducted for two nights with two double-high mist nets at Site A in Missouri on 1 and 2 August 2016, Site B in Illinois on 3 and 4 August 2016, and Site C in Illinois on 8 and 9 August 2016 (Figure 1; Appendix D). The personnel present during the surveys varied, but Jean Mengelkoch (permitted biologist) was present on all nights. The temperature during mist netting was generally in the upper 70s at the start of surveys and low to mid 70s by the end of the surveys (temperature is in °F).

Mist Net Site Descriptions

Site A was located on Watkins Creek south of Coal Bank Road in Spanish Lake, Missouri (UTM [NAD 83] 15N 0744522mE, 4295231mN; Columbia Bottom 7.5' topographic quadrangle; Figure 1). The dominant trees in the area were American sycamore, box elder, and black cherry; the understory was dominated by a dense layer of amur honeysuckle. Net A consisted of a 20-ft long net set suspended between 18-ft tall poles (Appendix E). There was no canopy over the net, but a leaning American sycamore crossed most of the creek just north of the net which would have potentially funneled bats into the net. Net A was about 115 ft south (upstream) of Coal Bank Road and 115 ft north (downstream) of Net B. Net B consisted of a 20-ft long net set suspended between 18-ft tall poles (Appendix E). There was no canopy over Net B, but a box elder leaned part of the way across the creek about 6 ft north of the net.

Site B was located on Chouteau Island, Illinois near the Chouteau Island Fishing Area parking lot (UTM [NAD 83] 15N 0745871mE; 4293585mN; Columbia Bottom 7.5' topographic quadrangle; Figure 1). The site was floodplain forest with eastern cottonwood and silver maple as the dominant trees. White mulberry (*Morus alba*) and honeysuckle were in the understory. Net A consisted of a 20-ft long net set suspended between 18-ft tall poles (Appendix E). The net was set over a 7-10 ft wide dirt trail through the trees. Net A was 15 ft west of an opening in the trees and a fork in trail. There was a canopy over the net. Net B was 165 ft west of Net A. Net B was composed of a 20-ft long net set suspended between 15-ft tall poles (Appendix E). Net B was just east of a sharp curve of the trail to the north. There was a canopy over the net to funnel bats.

Site C was located on Chain of Rocks Road on Chouteau Island, Illinois near the parking lot for the pedestrian bridge that crosses the Mississippi River (UTM [NAD 83] 15N 0746302mE 4293694mN; Columbia Bottom 7.5' topographic quadrangle; Figure 1). The nets were over a 7-10 ft wide dirt trail through a floodplain forest dominated by eastern cottonwood and silver maple. Net A consisted of a 20-ft long net set suspended between 18-ft tall poles (Appendix E). It was about 20 ft west of the edge of the forest and about 130 ft north of the elevated pedestrian bridge. There was a canopy over the net. Net B was about 230 ft west of Net A over the same trail. The trail forked into two trails about 20 ft west of Net B. Net B consisted of a 30-ft long net set suspended between 18-ft tall poles (Appendix E). There was a large pond 50-65 ft northwest of Net B. There was a canopy over the net to funnel bats.

Mist Netting Captures

Two big brown bats (*Eptesicus fuscus*) were caught at Site A in Missouri (Table 1). No bats were caught at either Site B or Site C in Illinois. Several bats were seen flying around the area, however, activity was relatively low throughout the surveys. No Indiana bats or northern long-eared bats were caught at any of the sites.

Table 1. Bats captured at the I-270 project area (Seq. No.: 19320A) in St. Louis County, MO and Madison County, IL. Site A was located in Spanish Lake, Missouri and was mist netted on 1-2 August 2016. Site B was located on Chouteau Island, Illinois near the Fishing Area parking lot and was mist netted on 3-4 August 2016. Site C was located on Chouteau Island, Illinois near the pedestrian bridge parking lot and was mist netted on 8-9 August 2016. No bats were caught in Illinois.

Date	Site	Species	No.	Sex	Age	Repro. Status
8/1/2016	A	big brown bat (*Eptesicus fuscus*)	1	F	Ad	L
8/2/2016	A	big brown bat (*Eptesicus fuscus*)	1	M	Ad	NR

M = male; F = female; Ad = adult; J = juvenile (young-of-year); P = pregnant; L = lactating; NR = non-reproductive

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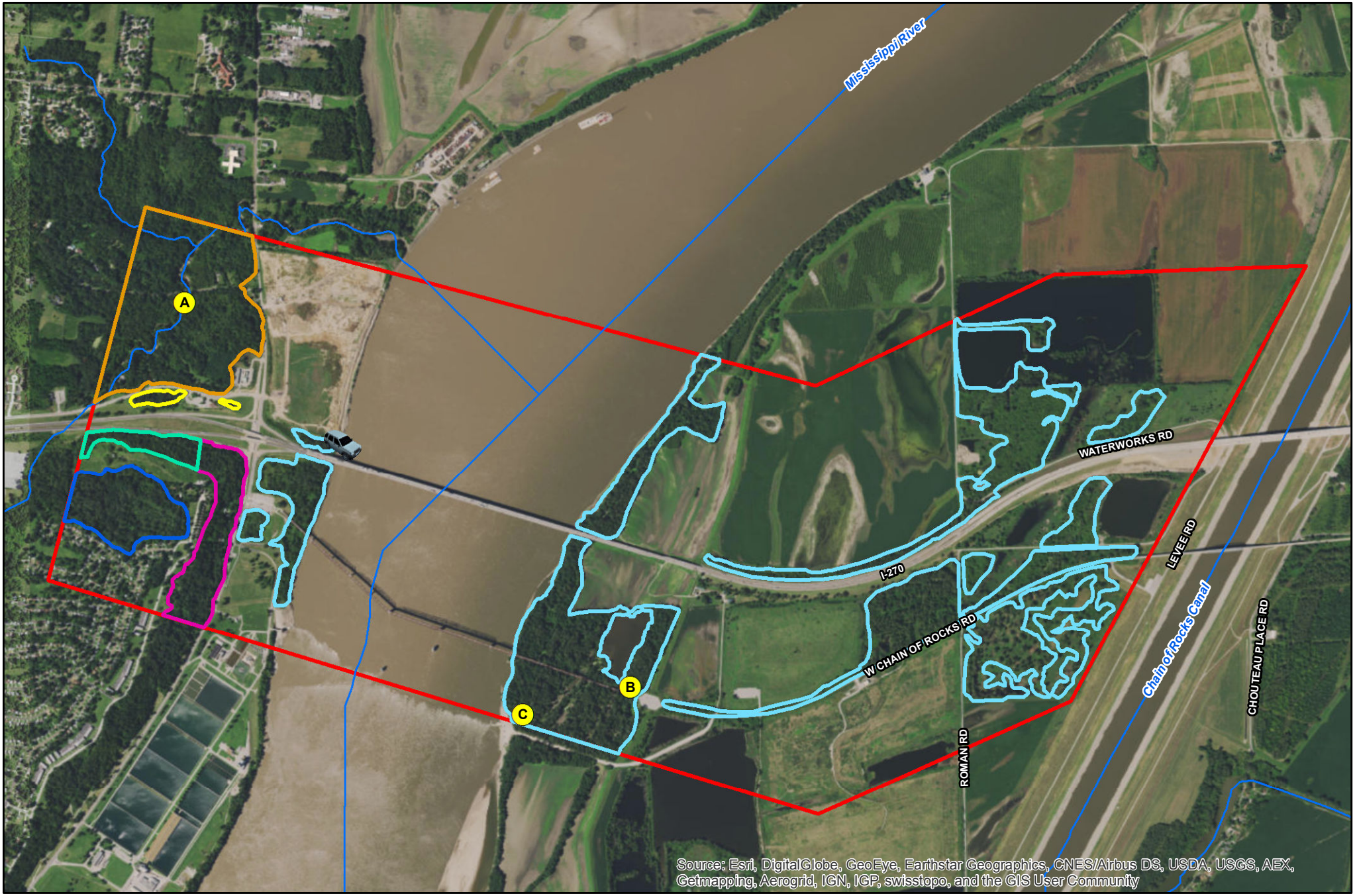


Bat mist netting and habitat survey locations near the I-270 bridge over the Mississippi River (Seq no. 19320A), St. Louis County and St. Louis City County Missouri, and Madison County, Illinois.

- IDOT Project Alignments
- 1: Sycamore, Box Elder, Black Cherry
- 2: Mixed Oak and Elm
- 3: Black Cherry and Black Walnut
- 4: Elm
- 5: Mixed Oak, some Walnut and Sycamore
- 6: Cottonwood and Silver Maple
- Bridge Emergence Count Site
- Mist Netting Sites
- Stream

0 500 1,000 2,000 Feet

N

Jarvis, 8/18/2016

APPENDIX A. Bridge/Structure Assessment Form

Bridge Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside, from activities above that bore down to the underside, or that could impact expansion joints, from deck removal on bridges, or from structure demolish. Each bridge/structure to be worked on must have a current bridge inspection. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has obtained clearance from the US Fish and Wildlife Service, if required. Additional studies may be undertaken by the DOT to determine what species may be utilizing structures prior to allowing any work to proceed.

DOT Project #	Water Body	Date/Time of Inspection
19320A	Mississippi River	9 August 2016 2PM

Route:	County:	Federal Structure ID:	Bat Indicators Check all that apply. Presence of one or more indicators is sufficient evidence that bats may be using the structure.				
			Visual	Sound	Droppings	Staining	**Notes: (e.g., number & species of bats, if known. Include the results of thermal, emergent, or presence/absence summer survey)**
I-270	St. Louis City County, MO	060-0035	No	No	No	No	

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	X	**Crevices, rough surfaces or imperfections in concrete**		**Human disturbance or traffic under bridge/in culvert or at the structure**	High X	Low	None
All crevices >12" deep & not sealed	X	**Spaces between walls, ceiling joists**		**Possible corridors for netting**	None/poor X	Marginal	excellent

All guardrails				**Evidence of bats using bird nests, if present?**	Yes	No X	
All expansion joints	X						
Spaces between concrete end walls and the bridge deck	X						
Vertical surfaces on concrete I-beams	X						

Assessment Conducted By: Jean Mengelkoch and Jocelyn Karsk **Signature(s):**

District Environmental Use Only: Date Received by District Environmental Manager:_____

DOT Bat Assessment Form Instructions

1. Assessments must be completed a minimum of 1 year prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Informal Consultation, regardless of whether assessments have been conducted in the past. **Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that structure in subsequent years.**
2. Legible copies of this document must be provided to the District Environmental Manager within two (2) business days of completing the assessment. Failure to submit this information will result in that structure being removed from the planned work schedule.
3. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has obtained clearance from the USFWS, if required. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
4. Estimates of numbers of bats observed should be place in the Notes column.
5. Any questions should be directed to the District Environmental Manager.

APPENDIX A. Bridge/Structure Assessment Form

Bridge Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside, from activities above that bore down to the underside, or that could impact expansion joints, from deck removal on bridges, or from structure demolish. Each bridge/structure to be worked on must have a current bridge inspection. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has obtained clearance from the US Fish and Wildlife Service, if required. Additional studies may be undertaken by the DOT to determine what species may be utilizing structures prior to allowing any work to proceed.

DOT Project #	Water Body	Date/Time of Inspection
19320A	Mississippi River	10 August 2016 2PM

Route:	County:	Federal Structure ID:	Bat Indicators Check all that apply. Presence of one or more indicators is sufficient evidence that bats may be using the structure.				
			Visual	Sound	Droppings	Staining	**Notes: (e.g., number & species of bats, if known. Include the results of thermal, emergent, or presence/absence summer survey)**
I-270	Madison Co, IL	060-0035	No	No	No	No	

Areas Inspected (Check all that apply)

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep	X	**Crevices, rough surfaces or imperfections in concrete**		**Human disturbance or traffic under bridge/in culvert or at the structure**	High X	Low	None
All crevices >12" deep & not sealed	X	**Spaces between walls, ceiling joists**		**Possible corridors for netting**	None/poor X	Marginal	excellent

All guardrails				**Evidence of bats using bird nests, if present?**	Yes	No X	
All expansion joints	X						
Spaces between concrete end walls and the bridge deck	X						
Vertical surfaces on concrete I-beams	X						

Assessment Conducted By: Jean Mengelkoch and Jocelyn Karsk Patty Dickerson, Mikko Moy, and Frank Sladek **Signature(s):**

District Environmental Use Only: Date Received by District Environmental Manager:_____

DOT Bat Assessment Form Instructions

1. Assessments must be completed a minimum of 1 year prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Informal Consultation, regardless of whether assessments have been conducted in the past. **Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that structure in subsequent years.**
2. Legible copies of this document must be provided to the District Environmental Manager within two (2) business days of completing the assessment. Failure to submit this information will result in that structure being removed from the planned work schedule.
3. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has obtained clearance from the USFWS, if required. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
4. Estimates of numbers of bats observed should be place in the Notes column.
5. Any questions should be directed to the District Environmental Manager.

USFWS BAT EMERGENCE SURVEY DATASHEET

Date: 10 August 2016 **Surveyor(s) Full Name:** Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Mikko Moy, Frank Sladek

State: IL, MO **County:** Madison, St. Louis City **Project Name:** I-270 @ Mississippi River , Seq. No.: 19320A

Site Name/#: I-270 bridge Mississippi River **Roost Name/#** _____ **Bat #:** _____

Lat/Long or UTM of Roost: 15N 745143 4294671 (NAD 83)

Description of Roost/Habitat Feature Surveyed: Watched for the emergence of bats from the bridge carrying I-270 over the Mississippi River in Madison Co., IL and St. Louis City Co., MO.

~~Bat Species K~~Known to be using this Roost/Feature (if not known, leave blank):

_____

Other Suspected Bat Species (explain): _____

Weather Conditions during Survey (temperature, precipitation, wind speed):

~~85-90 degrees F, no precipitation, light wind at start of survey but no wind by the end~~

Survey Start Time: 7:30 PM **Time of Sunset:** 8:00 PM **Survey End Time:** 9:00 PM

NOTE: Emergence surveys should begin ½ hour before sunset and continue for a minimum of 1 hour or until it is otherwise too dark to see emerging bats. The surveyor(s) should position him or herself so that emerging bats will be silhouetted against the sky as they exit the roost. Tallies of emerging bats should be recorded every few minutes or as natural breaks in bat activity allow. Please ensure that surveyor(s) are close enough to the roost to observe all exiting/returning bats, but not close enough to influence emergence (i.e., do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights other than a small flashlight to record data, if necessary). Do not shine a light on the roost tree crevice/cave/mine entrance itself as this may prevent or delay bats from emerging. If available, use of an infra-red, night vision, or thermal-imaging video camera or spotting scope and an ultrasonic bat detector are strongly recommended but not required.

Time	Number of Bats Leaving Roost*	Comments / Notes
		No bats were seen.

INDIANA BAT HABITAT ASSESSMENT DATASHEET

Project Name: 19320A Madison Co., I-270 over Mississippi River
Date: July 19 & 20, 2016
Township/Range/Section: T4N-R9, 10W-Sec 25, 36, 30, 29
Lat Long/UTM/ Zone:
Surveyor: Jean Mengelkoch, Mikko Moy, Frank Sladek, Jocelyn Karsk

Brief Project Description

Bridge replacement and approachway work.
IDOT is the lead agency on this project; however, work occurs in both Madison County, IL and St. Louis County and St. Louis City County, MO

Project Area

	Total Acres	Forest Acres	Open Acres
Project	1805	410	986

River Acres
409

Proposed Tree Removal (ac)	Completely cleared	Partially cleared (will leave trees)	Preserve acres- no clearing

Vegetation Cover Types

Pre-Project	Post-Project
Primarily floodplain forest. Heavily shaded by Japanese hops and grape vines with large honeysuckle presence in some areas.	

Landscape within 5 mile radius

Flight corridors to other forested areas?
Mississippi River corridor, floodplain forest trails, and Chain of Rocks Canal

Describe Adjacent Properties (e.g. forested, grassland, commercial or residencial development, water sources)
Residential and commercial development on MO side. IL side is a public island surrounded by agriculture. Mississippi River bisects the project area.

Proximity to Public Land

What is the distance (mi.) from the project area to forested public lands (e.g., national or state forests, national or state parks, conservation areas, wildlife management areas)?
Forested public lands occur on Chouteau Island, within the project limits. It is operated by U.S. Army Corps of Engineers, Illinois Department of Natural Resources, and Madison Co.

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 1 19320A St. Louis County and St. Louis City County, Missouri

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources: flowing
			x	
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	2	3	3	
Dominant Species of Mature Trees	Sycamore, box elder, black cherry			
% Trees w/ Exfoliating Bark	5%	5%	0%	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	30	55	15	=100%
No. of Suitable ~~Snags~~ potential roosts several				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:
Honeysuckle thicket, especially near roadway.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 2 19320A St. Louis County and St. Louis City County, Missouri

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	4	4	5	
Dominant Species of Mature Trees	Mixed oak & elm			
% Trees w/ Exfoliating Bark	5%	0%	0%	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	10	40	50	=100%
No. of Suitable ~~Snags~~ potential roosts few				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:
Small woodlot next to planted area at rest stop/visitor center.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 3 19320A St. Louis County, Missouri

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	1	2	6	
Dominant Species of Mature Trees	Black cherry & black walnut			
% Trees w/ Exfoliating Bark	-	-	-	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	50	40	10	=100%
No. of Suitable ~~Snags~~ potential roosts few				

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:
Treeline with chainlink fence on south side, very dense understory.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description

Sample Site No.(s): 4

19320A St. Louis County, Missouri

Water Resources at Sample Site

Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site

Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	4	4	6	
Dominant Species of Mature Trees	Elm			
% Trees w/ Exfoliating Bark	-	-	-	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	40	35	25	=100%
No. of Suitable Snags		multiple		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:

Extremely dense honeysuckle woodland with no trails.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description
Sample Site No.(s): 5 19320A border of St. Louis County and St. Louis City County, Missouri

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	3	5	6	
Dominant Species of Mature Trees	Mixed oak with some walnut & sycamore			
% Trees w/ Exfoliating Bark	-	-	-	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	20	40	40	=100%
No. of Suitable Snags		yes		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:
A few residences mixed in the woodland hillside. Very aggressive vines.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Use additional sheets to assess discrete habitat types at multiple sites in a project area

Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area

A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description

Sample Site No.(s): 6 19320A

Madison County, Illinois and St. Louis City County, Missouri

Water Resources at Sample Site

Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
Pools/Ponds (# and size)	N/A	Open and accessible to bats?		
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site

Closure/Density	Canopy (> 50 ')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
	2	3	4	
Dominant Species of Mature Trees	Cottonwood and silver maple			
% Trees w/ Exfoliating Bark	-	-	-	(use % sign if recording actual number instead of scale of 1-6)
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	40	35	25	=100%
No. of Suitable Snags	potential roosts	yes		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Yes

Additional Comments:

Floodplain forest. Dense vines cover large cottonwoods into canopy.

