January 12, 2022

County: Marion Route: FAI 57

Section: 61-(1,1-1,1-2,2)RS-1

Contract # 76F79

ADVERTISEMENT DATE: March 25, 2022 RESPONSE DATE: April 29, 2022 CONTACT PERSON(S):

Philip Coppernoll 618-346-3181 philip.coppernoll@illinois.gov

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

Dear Mr. Barkley:

Enclosed are the permit drawings and application for the Department of the Army for activities in waterways as required under Section 404 of Public Law 92-500. Also enclosed is a copy of the Cultural Resources Clearance, Natural Resource Clearance, and Environment Survey Request. Based on an inspection of the project location, 408 permitting is not anticipated, but additional information in support of a 408 permit can be provided if needed.

This project consists of the removal and replacement of approximately 3.72 miles of interstate pavement, interchange ramp reconfiguration, a significant culvert widening, minor bridge repairs to the overhead structures, drainage improvements, pipe underdrain installation, and the earthwork, traffic control, temporary pavement cross-overs, and miscellaneous items required to complete the work. The project begins at the Jefferson County line and extends to 0.7 miles north of the IL 161 interchange. With the exception of the temporary cross-over pavements, and the four interchange ramps at IL 161. the alignment remains the same as the existing alignment with minor widening of the inside and outside shoulders in order to accommodate stage traffic and to improve safety. The proposed typical section consists of 2 - 12ft wide lanes with a 6ft inside and 12ft outside paved shoulders. The four interchange ramps will be re-aligned to incorporate policy taper/transition lengths and will have the same paved width as the existing, one 16ft lane with 8ft and 10ft shoulders. Vertical profile changes are minimal, therefore extensive shoulder earthwork is not necessary.

Approximately 223,202 cubic yards of Earth Excavation, 46,768 cubic yards of Subbase Granular Material, Type B, 133,812 square yards of Subbase Granular Material, Type B 12", 85,827 square yards of Subbase Granular

Material, Type C 4", 917 tons of Aggregate Base Course, Type A will be used to reconstruct the pavement and reconfigure the interchange ramps. Approximately 116 square yards of Stone Riprap, Class A3, 686 square yards of Stone Riprap, Class A4, and 699 square yards of Stone Riprap, Class A5 will be used at culvert outlets to provide channel stabilization and permanent erosion control.

The adjacent land use is agricultural. It is anticipated that 554 trees of 6 to 15 unit diameter and 302 trees of greater than 15 unit diameter will be impacted by the proposed project. In addition, 9.25 acres of tree removal for trees below the minimum diameter listed above will occur. Tree removal is necessary to improve drainage, ensure adequate roadside safety, and to accommodate the ramp alignment which will improve safety. Trees will be replaced in accordance with IDOT tree removal policy. In order to ensure protection of endangered bat species, a commitment is provided in the plans and a special provision for tree removal is included in the contract documents.

Wetlands will be impacted by the proposed project. Approximately 3.94 acres of wet meadow and wet shrubland, 0.83 acres of forested wetland, and 1.68 acres of marsh will be impacted. In-kind mitigation credits will be deducted from the IDOT District 8 Cahokia Wetland Mitigation Site ledger in the amount of 16.815 acres. The individual wetland impacts and mitigation ratios are found in the attached wetland impact evaluation. No utilities will be relocated into wetlands due to this project. The Department will implement erosion control measures consistent with the "Standards and Specifications for Erosion and Sediment Control." Stormwater will be monitored and controlled in accordance with the Stormwater Pollution Prevention Plan. Erosion Control Blanket, Temporary Erosion Control Seeding, Temporary Ditch Checks, Perimeter Erosion Barrier, Inlet and Pipe Protection, and Temporary Erosion Control Blanket will be used as best management practices. The details are shown in the erosion control plan sheets.

Based on the total wetland impacts, The Illinois Department of Transportation anticipates that an individual 404 and individual IEPA water quality permit is necessary. It is IDOT's understanding that all coordination with IEPA will be initiated by your office. Please notify IDOT if this is not the case, so that we can ensure IEPA has what they need to review the permit.

Sincerely,

Kirk H. Brown, P.E.

Kirk H Brown

Program Development Engineer

Attachments

Joint Application Clearances and Coordination Plans, Provisions, and SWPPP

Attention: Central Office BD&E Environment Section

Room 330

# **Environmental Survey Request**

A. Project Information ☐ Bio ☐ Cultural ☐ Wetlands ✔ Special Waste
Submittal Date: 02/09/2018 Sequence No: 21410
District: 8 Requesting Agency: DOH Project No:
Contract #: 76F79 Job No.: D- 98-064-12
Counties: Marion
Route: FAI 57 Marked: I-57
Street: Section: 61-(1,1-1,1-2,2)RS-1
Municipality(ies) Project Length: km miles
FromTo (At): I-57 from Jefferson County Line to just N of IL 161
Quadrangle: Salem South/Kell Township-Range-Section: T1N-R2E-Sec 15,23,26,35
Survey Completion Target Date 08/09/2018 Anticipated Design Approval: 09/09/2018 Anticipated NEPA Processing: CE
B. Reason for Submittal: (Check all that apply); includes SW Level 1 Screening Criteriea
Survey Types: B = Biological; C = Cultural; SW = Special Waste
B,C,SW Involves Acquisition of additional ROW or temporary or permanent easements.
SW On a state-maintained route, crosses or involves RR ROW (except a single rail rural ROW with no maintenance facilities).
B,C Requires In-Stream work (e.g., drainage structure runaround). Stream Name:
C Potential to affect a historic district or historic property.
C Involves replacement or rehabilitation of a bridge/culvert 40 years old or older.
= ····································
SW Involves acquisition of, excavation (defined in BDE Manual 27-3.01) on, or subsurface utility relocation on State ROW.
Other:
C. Project Description: Shoulder replacement and bridge overlay
Proposed Work:   ✓ Roadway  ✓ Bridge   Railroad   Airport   Other
Tree Removal?: No Number?: 0 ha/ acres
Historic District Involved?  Historic Buildings Involved?
Section 4(f) Lands Involved?  Section 6(f) Lands Involved?
Wetland delineation performed by: End. Species Consultation performed by:
D. Funding: Federal State TBP MFT Local Non-MFT Other
404 Permit Required
District Contact: Liz Burnside Local Contact:
Telephone #: (618) 346-3180 ext.  Local Contact: Telephone #:
Env.Contact: Brian Macias  Env.Gontact: Brian Macias  E-Mail:
Telephone #: 6183463144 Title/Company:
Tue/Company.
☐ Closed ☐ PSI/RMP Only ☐ ESR Rec'd in CO ☐ ☐ SW Rec'd ☐

Special Waste				
Special Waste Submittal Da	ate: 02/09/2018 Antic	ipated Design Approval:	09/09/2018 Cleared	
Cleared for Letting:	Surv	ey Target Date: 08/09/2018	Design	Approval:
Step 1: Level 1 Screening 0	Criteria - District Sign-Off	[27-3.02(a)]*		
No 1. Acc	quisition of additional rigl	nt-of-way or easements (tempor	ary or permanent)	
No 2. Rai	Iroad ROW (other than si	ngle rail rural ROW with no mai	ntenance facilities)	
Yes 3. Exc	cavation or subsurface ut	lity relocation		
non-state route portion of th Sign-Off the project. Projec	e project, the Local Roads ts answering "Yes" or "Don	ning criteria apply to the state roun Manual/procedures should be foll 't Know" to #2 above are not eligi w", continue to Step 2: Level 2 Sc	owed. If all responses a ble for District Sign-Off	are No, then the SWC may
☐ District Sign-Off of Spe	ecial Waste - Level 1:	☐ Validation	n - Level 1	
Conducted By: Brian Mad	cias	Revised I	evel 1 Sign-Off Date:	
Position: Sr. Env. S	Specialist		_	
Telephone #: 618-346-3	3144 Ext.:			
Note: This Level 1 District S Date" in the box to the right		um of 6 months, after which it mu tion - Level 1" box.	st be validated; enter a	"Revised Level 1 Sign-Off
Level 1 Screening Comme	nts: Include vour na	me and date with your comments.		
zovor i corcoming commo	monado year mar	ne and date many can commenter		
Step 2: Level 2 Screening 0	Criteria - District Sign-Off	[27-3.02(b)]		
searches, please check	this box, add an explana	ntal condition cannot be determ ion below, and submit for PES wironmental conditions within	<u>1.</u>	onnaissance or from database
searches, please check	this box, add an explanative any of the following er	ion below, and submit for PES	<u>A.</u> he corresponding mi	nimum search distance?
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searches, please check  2.A. Does the project invol  Environmental Condition Industrial and/or comme Other Environmental Co (Please detail below 1) Crosses or otherwise inv (Please detail below 2) State UST State LUST State Voluntary Cleanup	this box, add an explanative any of the following eranger of the follow	viron below, and submit for PES.  Nation below, and submit for PES.  Minimum Search Distant 0.25 miles Property & adjoining property &	che corresponding minimize  Database  operty  operty  No  No  No  miles;	nimum search distance?  Search Site Reconnaissance  No No
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searches, please check  2.A. Does the project invol  Environmental Condition Industrial and/or comme Other Environmental Co (Please detail below 1) Crosses or otherwise inv (Please detail below 2) State UST State LUST State Voluntary Cleanup Federal NPL; NPL deliste Federal RCRA CORRACT CORRACTS TSD facilitie Federal RCRA generator	this box, add an explanative any of the following eranger of the follow	vironmental conditions within  Minimum Search Distar 0.25 miles Property & adjoining pr  Property & adjoining pr  Property & adjoining pr  0.5 miles 0.5 miles 1.0 miles; 0.5 miles; 0.5 miles; respectively 1.0 miles; 0.5 miles, respectively Property & adjoining pr	A.  the corresponding minute  Database  operty  operty  No  No  miles;  No  No  No  No  No  No  No  No  No  N	nimum search distance?  Search Site Reconnaissance  No No
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2.B. Were photographs taken of the site and/or surrounding area?