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

Jean Mengelkoch 217-265-7885
email: jmengelk@illinois.edu

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0744522mE 4295231mN (+/- 5m)	Date: 08/01/2016	Start time: 20:05 End time: 01:05

Project Name:I-270

Personnel: Jean Mengelkoch, Jocelyn Karsk, Stefanie Ervin, Mikko Moy, Frank Sladek

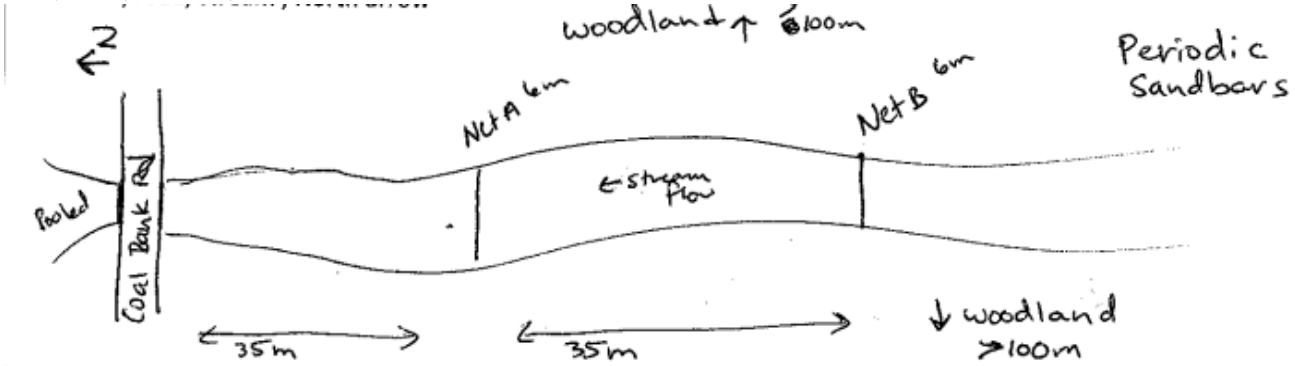
Site Name: A

State:MO

County: St. Louis

Net	# High	Length
A	2	6m
B	2	6m
C		
D		
E		

MAP: nets, road, stream , North arrow



Feature (circle one):bottomland forest, creek/riparian, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site:

Net A is a double-high (~6m high) 6m long net that is approximately 35m upstream of the bridge carrying Coal Bank Rd over an unnamed creek. About 1m of the net is over flowing water while the rest of the net is over a gravel bar. The east pole is at the bottom of a 3m high steep embankment. The west pole is at the edge of the gravel & a grassy flat area which is ~3m wide then a rise of ~2m. There is a tree crossing over most of the creek <1m north of Net A. There is a shrub <1m west of the western pole. There is no canopy over that but the tree & shrub should funnel the bats.

Net B is 35m upstream of net A. It is a double high that is 6 m long. It is over flowing water and there is a pool of water a few meters upstream. The eastern pole is on the embankment which rises ~5m. It's near a sycamore tree. The west pole is in the water ~1.5m from the water's edge then there is a 2m high sloping embankment to the woods. No canopy over the net, but a boxelder tree leans over the creek ~2m downstream.

Stream has gravel & rock/tar pieces bottom with riffles about every 15m. Trees in the area include Sycamore, boxelder, black willow & silver maple. Woodland also has some cottonwood. Lots of honeysuckle in under & midstory; very dense.

74.8° F @ 21:30. 71.4° F @ 00:58.

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Appendix D. INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
23:20	EPFU (big brown bat	A	F	Lactating	45mm	27	7.5	19.5 g	B	3	upstream	no	0	-	-	-	

Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

Jean Mengelkoch 217-265-7885
email: jmengelk@illinois.edu

INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0744522mE 4295231mN (+/- 5m)	Date: 08/02/2016	Start time: 20:06
		End time: 01:06

Project Name:I-270

Personnel: Jean Mengelkoch, Jocelyn Karsk, Stefanie Ervin, Mikko Moy, Frank Sladek

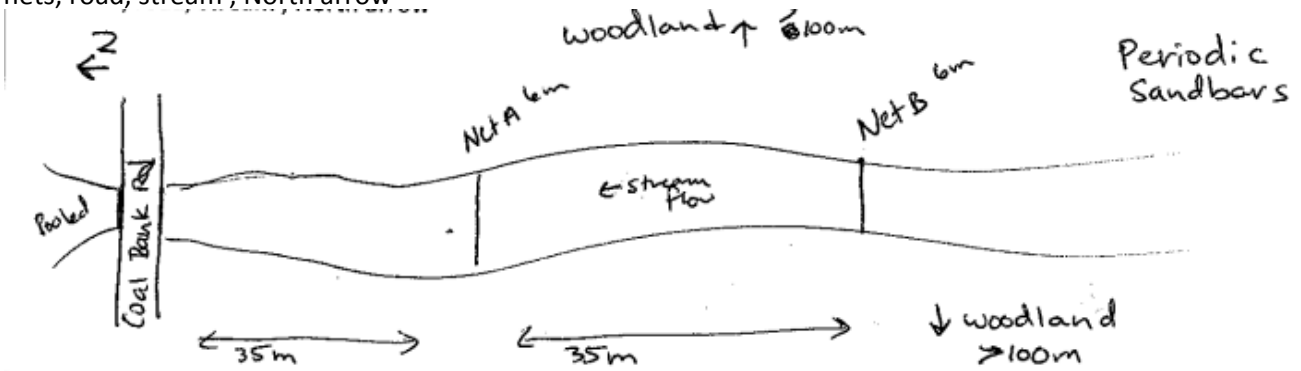
Site Name: A

State:MO

County: St. Louis

Net	# High	Length
A	2	6m
B	2	6m
C		
D		
E		

MAP: nets, road, stream , North arrow



Feature (circle one):bottomland forest, creek/riparian, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site:

Net A is a double-high(~6m tall) 6m long net that is approximately 35m upstream of the bridge carrying Coal Bank Road over an unnamed creek. About 1m of the net is over flowing water while the rest of the net is over a gravel bar. The east pole is at the bottom of a 3m high steep embankment. The west pole is at the edge of the gravel & a grassy flat area which is ~3m wide then a rise of ~2m. There is a tree crossing over most of the creek <1m north of Net A. There is a shrub <1m west of the western pole. There is no canopy over that but the tree & shrub should funnel the bats.

Net B is 35m upstream of net A. It is a double high that is 6 m long. It is over flowing water and there is a pool of water a few meters upstream. The eastern pole is on the embankment which rises ~5m. It's near a sycamore tree. The west pole is in the water ~1.5m from the water's edge then there is a 2m high sloping embankment to the woods. No canopy over the net, but a boxelder tree leans over the creek ~2m downstream.

Stream has gravel & rock/tar pieces bottom with riffles about every 15m. Trees in the area include Sycamore, boxelder, black willow & silver maple. Woodland also has some cottonwood. Lots of honeysuckle in under & midstory; very dense.

77 ° F @ 19:50, partly cloudy & calm. 1st bat seen @20:26 with temperature of 74.8°F. 23:04 beaver went downstream. 72.9°F @23:32. 72.7°F @ 00:44.

Jean Mengelkoch 217-265-7885
email: jmengelk@illinois.edu

INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
22:22	EPFU (big brown bat)	A	M	non-reproduct.	45mm	25	7.5	17.5 g	B	5m	upstream	no	0	-	-	-	

Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

Jean Mengelkoch 217-265-7885
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Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0745871mE 4293585mN (+/- 5m)	Date: 08/03/2016	Start time:20:00 End time: 01:00
Project Name:I-270	Personnel: Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Stefanie Ervin, Mikko Moy, & Frank Sladek	

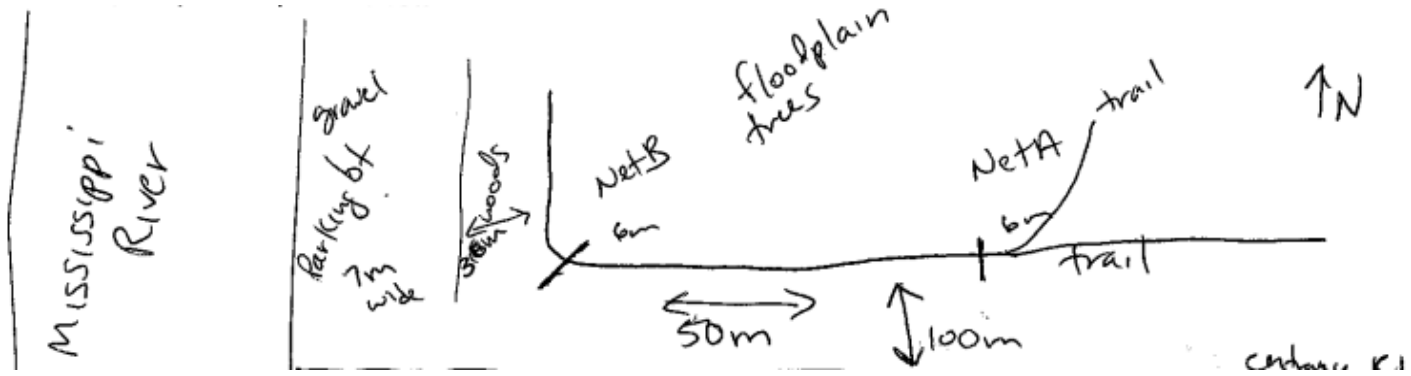
Site Name: B

State:IL

County: Madison

Net	# High	Length
A	2	6m
B	2	6m
C		
D		
E		

MAP: nets, road, stream , North arrow



Feature (circle one): creek/riparian, bottomland forest, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site:

Net A is a double high net (~5.5m) 6m long and is over a 2.5-3m wide mud trail thru floodplain forest. The poles extend into open areas on side of trail. The net is ~5m from an opening in the trees and the area where the trail splits to north and east. The north pole is ~1.5m from trail's edge and in front of a small tree growing sideways. The south pole is just west of a large silver maple. There is a canopy over the net. Net B is 50 m west of Net A on the trail just as the trail curves to the north by the gravel parking lot.

Net B is a double high net without one pole (~5 m tall; canopy was too low for all poles) and 6m long. The north pole is under branches of a white mulberry and is ~1m outside of the trail. The south pole is 1.5-2m out of the trail and is under another white mulberry. There is canopy cover over the net to funnel bats.

This is a floodplain forest dominated by silver maple and cottonwood. There are also white mulberry and honeysuckle in understory. Dense areas of understory. There are some gaps in the woods. Vines are taking over some area.

78.1°F, 81% humidity, and partly cloudy @20:00. First bat seen at 20:20. 77.5° F and clear @ 22:35. 74.5°F and clear @ 00:47. Screech owls, opossums & raccoons seen/heard.

Jean Mengelkoch 217-265-7885
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INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
																	NO BATS

Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

Jean Mengelkoch 217-265-7885
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INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0745871mE 4293585mN (+/- 5m)	Date: 08/04/2016	Start time:20:00 End time: 01:00

Project Name:I-270

Personnel: Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Stefanie Ervin, Mikko Moy, & Frank Sladek

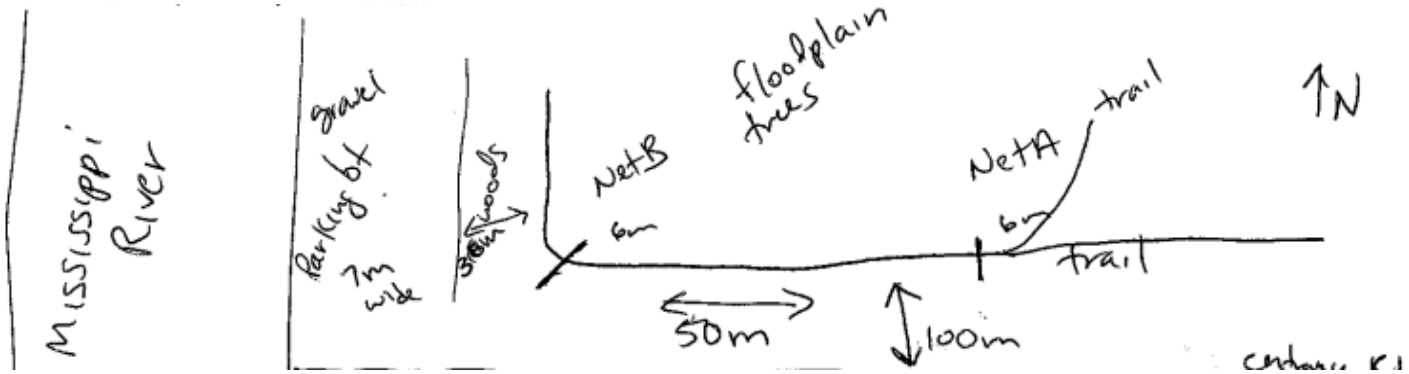
Site Name: B

State:IL

County: Madison

Net	# High	Length
A	2	6m
B	2	6m
C		
D		
E		

MAP: nets, road, stream , North arrow



Feature (circle one): creek/riparian, bottomland forest, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site:

Net A is a double high net (~5.5m high) 6m long and is over a 2.5-3m wide mud trail thru floodplain forest. The poles extend into open areas on side of trail. The net is ~5m from an opening in the trees and the area where the trail splits to north and east. The north pole is ~1.5m from trail's edge and in front of a small tree growing sideways. The south pole is just west of a large silver maple. There is a canopy over the net.

Net B is 50 m west of Net A on the trail just as the trail curves to the north by the gravel parking lot. Net B is a double high net without one pole (~5 m tall; canopy was too low for all poles) and 6m long. The north pole is under branches of a white mulberry and is ~1m outside of the trail. The south pole is 1.5-2m out of the trail and is under another white mulberry. There is canopy cover over the net to funnel bats.

This is a floodplain forest dominated by silver maple and cottonwood. There are also white mulberry and honeysuckle in understory. Dense areas of understory. There are some gaps in the woods. Vines are taking over some area.

First bat seen/heard @ 20:20. 80.8°F @20:30. 77.9°F@ 23:56. 78.4°F @00:41.

Jean Mengelkoch 217-265-7885
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INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
																	NO BATS

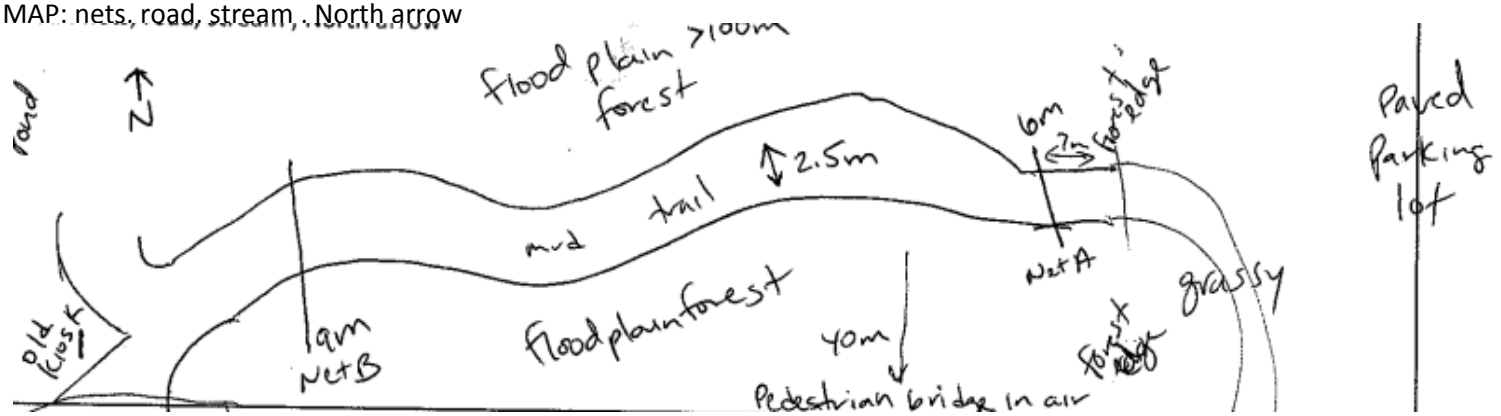
Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

Jean Mengelkoch 217-265-7885
email: jmengelk@illinois.edu

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0746302mE 4293694mN (+/- 5m)	Date:08/08/2016	Start time:20:00 End time:01:00
Project Name:I-270	Personnel: Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Frank Sladek, Mikko Moy	
Site Name: C State:IL County: Madison	MAP: nets, road, stream, North arrow	

Net	# High	Length
A	2	6m
B	2	9m
C		
D		
E		



Feature (circle one): creek/riparian, bottomland forest, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site:
Floodplain forest of silver maple and cottonwood; some large trees, lots of small to medium trees and a few shrubs.

Net A is a double high (~5.5m) 6m long and is ~7m from edge of woods. The north pole is under a silver maple and the south pole is near another silver maple. There is a canopy over the net. The pedestrian bridge (elevated) is ~40m south of the net. The paved parking lot (with a few lights) is ~30m west of net A and ~6-10m above ground level in a floodplain forest. The distance between nets A & B is ~70m west of net A (longer by meandering trail).

Net B is a double high (~5.5m) and 9m long. It is set over the trail and in a gap in the woods. The north pole is under multiple small silver maples. The south pole is a between small silver maples. The elevated pedestrian bridge is ~15m south of the south pole. There is a canopy over the net. The trail splits north & south ~7m west of Net B.

There is a large pond ~15-20m northwest of the net. The dirt/mud trail is ~2.5m wide and was recently graded. Most trees 2-10' dbh some larger cottonwoods and silver maples (dbh 18-24"). There are some dead trees in the area.

78.6°F., partly cloudy and calm air @ 19:54. 74.8°F @23:04. 72°F @ 00:51. Raccoon & opossum seen in area.

Jean Mengelkoch 217-265-7885
email: jmengelk@illinois.edu

INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
																	NO BATS

Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

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email: jmengelk@illinois.edu

INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

UTMs: (NAD 83) 15N 0746302mE 4293694mN (+/- 5m)	Date:08/09/2016	Start time:19:58 End time:01:00
Project Name:I-270	Personnel: Jean Mengelkoch, Jocelyn Karsk, Patty Dickerson, Frank Sladek, Mikko Moy	

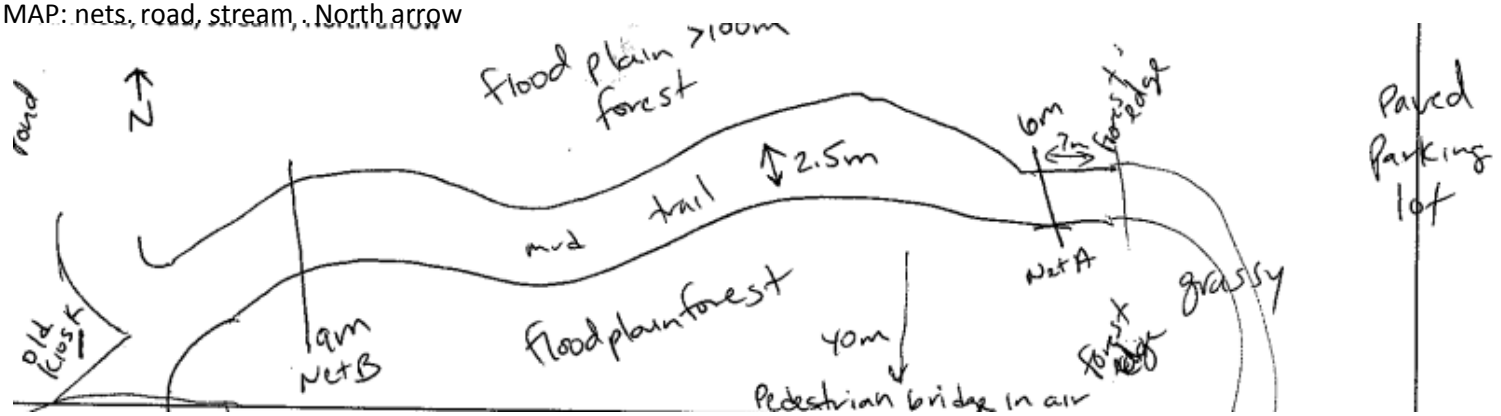
Site Name: C

State:IL

County: Madison

Net	# High	Length
A	2	6m
B	2	9m
C		
D		
E		

MAP: nets, road, stream, North arrow



Feature (circle one): creek/riparian, bottomland forest, upland forest, pond, cave entrance, mine portal, bridge, structure, field edge, open field, other

Description of site: Floodplain forest of silver maple and cottonwood; some large trees with lots of small to medium trees and a few shrubs.

Net A is a double high (~5.5m) 6m long and is ~7m from edge of woods. The north pole is under a silver maple and the south pole is near another silver maple. There is a canopy over the net. The pedestrian bridge (elevated) is ~40m south of the net. The paved parking lot (with a few lights) is ~30m west of net A and ~6-10m above ground level in a floodplain forest. The distance between nets A & B is ~70m and net B is located west of net A (longer by meandering trail).

Net B is a double high (~5.5m) and 9m long. It is set over the trail and in a gap in the woods. The north pole is under multiple small silver maples. The south pole is a between small silver maples. The elevated pedestrian bridge is ~15m south of the south pole. There is a canopy over the net. The trail splits north & south ~7m west of Net B. There is a large pond ~15-20m northwest of the net B.

The dirt/mud trail is ~2.5m wide and was recently graded. Most trees 2-10' dbh some larger cottonwoods and silver maples (dbh 18-24"). There are some dead trees in the area.

First bat seen flying @ 20:30. 83.7°F, partly cloudy & calm @ 20:37. 80.1°F and 71% humididty @22:45. 77.2°F and 79% humididty @ 00:43. Gunfire ~ 00:00.

Jean Mengelkock 217-265-7885
email: jmengelk@illinois.edu

INHS Summer Mist-netting Survey

Jocelyn Karsk 217-300-9956
email: jkarsk@illinois.edu

Time	Spp.	Age	Sex	Repro Cond	R 4arm (mm)	Mass (g): bat + bag, bag, bat			Net/height/ direction			Sample Collected	Wing Score	Band (new vs. recap)	Band ID	Band arm	Comments/radio freq/PIT tag
																	NO BATS

Wing index: 0= <6 sm spots with few to no pinholes; 1= discolored or flaking forearm with <50% pigment loss; 2= pigment loss > 50%, small holes <0.5cm, few areas of necrosis, trailing edge, tears <1 cm;3= pigment loss >90%, abundant necrosis, holes >0.5 cm, trailing edge membrane loss, tears >1 cm; P= physical damage

APPENDIX E. Bridge Assessment Photos

Looking west at the I-270 bridge abutment in St. Louis City County, Missouri on 9 August 2016.

Looking east under the bridge carrying I-270 over the Mississippi River. The photo is taken from the abutment in St. Louis City County, Missouri on 9 August 2016.

Looking east at the underside of the bridge carrying I-270 over the Mississippi River from the Missouri shoreline In St. Louis City County on 9 August 2016.

Looking east at the I-270 bridge abutment in Madison County, Illinois on 10 August 2016.

Looking west under the bridge carrying I-270 over the floodplain of the Mississippi River in Madison County, Illinois on 10 August 2016.

Looking west under the bridge carrying I-270 over the Mississippi River from Madison County, Illinois to St. Louis City County, Missouri on 10 August 2016.

View of the bridge carrying I-270 over the Mississippi River from St. Louis City, County Missouri on 10 August 2016, looking southeast. Photo taken from the site of the emergence survey.

APPENDIX E. Habitat Assessments

Habitat 1 was dominated by American sycamore (*Platanus occidentalis*), black cherry (*Prunus serotina*), and box elder (*Acer negundo*). The understory was a dense thicket of amur honeysuckle (*Lonicera maackii*). Habitat 1 was in St. Louis City County and St. Louis County, Missouri.

Habitat 2 was mixed oak (*Quercus* spp.) and elm (*Ulmus* sp.). Habitat 2 was part of the Chain of Rocks Welcome Center and Rest Area in St. Louis City County and St. Louis County, Missouri.

Habitat 3 was dominated by black cherry (*Prunus serotina*) and black walnut (*Juglans nigra*). Habitat 3 was located in St. Louis County, Missouri.

Habitat 4 was predominantly elm (*Ulmus* sp.). Habitat 4 was located in St. Louis County, Missouri.

Habitat 5 was dominated by mixed oaks (*Quercus* sp.) with some black walnut (*Juglans nigra*) and American sycamore (*Platanus occidentalis*). Habitat 5 was located on the border of St. Louis City County and St. Louis County, Missouri.

Habitat 6 was floodplain forest dominated by eastern cottonwood (*Populus deltoides*) and silver maple (*Acer saccharinum*). The structure and density of the trees in the floodplain forest within the project area varied. Habitat 6 was located in St. Louis City County, Missouri and Madison County, Illinois.

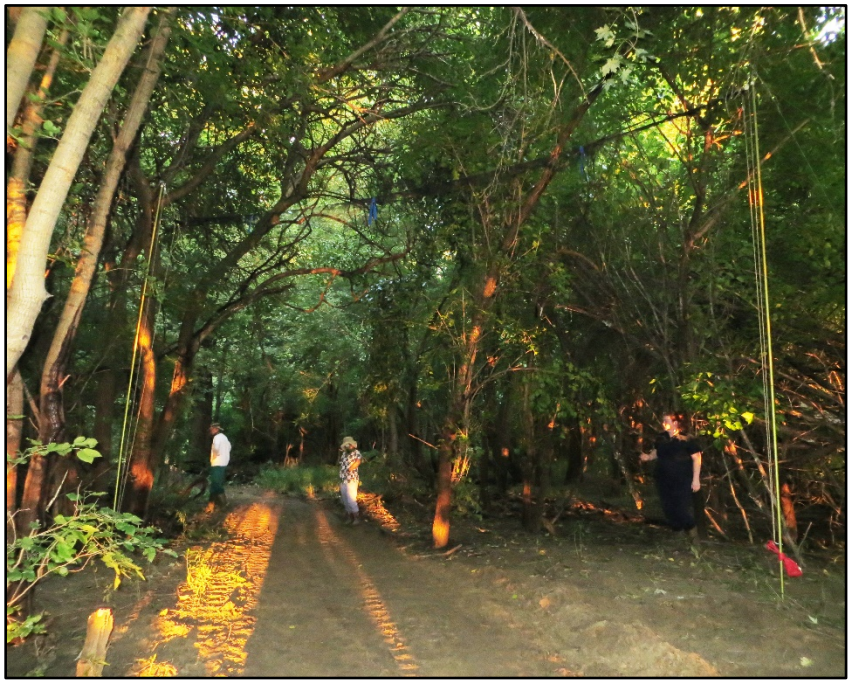
Habitat 6 had abundant invasive vines throughout the project area. Habitat 6 was located in St. Louis City County, Missouri and Madison County, Illinois.

APPENDIX E. Mist-netting Photos

Site A. Looking north at Net A over Watkins Creek in Spanish Lake, St. Louis County, Missouri in the I-270 project area on 1 and 2 August 2016.

Site A. Looking south at Net B over Watkins Creek in Spanish Lake, St. Louis County, Missouri in the I-270 project area on 1 and 2 August 2016.

Site B. Looking east at Net A over a trail near the Chouteau Island Fishing Area parking lot, Madison County, Illinois in the I-270 project area on 3 and 4 August 2016.



Site B. Looking east at Net B over a trail near the Chouteau Island Fishing Area parking lot, Madison County, Illinois in the I-270 project area on 3 and 4 August 2016.

Site C. Looking east at Net A over a trail near the pedestrian bridge parking lot on Chouteau Island, Madison County, Illinois on 8 and 9 August 2016.

Site C. Looking west at Net B over a trail near the pedestrian bridge parking lot on Chouteau Island, Madison County, Illinois on 8 and 9 August 2016.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Assistant Director-Ecological Services
5275 Leesburg Pike, Ms: Es
Falls Church, VA 22041-3803
Phone: (703) 358-2171 Fax: (703) 358-2171

In Reply Refer To: October 05, 2017
Consultation code: 03E14000-2018-I-0004
Consultation code: 03E18100-2018-I-0003
Event Code: 03E14000-2018-E-00085
Project Name: 19320 B I 270 over the Mississippi Preferred Alignment

Subject: Concurrence verification letter for the '19320 B I 270 over the Mississippi Preferred Alignment' project under the December 15, 2016 FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **19320 B I 270 over the Mississippi Preferred Alignment** (Proposed Action) may rely on the concurrence provided in the December 15, 2016, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Based on the information you provided (Project Description repeated below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat

and/or northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, or any designated critical habitat, additional consultation is required. In either of these circumstances, please contact this Office.

The following species may occur in your project area and **are not** covered by this determination:

- Decurrent False Aster, *Boltonia decurrens* (Threatened)
- Eastern Massasauga (=rattlesnake), *Sistrurus catenatus* (Threatened)
- Eastern Prairie Fringed Orchid, *Platanthera leucophaea* (Threatened)
- Least Tern, *Sterna antillarum* (Endangered)
- Pallid Sturgeon, *Scaphirhynchus albus* (Endangered)
- Spectaclecase (mussel), *Cumberlandia monodonta* (Endangered)

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

19320 B I 270 over the Mississippi Preferred Alignment

Description

This is the Preferred Alignment for the replacement of I 270 over the Mississippi River. There will be in stream work to the Mississippi River. No explosives shall be used. At this time, the amount of right-of-way is unknown. The project length Is approximately 0.5 miles. There will be an unknown amount of tree removal.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect, the endangered Indiana bat and/or the threatened Northern long- eared bat; therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the December 15, 2016 FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the Northern long-eared bat[1] (NLEB)?

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, property inspections, planning and technical studies, property sales, property easements, and equipment purchases)

   No

5. Are *all* project activities completely within the existing road/rail surface[1] (e.g., road line painting)?

   [1] Road surface is defined as the driving surface and shoulders (may be pavement, gravel, etc.) and rail surface is defined as the edge of the rail ballast.

   No

6. Are *all* project activites limited to the maintenance of the surrounding landscape at existing facilities (e.g., rest areas, stormwater detention basins)?

   No

7. Are *all* project activities limited to wetland or stream protection activities associated with compensatory wetland mitigation?

   No

8. Will the project raise the road profile **above the tree canopy** within 1,000 feet of known summer habitat (based on documented roosts and/or captures)?

   No

9. Does the project include percussives or other activities (not including the removal of trees) that will increase noise levels above existing traffic/background levels?

   Yes

10. Is there any suitable summer habitat[1] for Indiana Bat or NLEB within the project area? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

11. Will the project clear any suitable summer habitat[1]?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

12. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

13. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4]?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum(contact local Service Field Office for appropriate distance from hibernaculum) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    [4] negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

    SUBMITTED DOCUMENTS

    - *bat report.pdf*
      https://ecos.fws.gov/ipac/project/B3XNORD6NRGT7GG3DIP4666BQY/projectDocuments/9741743

14. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum(contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

15. Were the P/A summer surveys conducted within the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] contact the local Service Field Office for appropriate distance from hibernacula.

    No

16. Does the project include activities within documented **Indiana bat** habitat[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

17. Will the project remove any suitable **Indiana bat** roosting/foraging habitat or travel corridors that **has not** been documented as being used by Indiana bat?

    No

18. Does the project include activities within **documented NLEB** habitat[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

19. Will the project remove any suitable **NLEB** roosting/foraging habitat or travel corridors that have **not** been documented as being used by NLEB?

    No

20. Does the project include any ground disturbing activities?

    Yes

21. Is the project located within a karst area?

    No

22. Will the project include any type of activity that could impact a **known** hibernaculum[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

    [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

    No

23. Does the project include any activities **within** 0.5 miles of an Indiana bat and/or NLEB hibernaculum[1]?

    [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

    No

24. Does the project include any activities **greater than** 300 feet from existing road/rail surfaces?

    Yes

25. Does the project include slash pile burning?

    No

26. Does the project include any bridge removal and/or replacement activities?

    Yes

27. Does the project include any bridge maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    No

28. Has a Bridge Assessment[1] for use by bats been conducted within the last 12 months[2]?

    [1] See User Guide Appendix D for bridge/abandoned structure assessment guidance

    [2] Assessments must be completed a maximum of 1 year prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *bat report.pdf*
      https://ecos.fws.gov/ipac/project/B3XNORD6NRGT7GG3DIP4666BQY/projectDocuments/9741743

29. Did the bridge assessment detect bats or sign of bat roosting in/under the bridge?

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

30. Will the bridge related activities make the bridge no longer suitable for roosting?

    No

31. Does the project include the removal and/or replacement of any structures other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

32. Does the project include maintenance activities of any structures other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

33. Does the project include tree removal?

    Yes

34. Will the tree removal alter any documented Indiana bat or NLEB roosts and/or alter any surrounding summer habitat *within* 0.25 mile of a documented roost?

    No

35. Will *any* tree removal occur within 100 feet of existing road/rail surfaces[1]?

    [1] Road surface is defined as the driving surface and shoulders (may be pavement, gravel, etc.) and rail surface is defined as the edge of the rail ballast.

    Yes

36. Will *all* tree removal occur within 100 feet of existing road/rail surfaces?

    Yes

37. Are *all* trees that are being removed clearly demarcated?

    Yes

38. Will the project involve the use of **temporary** lighting during the construction/maintenance activities?

    No

39. Will the project install new (or replace existing) **permanent** lighting?

    No

40. **General AMM 1**

    Will the project ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

41. **Tree Removal AMM 1**
Can all phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is an avoidance measure, the full implementation of which may not always be practicable. In such cases, projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented

Yes

42. **Tree Removal AMM 2**
Can all tree removal activities be restricted to when bats are not likely to be present[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

43. **Tree Removal AMM 3**
Can tree removal be limited to that area specified in project plans, and assured through: (1) installation of bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits, and (2) confirmation that contractors understand clearing limits and how they are marked in the field?

Yes

44. **Tree Removal AMM 4**
Can the project avoid cutting down/removal of all 1) documented Indiana bat or NLEB roosts[1] (that are still suitable for roosting), and 2) trees within 0.25 miles of roosts?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Automatically answered
Yes - you indicated that tree removal for this project would not alter documented Indiana bat or NLEB roosts and/or summer habitat within 0.25 mile of a documented roost

Project Questionnaire

1. Please describe the proposed bridge work:
   Bridge Removal.

2. Please state the timing of all proposed bridge work:
   Unknown

3. Have you made a No Effect determination for all other species indicated on the FWS IPaC generated species list?
   No

4. Have you made a May Affect determination for any other species on the FWS IPaC generated species list?
   Yes

5. How many acres of trees are proposed for removal?
   1

6. **Please verify:**
   All tree removal will occur greater than 0.5 mile from any hibernaculum.

   Yes, I verify that all tree removal will occur greater than 0.5 miles from any hibernaculum.

7. The project location is 0-100 feet from the edge of existing road/rail surface.
   Yes

8. The project location is 100-300 feet from the edge of existing road/rail surface.
   Yes

Avoidance And Minimization Measures (AMMs)

These measures **were accepted** as part of this determination key result:

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal in excess of what is required to implement the project safely.

Note: Tree Removal AMM 1 is an avoidance measure, the full implementation of which may not always be practicable. In such cases, projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented.

TREE REMOVAL AMM 2

Apply time of year (TOY) restrictions for tree removal[1] when bats are not likely to be present.
[1] Coordinate with the local Service Field Office for appropriate dates.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans. Install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field.

TREE REMOVAL AMM 4

Do not cut down documented Indiana bat or NLEB roosts (that are still suitable for roosting) or trees within 0.25 miles of roosts, or documented foraging habitat at any time of year.

Additional Avoidance And Minimization Measures (AMMs)

These measures **are not required** for this project as described:

TREE REMOVAL AMM 5

Avoid conducting tree removal within documented Indiana bat roosting/foraging habitat[1] or travel corridors[2] from May 1-July 31.

[1] Documented roosting or foraging habitat – for the purposes of this BA, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.

[2] Documented travel corridor - for the purposes of this BA, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) tree corridors located directly between documented roosting and foraging habitat.

TREE REMOVAL AMM 6

Minimize tree removal within suitable Indiana bat habitat (no documented habitat) from May 1-July 31 in the following manner:
1) Limit clearing such that all trees can be visually assessed.
2a) Conduct visual emergence surveys if trees are greater than or equal to 9 inches diameter at breast height (dbh).

- If no bats are observed, proceed with clearing the following day.
- If bats observed, modify project to conduct tree removal after August 1.

OR
2b) If trees are <9 inches dbh, no emergence survey required.

TREE REMOVAL AMM 7

Avoid removing documented NLEB maternity roosts and trees within 150 feet of those roosts from June 1-July 31.