In an effort to identify any property or condition that may negatively affect the project site or potential historical, industrial and/or commercial use, the following sources of information can be helpful while screening the project.

#### 2.C. Place a check next to each reference that is reviewed. (Optional)

✓ Google - type aerial maps	✓ Extranet data	✓ Historic Photos	Aerial	☐ Survey Books	Other Files & Photos		
☐ City Directories	County Assessor		n Fire ce Maps	☐ Plat Books			
✓ Other source (describe	✓ Other source (describe): IEPA Databases						
If any historical reference ind PESA is required.	licates the possible pres	sence of a property	or condition th	at may negatively affect the	project site, then a		
project. Ensure the special v response for database searc	f all responses for database search and site reconnaissance are "No", then the District Special Waste Coordinator may sign-off the project. Ensure the special waste box in section A is checked. The level 2 District Sign-off is valid for a maximum of six months. If any response for database search and site reconnaissance is "Yes", or if a database search or site reconnaissance is not performed or is not not performed or is not performed. See BDE Manual 27-3 for additional instructions.						
✓ District Sign-Off of Spe	ecial Waste - Level 2:	02/09/2018	_ v	alidation - Level 2			
Prepared by (name): Bria	an Macias		R	evised Level 2 Sign-Off Da	ite:		
Organization/firm: IDC	DT D8		С	leared for Design Approva	d:		
Position/title: Sr.	Env. Specialist			<b>5</b>			
Telephone #: 618-346-31	44	Ext #:					
Email: Brian.Macia	as.illinois.gov						
Note: This Level 2 District Si	gn-Off is valid for a max	imum of 6 months.	After that date	e, the District Sign-Off must	be validated and a		

Note: This Level 2 District Sign-Off is valid for a maximum of 6 months. After that date, the District Sign-Off must be validated and a Revised Sign-Off Date entered in the box to the right above.

After this Level 1 or Level 2 District Sign-Off has been completed:

- 1. Email a screen shot or Adobe.pdf of the form to the Central Office, BDE, Environment Section, Geologic & Waste Assessment Unit for Processing.
- 2. Complete the Cleared for Design Approval step by clicking on the Dist/CBLRS tab and adding the date to the special waste cell.
- 3. Complete the Cleared for Letting step in a similar fashion.
- 4. Add explanatory note in the Addtl. Info tab.

For questions about this form, see the submittal instructions, contact the District Special Waste Coordinator or contact the BDE Geologic & Waste Assessment Unit.

Sequence No: 21410

Memo Date:	02/07/2018	Memo By:	Brian Macias
Memo:	No ROW or in-stream	work.	
Memo Date:	02/07/2018	Memo By:	Brian Macias
Memo:	District level II sign-off		
Wiellio.	District level if sign-on	ioi speciai wasti	5.

Attention: Central Office BD&E Environment Section Room 330

# **Environmental Survey Request Addendum**

A. Project Information   Bio	Cultural 🗌 W	Vetlands ✓ Special Waste
Submittal Date: 03/26/2020 Sequence No:	21410 A	
District: 8 Requesting Agency: DOF	1	Project No:
Contract #: 76F79	Job No.:	D- 98-064-12
Counties: Marion		
Route: FAI 57	Marked: I-57	7
Street:		<b>Section:</b> 61-(1,1-1,1-2,2)RS-1
Municipality(ies):		oject Length: 6.1155 km 3.8 miles
FromTo (At): I-57 from Jefferson County Line to ju	ust N of IL 161	
Quadrangle: Salem South/Kell	Township-Ran	
Survey Target Date: 09/26/2020 Antic	ipated Design App	proval: 10/26/2020 Anticipated NEPA Processing: CE
B. Reason for Submittal: (Check all that a	nnly) · includes	SW Level 1 Screening Criteries
Survey Types: B = Biological; C = Cultural; SW		OW Level 1 Octeening Officeriea
	= Special Waste	
B,C,SW Involves Acquisition of additional RC	W or temporary o	or permanent easements. Addendum: acres
		Total Project: acr
SW On a state-maintained route, crosses	or involves RR R	OW (except a single rail rural ROW with no maintenance facilities).
B,C Requires In-Stream work (e.g., draina	age structure runa	around). Stream Name: Raccon Creek
C	or historic property	у.
C Involves replacement or rehabilitation	n of a bridge/culve	ert 40 years old or older.
SW Involves acquisition of, excavation (c	defined in BDE Ma	anual 27-3.01) on, or subsurface utility relocation on State ROW.
Other:		
_ other.		
C. Addendum Description: Addendum being salong with shoulde  D. Tree Removal?: Don't Know Number	r reconstrution alon	
Existing Bridge(s) Structure Number:	061-2474	On Historic Bridge List: No
Existing Bridge(s) Structure Number:	061-0017	On Historic Bridge List: No
Existing Bridge(s) Structure Number:	061-2000	On Historic Bridge List: No
Existing Bridge(s) Structure Number:	061-2473	On Historic Bridge List: No
Existing Bridge(s) Structure Number: Existing Bridge(s) Structure Number:	061-2472 061-0046	On Historic Bridge List: No
Existing Bridge(s) Structure Number:	061-2471	On Historic Bridge List: No On Historic Bridge List: No
Existing Bridge(s) Structure Number:	061-0027	On Historic Bridge List: No
Wetland delineation performed by:		pecies Consultation performed by:
E. Contact Person: Sarah Wiszkon	Local Cont	tact Person:
Telephone #: (618) 346-3309 ext.		Felephone #:
Env.Contact: Brian Macias		E-Mail:
<b>Telephone #:</b> (618) 346-3144 ext.	Ti	itle/Company:
<u> </u>		
F. Update Entire Project		
Addendum Only		
Addendam Omy		
☐ Closed ☐ PSI/RMP Only ☐ ESR F	Rec'd in CO	SW Rec'd

Special Waste					
Special Waste Su	ubmittal Date: 03/26	/2020 Anticipa	ted Design Approval: 10/26/20	Cleared for Design Approva	ı.
Cleared for Lettir	ng:	Survey	<b>Farget Date:</b> 09/26/2020	Design Approva	
Step 1: Level 1 S	creening Criteria - Distri	ict Sign-Off [27	-3.02(a)]*		
Don't Know  No  Yes	<u>-</u>	ther than singl	of-way or easements (temporary or per e rail rural ROW with no maintenance or relocation	•	
non-state route p Sign-Off the proje	ortion of the project, the Lect. Projects answering "	Local Roads Mai Yes" or "Don't K	g criteria apply to the state route/state junual/procedures should be followed. If a now" to #2 above are not eligible for Discontinue to Step 2: Level 2 Screening C	all responses are No, th trict Sign-Off and must	en the SWC may
☐ District Sign	-Off of Special Waste - L	_evel 1:	☐ Validation - Level	1	
Conducted By:	Brian Macias		Revised Level 1 Si	gn-Off Date:	
Position:	Sr. Env. Specialist				
Telephone #:	618-346-3144	Ext.:			
	1 District Sign-Off is valid to the right above and clic		of 6 months, after which it must be valid	lated; enter a "Revised	Level 1 Sign-Off
Level 1 Screenir	ng Comments: Incl	lude your name	and date with your comments.		
		,	, and the second		
Step 2: Level 2 S	creening Criteria - Distri	ict Sian-Off [27	-3.02(b)1		
☐ If for any reas	on the presence of any	, environmental	\	n the site reconnaiss	unce or from database
			condition cannot be determined from below, and submit for PESA.	n the site reconnaissa	nce or from database
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In an effort to identify any property or condition that may negatively affect the project site or potential historical, industrial and/or commercial use, the following sources of information can be helpful while screening the project.