BRIDGE AMM 1

To completely avoid direct effects to roosting bats, perform any bridge repair, retrofit, maintenance, and/or rehabilitation work during the winter hibernation period[1].

[1] Coordinate with the local Service Field Office for appropriate dates.

BRIDGE AMM 2

If construction activity is planned during the active season, perform a bridge assessment[1] for presence of bats.

[1] See User Guide Appendix D for bridge assessment guidance

BRIDGE AMM 3

If bridge assessment for bats suggests presence of bats, ensure activity will not disturb bats.

BRIDGE AMM 4

If bridge assessment for bats suggests presence of a small number of bats (5)6, conduct bridge repair, retrofit, maintenance, and/or rehabilitation work (including activity with percussives) outside of pup season (June 1- July 31) AND keep the light localized in the evening while the bats are feeding, starting one hour after sunset and ending one hour before daylight, excluding the hours between 10 p.m. and midnight[1].

[1] Keeley and Tuttle (1999) indicated peak night roost usage is between 10:00 p.m. to midnight.

BRIDGE AMM 5

Ensure suitable roosting sites remain after any bridge work. Suitable roosting sites may be incorporated into the design of a new bridge.

STRUCTURE AMM 1

If the goal of the project is to exclude bats from the structure, coordinate with your local Service Field Office and follow the Acceptable Management Practices for Bat Control Activities in Structures guidance document (White-nose Syndrome Conservation and Recovery Working Group 2015).

STRUCTURE AMM 2

Perform *all* maintenance and/or repair work during the winter hibernation period[1] unless a hibernating colony of bats is present.

[1] Coordinate with the local Service Field Office for appropriate dates.

STRUCTURE AMM 3

If maintenance and/or repair work will be performed outside of the winter hibernation period, determine if work will occur in an area with roosting bats. If there is observed bat activity (or signs of frequent bat activity), Transportation Agencies/State Departments of Transportation (DOTs) will conduct maintenance activity or similar structure alteration when bats are not present (i.e., foraging) or in a manner that will not disturb them.

STRUCTURE AMM 4

If roosting bats or signs of roosting bats are observed, Transportation Agencies/State DOTs will avoid removing the structure.

Note: If there are concerns about human health/safety/property coordinate with a nuisance wildlife control officer and the local USFWS Field Office.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

LIGHTING AMM 2

Use downward-facing, full cut-off[1] lens lights, and direct lighting away from suitable habitat when installing new or replacing existing permanent lights; or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society[2][3], the goal is to be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

[1] Refer to Luminaire classification for controlling stray light

[2] Refer to Fundamentals of Lighting - BUG Ratings

[3] Refer to The BUG System—A New Way To Control Stray Light

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

[1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 03, 2017. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's revised programmatic biological opinion for transportation projects dated December 15, 2016. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

U.S. Fish & Wildlife Service Contact List

Determination key office contact information

Assistant Director-Ecological Services
5275 Leesburg Pike, Ms: Es
Falls Church, VA 22041-3803
(703) 358-2171

Offices with jurisdiction over project area

Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
(573) 234-2132

Marion Ecological Services Sub-Office
Marion Illinois Sub-office
8588 Route 148
Marion, IL 62959-5822
(618) 997-3344

- Super Bundles
- Bundles
- Section 7
- CPA
- Contam
- Reports
- Customize

03E18100-2018-SLI-0189 I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

Full Consultation Report

Consultation Title:	I-270 Bridge over Mississippi River, MO and IL St. Louis, MO
ARRA Fund:	No ARRA funding
Consultation Description:	replace/repair bridge
Consultation Type:	Species List (IPaC-Generated)
Consultation Complexity:	Standard
Comments:	Section 7 Consultation generated by the IPaC application.
Action/Work Types:	• TRANSPORTATION
Species:	• Decurrent false aster (Boltonia decurrens) [Q26A, P01] (T) [Wherever found] • Eastern Massasauga (=rattlesnake) (Sistrurus catenatus) [C03P, V01] (T) [Wherever found] • Eastern prairie fringed orchid (Platanthera leucophaea) [Q2GG, P01] (T) [Wherever found] • Indiana bat (Myotis sodalis) [A000, V01] (E) [Wherever found] • Least tern (Sterna antillarum) [B07N, V01] (E) [interior pop.] • Northern Long-Eared Bat (Myotis septentrionalis) [A0JE, V01] (T) [Wherever found] • Pallid sturgeon (Scaphirhynchus albus) [E06X, V01] (E) [Wherever found] • Spectaclecase (mussel) (Cumberlandia monodonta) [F00X, I01] (E) [Wherever found]
Staff Lead:	Matthew Mangan
Lead Agency:	Federal Highway Administration
Supporting Agencies:	*None entered*
No further Service work performed:	*None entered*
First Contact Date:	01/26/2018
Date of Correspondence:	01/26/2018
Start Date:	01/26/2018
Days until Due:	Concluded
Due Date:	01/26/2018
Conclusion Date:	01/26/2018

Bundles

Bundle(s):

- 03E14000-2018-B-0016: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

- 03E18100-2018-B-0068: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

SuperBundles

SuperBundle(s): *None entered*

Contacts

Contacts
MoDOT Environmental Staff
Missouri Department of Transportation (MDOT)
(573) 526-4778

Consultants
None entered

Location

Location Description:	A map of the proposed project area
Within Coastal Zone?:	No
Within Flood Plain/Zone?:	No
Latitude:	38.762950
Longitude:	-90.163996
Datum:	WGS84
Latitude:	*None entered*
Longitude:	*None entered*
Datum:	*None entered*
UTM East (meters):	*None entered*
UTM North (meters):	*None entered*
UTM Zone:	*None entered*
Datum:	*None entered*
State(s):	Illinois
Counties or Equivalents:	Madison, IL
Congressional District(s):	IL12
Watersheds:	Cahokia - Joachim (07140101)
Ecoregions:	Upper Mississippi River/Tallgrass Prairie
USGS Quads:	Columbia Bottom (38090-G2)

Details / References

Habitat Types Involved:	*None entered*
Recommendations Provided:	No
Final Plans/Reports Received:	No
Recommendations Implemented:	*None entered*
Terms/Conditions Implemented:	*None entered*
Affiliated Office(s):	• 33410: MISSOURI ESFO
GIS File(s):	ipacProjectShapefile.zip
Permit/Action Type:	*None entered*
Associated w/Fire:	No

Biological Conclusion

Species:	Decurrent false aster (Boltonia decurrens) [Q26A, P01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Eastern Massasauga (=rattlesnake) (Sistrurus catenatus) [C03P, V01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Eastern prairie fringed orchid (Platanthera leucophaea) [Q2GG, P01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Indiana bat (Myotis sodalis) [A000, V01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Least tern (Sterna antillarum) [B07N, V01] (E) [interior pop.]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Northern Long-Eared Bat (Myotis septentrionalis) [A0JE, V01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Pallid sturgeon (Scaphirhynchus albus) [E06X, V01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Spectaclecase (mussel) (Cumberlandia monodonta) [F00X, I01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*

Events

01/26/2018
03E18100-2018-E-00451
Correspondence Exchange

Official Species List issued from IPaC. Project information was submitted through IPaC for FWS review and IPaC provided an appropriate response (see attached).

Electronic File(s):

- ipac-OfficialSpeciesList-26_Jan_2018.pdf

01/26/2018
03E18100-2018-E-00450
Other Notations

IPaC has created this activity based on the following project information: - Work Type: TRANSPORTATION - Lead Agency: Federal Highway Administration - Project Name: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO - Project Description: replace/repair bridge Provided by ipac@modot.mo.gov in IPaC

Transportation Review for Ecological Compliance: Report of Possible Resource Conflicts

Sequence #: 19320 B

I 270 over the Miss.
Preferred Alignment

Resource in Vicinity of Project Polygon

*T&E

*Ducks Unlimited Wetlands

*INHS Wetland

*National Wetlands Inventory

INAI & NP w/in 1 mile

*none found

No Resource Found

*INAI

*Nature Preserve

*Roadside Prairie Inventory

County: MADISON

Section(PLSS): 3 4N10W25

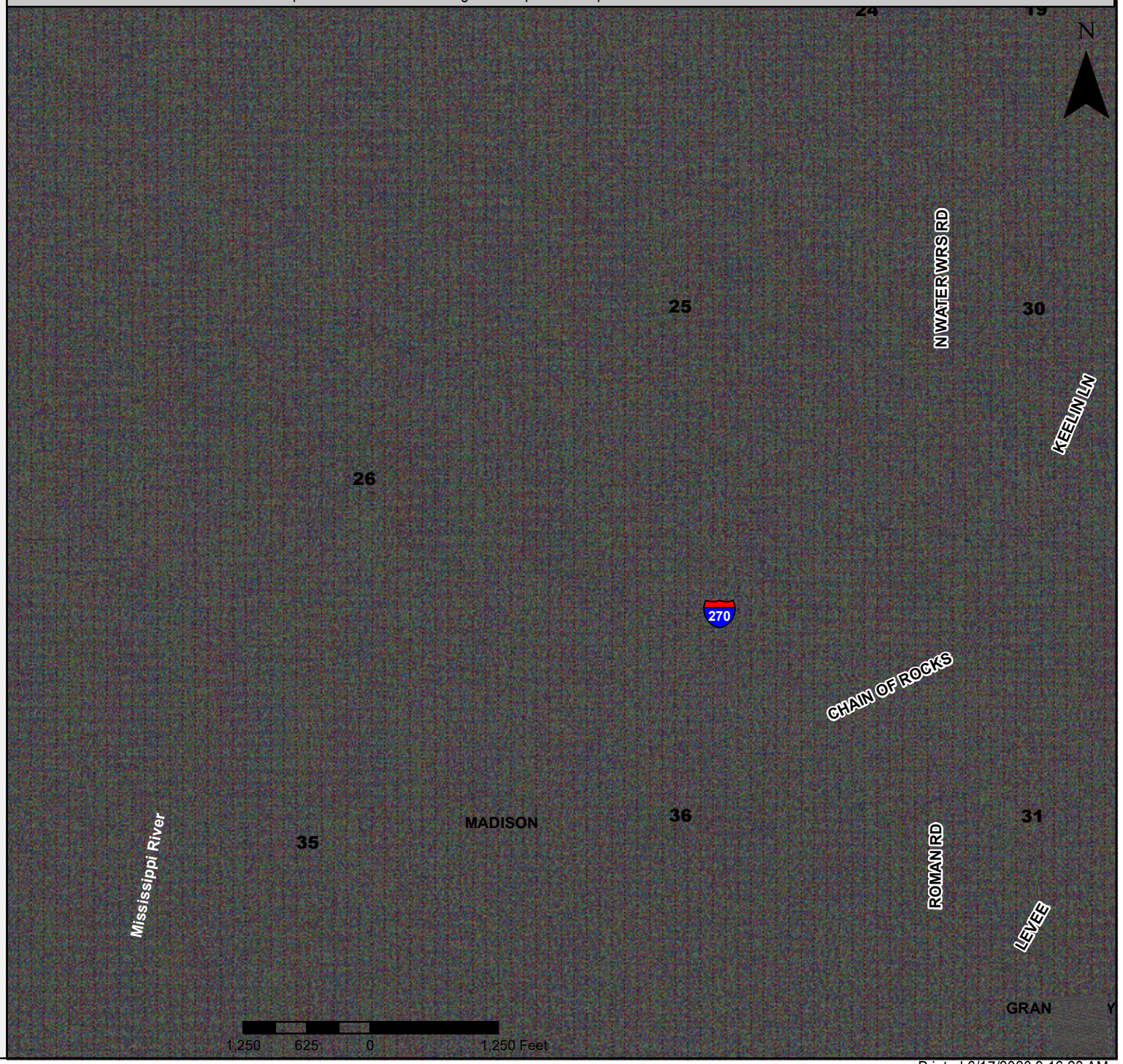
Area: 0.1742 sq. miles = 111.48694 acres

Report created by KessingerK

[redacted]

[redacted]

Include as additional documentation with permit applications (USACE).



Printed 6/17/2020 9:16:23 AM

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959

FWS/SISO

March 16, 2018

Maureen M. Addis
Bureau of Design and Environment
IL Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

Attn: Kimberly Kessinger

Dear Ms. Addis:

Thank you for your email dated February 23, 2018, requesting additional review of the proposed Illinois Department of Transportation (IDOT) Project #19320 B. The proposed project is located in Madison County, Illinois, and involves removal and replacement of the existing I-270 bridge over the Mississippi River. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq*.) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

Threatened and Endangered Species

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service (Service) information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. The list for the proposed project area includes the endangered Indiana bat (*Myotis sodalis*), endangered least tern (*Sterna antillarum*), endangered pallid sturgeon (*Scaphirhynchus albus*), endangered spectaclecase mussel (*Cumberlandia monodonta*), threatened decurrent false aster (*Boltonia decurrens*), threatened eastern massasauga (*Sistrurus catenatus*), threatened eastern prairie fringed orchid (*Platanthera leucophaea*), and threatened northern long-eared bat (*Myotis septentrionalis*). There is no designated critical habitat in the project area at this time.

Information in the original NRR dated October 5, 2017, indicated that the proposed project would have no effect on the decurrent false aster, eastern massasauga, eastern prairie fringed orchid, least tern, and spectaclecase mussel. This precluded the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended, for those species. Information in the original NRR indicated that no bats were observed under the bridge and none were captured during mist netting efforts. Based on implementation of the proposed conservation measure (no tree clearing April 1 through September 30), IDOT determined that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Information in the revised NRR dated February 20, 2018, indicates that 2 big brown bats were captured on the Missouri side of the proposed project and that any tree clearing on the Missouri side of the proposed project will occur between November 1 and March 31. Based on this information, the Service continues to concur that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Information in the original NRR indicated that pallid sturgeon may migrate through the proposed project area and the proposed project involves in-river work. In order to avoid and minimize impacts to the pallid sturgeon, IDOT developed several conservation measures including no explosives shall be used during demolition of the existing structures or during construction of the new structures, the superstructure shall not be dropped into the river during demolition, and piles shall not be driven during the primary spawning season of April 15 to June 30. Based on the information provided and provided these recommendations are followed, the Service concurred that the proposed project is not likely to adversely affect pallid sturgeon. Should this project be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute “disturbance,” which is prohibited by the BGEPA. The Service is unaware of any bald eagle nests in the proposed project area; however, if a bald eagle nest is found in the project area or vicinity of the project area then our office should be contacted and the guidelines implemented. A copy of the guidelines is available at:

http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf

Thank you for the opportunity to provide information concerning threatened and endangered species. For additional coordination, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Southern Illinois Sub-Office (ES)
8588 Route 148
Marion, Illinois 62959

FWS/SISO

October 27, 2017

Maureen M. Addis
Bureau of Design and Environment
IL Department of Transportation
2300 South Dirksen Parkway
Springfield, IL 62764

Attn: Kimberly Kessinger

Dear Ms. Addis:

Thank you for your email dated October 9, 2017, requesting review of the proposed Illinois Department of Transportation (IDOT) Project #19320 B. The proposed project is located in Madison County, Illinois, and involves removal and replacement of the existing I-270 bridge over the Mississippi River. These comments are provided under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.); the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.); the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq*.) and, the National Environmental Policy Act (83 Stat. 852, as amended P.L. 91-190, 42 U.S.C. 4321 et seq.).

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Information in the NRR indicates that the proposed project will have no effect on the decurrent false aster, eastern massasauga, eastern prairie fringed orchid, least tern, and spectaclecase mussel. This precludes the need for further action on this project as required under Section 7 of the Endangered Species Act of 1973, as amended, for this species. Information in the NRR indicates that no bats were observed under the bridge and none were captured during mist netting efforts. Based on implementation of the proposed conservation measure (no tree clearing April 1 through September 30), IDOT has determined that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Based on this information, the Service concurs that the proposed project is not likely to adversely affect the Indiana bat and northern long-eared bat. Information in the NRR indicates that pallid sturgeon may migrate through the proposed project area and the proposed project involves in-river work. In order to avoid and minimize impacts to the pallid sturgeon, IDOT developed several conservation measures including no explosives shall be used during demolition of the existing structures or during construction of the new structures, the superstructure shall not be dropped into the river during demolition, and piles shall not be driven during the primary spawning season of April 15 to June 30. Based on the information provided and provided these recommendations are followed, the Service concurs that the proposed project is not likely to adversely affect pallid sturgeon. Should this project be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination with this office, as appropriate, should be initiated.

Although the bald eagle has been removed from the threatened and endangered species list, it continues to be protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (BGEPA). The Service developed the National Bald Eagle Management Guidelines to provide landowners, land managers, and others with information and recommendations regarding how to minimize potential project impacts to bald eagles, particularly where such impacts may constitute "disturbance," which is prohibited by the BGEPA. The Service is unaware of any bald eagle nests in the proposed project area; however, if a bald eagle nest is found in the project area or vicinity of the project area then our office should be contacted and the guidelines implemented. A copy of the guidelines is available at:

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Thank you for the opportunity to provide information concerning threatened and endangered species. For additional coordination, please contact me at (618) 997-3344, ext. 345.

Sincerely,

/s/ Matthew T. Mangan

Matthew T. Mangan
Fish and Wildlife Biologist

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD AND SPECIFICATIONS

TREE/SHRUB ESTABLISHMENT

(Acre)
CODE 612

DEFINITION

Establishing woody plants by planting seedlings, container/potted plants, or cuttings, direct seeding, or natural regeneration.

PURPOSE

To establish woody plants for:

- forest products
- wildlife habitat
- long-term erosion control
- water quality improvement
- waste treatment
- air pollution reduction
- carbon sequestration
- energy conservation
- aesthetics.

CONDITIONS WHERE PRACTICE APPLIES

On any area where woody plants can be grown.

CRITERIA

General Criteria Applicable to All Purposes

Species will be adapted to site conditions and suitable for the planned purpose(s).

Planting or seeding rates will be adequate to accomplish the planned purpose.

Planting dates, and care in handling and planting of the seed, cuttings or woody plants will ensure that planted materials have an acceptable rate of survival.

Only viable, high quality and adapted planting stock or seed will be used.

Site preparation shall be sufficient for establishment and growth of selected species.

Adequate seed or advanced reproduction needs to be present or provided for when using natural regeneration to establish a stand.

Choose a planting method that is appropriate for existing site conditions and species capabilities.

Timing and use of equipment will be appropriate for the site and soil conditions.

The planting will be protected from adverse impacts from livestock, wildlife, pests and fire.

The planting shall not compromise the integrity of property lines, utilities, fences, right-of-ways, drainage tiles, or buildings.

Each site will be evaluated to determine if mulching, supplemental water or other cultural treatments will be needed to assure adequate survival and growth. Use supplemental water, mulching, root dips, geo-textile mats, tree shelters, and tree shades as necessary to ensure adequate survival.

Additional Criteria for Improving Water Quality

Use species that are native to the area, medium to fast growing, and deep rooting.

For riparian areas, use species adapted to local flooding conditions and soil wetness.

Additional Criteria for Wildlife Habitat

Use multiple native species (minimum of 3 or more species).

Select species which best meet wildlife and ecosystem needs.

Additional Criteria to Provide Erosion Control

Plants should be evenly distributed over the planting site. Place plants on the contour.

Use non-competitive cover crops between planted rows on critical erosive slopes.

Additional Criteria for Carbon Sequestration

Select plant species that are adapted to the site to assure strong health and vigor. Plant the full stocking rate for the site.

For optimal carbon sequestration, select plants that have higher rates of sequestration in biomass and soils.

When using trees and shrubs for greenhouse gas reductions, prediction of carbon sequestration rates shall be made using current, approved carbon sequestration modeling technology.

Additional Criteria to Treat Waste

Use species that have fast growth characteristics, extensive root systems, high nutrient uptake capabilities, and may produce wood/fiber products in short rotations.

CONSIDERATIONS

When underplanting, trees should be planted sufficiently in advance of overstory removal to ensure full establishment.

Prescribed burning may be required for natural regeneration of serotinous cone species and for site preparation for other species.

Consideration will be given to plant materials that have been selected and tested in tree improvement programs.

Plans for landscape and beautification plantings should consider foliage color, color and season of flowering, and mature plant height.

Tree arrangement and spacing should allow for access lanes.

Residual chemical carryover should be evaluated prior to planting.

Applications of nutrients may be needed to maintain plant vigor or improve planting survival.

OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice, and repair and upkeep of the practice.

Competing vegetation will be controlled until the woody plants are established.

Check for insect and disease damage with annual inspections. Seek professional assistance for diagnosis and control measures.

Maintain necessary firebreaks around all plantings.

Replanting will be required when survival is inadequate. (See **Table 1**)

Residual chemical carryover should be considered prior to planting.

Trees and shrubs will be protected from fire, insects, disease, and animals until established.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, and narrative statements in the conservation plan, or other acceptable documentation.

GENERAL SPECIFICATIONS

The following table can be used as a guide in choosing suitable planting stock or seed:

Site	Planting Stock
Open Fields	1,2,3,5
Understocked Woodland	1,2,5
Landscaping	1,2,3,4,5
Environmental	1,2,3,5

1 = Bare-root; 2 = Container grown; 3 = Cutting; 4 = Balled & burlap; 5 = Direct seeding

Bare-root: Plant large diameter seedlings with well-branched, fibrous root systems. Discard any diseased or damaged seedlings. For underplanting hardwoods, use stock at least 3/8 inch in stem diameter.

Container grown: Use healthy, well-developed plants. Discard any diseased or damaged material.

Included as container plants are potted, air root-pruned plants. These plants are developed through a multi-step growing program that produces a dense, fibrous root system creating a plant with improved survivability and accelerated growth characteristics.

Cuttings: Use cuttings prepared during the dormant season from wood of the previous season's growth. The cuttings should be taken from healthy, moderately vigorous stock plants growing in full sunlight. At least two nodes should be included in the cutting. The minimum size of cuttings should be 1/4 inch in diameter and 8 in length.

Balled and burlap: Use plant stock that is 18 inches or more in height for shrubs and 48 inches or more in height for trees. Do not use plants with cracked or broken rootballs. Avoid plants with root systems that are visible on the rootball surface and that circle the trunk.

Direct seeding: Use viable, mature seed.

Care of planting stock

Protect stock from desiccation during temporary storage and delivery to the planting site. Keep all types of planting stock, except the ones needed immediately for a supply during planting, stored in a cool environment (preferably < 50 degrees F) out of direct sunlight and wind. Do not plant into frozen soil. Avoid planting on hot, windy days. A cool, cloudy day is preferred.

Cuttings: Plant cuttings within 2 days of collection or shipping arrival. If planting will be delayed, place cuttings in moist sand/paper, sphagnum moss, or plastic bags and store in a cool (34-40 degrees F) place.

Seedlings: Seedlings should be promptly examined in the shipping container and watered or re-wrapped in moist packing material. Survival can be increased by dipping roots in a commercial water-absorbing gel before planting or by soaking seedlings in water 1 to 2 hours before planting.

Plant as soon as possible after materials arrive, preferably the day of delivery. If planting will be delayed for more than 5 days, keep seedlings in shipping container and place in cold storage at 35 to 45 degrees F. If cold storage is not feasible or available, seedlings should be heeled-in. Dig a trench a little deeper than the root systems and spread roots against the back of the trench. Cover roots completely with soil, tamped to eliminate air spaces. Water as needed to keep roots moist but not wet.

Container grown: Container grown stock should be kept in its container and its soil kept moist (field capacity). Thoroughly water plants 2 days before planting. This will facilitate removal from containers during planting.

Direct seeding: Keep seeds cool. Maintain seed moisture content of 30-50%. Do not allow seed to mold. If seeds are field collected, place seeds in porous bags to prevent heat buildup. Keep seeds cool and stratify if necessary. For further information on seed collection and handling, refer to NRCS FORESTRY TECHNICAL NOTE MO-18, Seed Collection Guide.

Balled and burlap: Keep the rootball moist by watering slowly from the top. Wet the foliage occasionally. Balled planting stock can be held temporarily by placing soil or mulch around the entire ball of the tree and keeping it moist.

Planting Dates

Bare-root stock and cuttings. Use the following guidelines for bare-root stock and cuttings:

Missouri River - North: ***March 1 - June 1***
Missouri River- South: ***February 15 - May 15***
Dunklin, Pemiscot, Stoddard, New Madrid, Mississippi, Scott, Butler, Ripley, Carter, Oregon, Howell, Ozark, Douglas, Taney, Christian, Stone, Barry, Lawrence, Newton, and McDonald counties: ***December 1 - May 1***

A two-week variance in the above dates may be used if the ground is not frozen and/or adequate soil moisture is present.

Balled and burlap and container grown stock. Plant at any time of the year that the ground is not frozen and adequate soil moisture is present.

Seed. Tree/shrub seed may be planted from November through April anytime that soil and site conditions allow (do not seed into frozen soil). Non-stratified seed should be planted before January 1. Spring seeding can reduce rodent and insect damage. Fall seeding can eliminate the need for stratification. Acorns of most species in the white oak group have little or no dormancy and should be planted as soon as possible after collection in the fall.

Site preparation

Based on cover present, follow guidelines in FOREST SITE PREPARATION (490), Section IV, Missouri FOTG.

Planting methods

Plant seedlings upright at the same depth or slightly deeper (1 inch) than the stock was growing in the nursery or container. Properly planted seedlings should resist gentle lifting pressure.

Check each planted row for proper planting depth and root position and for adequate soil packing around the roots.

Plant cuttings at an angle of 45 to 60 degrees with buds pointing upward. (If cuttings are planted straight up, the soil often settles away from them in dry weather.) Leave 2 good buds above ground.

Balled and burlap/containerized: Dig a hole large enough to hold root ball or container volume. Remove plants from containers before placing in the ground. If plants are in tarpaper pots, the tarpaper should be slit along each side or removed before placing in the ground. Place stock at same depth it grew at the nursery and firmly pack soil around roots to eliminate air pockets.

Direct seeding: Care must be taken to completely cover the seed and achieve good soil-seed contact. One or more of the following seeding methods should be used:

- Broadcast: Broadcast the seed evenly over the planting area and cover seeds with mineral soil (1/2 to 1 inch).
- Strip: Broadcast the seed evenly over the prepared strips and cover with mineral soil (1/2 to 1 inch).
- Spot: Plant 2 to 3 seeds per spot, 2 inches deep. Seal planting hole.
- Machine: Plant seeds 1 to 2 inches deep. Cover with mineral soil.

Natural regeneration: The use of a natural seed source may be used under the following conditions:

- Areas that experience frequent flooding.
- Depression areas too wet to machine or hand plant.
- Sites likely to be invaded by soft-mast or light seed species.
- Sites that are within 300 feet of existing mature woodlands and adjacent to desirable seed sources.

Planting Rates

General

Direct Seeding: Use a minimum of 1500 seeds per machine or hand planted acre. Use 3000 seeds per acre for broadcast seeding.

Seedlings, cuttings, or containers (liners only): The following planting rates shall be used for tree species. Adjust rates within listed ranges for desired objectives, site conditions, maintenance requirements, and species needs.

hardwood	302 - 544 plants/acre
conifer	605 - 726 plants/acre
biofuels	907 - 1210 plants/acre

Container (≥2 gallon): Plant 48 trees per acre (30 x 30 or equivalent). Adjust rates up or down to accommodate site conditions or desired objectives.

Christmas Trees

For Christmas tree production a minimum of 1210 plants/acre is recommended. Landowner equipment and objectives must be considered in the planting design/layout.

Alley Cropping

Base plant spacing upon the type of alley cropping system being developed. Use within row spacing distances under **Planting Rates**, *Wind Erosion, Energy Conservation, and Snow Control*. See ALLEY CROPPING (311) for between row spacing guidance.

Silvopastoral

Base plant spacing upon the type of system being developed. Use any of the tree planting rates under **Planting Rates**, *General*.

Wildlife Habitat

For tree species, use any of the minimum planting rates under **Planting Rates**, *General*.

For shrub plantings, use a minimum of 726 plants per acre (6x10, 5x12 spacing or equivalent) or use shrub spacing guidelines listed under *Wind Erosion, Energy Conservation, and Snow Control*.

For direct seeding wildlife habitat development or wetland restoration, a minimum rate of 750 seeds per acre should be used, provided there is an adequate mature tree seed source of desired species within 300 feet. If a mature seed source is not close, use 1500 seeds per planted acre.

For specialized wildlife planting areas refer to the appropriate standard(s) for guidance.

Wind Erosion, Energy Conservation, and Snow Control

Per acre planting rates will vary according to the extent of the planting and individual site plans. Base per acre rates on the following spacing:

Within the row spacing will be:

small shrubs (< 8 ft)	3-6 feet
large shrubs	5-8 feet
evergreens	8-12 feet
deciduous trees	8-15 feet

Between the row spacing will be:

between shrub rows	6-12
between tree rows	12-20 feet
between tree/shrub	10-20 feet

Use widest spacing when using large (≥2 gallon) container grown plants or balled & burlap stock.

Beautification

Per acre planting rates will vary according to the extent of the planting and individual site plans.

Plants required per acre for selected spacings:

Spacing (feet)	Plants per acre
5 x 5	1742
6 x 6	1210
6 x 8	907
6 x 10	726
7 x 10	622
7 x 7	889
8 x 8	680
8 x 9	605
9 x 9	538
8 X 10	544
10 x 10	436
10 x 12	363
11 x 11	360
12 x 12	302
14 x 14	222
16 x 16	170
18 x 18	134
20 x 20	109
30 x 30	48

Adapted Species

Base selection on soil type, site limitations, landowner objectives, landscape characteristics, and geographic location.

For guidance on species selection refer to Missouri eFOTG, Section II, Statewide Soil and Site Information - Woodland, and Section IV, practice standards: WILDLIFE UPLAND HABITAT MANAGEMENT (645), HEDGEROW PLANTING (422), RIPARIAN FOREST BUFFER (391), ALLEY CROPPING (311), WINDBREAK/ SHELTERBELT ESTABLISHMENT (380), and RESTORATION AND MANAGEMENT OF DECLINING HABITATS (643).

Weed Control

Provide a 2-3 feet (diameter) competition free zone around all woody plantings.

If mulches (including weed mats) are used, follow MULCHING (484).

If herbicides are used, apply them only when needed and handle with care. Follow all label directions and precautions.

If herbicides are not handled or applied properly, they may be injurious to humans, animals, fish, wildlife, desirable plants, and pollinating insects and may contaminate water supplies.

If mechanical means are used, care should be taken to avoid physical damage to plantings. Keep tillage depths shallow to avoid root damage.

If temporary cover is used, follow criteria to control erosion in COVER AND GREEN MANURE CROP (340).

If living mulches are used, use one of the following species at the specified rates to control weed competition:

Species	Rate - PLS/Ac
Ladino clover	*3.0 lbs*
Alsike clover	*3.2 lbs*
Red clover	*6.1 lbs*

Note: Above rates are for good planting conditions. Increase rates by 50% for fair planting conditions.

Use of living mulches may cause an increase in rodent or deer damage to the woody planting.

REFERENCES USED IN PREPARATION OF THIS STANDARD

A Guide to Bottomland Hardwood Restoration; USGS/USDA Forest Service; General Technical Report SRS-40; 2001.

Trees for Conservation: Planning, Planting and Care; CSFS No. 114; Colorado State Forest Service; 1985.

Plant Propagation Principles and Practices, third edition; Prentice-Hall, Inc.; 1976.

Seeding and Planting Hardwoods; in Central Hardwood Notes; USDA Forest Service; 1989.

Seeding and Planting Pines; in Central Hardwood Notes; USDA Forest Service; 1989.

Planting Trees for Farmstead Shelter; Extension Bulletin 196; University of Minnesota; 1980.

Forestry Handbook - Second Edition: Society of American Foresters; Ronald Press; 1984.

Seeds of Woody Plants in the United States: Agricultural Handbook No.450; USDA Forest Service; 1974.

Care and Planting of Southern Pine Seedlings; USDA Forest Service; Management Bulletin R8-MB39; 1989.

Table 1. This table gives survival guidelines for tree/shrub plantings and presumes that the minimum number of trees and/or shrubs were originally planted based on acceptable design and site objectives. Required survivability of individual plants will vary with the purpose of the planting.

Survival Guidelines For Tree/Shrub Plantings

(Inventoried after "leaf out" during spring or summer of the second year (% or number))

Practice	*Survival Percent or Number*
380 - Windbreaks/Shelterbelt Establishment Sound Barrier Visual Screen Snow protection Wind/air quality protection Living snow fence 311 Alley Cropping	• 90 % of all trees and shrubs planted with no two adjacent within row plants missing for all purposes.
Any ball and burlap or ≥2 gallon container planting	• 80 % of any planting rate purpose.
391 Riparian Forest Buffer 422 Hedge Row Planting 612 Tree/Shrub Establishment - General 580 Streambank/Shoreline Protection	• 200 plants/ac for any establishment method* or 67% of the original planting rate. Surviving plants should be evenly distributed over the planting area.
644 Wetland Wildlife Habitat Management 645 Wildlife Upland Habitat Management	• 150 plants/ac for any establishment method* or 50% of the original planting rate. Surviving plants should be evenly distributed over the planting area.

* Includes sites using direct seeding or natural regeneration.

Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

TO: Illinois Department of Transportation
Hwy Project Implementation Dist 8 - Lavon Singleton
1102 Eastport Plaza Drive
Collinsville, Illinois 62208

FROM: Illinois Department of Natural Resources, Forestry Division

DATE: June 10, 2021

SUBJECT: District 8 Spring 2021 Tree Planting – Summary of Charges to IGA

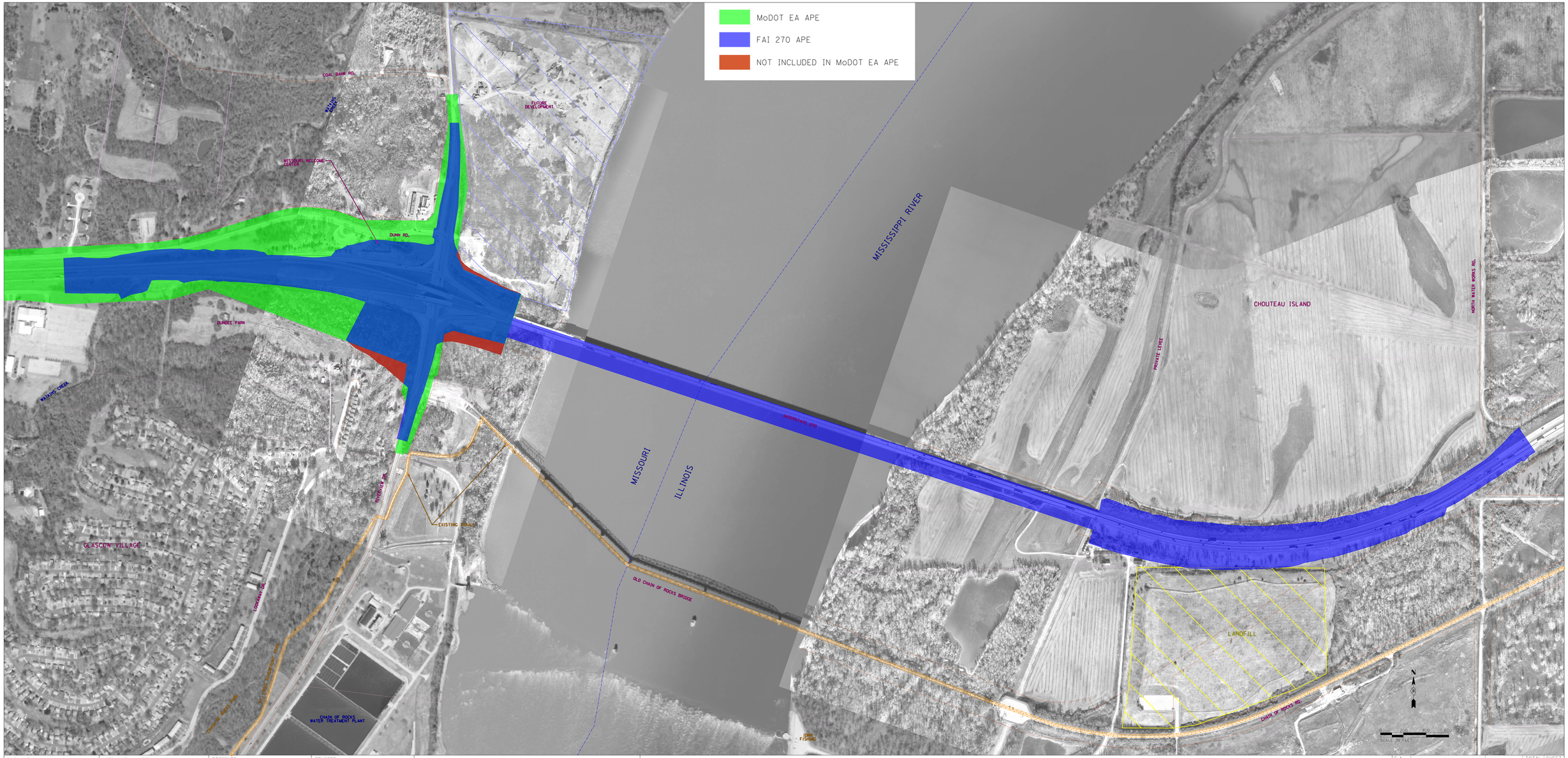
Below is a breakdown of the cost of tree planting that will be charged as per the Intergovernmental Agreement for tree planting between Illinois Department of Natural Resources and Illinois Department of Transportation:

Summary of Charges to be Billed

Description of Work	Acres Planted	Unit Cost	Total Cost
Completion of planting native Illinois forest seedling trees and one herbicide treatment between the dates of 4/15/2021 and 6/30/2021	56 acres	$2,500/acre	**$140,000**

Total Amount to be Charged:
$140,000.00

Please Remit To:
Illinois Department of Natural Resources
Forestry Division – FEIN #37-1349602
Attention: Michael Brunk
Office of Resource Conservation
1 Natural Resources Way
Springfield, IL 62702



FILE NAME =	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = 8/24/2017	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI 270 MISSISSIPPI RIVER CROSSING ALTERNATIVE D-S3 CULTURAL RESOURCE SURVEY APE

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.