#### 2.C. Place a check next to each reference that is reviewed. (Optional)

Google - type aerial maps	Extranet data		☐ Survey Books	Other Files & Photos
City Directories	County Assessor	Sanborn Fire Insurance Maps	☐ Plat Books	
✓ Other source (describe	e): IEPA Database, NET	R Online		
If any historical reference inc PESA is required.	licates the possible presenc	e of a property or condition th	at may negatively affect the	project site, then a
project. Ensure the special versponse for database search	waste box in section A is che h and site reconnaissance is	ance are "No", then the Distric ecked. The level 2 District Sig s "Yes", or if a database seard Il 27-3 for additional instruction	gn-off is valid for a maximum ch or site reconnaissance is	n of six months. If any
☐ District Sign-Off of Spe	ecial Waste - Level 2:	□ Va	alidation - Level 2	
Prepared by (name): Bria	an Macias	R	evised Level 2 Sign-Off Da	ate:
Organization/firm: IDC	OT D8	С	leared for Design Approva	ıl:
Position/title:				
Telephone #: 618-346-31	44 Ext	#:		
Email: Brian.Macia	as@illinois.gov			
Note: This Level 2 District Si	ign-Off is valid for a maximul	m of 6 months. After that date	e. the District Sian-Off must	be validated and a

Note: This Level 2 District Sign-Off is valid for a maximum of 6 months. After that date, the District Sign-Off must be validated and a Revised Sign-Off Date entered in the box to the right above.

After this Level 1 or Level 2 District Sign-Off has been completed:

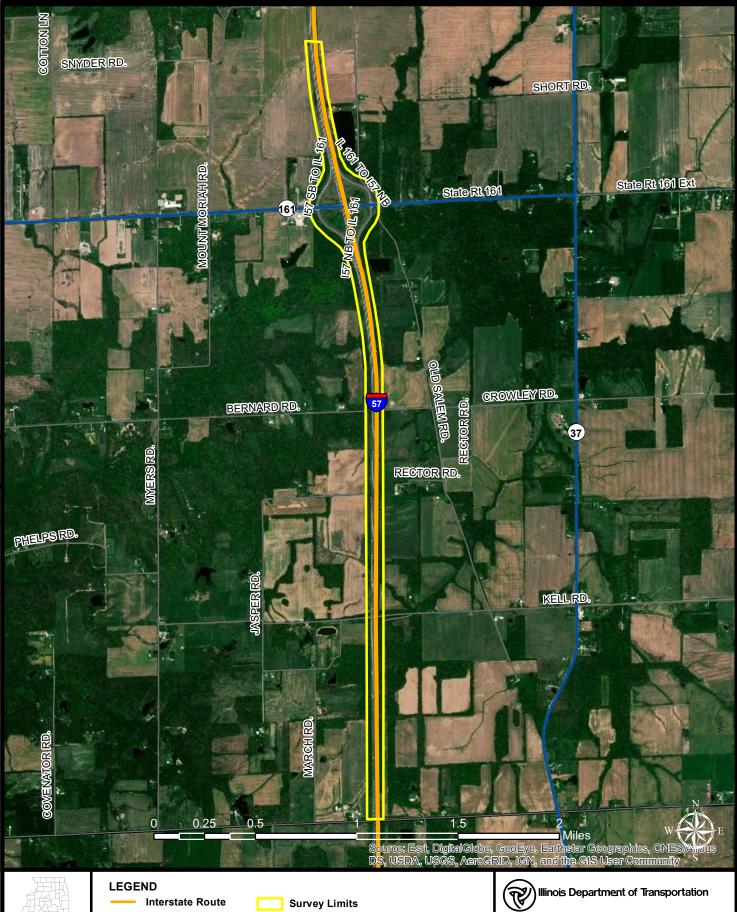
- 1. Email a screen shot or Adobe.pdf of the form to the Central Office, BDE, Environment Section, Geologic & Waste Assessment Unit for Processing.
- 2. Complete the Cleared for Design Approval step by clicking on the Dist/CBLRS tab and adding the date to the special waste cell.
- 3. Complete the Cleared for Letting step in a similar fashion.
- 4. Add explanatory note in the Addtl. Info tab.

For questions about this form, see the submittal instructions, contact the District Special Waste Coordinator or contact the BDE Geologic & Waste Assessment Unit.

Sequence No: 21410 A

 Memo Date:
 03/26/2020
 Memo By:
 Brian Macias

 Memo:
 Survey limitys: Along I-57 from the Jefferson County Line to 0.7 mi N of IL 161; 150' from the edge of pavement (See attached maps)





**State Route** 

**Local Route** 

**US Route** 

FAI 57 (I-57) Section 61-(1,1-1,1-2,2)RS-1 Marion County Sequence No. 21410A

To: Jeffrey L. Keirn Attn: Keith Rogers

From: Jack A. Elston By: Thomas C. Brooks

Subject: Natural Resources Review

Date: December 7, 2021

**FAI 57** 

T 1N, R 2E, Sec15 Marion County

Sequence # 21410 and 21410 A

This review covers the original project as well as addendum A. The proposed project is for shoulder replacement and bridge overlay on several structures along I 57 from the Jefferson County Line to just north of IL 16.

The original scope of work has been changed. Previously the project did not include right if way right-of-way acquisition or temporary easements, in stream work, or tree removal. However, it has since been determined that a small unknown amount of right of way or easements will be required to complete the project. Additionally, there will be in stream work to Raccoon Creek. The project will require 8.75 acres of tree removal.

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

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. Additionally, no threatened or endangered species or natural communities of interest were found during the 3-parameter survey and the wetland delineations which were conducted for this project. **Therefore, consultation under Part 1075 is terminated**.

This review for compliance with 17 III. 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.

#### Review for Illinois Interagency Wetland Policy Act - Part 1090

The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, USDA Soil Survey, and topographic quadrangle maps were examined. A Wetland Impact Evaluation was sent in. This office has reviewed the Wetland Impact Evaluation. Wetland impacts were minimized as

much as possible but due to widening and shoulder work as well as in stream work and land acquisition, there are unavoidable wetland impacts. The project will impact 6.45 acres of wetlands including 3.94 acres of wet meadow and wet shrubland, 0.83 acres of forested wetland, and 1.68 acres of marsh. Some of the impacts are considered significant impacts and qualify as destruction due to impacts larger than 0.5 acres to a single wetland. The appropriate mitigation ratios have been applied as required under IWPA. In Kind mitigation credits will be deducted from the IDOT District 8 Cahokia Wetland Mitigation Site ledger in the amount of 16.815 acres. **Therefore**, **review for wetlands under Part 1090 is terminated**.

#### 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 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), Rattlesnake-master borer moth, and Eastern prairie fringed orchid. There is no proposed or designated critical habitat in Marion 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. We completed an IPaC qualification interview and determined that the project is within the scope of the programmatic biological opinion and is not likely to adversely affect either bat species provided the following commitment is implemented:

Trees three (3) inches or greater in diameter at breast height shall not be cleared from April 1st through September 30th of any given year.

This determination is based in part on the results of the bridge/structure assessment. No bats or signs of bats were observed on the bridge. Please note that all bat bridge/structure assessments are valid for two years and that expired assessments shall be updated prior to construction.

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.



# Interstate 57 (FAI 57) Marion County, Illinois

IDOT Sequence Number: 21410A



Prepared by:
Julie Nieset, Elizabeth Miernicki, Jeannine Adomaitis and Tari Tweddale

**INHS/IDOT Wetland Science Program** 

January 2021



#### **Project Summary**

A wetland survey was conducted for proposed work on Interstate 57 (FAI 57) in Marion County, Illinois. All potential wetlands within the specified project area were examined. Twenty-one 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 (<a href="https://isats.dot.illinois.gov/login.aspx">https://isats.dot.illinois.gov/login.aspx</a>). 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: Paul B. Maure

Paul B. Marcum

Wetland Science Program

Associate Scientist/Project Leader for Botany

**Conducted By:** Julie Nieset (Vegetation, Hydrology, and GNSS)

Elizabeth Miernicki (Soils and Hydrology)

Jeannine Adomaitis (GIS and NRCS Method Determination)

Date: January 14, 2021

Tari Tweddale (GIS)
University of Illinois
Prairie Research Institute
Illinois Natural History Survey
Wetland Science Program

1816 South Oak Street Champaign, Illinois 61820

jenieset@illinois.edu (217) 300-2472 (Nieset)

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Cover Photo: Milkweed tussock moth caterpillars (*Euchaetes egle*) on common milkweed (*Asclepias syriaca*) within the project corridor, September 2020.

# Interstate 57 (FAI 57) Marion County, Illinois

#### Introduction

A wetland survey was conducted on September 2-3, September 10 and 21, 2020, for the proposed work on Interstate 57 (FAI 57) in Marion County, Illinois. This is an addendum to construction work due to additional in-stream work within the I-57/IL 161 interchange along with shoulder reconstruction along I-57.

#### **Methods**

All potential wetlands within the specified study area were examined. Characteristics of vegetation, soils, hydrology, and topography were evaluated during field investigation and onsite 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 (Salem South/Kell 7.5 minute quadrangles); National Wetlands Inventory (NWI) website (USFWS 2020); the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987); 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.

All areas of agricultural land use within the project corridor were evaluated following the NRCS method of wetland determination (for more information, see: USDA-NRCS 2016). Briefly, this method involves examining five years of aerial photography taken during the early summer for evidence of saturation or inundation (wetland signature). The years used are determined to be five years during which precipitation was closest to the long-term precipitation averages. Any area which showed a wetland signature in three years out of five (or in two years out of five if the site was also mapped as wetland by the NWI) was investigated by a site visit. If hydric soils

were present at the site, the site was determined to be wetland. The site was then delineated from the aerial photography based on an average wetland signature. Photographic documentation for this procedure is presented only when a wetland is determined to be present or when a site was mapped as wetland in the NWI. Twenty-one potential sites were investigated in the field but none of the sites met farmed wetland requirements.

Wetland location data 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 (<a href="https://isats.dot.illinois.gov/login.aspx">https://isats.dot.illinois.gov/login.aspx</a>). Locations of determination sites were overlaid on a digital aerial orthophoto and approximate area was determined for each wetland site using ArcGIS Desktop 10.7.1 (ESRI 2019). 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 (VN), 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: Wet meadow

National Wetlands Inventory code: **U** (upland)

Site location: Approximately 20 ft west of southbound I-57 and 14 ft east of northbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.56 ac

Total site area: Undetermined

Mean Coefficient of Conservatism (mean C): 2.0 Floristic Quality Index (FQI): 12.2

Additional remarks: The parcels of this site are connected via culverts.

Site Number: 2

Community type: Marsh

National Wetlands Inventory code: U (upland)

Site location: Approximately 15 ft west of southbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.01 ac** 

Total site area: **0.01 ac** 

Mean Coefficient of Conservatism (mean C): **1.4** Floristic Quality Index (FQI): **5.8** Additional remarks: **It's possible that this site is connected to Site 3 but that the culvert is crushed.** We noticed an area along the roadside that suggested so, but since we couldn't

confirm, did not connect the sites.

Site Number: 3

Community type: Wet meadow

National Wetlands Inventory code: U (upland)

Site location: Approximately 15 ft west of northbound I-57 and 9 ft east of northbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.08 ac

Total site area: 0.08 ac

Mean Coefficient of Conservatism (mean C): 1.7 Floristic Quality Index (FQI): 7.3

Additional remarks: The parcels of this site are connected via culverts.

Site Number: 4

Community type: Wet shrubland

National Wetlands Inventory code: U (upland)

Site location: Approximately 18 ft west of the southbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? **Yes** 

Area of site occurring within the project corridor: **0.06 ac** 

Total site area: 0.06 ac

Mean Coefficient of Conservatism (mean C): 2.0 Floristic Quality Index (FQI): 9.2

Site Number: 5

Community type: Marsh

National Wetlands Inventory code: U (upland)

Site location: Approximately 6 ft west of the southbound I-57 exit ramp, 11 ft west of

northbound I-57 and 25 ft east of northbound I-57

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: Undetermined

Mean Coefficient of Conservatism (mean C): 2.3 Floristic Quality Index (FQI): 11.4

Additional remarks: The parcels of this site are connected via culverts.

Site Number: 6

Community type: Marsh

National Wetlands Inventory code: U (upland)

Site location: Approximately 23 ft east of northbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.13 ac** 

Total site area: **0.13 ac** 

Mean Coefficient of Conservatism (mean C): **1.9** Floristic Quality Index (FQI): **8.5** Additional remarks: **During field survey no culverts to connect this site to Site 5 were observed** 

nor drainage marks between the two.

Site Number: 7

Community type: Upland forest

National Wetlands Inventory code: PUBGx (excavated, intermittently exposed, unconsolidated

bottom, palustrine wetland)

Site location: **Sampling point 10A approximately 51 ft east of northbound I-57**Hydrophytic Vegetation? **No**Hydric Soils? **No**Wetland Hydrology? **No** 

Is this site a wetland? No

Site Number: 8

Community type: **Deepwater Aquatic Habitat** 

National Wetlands Inventory code: PUBGx (excavated, intermittently exposed, unconsolidated

bottom, palustrine wetland)

Site location: Approximately 109 ft east of northbound I-57

Hydrophytic Vegetation? No Hydric Soils? No Wetland Hydrology? No

Is this site a wetland? No

Site Number: 9

Community type: Upland forest

National Wetlands Inventory code: PUBGh (diked/impounded, intermittently exposed,

unconsolidated bottom, palustrine wetland)

Site location: Sampling point 12A approximately 39 ft east of the exit ramp from IL 161 onto

northbound I-57

Hydrophytic Vegetation? **No** Hydric Soils? **No** Wetland Hydrology? **No** 

Is this site a wetland? No

Site Number: 10

Community type: Forested wetland

National Wetlands Inventory code: PUBGh (diked/impounded, intermittently exposed,

unconsolidated bottom, palustrine wetland)

Site location: Approximately 67 ft east of the exit ramp from IL 161 onto northbound I-57

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: **Undetermined** 

Mean Coefficient of Conservatism (mean C): **3.1** Floristic Quality Index (FQI): **13.6** 

Site Number: 11

Community type: Wet meadow

National Wetlands Inventory code: U (upland); R2UBH (permanently flooded, unconsolidated

bottom, lower perennial, riverine wetland)\*

Site location: Approximately 14 ft west and 22 ft east of southbound I-57, north of IL 161; and

17 ft west and 12 ft east of southbound I-57, south of IL 161

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 1.27 ac

Total site area: 1.27 ac

Mean Coefficient of Conservatism (mean C): 1.8 Floristic Quality Index (FQI): 9.7 Additional remarks: The six parcels of this site are connected via culverts and ditches.\*Note that even though this wetland technically includes the R2UBH according to the NWI map (see Figure 2), the stream has been channelized and concretized under the roadway at depth. Due to past construction efforts, this portion of Site 11 over the R2UBH looks indistinguishable from the portion of Site 11 marked as upland by the NWI in this area.

Site Number: 12

Community type: Wet meadow

National Wetlands Inventory code: U (upland)

Site location: Approximately 42 ft west of the exit ramp from IL 161 onto northbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.16 ac** 

Total site area: **0.16 ac** 

Mean Coefficient of Conservatism (mean C): 2.1 Floristic Quality Index (FQI): 11.1

Site Number: 13

Community type: Marsh

National Wetlands Inventory code: U (upland)

Site location: Approximately 58 ft east of northbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.19 ac

Total site area: **0.19 ac** 

Mean Coefficient of Conservatism (mean C): 2.0 Floristic Quality Index (FQI): 9.4

Site Number: 14

Community type: Wet floodplain forest National Wetlands Inventory code: U (upland)

Site location: **Approximately 58 ft east of the northbound I-57 exit ramp onto IL 161**Hydrophytic Vegetation? **Yes**Hydric Soils? **Yes**Wetland Hydrology? **Yes** 

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.42 ac

Total site area: Undetermined

Mean Coefficient of Conservatism (mean C): 2.9 Floristic Quality Index (FQI): 17.6

**Site Number: 15** 

Community type: Wet floodplain forest National Wetlands Inventory code: U (upland)

Site location: Approximately 62 ft east of southbound I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.56 ac

Total site area: Undetermined

Mean Coefficient of Conservatism (mean C): 2.9 Floristic Quality Index (FQI): 16.9

Site Number: 16

Community type: Wet meadow

National Wetlands Inventory code: U (upland)
Site location: Approximately 6 ft east of I-57

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): 2.3 Floristic Quality Index (FQI): 11.4

Site Number: 17

Community type: Wet meadow

National Wetlands Inventory code: U (upland) Site location: As near as 12 ft east of I-57

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): 2.4 Floristic Quality Index (FQI): 11.7

Additional remarks: The six parcels of this site are connected via a ditch.