CONTRACT NO.

ILLINOIS FED. AID PROJECT

Illinois Department of Transportation

Memorandum

To:	Jeffrey Keirn	Attn: Keith Rogers
From:	Jack A. Elston	By: Thomas C. Brooks
Subject:	Natural Resources Review Renewal	
Date:	November 5, 2021	

FAI 270 (I-270)
T 4N, R 10W, Sec 25, 36, 30
Seq.: 19320 B
Madison County

This Natural Resource Review Memo is for the Preferred Alignment for the replacement of I-270 over the Mississippi River. The project length is approximately 0.5 miles and extends from west of Levee Road to the Missouri River Bank. At this time, the amount of right-of-way is unknown. There will be an unknown amount of tree removal. There will be in stream work to the Mississippi River. Land cover in the project area is open water and forested floodplain. The project is being processed as a Categorical Exclusion.

A meeting was held June 16, 2021 to discuss the scope of work involved with the deconstruction of the existing bridge and construction of the new one and to discuss the feasibility of certain avoidance and minimization measures. Representatives from IDOT, MODOT, Project Consultant Teams, USFWS, and IDNR were present. The following is summary of what was discussed at the meeting.

Existing bridge demolition: It is anticipated that the deck of the superstructure would be removed in pieces from the center working out to the end bents or from one end to the other. This would allow the contractor to utilize the existing bridge as a working platform. Deck pieces will likely be removed in sections and loaded on to barges below or trucks on the bridge. After the deck is removed, the girders will be cut into pieces and loaded onto barges below.

Removal of the existing piers will be determined by the contractor and may utilize equipment from barges to remove them to the existing streambed. A Technical Memorandum dated June 12, 2017 described the general process of how pier removal is likely to occur. The following is from that document:

Once the superstructure is completely removed, construction barges containing excavators and concrete breakers will be placed around the piers. Broken pieces from above the barge will be captured and will not be allowed to drop in the river. Removal from below the water will utilize the same equipment; however, broken pieces of concrete will be allowed to settle to the bottom of the river where they will then be removed. For piers where there is significant scour, if deemed acceptable, the broken pieces of concrete may be used to fill in these

voids so long as they do not exceed the height of the pier to be left in place. If this is not acceptable, cofferdams would have to be constructed to ensure the complete removal of the broken concrete.

Construction of the new bridge: Pier construction will be completed using drilled shafts. The drilled shafts are approximately 9' in diameter. A permanent steel casing will be screwed into the ground to bedrock. Material will be removed from inside the casing as it is screwed into the earth. The rock sockets will then be drilled out from the inside of the previously installed casings. Reinforced concrete will then be placed in the rock sockets and drilled shafts (cased area) up to an elevation above the water where a strut will be constructed. The columns for the bridge pier will then continue up to the pier cap for placement of the superstructure steel beams. No cofferdams are required for this type of construction and minimal disturbance to the river is achieved. It is worth noting that the installation of the permanent steel casing is a very slow and intentional process with minimal disturbance to the soil material outside of the casing.

Cofferdams and Causeways: USACE advised the project sponsor not to use causeways. Causeways will not be necessary if the drilled shaft is constructed during the historically higher water elevation This timeframe overlaps the time when the Pallid sturgeon is likely to be spawning. Another option is to dredge. The rock is high on this portion of the river. This may make dredging not feasible. Dredging may allow some construction to occur outside of the pallid sturgeon in stream work restriction dates, but some construction would still be required to occur within the in -stream work restriction dates.

Discussion of commitments: The scope and magnitude of the project is such that implementing in stream work date restrictions to avoid and minimize impacts to the Pallid sturgeon are not feasible or reasonably able to be implemented due to other permitting, safety, and construction requirements. However, it should be noted that most of the construction schedule was designed with these vital dates for the Pallid sturgeon in mind. Therefore, other avoidance and minimization measures must be implemented to reduce impacts to the Pallid sturgeon during this time. It was decided during coordination and consultation with resource agencies that no explosives will be used during demolition. The Pallid sturgeon is a bottom dwelling fish and concerns were expressed by USFWS regarding impacts to the riverbed from dredging activities. During the June 16, 2021 meeting it was decided that the contractor will not be permitted to use a cutterhead as a method for dredging activities. The contractor will be limited to mechanical excavation or the use of a dust bin. A discussion of the Pallid sturgeon and the project commitments related to this species can be found in the Review for Section 7 portion of this document.

Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

The Illinois Natural Heritage Database contains records for the State and Federally-listed Pallid sturgeon in the project vicinity. For further discussion of the Pallid sturgeon refer to the Review for Endangered Species Act Section 7 in this document. **This office has determined that the action is not likely to jeopardize the Pallid sturgeon or its essential habitat provided the commitments outlined in the Section 7 portion of this document are implemented.** There are no Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. **Therefore, consultation under Part 1075 is terminated.**

This review for compliance with 17 Ill. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

For a discussion of Missouri state listed species please see the February 14, 2018 memorandum issued by the Missouri Department of Transportation subject "J6I3264; I-270 Over Mississippi River; Impacts to T&E Species in Missouri". **Coordination with Missouri Department of Conservation will be updated by transmittance of this memo. The results of the updated coordination will be discussed here.**

Review for Illinois Interagency Wetland Policy Act – Part 1090

The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, plan sheets, USDA soil maps, and topographic quadrangle maps were examined. A wetland survey was conducted between June 21 and September 2, 2016. Multiple sites were determined to be wetlands. The Wetland Delineation Report and spatial information (ArcGIS shapefile) are saved in the project folder.

A Wetland Impact Evaluation (WIE) was sent in. There will be 2.815 acres of wetland impacts. A mitigation ratio of 1.5:1 has been applied as compensation will occur off-site but in basin. 4.1625 acres of in kind wetland credits has been deducted from the IDOT District 8 Fairmont City Wetland Mitigation Site ledger. **Therefore, review for Part 1090 is complete.**

Review for Endangered Species Act - Section 7

The proposed improvement was reviewed in fulfillment of our obligation under Section 7(a)2 of the Endangered Species Act. Our review included use of the US Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) web-based review tool. Through IPaC, an official species

list was received and is saved to the project folder. The list contains the endangered, threatened, proposed and candidate species and proposed and designated critical habitat that may be present within or in the vicinity of the proposed improvement. The following species are listed: Indiana bat (Ibat), Northern long-eared bat (NLEB), Least tern, Eastern massasauga, Pallid sturgeon, Spectaclecase mussel, Decurrent false aster, and Eastern prairie fringed orchid. No proposed or designated critical habitat is listed in Madison County. Under 50 CFR 402.12(e), **the accuracy of the species list is limited to 90 days.**

Within IPaC there is a Determination Key for the NLEB- and Ibat. We used the key to determine applicability of the project with the USFWS revised programmatic biological opinion for transportation projects and to assess what effect the project would have on NLEB or Ibat. Our assessment is based on the results of the mist netting survey, bat bridge assessment, and bat habitat surveys which occurred in July and August of 2016. All surveys were conducted in accordance with USFWS regulations regarding the species. No bats were caught at either site in Illinois. Two big brown bats were caught in Missouri. No Ibat or NLEB were caught at any of the sites. Due to safety concerns and with approval from USFWS, only the Missouri side of the bridge was inspected. Neither bats nor signs of bats were found. Lastly, the habitat assessment indicated that there is suitable habitat for the Ibat and NLEB in the project vicinity. At this time, the amount of tree removal associated with the Preferred Alternative is unknown. We completed an IPaC qualification interview and determined that **the project is within the scope of the programmatic biological opinion and is <u>not likely to adversely affect</u> the NLEB or Ibat** provided the following conservation measure is implemented by the project sponsor:

For any tree removal conducted in Illinois: Trees three (3) inches or greater in diameter at breast height shall not be cleared from April 1 through September 30 of any given year.

For any tree clearing conducted in Missouri:
All trees shall be removed between the dates of November 1 and March 31 of any given year.

Please note that the above bat bridge assessment is valid for two years and that an expired assessment will need to be updated prior to construction. Per email discussion with Mr. Matt Mangan with the USFWS in 2018, "Once the dates of construction are known, the USFWS will be contacted to discuss whether an additional survey is warranted."

The Illinois Natural Heritage Database contains records for the State and Federally listed Pallid sturgeon. The USFWS is aware of the species migrating through the area, but there is no existing data showing that this area is vital to its survival, not is there any documentation of the species spawning in this area. This office has made the determination that the project **may affect, but is <u>not</u>**

likely to adversely affect the Pallid sturgeon provided the following conservation measures are implemented by the contractor:

1. **The use of explosives is prohibited on this construction contract as a method of demolition or construction.**

2. **During demolition, the superstructure shall not be dropped into the river.**

3. **The use of a cutterhead shall be prohibited as a dredging method. All dredging activities shall utilize either mechanical excavation or a dust bin.**

We cross-referenced the preferred habitat of each of the remaining listed species; the Least tern, Eastern massasauga, Spectaclecase mussel, Decurrent false aster, and Eastern prairie fringed orchid, with our knowledge of the project area and determined that the project will have **no effect** on those species.

Should the proposed improvement be modified or new information indicates listed or proposed species may be affected, consultation or additional coordination should be initiated.

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

Avian surveys were conducted by the Illinois Natural History Survey in the project area in 2015 and 2016. No bald eagles were found within 1,000 feet of the bridge. Two adults and one juvenile were seen within 5,000 feet of the bridge. A total of 80 or more eagles were observed on the Missouri side of the river. There is a known roost approximately 7 miles upriver of the project and the eagles are likely using this roost and not the project area. If a bald eagle nest is found in the project area or vicinity of the project then USFWS should be notified and the National Bald Eagle Management Guidelines implemented. Additionally, Peregrine falcons were seen in the project area. Based on the structures present, the pair was likely nesting on the Chain of Rocks Bridge and not the I-270 bridge. Therefore, the proposed project will have no effect to migratory bird species, specifically the Peregrine falcon and Bald eagle.

KCB

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Assessing the risk of entrainment by cutterhead dredges to juvenile lake sturgeon (*Acipenser fulvescens*) and juvenile pallid sturgeon (*Scaphirhynchus albus*)

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Summary

Sturgeon are threatened by dredging, but there is no established protocol for determining risk of entrainment to different populations of wide-ranging species. We demonstrate that laboratory evaluations of swimming performance for individual populations are an effective way to describe susceptibility of entrainment. Using a Blazka-type swim tunnel, we quantified positive rheotaxis (head-first orientation into flowing water), endurance (time to fatigue), and behaviour (method of movement) of juvenile sturgeon in water velocities ranging from 10 to 90 cm s^{-1}. Sturgeon representing four different populations of the United States were tested: two populations of lake sturgeon (*Acipenser fulvescens*) and two populations of pallid sturgeon (*Scaphirhynchus albus*). Lake sturgeon from Lake Winnebago were weaker swimmers than those from the Wisconsin River, and pallid sturgeon from the Yellowstone River were weaker swimmers than those from the Atchafalaya River. Rheotaxis, endurance, and behavioural data were used to calculate an index of entrainment risk, ranging from 0 (unlikely) to 1.00 (inevitable), which was applied to hydraulic models of dredge flow fields. Risk of entrainment varied among populations but for all groups tested, substantial entrainment risk occurred only within a 1.25 m radius of the draghead and this risk could be significantly reduced or eliminated by reducing the diameter of the dredge pipe.

Introduction

In the United States, rivers inhabited by sturgeon are dredged to provide flood control and navigation, and to enable commercial extraction of sand and gravel. Dredges are of three general types. Bucket or mechanical dredges (e.g., grabs, clam-shells) excavate sediment; hydraulic dredges (e.g., simple suction dragheads) pump sediment and water; pipeline cutterheads excavate material with rotating blades and then move it hydraulically (Huston, 1970). Bucket dredges operate episodically, must be repeatedly withdrawn (to discharge each load of material) and re-deployed, striking the surface of the water with substantial impact. Their likelihood of entraining a sturgeon is minimized by sporadic contact and by noise and pressure waves likely to startle fish. Hydraulic and cutterhead dredges, however, operate for prolonged periods underwater, with minimal disturbance, but generating continuous flow fields of suction forces. These dredges entrain a wide variety of benthic fishes including sturgeons (Buell, 1992; Harvey and Lisle, 1998; Reine and Clarke, 1998). Because dredging often takes place during high river stages in late winter and spring, during and shortly after sturgeon spawning seasons (LeBreton et al., 2004), young sturgeon may be especially susceptible to entrainment, although this is difficult to document empirically.

Laboratory swim tunnels can be used to estimate likelihood of a young sturgeon being entrained by a specific water velocity. They were first employed by J. Roland Brett to measure metabolic rates and endurance of salmon and establish hydraulic conditions necessary for fish passage in rivers (Brett, 1964). We have recently used swim tunnels to quantify behaviour and endurance of young sturgeon and paddlefish and evaluate flow rates capable of entrainment associated with dredges (Boysen and Hoover, 2009; Hoover et al., 2009). Salmon presented Brett with some working challenges, like their 'lazy behaviour' and 'excitability', requiring special tunnel modifications and data analyses (Brett, 1965, 1979). Juvenile sturgeon, in contrast, are relatively 'motivated' and 'docile'. They require only rare and mild stimulation to swim (Adams et al., 1999; Boysen and Hoover, 2009), and they are easily maintained and calm in laboratory aquaria (Hoover et al., 1999; Varble and Hoover, 2007).

We evaluated risk of entrainment by cutterhead dredges at representative water velocities for hatchery-reared juvenile sturgeon of two wide-ranging species and four populations: (i) lake sturgeon (*Acipenser fulvescens*) from the Wisconsin River near its confluence with the upper Mississippi River; (ii) lake sturgeon from the Wolf River in the Lake Winnebago Basin; (iii) pallid sturgeon (*Scaphirhynchus albus*) from the Yellowstone River at its confluence with the Missouri River; (iv) pallid sturgeon from the Atchafalaya River, a distributary of the lower Mississippi River. These represent two of the three species of sturgeon in the Mississippi-Missouri River Basins. Lake sturgeon populations are geographically proximate, pallid sturgeon populations remote. Data for pallid sturgeon from the Yellowstone River and for the lake sturgeon have been presented previously in scientific and on-line literature, respectively (Adams et al., 1999; Smith, 2006). For this study, we re-analyzed raw data. Experimental trials for all four populations were conducted in the same laboratory, using the same water supply, with fish that were handled and cared for under similar conditions. Senior author (JJH) was a principal investigator in all four studies.

Materials and methods

Laboratory protocol

Fish were obtained from United States Fish and Wildlife Service national fish hatcheries and transferred to the US Army Engineer Research and Development Center in Vicksburg, MS. Fish were maintained in closed system, indoor aquaria: self-manufactured Ferguson flumes (Hoover et al.,

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Table 1
Sturgeon populations used in swimming performance studies: lake sturgeon from the Wisconsin (WI) and Wolf (WO) Rivers, and pallid sturgeon from the Yellowstone (YE) and Atchafalaya (AT) Rivers, USA

Species	Population	N	Temperature (°C)	Size (mm) FL	Reference
Lake sturgeon	WI	42	19–23	121–173	Smith, 2006
	WO	31	19–23	120–157	Smith, 2006
Pallid sturgeon	YE	33	17–20	130–168	Adams et al., 1999
	AT	29	19–23	122–150	This study

1999) or Living Streams (Frigid Units, Toledo, OH, USA). Water movement in the aquaria was non-rectilinear (direction variable throughout tank), slow (< 5 cm s^{-1}), and spatially limited (measurable in a few areas near inflow and outflows). Fish were fed pellets (commercial trout chow) and frozen foods several times a day. Frozen foods consisted of adult brine shimp (Anostraca: *Artemia salina*) and bloodworms (Diptera: Chironomidae). Ambient lighting approximated a 12 h light, 12 h dark cycle.

Most fish were naïve and tested only once. Nine specimens from the Yellowstone River were re-tested after 23 days (presumably after training effects had elapsed) but at different water velocities (Adams et al., 1999). Initial trials with fish from the Wolf River were anomalous – showing poor performance and no significant trends with water velocity (Smith, 2006). These fish were subsequently transferred to a 1000-L racetrack with uniform water velocities of 10–12 cm s^{-1} and 'trained' in this higher velocity for 3 weeks before retesting.

During testing, three components of swimming performance were evaluated: (i) rheotaxis – head-first orientation into the flow of water; (ii) endurance – or 'time-to-fatigue', the length of time that a fish was able to maintain its position in flowing water; (iii) station-holding behaviour – method used by the fish to maintain its position in flowing water. Tests were conducted in a 100-L Blazka-type swim tunnel using procedures similar to that of a previous study of the federally endangered pallid sturgeon (Adams et al., 1999).

In the swim tunnel, flow was provided by a motor-driven propeller. Turbulence was removed by flow-filters (collimators) at the front of the tunnel. The working section of the tunnel was 39 cm long and 15 cm diameter. Rear portion of the tunnel was covered with a removal cap of fine mesh (1 mm) screen. Water velocity was controlled by a rheostat on the motor. Fish were placed in the working section of the swim tunnel and allowed to habituate in low velocities: 15 min at 5 cm s^{-1} and another 15 min at 10 cm s^{-1}. Then water velocity was increased (over a 2–3 s interval) to the test velocity (15–90 cm s^{-1}) and a stopwatch started to begin timing. Some populations were not tested at velocities < 30 cm s^{-1} (if sustained swimming was observed at higher speeds) or at water velocities > 70 cm s^{-1} (if burst swimming was observed at lower speeds). If a fish did not exhibit rheotaxis, it was considered a nonperformer. If the fish performed, the test was continued for 200 + min or until it could no longer maintain position. During the trial, swimming behaviours of the sturgeon were identified. Duration of each behaviour was timed or estimated. Sturgeon swimming behaviours have been described previously and include: free-swimming (vigorous swimming in the water column), skimming (vigorous swimming along the substrate), hunkering (appression to the substrate), tail-bracing (caudal fin pressing against vertical surface), and 'wedging' (rostrum forced into crevices)(Adams et al., 1997; Hoover et al., 2005; Allen et al., 2006; Boysen and Hoover, 2009).