Site Number: 18

Community type: Wet meadow

National Wetlands Inventory code: U (upland)

Site location: Approximately 83 ft east of I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.06 ac** 

Total site area: **0.10 ac** 

Mean Coefficient of Conservatism (mean C): 2.1 Floristic Quality Index (FQI): 9.6

Site Number: 19

Community type: Forested wetland

National Wetlands Inventory code: R4SBC (seasonally flooded, streambed, intermittent,

riverine wetland) and U (upland)

Site location: Approximately 12 ft west of I-57

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): **2.9** Floristic Quality Index (FQI): **16.9** Additional remarks: **There are two parcels that are hydrologically connected to W9 - Unnamed** 

tributary to Raccoon Creek #8, an intermittent stream.

Site Number: 20

Community type: Wet meadow

National Wetlands Inventory code: U (upland)
Site location: Approximately 13 ft west of I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.31 ac** 

Total site area: 0.31 ac

Mean Coefficient of Conservatism (mean C): 2.2 Floristic Quality Index (FQI): 12.0

Site Number: 21

Community type: Marsh

National Wetlands Inventory code: U (upland)

Site location: As near as 14 ft east of I-57 and 18 ft west of northbound I-57

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): 2.0 Floristic Quality Index (FQI): 8.9

Additional remarks: The three parcels of this site are connected via culverts.

Site Number: 22

Community type: Wet meadow

National Wetlands Inventory code: U (upland)

Site location: As near as 8 ft west of I-57; 18 ft east of southbound I-57; and as near as 17 ft east of I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.87 ac** 

Total site area: **0.87 ac** 

Mean Coefficient of Conservatism (mean C): **2.5** Floristic Quality Index (FQI): **16.0** Additional remarks: **The seven parcels of this site are connected via ditches and culverts.** 

Site Number: 23

Community type: Forested wetland

National Wetlands Inventory code: U (upland)
Site location: Approximately 83 ft east of I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: 0.08 ac

Total site area: **0.08 ac** 

Mean Coefficient of Conservatism (mean C): 2.8 Floristic Quality Index (FQI): 15.8

Additional remarks: Area outside of project is < 0.01 ac.

Site Number: 24

Community type: Wet meadow

National Wetlands Inventory code: U (upland)

Site location: Approximately 9 ft west and 14 ft east of I-57

Hydrophytic Vegetation? Yes Hydric Soils? Yes Wetland Hydrology? Yes

Is this site a wetland? Yes

Area of site occurring within the project corridor: **0.31 ac** 

Total site area: **0.31 ac** 

Mean Coefficient of Conservatism (mean C): 1.8 Floristic Quality Index (FQI): 9.4

Additional remarks: The two parcels of this site are connected via culverts.

#### **Wetland Determination Site Summary**

Site no.	NWI code	Community type	Area (ac.)¹	>50%²	FQI	Mean C
1	U	Wet meadow	0.56	Yes	12.2	2.0
2	U	Marsh	0.01	Yes	5.8	1.4
3	U	Wet meadow	0.08	Yes	7.3	1.7
4	U	Wet shrubland	0.06	Yes	9.2	2.0
5	U	Marsh	0.75	Yes	11.4	2.3
6	U	Marsh	0.13	Yes	8.5	1.9
10	PUBGh	Forested wetland	0.26	Yes	13.6	3.1
11	U	Wet meadow	1.27	Yes	9.7	1.8

Site no.	NWI code	Community type	Area (ac.)¹	>50%²	FQI	Mean C
12	U	Wet meadow	0.16	Yes	11.1	2.1
13	U	Marsh	0.19	Yes	9.4	2.0
14	U	Wet floodplain forest	0.42	No	17.6	2.9
15	U	Wet floodplain forest	0.56	No	16.9	2.9
16	U	Wet meadow	0.18	Yes	11.4	2.3
17	U	Wet meadow	0.14	Yes	11.7	2.4
18	U	Wet meadow	0.06	Yes	9.6	2.1
19	R4SBC and U	Forested wetland	0.15	Yes	16.9	2.9
20	U	Wet meadow	0.31	Yes	12.0	2.2
21	U	Marsh	0.60	Yes	8.9	2.0
22	U	Wet meadow	0.87	Yes	16.0	2.5
23	U	Forested wetland	0.08	Yes	15.8	2.8
24	U	Wet meadow	0.31	Yes	9.4	1.8

<sup>&</sup>lt;sup>1</sup> Area within the ESR project limits. <sup>2</sup> In our best professional judgment is more than 50% of the total site area within the ESR project limits.

#### **Stream Descriptions**

Site Name: Unnamed Tributary to Raccoon Creek #1

Site Location: Approximately 31 ft east of I-57

Community type: Stream

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Additional Remarks: This stream flows under I-57 and becomes an NWI (R4SBC) outside the

project corridor.

Site Name: Unnamed Tributary to Raccoon Creek #2

Site Location: Approximately 151 ft northeast of the I-57 northbound on-ramp

Community type: Stream

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral** Is the stream identified by the IDNR (2008) as a biologically significant stream? **No** 

Stream Integrity Rating: **Not Rated** Stream Diversity Rating: **Not Rated** 

Additional Remarks: The area of the stream within the project corridor is a concretized

channel.

Site Name: Unnamed Tributary to Raccoon Creek #3

Site Location: Approximately 116 ft northeast of the I-57 northbound on-ramp

Community type: **Stream** 

National Wetlands Inventory code: R4SBC (seasonally flooded, streambed, intermittent,

riverine wetland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Intermittent**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Additional Remarks: The area of the stream within the project corridor is a concretized .

channel.

Site Name: Unnamed Tributary to Raccoon Creek #4

Site Location: Approximately 103 ft east of the I-57 northbound exit ramp onto IL 161

Community type: Stream

National Wetlands Inventory code: **U (upland)** 

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Additional Remarks: **The concretized channel in the mowed area next to IL-161 becomes**natural in the forested area in the south and flows through wetland Site 14 into Raccoon

Creek.

Site Name: Raccoon Creek

Site Location: Passes under I-57 approximately 1022 ft south of IL 161

Community type: Stream

National Wetlands Inventory code: R2UBH (permanently flooded, unconsolidated bottom,

lower perennial, riverine wetland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: 12.6 mi<sup>2</sup> (USGS 2017)

Riffles observed? Yes Pools observed? Yes

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Perennial** 

Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #5

Site Location: Approximately 77 ft west of the I-57 southbound on-ramp

Community type: Stream

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #6
Site Location: Approximately 36 ft west of I-57

Community type: **Stream** 

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Additional Remarks: This stream flows under I-57.

Site Name: Unnamed Tributary to Raccoon Creek #7

Site Location: Approximately 65 ft east of I-57

Community type: **Stream** 

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #8

Site Location: Passes under I-57 approximately 1297 ft north of Kell Road

Community type: Stream

National Wetlands Inventory code: R4SBC (seasonally flooded, streambed, intermittent, riverine wetland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Intermittent**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #9

Site Location: Approximately 30 ft east of I-57

Community type: Stream

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #10

Site Location: Passes under I-57 approximately 2075 ft south of Kell Road

Community type: **Stream** 

National Wetlands Inventory code: R4SBC (seasonally flooded, streambed, intermittent,

riverine wetland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Intermittent**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Stream integrity nating. Not nated

Site Name: Unnamed Tributary to Raccoon Creek #11

Site Location: Approximately 30 ft west of I-57

Community type: Stream

National Wetlands Inventory code: **U** (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral** 

Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #12

Site Location: Approximately 35 ft east of I-57

Community type: Stream

National Wetlands Inventory code: R4SBC (seasonally flooded, streambed, intermittent,

riverine wetland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Intermittent**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

Site Name: Unnamed Tributary to Raccoon Creek #13

Site Location: Approximately 66 ft east of I-57

Community type: Stream

National Wetlands Inventory code: U (upland)

USGS 8-Digit Hydrologic Unit Code (HUC): 07140202 (Middle Kaskaskia River)

Watershed area: <1 mi<sup>2</sup> (USGS 2017)

Riffles observed? **No** Pools observed? **No** 

Mussel shell material observed? No

Is the stream or body of water perennial/intermittent/ephemeral? **Ephemeral**Is the stream identified by the IDNR (2008) as a biologically significant stream? **No**Stream Integrity Rating: **Not Rated**Stream Diversity Rating: **Not Rated** 

#### **Stream Descriptions Summary Table**

Waters Name	NWI code	Community type	USGS 8- digit HUC	IDNR BSS <sup>1</sup>	IDNR SIR <sup>1</sup>	IDNR SDR <sup>1</sup>
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #1		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #2		Stream			Rated	Rated
Unnamed Tributary to	R4SBC	Intermittent	07140202	No	Not	Not
Raccoon Creek #3		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #4		Stream			Rated	Rated
Raccoon Creek	R2UBH	Perennial	07140202	No	Not	Not
		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #5		Stream			Rated	Rated

Waters Name	NWI	Community	USGS 8-	IDNR	IDNR	IDNR
waters warne	code	type	digit HUC	BSS <sup>1</sup>	SIR <sup>1</sup>	SDR <sup>1</sup>
Unnamed Tributary to	U	Ephemeral	07140202	07140202 No		Not
Raccoon Creek #6		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #7		Stream			Rated	Rated
Unnamed Tributary to	R4SBC	Intermittent	07140202	No	Not	Not
Raccoon Creek #8		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #9		Stream			Rated	Rated
Unnamed Tributary to	R4SBC	Intermittent	07140202	No	Not	Not
Raccoon Creek #10		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #11		Stream			Rated	Rated
Unnamed Tributary to	R4SBC	Intermittent	07140202	No	Not	Not
Raccoon Creek #12		Stream			Rated	Rated
Unnamed Tributary to	U	Ephemeral	07140202	No	Not	Not
Raccoon Creek #13		Stream			Rated	Rated

<sup>&</sup>lt;sup>1</sup>IDNR 2008 BSS (Biologically Significant Stream), SIR (Stream Integrity Rating), and SDR (Stream Diversity Rating).

#### **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.

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### **APPENDIX A**

#### **Wetland Determination Forms**

### WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Interstate 57 (FAI 57)		City/County: Marion		Sampling Date: 9/2/2020				
Applicant/Owner: IDOT District 8				State: IL Samp	pling Point 1A			
Investigator(s): Nieset and Miernicki			Section, Township, Range: Sec. 15, T1N, R2E					
Landform (hillslope, terrace, etc.): Excavated channel/ditch			ocal relief (c	concave, convex, none):	Concave			
Slope (%): <2 Lat: 38.53028		Long: -88.9	6480	Г	Datum: NAD 83			
Soil Map Unit Name: Cisne-Huey SILs, 0-2% slopes		<u> </u>		NWI classification	on: U			
Are climatic/hydrologic conditions on the site typical for this	time of ve	ar? Ye	s (If i	no explain in Remarks.)				
Are Vegetation No , Soil No , or Hydrology No si	•			Are "Normal Circumsta	ances" present? Y	'es		
Are Vegetation No , Soil No , or Hydrology No no				(If needed, explain any	•			
SUMMARY OF FINDINGS - Attach site map sl			point lo					
Hydrophytic Vegetation Present? Yes	ilowing		point io	oations, transcotts	, important routu	100, 010		
Hydric Soil Present? Yes			Is the Sampled Area within a Wetland? Yes					
Wetland Hydrology Present? Yes								
Remarks: Community type is wet meadow.  VEGETATION - Use scientific names of plants.								
'	Absolute	Dominant	Indicator	Dominance Test wor	rkahaati			
<u>Tree Stratum</u> (Plot size: 30 ft radius	% Cover	Species?	Status	Number of Dominant	Species	(4)		
1. 2.				That are OBL, FACW, Total Number of Domi	·	(A)		
3.				Species Across All Str		(B)		
4.       5.				Percent of Dominant S That are OBL, FACW,		(A/B)		
Sapling/Shrub Stratum (Plot size: 15 ft radius)	Prevalence Index wor	rkshoot:	_ (A/b)					
1 Soliv interior	5	Yes	FACW		Multiply by:			
Diospyros virginiana	1	No	FAC	OBL species	x 1 =	-		
3.				FACW species	x 2 =	=		
5.				FAC species	x 3 =	=		
	6	= Total Cov	/er	FACU species	x 4 =	_		
Herb Stratum (Plot size: 5 ft radius )				UPL species	x 5 =	_		
1. Bidens aristosa	55	Yes		Column Totals	(A)	(B)		
Asclepias incarnata     Penstemon digitalis	10 10	No No	OBL FAC	Prevalence In	ndex =B/A =	_		
4. Iva annua	5	No	FAC	Hydrophytic Vegetation	on Indicators			
5. Juncus gerardii	5	No	OBL	✓ 1-Rapid Test for Hy	ydrophytic Vegetation			
6. Lycopus americanus	5	No	OBL	2-Dominance Test	is >50%			
7. Scirpus georgianus	5	No	OBL	3-Prevalence Index				
8. 9.				4-Morphological Ac	daptations 1(Provide sur on a separate sheet)			
10.					phytic Vegetation¹ (Ex			
	1		. ,					
Woody Vine Stratum (Plot size: 30 ft radius) = Total Cover				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
1				Hydrophytic				
	0	= Total Cov	/er	Vegetation Present?	Yes			
Remarks: (Include photo numbers here or on a separate s	sheet.)			1				
(								

Sampling Point: 1A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Loc2 Texture Type Remarks 0-8 2.5Y 5/1 98 7.5YR 4/6 PL & M SICL 8-15 10YR 4/1 97 7.5YR 5/8 3 C Μ SICL Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

US Army Corps of Engineers Midwest Region - Version 2.0

Project/Site: Interstate 57 (FAI 57)		City/County	: Marion	Samplir	ng Date: 9/2	2/2020	
Applicant/Owner: IDOT District 8				State: IL Samplin	ng Point 2/	4	
Investigator(s): Nieset and Miernicki		Sect	ion, Townsł	nip, Range: Sec. 15, T1N	, R2E		
Landform (hillslope, terrace, etc.): Excavated depression			ocal relief (c	oncave, convex, none): (	Concave		
Slope (%): 1-2 Lat: <u>38.52694</u>		Long: -88.9	6418	Dat	tum: NAD	83	
Soil Map Unit Name: Orthents, Silty, Undulating				NWI classification:	: U		
Are climatic/hydrologic conditions on the site typical for this	time of ve	ar? Ye	s (If r	no explain in Remarks.)			
Are Vegetation No , Soil No , or Hydrology No s			`	Are "Normal Circumstance	ces" preser	nt? Ye	es
Are Vegetation No , Soil No , or Hydrology No r				(If needed, explain any ar		-	
SUMMARY OF FINDINGS - Attach site map s			noint loc				
Hydrophytic Vegetation Present? Yes			point io	satione, transcotte, in	portan	routui	00, 010
Hydric Soil Present? Yes			Sampled A land?	rea within Yes			
Wetland Hydrology Present? Yes							
Remarks: Community type is marsh.  VEGETATION - Use scientific names of plants.							
- 2-2-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-3-	Absolute	Dominant	Indicator	Dominance Test works	choot:		
<u>Tree Stratum</u> (Plot size: <u>30 ft radius</u>	% Cover	Species?	Status	Number of Dominant Sp That are OBL, FACW, o	ecies	2	(A)
2.				Total Number of Domina	_		_ (/ (/
3.				Species Across All Strat	_	2	_ (B)
4 5.				Percent of Dominant Spe That are OBL, FACW, o		100%	
Openion (Observe Overseas) (District 45 th rediver)	0	= Total Cov	ver		_		_ (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index works  Total % Cover of:		inly by:	
1				OBL species	x 1 =		
3				FACW species	x 2 =		
4 5.				FAC species	x 3 =		•
J	0	= Total Cov	νοr	FACU species			•
Herb Stratum (Plot size: 5 ft radius )		= 10tal C0	CI	UPL species	x 5 =		
Phragmites australis	65	Yes	FACW	Column Totals	(A)		(B)
Toxicodendron radicans     Parthenocissus quinquefolia	30 5	Yes No	FAC FACU	Prevalence Inde	ex =B/A = _		
4.	<u> </u>	INO	1 700	Hydrophytic Vegetation	Indicators	S	
5.				1-Rapid Test for Hydr		getation	
6				✓ 2-Dominance Test is			
7. 8.				3-Prevalence Index is			
8. 9.				4-Morphological Adap data in Remarks or or			pporting
10				Problematic Hydrophy		,	olain)
Woody Vine Stratum (Plot size: 30 ft radius)		= Total Cov	ver	<sup>1</sup> Indicators of hydric soil must be present, unless			
1.				Hydrophytic			
2	0	= Total Cov	ver	Vegetation Present?	Yes		
Remarks: (Include photo numbers here or on a separate s	sheet.)						