At the conclusion of each trial, water temperature was measured to the nearest 0.5°C and the sturgeon was removed from the tunnel and measured. Fork length (FL), the distance from the tip of the snout to the innermost curve of the caudal fin, was recorded. Tested fish were placed in a separate tank and observed for any changes in behaviour, injuries, or mortality. None of these were detected in any fish during the 24 h period following tests (Fish were maintained in the laboratory afterwards for periods of several weeks to several years). Sample sizes, water temperatures, and sizes of fish were all comparable (Table 1).

Analytical protocol

Data were analyzed using SAS (Version 9.1; SAS Institute, Cary, NC, USA). Data for fish that performed were sorted by test velocity. Any fish that did not conform to other fish tested at that velocity were designated as outliers and were analyzed separately or were excluded from further analyses.

Rheotaxis was expressed as a percentage: number of fish performing divided by the total number of fish tested, overall or at a specific range of test velocities. Because sample sizes were low for some groups at some test velocities, rheotaxis data were summarized for water velocities combined into ranges: 20–25 cm s^{-1}, 30–35 cm s^{-1}, etc. This resulted in 5–12 observations for the majority (16/26) of velocity categories for all species combined.

Swimming speeds of fish were classified as sustained, prolonged, or burst, based on endurance observed or predicted for a given water velocity (Webb, 1975; Beamish, 1978; Hammer, 1995). Sustained speeds are low and those which the fish can maintain for long periods (i.e., > 200 min). They depend on aerobic metabolism, do not result in muscular fatigue, and are used in foraging and other routine activities. Prolonged speeds are moderate, of intermediate duration (i.e., 0.5–200 min), and use aerobic and anaerobic metabolism. Burst speeds are the highest attainable speeds, but can only be maintained for short periods (i.e., < 0.5 min) due to accumulation of anaerobic metabolites and muscular fatigue. Higher prolonged and burst speeds are used in prey capture, short-term movements in fast current, and predator avoidance and, consequently, can be used to characterize 'escape' speeds.

Relationship between endurance at prolonged and burst speeds to water velocity was described using regression analyses of prolonged and burst speeds. Water velocity was the independent or 'predictor' variable (x) and time-to-fatigue, or endurance, was the dependent or 'response' variable (y). Because of the wide range of possible values for endurance (seconds to several hours), those data were transformed ($\log_{10}$). Linear and curvilinear regression models were generated for each population and the model with the best

predictive ability (highest R^2, lowest P) selected as representative for that population. Models were used to identify an 'escape speed' for each population of sturgeon. Definitions of escape speeds can be discretionary since they are used for comparative purposes. We define escape speed here as predicted swim speed that can be maintained for 1-min. This represents an upper value for prolonged speed since it is sufficient to carry fish beyond the outer limits of a dredge-produced flow field.

Percentage time spent free-swimming and benthic station-holding (all substrate-associated behaviours combined) were compiled for individual fish in each range of water velocities. Percentage of fish that maintained position predominantly by benthic station-holding ($>75\%$ of total time) was determined.

Entrainment of juvenile sturgeon was evaluated for a cutterhead dredge drawing water at a rate of 4.6 m s^{-1}, generating a quarter-sphere flow field, equipped with three pipes of varying diameter: 71, 51, and 30 cm. Water velocities in the three flow fields were based on hydraulic models available as a web-based tool (Clausner and Jones, 2004). Flow field data are available for distances of 0.5 to 3.0 m from the dredge, but water velocities are negligible (<10 cm s^{-1}) at distances >1.5 m and were not evaluated. Risk of entrainment at points in the flow field (i.e., at regular distances from the dredge) was assessed by first determining the water velocity (i) at that point. The percentage of non-performers for the corresponding range of velocities tested in the laboratory were added to 'weighted' percentage of performers that were considered susceptible to entrainment tested at that water velocity. Since rheotaxis data for individual velocity classes were unavailable for pallid sturgeon from the Yellowstone River, the overall value of 7% non-performers was applied for each range of water velocities. The total percentage of non-performers and weighted performers was divided by 100, i.e.,

$$\text{Risk}_{\text{Velocity}\,i} = \frac{[\text{Percent Non-performers}]_i \pm [\text{Percent Performers}]_i\,[\text{Suseptibility}]}{100}$$

If regression-predicted escape speed of fish was substantially greater than flow-field water velocity (i.e., difference >5 cm s^{-1}), susceptibility was zero (i.e., no performers entrained). If regression-predicted escape speed of fish was substantially lower than water velocity (i.e., difference <5 cm s^{-1}), susceptibility was one (i.e., all performers entrained). When escape speeds approximated water velocities (i.e., difference $\pm$ 5 cm s^{-1}), susceptibility was quantified as the percentage of individual fish tested at corresponding velocities that were predominantly benthic (i.e., individual fish spending most of their time on the bottom will eventually be entrained by water velocities that approximate their escape speed). Values for the index range from 0.00 (minimal risk of entrainment) to 1.00 (maximum risk of entrainment). Index values are interpreted as likelihood of entrainment: 0.00, unlikely; 0.01–0.33, low; 0.34–0.66, moderate; 0.67–0.99, high; 1.00, inevitable.

Assessment based on prolonged 'escape speed' is environmentally conservative. It addresses a wide range of entraining flow, a larger area of entrainment around the dredge, and escape responses by the fish that are protracted in duration but only moderate in intensity. This assessment procedure assumes: (i) risk of entrainment is a simple functional response of fish to single point water velocities; (ii) regression-predicted escape speeds and swimming behaviours are meaningful predictors of susceptibility to a water velocity; (iii) swimming performance measured in the laboratory approximates swimming performance in the field.

Results

All sturgeon populations were highly rheotactic but data suggest ability to orient is velocity-dependent. Frequency of fish that successfully oriented head-first into the onset of current (all velocities combined) ranged from 80%, for lake sturgeon from the Wisconsin River, to 100%, for lake sturgeon from the Wolf River. For two naïve populations, lake sturgeon from the Wisconsin River and pallid sturgeon from the Atchafalaya River, frequency of positive rheotaxis was highest (100%) at 30–35 cm s^{-1}, lowest (67%) at 70–75 cm s^{-1}, and higher at velocities $\geq$80 cm s^{-1} (80–100%) suggesting that magnitude of flow, and not just the onset of flow, influenced ability to orient (Fig. 1).

Sturgeons were highly variable in swimming endurance (Fig. 2). Sustained swimming was observed at a wide range of water velocities: 10 cm s^{-1}, for pallid sturgeon from the Yellowstone River, to 45 cm s^{-1}, for lake sturgeon from the Wisconsin River. For pallid sturgeon from the Yellowstone River, prolonged swimming was observed at 15–40 cm s^{-1}, burst speeds at 40–70 cm s^{-1}. For the other three populations, prolonged swimming was typically observed at 35–70 cm s^{-1} and burst swimming >70 cm s^{-1}. Relationships between endurance and water velocity were linear for three of the four populations, curvilinear for pallid sturgeon from the Yellowstone River. Best-fit regression models were all significant ($P < 0.05$) but variation was greater for lake sturgeon populations ($R^2 < 0.45$) than for pallid sturgeon ($R^2 > 0.70$). Regression models for the four populations were:

lake sturgeon from the Wisconsin River,
$\text{Log}_{10}\text{Endurance} = 1.52 - 0.024(\text{Velocity})$, $R^2 = 0.14$;
lake sturgeon from the Wolf River,
$\text{Log}_{10}\text{Endurance} = 1.93 - 0.033(\text{Velocity})$, $R^2 = 0.40$;
pallid sturgeon from the Yellowstone River,
$\text{Log}_{10}\text{Endurance} = 2.63 - 0.108(\text{Velocity}) + 0.00086(\text{Velocity}^2)$, $R^2 = 0.85$;
and pallid sturgeon from the Atchafalaya River
$\text{Log}_{10}\text{Endurance} = 3.62 - 0.056(\text{Velocity})$, $R^2 = 0.74$.

Escape speeds (1-min endurance) based on these models are:

lake sturgeon from the Wisconsin River 63.5 cm s^{-1}
lake sturgeon from the Wolf River 57.8 cm s^{-1}
pallid sturgeon from the Yellowstone River 33.0 cm s^{-1}
pallid sturgeon from the Atchafalaya River 64.7 cm s^{-1}

Behaviour was diverse. All four populations commonly exhibited free-swimming, skimming, and hunkering. Tail-bracing was observed in both populations of lake sturgeon and in pallid sturgeon from the Atchafalaya River. Wedging was seen only in pallid sturgeon from the Atchafalaya River. Substrate-associated behaviours collectively predominated at lower water velocities for all populations, with $>80\%$ of the fish tested at 30–35 cm s^{-1} classified as benthic (Fig. 3). Frequency of benthic individuals decreased at higher water

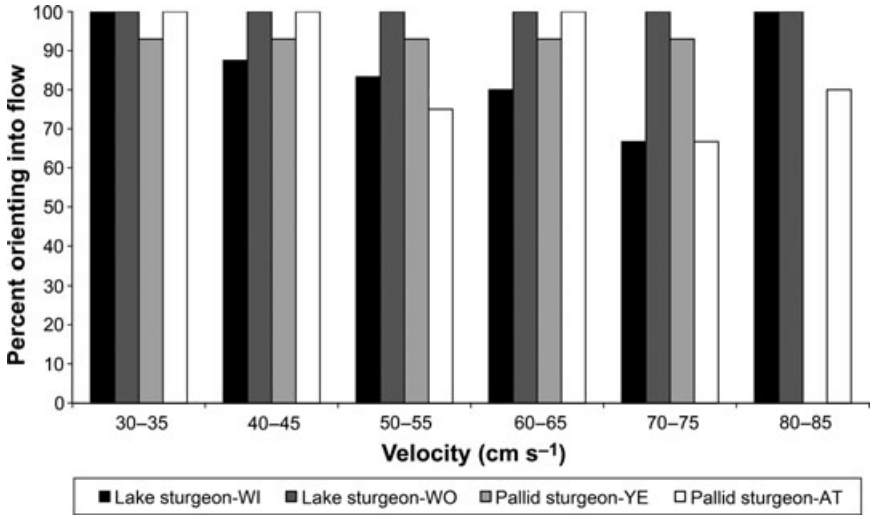

Fig. 1. Frequency of positive rheostaxis in juvenile *Acipenser fulvescens* from the Wisconsin (WI) and Wolf (WO) Rivers (N = 42 and 31, respectively), and for *Scaphirhynchus albus* from the Yellowstone (YE) and Atchafalaya (AT) Rivers (N = 33 and 29, respectively), USA. Frequencies are percentage of fish in each velocity category that oriented head-first into flowing water. Note: *S. albus* from the Yellowstone River were not tested at velocities >70 cm s^{-1} so absence of a value does not represent an observation of zero

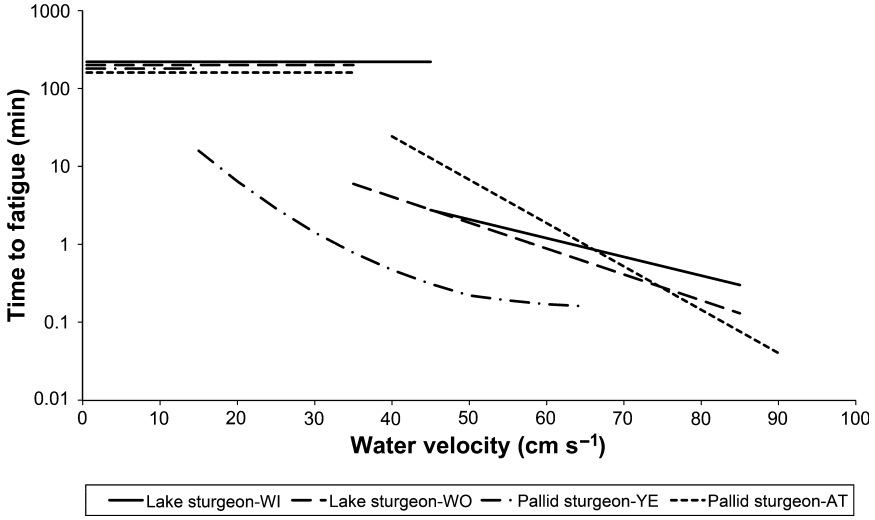

Fig. 2. Swimming endurance models for juvenile *Acipenser fulvescens* from the Wisconsin (WI) and Wolf (WO) Rivers (N = 42 and 31, respectively), and *Scaphirhynchus albus* from the Yellowstone (YE) and Atchafalaya (AT) Rivers (N = 33 and 29 respectively), USA. Sustained swimming (for 200 min) represented as maximum observed speed. Prolonged and burst speeds represented as regression models

velocities. Free-swimming individuals predominate at 60–65 cm s^{-1} and 80–85 cm s^{-1}. Overall, pallid sturgeon were more likely to be benthic than lake sturgeon.

Risk of entrainment varied appreciably among populations and among alternative sizes of dredge pipes, with consistently highest risk indicated for pallid sturgeon from the Yellowstone River and substantially reduced risk to all populations presented by the smallest pipe (Table 2). For the two larger dredge pipes, entrainment was inevitable (Risk = 1.00) for all populations to a distance of 0.62 m from the draghead. At a distance of 0.75 m, entrainment was inevitable for all four populations by the 71 cm pipe, but was only low to moderate (Risk = 0.33–0.57) for three of the populations by the 51 cm pipe. At distances of 0.87–1.12 m, risk for the same three populations was unlikely to low (Risk = 0.00–0.33). At greater distances, only pallid sturgeon from the Yellowstone River were at any risk of entrainment, and this risk was negligible at distances ≥1.25 m. In contrast, risk presented by the 30 cm pipe was not substantial. There was a low risk of entrainment (Risk = 0.13) to lake sturgeon from the Wisconsin River only at a distance of 0.5 m, and high to inevitable risk for pallid sturgeon from the Yellowstone River (Risk = 0.82–1.00) only to a distance of 0.75 m.

Discussion

Quantitative measures of swimming performance in sturgeon have been used previously to predict probability of entrainment by a dredge (Boysen and Hoover, 2009), effective fishway designs (Peake et al., 1997), examine effects of pectoral fin ray removal (Parsons et al., 2003), evaluate influence of fish size and season (Allen et al., 2006), and describe variation among and within species (Adams et al., 1999, 2003). Variation among populations in swimming performance parameters,

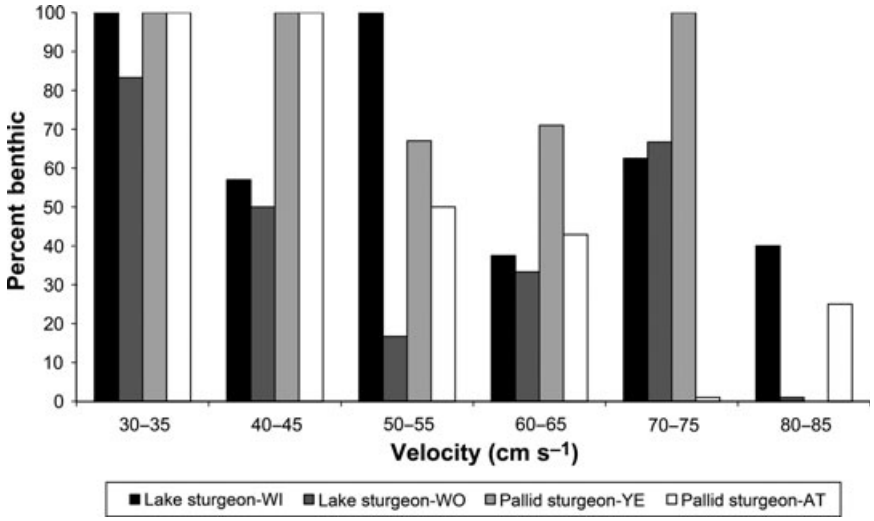

Fig. 3. Percentage of primarily benthic individuals in juvenile *Acipenser fulvescens* from the Wisconsin (WI) and Wolf (WO) Rivers (N = 42 and 31, respectively), and *Scaphirhynchus albus* from the Yellowstone (YE) and Atchafalaya (AT) Rivers (N = 33 and 29, respectively), USA. Frequencies are percentage of total fish tested in each velocity category that exhibited station-holding behaviours other than free-swimming for more than 75% of their individual trial time. Note: *S. albus* from the Yellowstone River were not tested at velocities >70 cm s^{-1} so absence of a value does not represent an observation of zero

Table 2
Risk of entrainment for four populations of North American sturgeon: lake sturgeon from the Wisconsin (WI) and Wolf (WO) Rivers, pallid sturgeon from the Yellowstone (YE) and Atchafalaya (AT) Rivers. Risk is based on hydraulic models for quarter-sphere flow fields generated by a cutterhead dredge pumping 4.6 m s^{-1} (Clausner and Jones, 2004). Pipe size ranges from 71 to 30 cm diameter. Values for risk range from 0.00 (unlikely) to 1.00 (inevitable)

Pipe (cm)	Population		Distance From Dredge (m)								
			0.50	0.62	0.75	0.87	1.00	1.12	1.25	1.37	1.50
71	Lake sturgeon	WI	1.00	1.00	1.00	0.33	0.17	0.13	0.00	0.00	0.00
		WO	1.00	1.00	1.00	1.00	0.17	0.00	0.00	0.00	0.00
	Pallid sturgeon	YE	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.07	0.07
		AT	1.00	1.00	1.00	0.33	0.25	0.00	0.00	0.00	0.00
51	Lake sturgeon	WI	1.00	1.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00
		WO	1.00	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
	Pallid sturgeon	YE	1.00	1.00	1.00	1.00	1.00	0.07	0.07	0.07	0.07
		AT	1.00	1.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00
30	Lake sturgeon	WI	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		WO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Pallid sturgeon	YE	1.00	1.00	0.82	0.07	.07	0.07	0.07	0.07	0.07
		AT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

especially endurance (Fig. 2), is associated with interspecific and intraspecific variation in caudal morphology. The peduncle of lake sturgeon is short, thick and naked except for a few scutes; the peduncle of pallid sturgeon, in contrast is long, thin, and completely armored. Because the caudal fin of the pallid sturgeon is more distant from the body than that of the lake sturgeon, and moved with less flexibility and by comparatively less muscle, it would be expected to generate less power and produce less thrust for an equivalent tail beat, than that of a lake sturgeon. This is true for pallid sturgeon from the Yellowstone River which were weak swimmers when compared with lake sturgeon, but not so for those from the Atchafalaya River, which had greater endurance than lake sturgeon at 40–55 cm s^{-1} and comparable endurance at higher velocities (Fig. 2). This may be due, at least partly, to behavioural nuances between the two populations. Pallid sturgeon from the Yellowstone River are predominantly benthic at all water velocities (Adams et al., 1999) but those from the Atchafalaya are more likely to free-swim at water velocities >50 cm s^{-1}, as do both populations of lake sturgeon (Fig. 3).