SOIL Sampling Point: 2A

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 <sup>1</sup>	Loc²	Texture	Remarks	
0-7	10YR 4/2	98	7.5YR 4/6	2	С	М	SICL		
7-10	10YR 5/2	88	5YR 4/6	10	C	M	SICL		
7-10	40)/D 5/0		2.5Y 7/1	2	D	M	0101		
10-16 10-16	10YR 5/2	83	7.5YR 5/8 10YR 6/1	15 2	C D	M M	SICL		
10-10			10110/1		U	IVI			
<sup>1</sup> Type: C=Cor	ncentration, D=Depletion	n, RM=Redu	iced Matrix, MS=Mas	ked Sand	Grains.		² Lo	ocation: PL=Pore Lining, M=Matrix	
Hydric Soil I	ndicators:						Indicators 1	for Problematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Sandy Gleyed M	latrix (S4)	)		Coas	st Prairie Redox (A16)	
	oipedon (A2)		Sandy Redox (S	55)			Dark	Surface (S7)	
Black Hi	stic (A3)		Stripped Matrix	(S6)			☐ Iron-	-Manganese Masses (F12)	
Hydroge	n Sulfide (A4)		Loamy Mucky M	lineral (F1	)		Very	Shallow Dark Surface (TF12)	
Stratified	d Layers (A5)		Loamy Gleyed N	Matrix (F2)	)		Othe	er (Explain in Remarks)	
	ıck (A10)		Depleted Matrix						
	d Below Dark Surface (	A11)	Redox Dark Sur	` ,					
	ark Surface (A12)		Depleted Dark S	`	7)			tors of hydrophytic vegetation and	
	lucky Mineral (S1)		Redox Depressi	ons (F8)			wetiand	hydrology must be present, unless disturbed or problematic.	
5 cm Mu	icky Peat or Peat (S3)							distarbed of problematic.	
Restrictive L	ayer (if observed):								
Type:			_			н	lydric Soil P	Present? Yes	
Depth (inche	es):		_				•		
Remarks:									
remarks.									
HYDROLO									
	Irology Indicators:							econdary Indicators inimum of two is required)	
	ators (minimum of one	is required: o					(111)	- '	
Surface W	` '		Water-Stained	,	B9)			Surface Soil Cracks (B6)	
_ •	er Table (A2)		Aquatic Fauna				L	Drainage Patterns (B10)	
Saturation			True Aquatic F					Dry-Season Water Table (C2)	
Water Ma			Hydrogen Sulf					Crayfish Burrows (C8)	
	Deposits (B2)		Oxidized Rhize		J	Roots (0	C3)	Saturation Visible on Aerial	
Drift Depo	, ,		Presence of R					Imagery (C9)  Stunted or Stressed Plants (D1)	
	or Crust (B4)		Recent Iron R			oils (C6)	) <u> </u>	Geomorphic Position (D2)	
Iron Depo	` ,	(5-)	Thin Muck Su				_	FAC-Neutral Test (D5)	
	Note that I Visible on Aerial Imag	, , ,	Gauge or Well				V	FAC-Neutral Test (D5)	
☐ Sparsely \	Vegetated Concave Su	rface (B8)	Other (Explain	in Rema	rks)				
Field Observ		Donth (incl	200						
Surface Wate	-	Depth (incl	· -						
Water Table		Depth (incl	· -						
Saturation Pr (includes cap		_ Depth (incl	nes):			Wetlan	d Hydrolog	y Present? Yes	
	corded Data (stream ga	uge monitor	ing well aerial photos	s previous	s inspect	ions) if a	available.		
DOGGING INGO	Joiada Data (Stroaill ge	ago, monitor	mg won, aonai priotos	s, proviou	c mopoot	.5.15), 11 6	a valiable.		
_									
Remarks:									

Project/Site: Interstate 57 (FAI 57)		City/Count	y: Marion	Sa	ampling Date: 9/2/2020			
Applicant/Owner: IDOT District 8				State: IL Sa	ampling Point 3A			
nvestigator(s): Nieset and Miernicki		Sec	ection, Township, Range: Sec. 15, T1N, R2E					
Landform (hillslope, terrace, etc.): Excavated channel/d	itch	L	ocal relief (d	concave, convex, non	e): Concave			
Slope (%): <1 Lat: 38.52702		Long: <u>-88.9</u>	96387		Datum: NAD 83			
Soil Map Unit Name: Orthents, Silty, Undulating				NWI classific	ation: U			
Are climatic/hydrologic conditions on the site typical for the	nis time of yea	ar? Ye	es (If	no explain in Remark	s.)			
Are Vegetation No , Soil No , or Hydrology No			_		stances" present?	Yes		
Are Vegetation No , Soil No , or Hydrology No	_				any answers in Remark			
SUMMARY OF FINDINGS - Attach site map								
Hydrophytic Vegetation Present? Yes			<del></del>		-			
Hydric Soil Present? Yes		Is the	Sampled A	∆rea within				
Wetland Hydrology Present? Yes			tland?	Yes_	<u> </u>			
Remarks: Community type is marsh.								
VEGETATION - Use scientific names of plants	S.							
	Absolute	Dominant Species?	Indicator	Dominance Test w	vorksheet:			
Tree Stratum (Plot size: 30 ft radius	% Cover	Species?	Status	Number of Domina That are OBL, FAC		(4)		
1				Total Number of Do	· —	(A)		
3.				Species Across All	Strata:	(B)		
4 5.				Percent of Dominal	nt Species	. ,		
	0	= Total Co	ver		·	(A/B)		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index v				
1. 2.				OBL species				
3.				FACW species	x 1 =			
4.				· -	x 2 =			
5				FAC species	x 3 =			
Harb Otesture (Distrains 5 (treative))	0	= Total Co	ver	FACU species	x 4 =	<del></del> '		
Herb Stratum (Plot size: 5 ft radius )	70	Voo	OBL	UPL species	x 5 =			
Leersia oryzoides     Carex tribuloides	10	Yes No	OBL OBL	Column Totals	(A)	(B)		
3. Paspalum sp.	10	No	-	Prevalence	e Index =B/A =			
4. Juncus tenuis	5	No	FAC	Hydrophytic Veget	ation Indicators			
5.					Hydrophytic Vegetation	n		
6.				2-Dominance Te				
7.				3-Prevalence Inc				
8. 9.					Adaptations 1(Provide sor on a separate shee			
9. 10.				<del>-</del> -	drophytic Vegetation¹ (E	,		
	95	= Total Co	ver	¹Indicators of hydric	c soil and wetland hydronless disturbed or problem	ology		
Woody Vine Stratum (Plot size: 30 ft radius)				Hydrophytic	mess disturbed of blobi	iematic.		
· · · · · · · · · · · · · · · · · · ·				HVAFARNAMA				
Woody Vine Stratum (Plot size: 30 ft radius)  1. 2.				Vegetation				

26 Sampling Point: 3A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Type Loc2 Texture Remarks 0-9 10YR 4/1 98 7.5YR 4/6 PL & M SII 9-17 2.5Y 6/1 70 5YR 4/6 10 C Μ SICL 20 9-17 2.5Y 7/1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations:

Surface Water Present?

(includes capillary fringe)

Water Table Present?

Saturation Present?

Remarks:

Depth (inches):

Depth (inches):

Depth (inches):

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

No

No

Yes

Wetland Hydrology Present?