Differences in swimming performance may also be due to morphological variation within the species. Published morphometric data are limited but information on larger fish (>250 mm FL) suggest that pallid sturgeon from the lower Mississippi River Basin (and representative of the Atchafalaya River) have shorter peduncles (16.7–21.5% SL, N = 21) than those from the upper Missouri River Basin (22.0–23.0% SL, N = 2) as well as larger dorsal and anal fins (Murphy et al., 2007; Kuhajda et al., 2007). Since forward motion in sturgeon is generated by body-tail undulations, these could provide greater thrust for Atchafalaya River fish. Pectoral fins of some lower Mississippi River Basin fish (11.2–15.1% SL, N = 21) may also be larger than those of upper Missouri River Basin fish (11.8–12.1% SL, N = 2), enabling them to more effectively generate lift and velocity-specific angles of swimming

(Wilga and Lauder, 1999). Similarly, faster swimming lake sturgeon from the Wisconsin River frequently have large upper caudal lobes (9.0–23.0% FL, N = 42) than those from the Wolf River (7.0–16.0% FL, N = 31) which could also increase forward thrust (Smith, 2006).

Overall, juvenile sturgeon are not strong swimmers (Peake et al., 1997; Adams et al., 2003; Allen et al., 2006; Boysen and Hoover, 2009) but our data indicate their performance, and their risk of entrainment, is a complex interplay of behavioural and morphological variation among populations. Differences among populations may become even more apparent at greater water velocities necessitating escape speeds based on burst swimming. Because not all populations were tested at higher speeds (> 70 cm s^{-1}), our data precluded rigorous identification of such burst swimming speeds, but individual values for a few of pallid sturgeon from the Yellowstone River and extrapolations of regression models for the other three populations suggest even substantial variation among populations for 6-s burst speeds:

lake sturgeon from the Wisconsin River 105.0 cm s^{-1}
lake sturgeon from the Wolf River 88.8 cm s^{-1}
pallid sturgeon from the Yellowstone River 55–70.0 cm s^{-1}
pallid sturgeon from the Atchafalaya River 82.6 cm s^{-1}.

If values for pallid sturgeon from the Yellowstone River are excluded, the range in values is approximately three times that for 1-min burst speeds for the same populations (i.e., 22.4 vs 6.9 cm s^{-1}).

Although swimming performance data have been used recently to assess risk of entrainment by cutterhead dredges to juvenile white sturgeon (*Acipenser transmontanus*) and juvenile paddlefish (*Polyodon spathula*) (Boysen and Hoover, 2009; Hoover et al., 2009), it is not practical to do this for every possible species and dredging scenario. Critical swim speeds of sturgeon are not uncommon in published literature (e.g., Adams et al., 1997, 2003; Parsons et al., 2003; Allen et al., 2006), but swimming endurance models have, until recently, only been reported for one population of lake sturgeon (Adams et al., 1999) and one population of pallid sturgeon (Peake et al., 1997). Similarly, flow field models are available only for a limited range of dredge types, sizes, and suction rates (Clausner and Jones, 2004). Also, dredging operations vary with type of dredge and with project objectives (Huston, 1970). Simple hydraulic drag heads usually operate at the sediment surface (especially when sediments are firm sand or gravel) but cutterheads are partly buried. A small sturgeon hunkering or skimming over the substrate could be entrained by a simple hydraulic drag head as could a free-swimming sturgeon moving over the open spaces of a cutterhead, but in either case the fish would need to be almost on top of the drag head, and unaffected by associated disturbance (e.g., turbidity and noise). Drag heads of either type are moved about more when specific channel profiles are being created (e.g., flood control and navigation projects) than when dredged material is being 'harvested' (e.g., sand and gravel mining). Whether moving drag heads increase risk of entrainment, by increasing likelihood of encounter, or reduce it, by inducing a startle response is a matter of conjecture. Behaviour studies of sturgeon around simulated dredges are needed to resolve these questions.

Although juvenile sturgeon are highly rheotactic (Fig. 1), they are not powerful swimmers Fig. 2), and they are prone to bottom-holding behaviours (Fig. 3). These last two traits make them vulnerable to entrainment when in close proximity (< 1 m) to drag heads (Table 2). Although behavioural responses of sturgeon to dredges (and conditions associated with dredges) are known, any possibility of entrainment can be reduced by various means. These include: (i) restriction of dredging activities to periods outside spawning and rearing season to minimize probability of small sturgeon occurrence; (ii) prohibitions on stocking hatchery-reared fish that were produced from broodstock collected from other locations which may not be behaviourally and morphologically adapted to other rivers; (iii) promotion of smaller pipe diameters for dredging, since reductions in pipe diameter of 20 cm can significantly reduce radius of effective flow field by more than 0.25 m and can reduce levels of risk at some points in the field from inevitable to unlikely.

Acknowledgements

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Missouri Department of Conservation

Natural Heritage Review Report

Resource Science Division
P. O. Box 180
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Prepared by: Brittnie Brauner
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MATT VITELLO
POLICY COORDINATION
MISSOURI DEPT OF CONSERVATION
MATT.VITELLO@MDC.MO.GOV

Project type:	ROAD HIGHWAY
Location/Scope:	LANDGRANT 2007 & 114
County:	ST. LOUIS
Query reference:	I-270 PROJECT
Query received:	1/10/2018

This NATURAL HERITAGE REVIEW is not a site clearance letter. Rather, it identifies public lands and sensitive resources known to have been located close to and/or potentially affected by the proposed project. On-site verification is the responsibility of the project. Natural Heritage records were identified at some date and location. This report considers records near but not necessarily at the project site. Animals move and, over time, so do plant communities. To say "there is a record" does not mean the species/habitat is still there. To say that "there is no record" does not mean a protected species will not be encountered. These records only provide one reference and other information (e.g. wetland or soils maps, on-site inspections or surveys) should be considered. Look for additional information about the biological and habitat needs of records listed in order to avoid or minimize impacts. More information is at http://mdc.mo.gov/discover-nature/places-go/natural-areas and mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx.

Level 3 issues: Records of federal-listed (these are also state-listed) species or critical habitats near the project site:

Natural Heritage records identify no wildlife preserves, no designated wilderness areas or critical habitats, and no federal-listed species records within the project area, or in the public land survey section listed above or sections adjacent.

FEDERAL LIST species/habitats are protected under the Federal Endangered Species Act. Contact the U.S. Fish and Wildlife Service (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; 573-234-2132) for Endangered Species Act coordination and concurrence information.

Level 2 issues: Records of state-listed (not federal-listed) endangered species AND / OR state-ranked (not state-listed endangered) species and natural communities of conservation concern. The Department tracks these species and natural communities due to population declines and/or apparent vulnerability.

Natural Heritage records identify no state-listed endangered species within the project area.

Natural Heritage records identify no state-ranked species and/or natural communities within the project area.

See https://nature.mdc.mo.gov/sites/default/files/downloads/2017-SOCC.pdf for a complete list of species and communities of conservation concern.

STATE ENDANGERED species are listed in and protected under the Wildlife Code of Missouri (3CSR10-4.111).

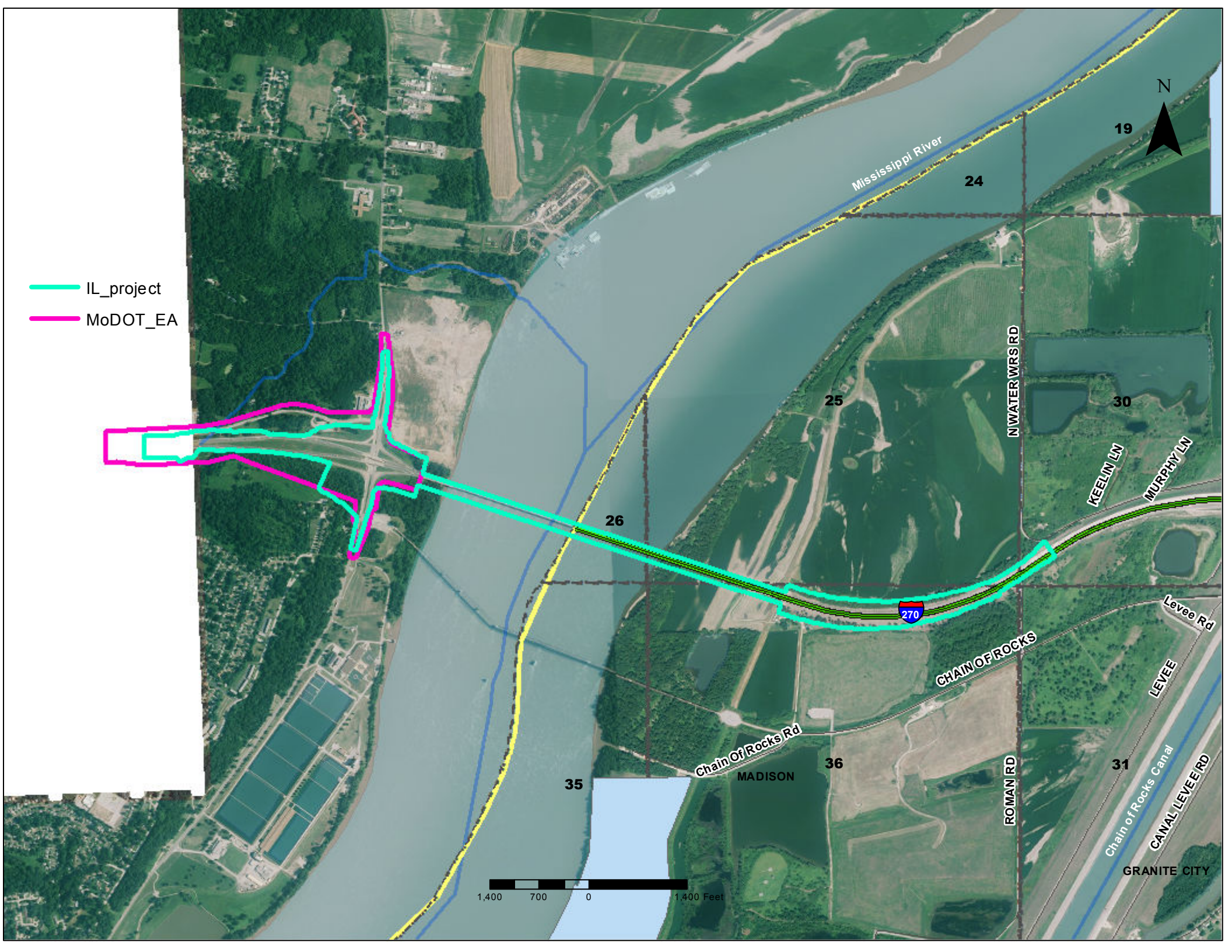
General recommendations related to this project or site, or based on information about the historic range of species (unrelated to any specific Natural Heritage records):

- Indiana bats *(Myotis sodalis*, federal and state-listed endangered) and Northern long-eared bats (*Myotis septentrionalis,* federal-listed threatened) occur in St. Louis County and could occur within the project area. Both species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April. **If any trees need to be removed by your project, please contact the U.S. Fish and Wildlife**

Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 Ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.

- Gray bats (*Myotis grisescens*, federal and state-listed endangered) also occur in St. Louis County and could occur in the project area, as they forage over streams, rivers, and reservoirs. Avoid entry or disturbance of any cave inhabited by gray bats and when possible retain forest vegetation along the stream and from the gray bat cave opening to the stream.
- Bald eagles (*Haliaeetus leucocephalus*) may nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: http://www.fws.gov/midwest/MidwestBird/EaglePermits/index.html if eagle nests are seen.
- St. Louis County has known karst geologic features (e.g. caves, springs, and sinkholes, all characterized by subterranean water movement). Few karst features are recorded in Natural Heritage records, and ones not noted here may be encountered at the project site or affected by the project. Cave fauna (many of which are species of conservation concern) are influenced by changes to water quality, so check your project site for any karst features and make every effort to protect groundwater in the project area.
- Transportation related projects typically change the plants and animals that live on the right-of-way or in the vicinity. Minimize erosion and sedimentation/runoff to nearby streams and lakes by carefully adhering to any "Clean Water Permit" conditions; and include design elements to manage stormwater so that present water discharge rates from the site to streams during heavy rain events are not increased. Revegetation of disturbed areas is recommended to minimize erosion, as is restoration with native plant species compatible with the local landscape and wildlife needs. Annuals like ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crown vetch and sericea lespedeza.
- Maintenance of ground cover in utility corridors can have significant implications for sensitive resources. Native plant species typically require low maintenance over the long term, and provide more benefits to native wildlife. Use silt fences and/or vegetative filter strips to buffer streams and drainages, and monitor those after rain events and until a well-rooted ground cover is reestablished.
- Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment, so inspect and clean equipment thoroughly before moving between project sites.
  - Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
  - Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
  - When possible, wash and rinse equipment thoroughly with hard spray or HOT water (≧140° F, typically available at do-it-yourself carwash sites), and dry in the hot sun before using again.

These recommendations are ones project managers might prudently consider based on a general understanding of species needs and landscape conditions. Natural Heritage records largely reflect sites visited by specialists in the last 30 years. Many privately owned tracts have not been surveyed and could host remnants of species once but no longer common.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- Super Bundles
- Bundles
- Section 7
- CPA
- Contam
- Reports
- Customize

03E18100-2018-SLI-0189 I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

Full Consultation Report

Consultation Title:	I-270 Bridge over Mississippi River, MO and IL St. Louis, MO
ARRA Fund:	No ARRA funding
Consultation Description:	replace/repair bridge
Consultation Type:	Species List (IPaC-Generated)
Consultation Complexity:	Standard
Comments:	Section 7 Consultation generated by the IPaC application.
Action/Work Types:	• TRANSPORTATION
Species:	• Decurrent false aster (Boltonia decurrens) [Q26A, P01] (T) [Wherever found] • Eastern Massasauga (=rattlesnake) (Sistrurus catenatus) [C03P, V01] (T) [Wherever found] • Eastern prairie fringed orchid (Platanthera leucophaea) [Q2GG, P01] (T) [Wherever found] • Indiana bat (Myotis sodalis) [A000, V01] (E) [Wherever found] • Least tern (Sterna antillarum) [B07N, V01] (E) [interior pop.] • Northern Long-Eared Bat (Myotis septentrionalis) [A0JE, V01] (T) [Wherever found] • Pallid sturgeon (Scaphirhynchus albus) [E06X, V01] (E) [Wherever found] • Spectaclecase (mussel) (Cumberlandia monodonta) [F00X, I01] (E) [Wherever found]
Staff Lead:	Matthew Mangan
Lead Agency:	Federal Highway Administration
Supporting Agencies:	*None entered*
No further Service work performed:	*None entered*
First Contact Date:	01/26/2018
Date of Correspondence:	01/26/2018
Start Date:	01/26/2018
Days until Due:	Concluded
Due Date:	01/26/2018
Conclusion Date:	01/26/2018

Bundles

Bundle(s):

- 03E14000-2018-B-0016: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

- 03E18100-2018-B-0068: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO

SuperBundles

SuperBundle(s): *None entered*

Contacts

Contacts
MoDOT Environmental Staff
Missouri Department of Transportation (MDOT)
(573) 526-4778

Consultants
None entered

Location

Location Description:	A map of the proposed project area
Within Coastal Zone?:	No
Within Flood Plain/Zone?:	No
Latitude:	38.762950
Longitude:	-90.163996
Datum:	WGS84
Latitude:	*None entered*
Longitude:	*None entered*
Datum:	*None entered*
UTM East (meters):	*None entered*
UTM North (meters):	*None entered*
UTM Zone:	*None entered*
Datum:	*None entered*
State(s):	Illinois
Counties or Equivalents:	Madison, IL
Congressional District(s):	IL12
Watersheds:	Cahokia - Joachim (07140101)
Ecoregions:	Upper Mississippi River/Tallgrass Prairie
USGS Quads:	Columbia Bottom (38090-G2)

Details / References

Habitat Types Involved:	*None entered*
Recommendations Provided:	No
Final Plans/Reports Received:	No
Recommendations Implemented:	*None entered*
Terms/Conditions Implemented:	*None entered*
Affiliated Office(s):	• 33410: MISSOURI ESFO
GIS File(s):	ipacProjectShapefile.zip
Permit/Action Type:	*None entered*
Associated w/Fire:	No

Biological Conclusion

Species:	Decurrent false aster (Boltonia decurrens) [Q26A, P01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Eastern Massasauga (=rattlesnake) (Sistrurus catenatus) [C03P, V01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Eastern prairie fringed orchid (Platanthera leucophaea) [Q2GG, P01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Indiana bat (Myotis sodalis) [A000, V01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Least tern (Sterna antillarum) [B07N, V01] (E) [interior pop.]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Northern Long-Eared Bat (Myotis septentrionalis) [A0JE, V01] (T) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Pallid sturgeon (Scaphirhynchus albus) [E06X, V01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*
Species:	Spectaclecase (mussel) (Cumberlandia monodonta) [F00X, I01] (E) [Wherever found]
Biological Conclusion:	*None entered*
Critical Habitat:	*None entered*
Take:	*None entered*

Events

01/26/2018
03E18100-2018-E-00451
Correspondence Exchange

Official Species List issued from IPaC. Project information was submitted through IPaC for FWS review and IPaC provided an appropriate response (see attached).

Electronic File(s):

- ipac-OfficialSpeciesList-26_Jan_2018.pdf

01/26/2018
03E18100-2018-E-00450
Other Notations

IPaC has created this activity based on the following project information: - Work Type: TRANSPORTATION - Lead Agency: Federal Highway Administration - Project Name: I-270 Bridge over Mississippi River, MO and IL St. Louis, MO - Project Description: replace/repair bridge Provided by ipac@modot.mo.gov in IPaC