Project/Site: Interstate 57 (FAI 57)		City/Count	y: Marion	Sampling D	ate: 9/2/2020	
Applicant/Owner: IDOT District 8				State: IL Sampling P	oint 4A	
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 15, T1N, R2	!E	
Landform (hillslope, terrace, etc.): Excavated channel/ditc			ocal relief (d	concave, convex, none): Conc	cave	
Slope (%): <1 Lat: <u>38.52481</u>		Long: -88.9	6373	Datum:	: NAD 83	
Soil Map Unit Name: Orthents, Silty, Undulating						
Are climatic/hydrologic conditions on the site typical for this				no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No s	•	-		Are "Normal Circumstances"	present? Y	es
Are Vegetation No , Soil No , or Hydrology No r				(If needed, explain any answe		
SUMMARY OF FINDINGS - Attach site map s			noint lo			
Hydrophytic Vegetation Present? Yes	mownig	Samping	point io	cations, transects, imp	Ortant leatur	<b>c</b> 3, ctc
			Sampled <i>i</i> land?	Area within Yes		
Wetland Hydrology Present? Yes						
Remarks: Community type is wet shrubland.  VEGETATION - Use scientific names of plants.						
Prainter	Absolute	Dominant	Indicator	Dominance Test workshee	<b>4</b> •	
<u>Tree Stratum</u> (Plot size: 30 ft radius	% Cover	Species?	Status	Number of Dominant Specie     That are OBL, FACW, or FA	es	(A)
2.				Total Number of Dominant	-	_ ('')
3.				Species Across All Strata:	4	_ (B)
5.				<ul><li>Percent of Dominant Specie</li><li>That are OBL, FACW, or FA</li></ul>		
	0	= Total Co	ver			_ (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)  1. Fraxinus lanceolata	70	Yes	FACW	Prevalence Index workshee  Total % Cover of:		
Fraxinus ianceolata     2.	70	163	TACW	OBL species	x 1 =	
3.				· -	x 2 =	=
4 5.					x 3 =	=
5.	70	= Total Co	(Or		x 4 =	<b>=</b> -
Herb Stratum (Plot size: 5 ft radius)		= 10tal C0	vei	UPL species	x 5 =	="
Festuca arundinacea	30	Yes		Column Totals	(A)	(B)
2. Agrostis gigantea	20	Yes	FACW	Prevalence Index =	B/A =	-
Fraxinus lanceolata     Juncus tenuis	20 15	Yes No	FACW FAC	Hydrophytic Vegetation Ind	licators	=
5. Lonicera japonica	5	No	FACU	1-Rapid Test for Hydroph	ytic Vegetation	
6						
1. <sub>-</sub>				3-Prevalence Index is < 0		
8. 9.				4-Morphological Adaptation data in Remarks or on a s		pporting
10				Problematic Hydrophytic	. ,	olain)
Woody Vine Stratum (Plot size: 30 ft radius)	90	= Total Co	ver	<sup>1</sup> Indicators of hydric soil and must be present, unless dist		
1				Hydrophytic		
2	0	= Total Co	ver	Vegetation Yes Present?	<u>s</u>	
Remarks: (Include photo numbers here or on a separate	sheet.)					

28 Sampling Point: 4A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Type<sup>1</sup> Loc2 Texture Remarks 0-6 10YR 4/1 95 5YR 4/6 PΙ SICL 6-8 10YR 5/1 95 7.5YR 4/4 5 С Μ SICL 5Y 6/1 87 SIC 8-15 7.5YR 4/6 10 С Μ 8-15 2.5Y 7/1 3 D Μ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) ✓ Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2)

#### Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? No Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Interstate 57 (FAI 57)		City/County	: Marion		_Sampling [	Date: 9/2/2020	
Applicant/Owner: IDOT District 8				State: IL	Sampling F	Point 5A	
Investigator(s): Nieset and Miernicki		Sect	ion, Townsh	ship, Range: Sec. 15, T1N, R2E			
Landform (hillslope, terrace, etc.): Excavated channel/ditch		Lo	cal relief (c	oncave, convex, ı	none): <u>Con</u>	cave	
Slope (%): <1 Lat: 38.52389		Long: <u>-88.9</u>	6352		Datum	: NAD 83	
Soil Map Unit Name: Orthents, Silty, Undulating				NWI class	sification: U		
Are climatic/hydrologic conditions on the site typical for this tim				o explain in Rem	arks.)		
Are Vegetation No , Soil No , or Hydrology No sign	ificantly	disturbed?		Are "Normal Circ	cumstances"	' present? Y	'es
Are Vegetation No , Soil No , or Hydrology No natu	urally pro	blematic?		(If needed, expla	ain any answ	ers in Remarks.	.)
SUMMARY OF FINDINGS - Attach site map sho			point loc	cations, trans	ects, imp	ortant featu	res, etc
Hydrophytic Vegetation Present? Yes							
Hydric Soil Present? Yes		Is the	Sampled A	rea within			
Wetland Hydrology Present? Yes		a Wet			es		
Remarks: Community type is marsh.							
VEGETATION - Use scientific names of plants.							
	solute	Dominant	Indicator	Dominance Te	st workshed	et:	
Tiee Stratum (Flot Size. 30 It radius	Cover	Species?	Status	Number of Dom			
1. 2.				That are OBL, F	•	AC:	(A)
2. 3.				Total Number o Species Across			(P)
4				Percent of Dom		es	_ (b)
5	0	= Total Cov	er	That are OBL, F	FACW, or FA	AC:	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)		- 10tai 00v	OI .	Prevalence Inde	ex workshed	et:	
1				Total % Cov	er of:		_
2				OBL species		x 1 =	_
3. 4.				FACW species		x 2 =	_
5				FAC species		x 3 =	_
Herb Stratum (Plot size: 5 ft radius )	0	= Total Cov	er	FACU species UPL species		x 4 =	_
1. Leersia oryzoides	80	Yes	OBL	Column Totals		(A)	(B)
2. Scirpus georgianus	20	Yes	OBL		ence Index =		_(D)
3.				Hydrophytic Ve			_
4 5.				✓ 1-Rapid Test	_		
6				2-Dominance	e Test is >50	0%	
7.				3-Prevalence			
8						ions ¹(Provide su	
9. 10.				1 —		separate sheet) Vegetation <sup>1</sup> (Ex	
Woody Vine Stratum (Plot size: 30 ft radius)	100	= Total Cov	er	<sup>1</sup> Indicators of hy must be presen	dric soil and	d wetland hydrol	ogy
1				Hydrophytic			
2	0	= Total Cov	er	Vegetation	Yes	s	
<del>-</del>		- Total COV	CI .	Present?			
Remarks: (Include photo numbers here or on a separate she	et.)						

30 Sampling Point: 5A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Type<sup>1</sup> Loc2 Texture Remarks 0-4 10YR 4/2 96 7.5YR 5/8 SII 0-4 10YR 5/1 2 D Μ 10YR 4/1 96 PL SICL 4-8 5YR 4/6 2 С 4-8 10YR 6/2 2 D Μ 8-15 10YR 5/1 95 7.5YR 4/6 2 С Μ SIC 8-15 5Y 6/1 3 D Μ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) ✓ Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe)

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

Remarks:

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion		ampling Date: 9/2/202	20
Applicant/Owner: IDOT District 8				State: IL S	ampling Point 6A	
nvestigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 15	, T1N, R2E	
_andform (hillslope, terrace, etc.): _Excavated channel/di	tch	L	ocal relief (	concave, convex, non	ne): Concave	
Slope (%): 1-2 Lat: 38.52566		Long: -88.9	96320		Datum: NAD 83	
Soil Map Unit Name: Orthents, Silty, Undulating					cation: U	
Are climatic/hydrologic conditions on the site typical for the	nis time of ve	ar? Ye	es (If		·	
Are Vegetation No , Soil No , or Hydrology No					nstances" present?	Yes
Are Vegetation No , Soil No , or Hydrology No	_				any answers in Rema	
SUMMARY OF FINDINGS - Attach site map						
Hydrophytic Vegetation Present? Yes	<u> </u>		, I		, ,	,
Hydric Soil Present? Yes		lo the	Compled	Avaa within		
Wetland Hydrology Present? Yes			tland?	Area within Yes		
wettand right ology riesent:						
VEGETATION - Use scientific names of plants	S.					
	Absolute	Dominant	Indicator	Dominance Test v	worksheet:	
Tree Stratum (Plot size: 30 ft radius	% Cover	Species?	Status	Number of Domina		(4)
1 2.				Total Number of D	·	(A)
3.				Species Across All	l Strata	(B)
4 5.				Percent of Domina That are OBL, FAC	int Species	. ,
	0	= Total Co	ver			(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index		
1. 2.				Total % Cover of		-
3.				OBL species FACW species	x 1 =	
4.				FAC species _	x 2 =	
5					x 3 =	
Herb Stratum (Plot size: 5 ft radius )	0	_ = Total Co	ver	FACU species UPL species	x 4 =	
1. Phragmites australis	80	Yes	FACW	Column Totals	x 5 =	
Toxicodendron radicans	10	No	FAC	<b></b>	(A)	
3. Dipsacus fullonum	5	No	FACU		e Index =B/A =	
4. Lonicera japonica	5	No	FACU	Hydrophytic Veget		
5.				2-Dominance To	r Hydrophytic Vegetat	tion
6. 7.				3-Prevalence In		
7. 8.					I Adaptations ¹(Provid	a supporting
9.					s or on a separate sh	
10				Problematic Hy	drophytic Vegetation1	(Explain)
Woody Vine Stratum (Plot size: 30 ft radius)	100	_ = Total Co	ver		c soil and wetland hyd Inless disturbed or pro	
1.				Hydrophytic		
2				Vegetation Present?	Yes	
	0	= Total Co				

Sampling Point: 6A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Type Loc2 Texture Remarks 0-5 10YR 4/1 98 7.5YR 4/6 PL & M SII 5-11 10YR 5/1 97 7.5YR 4/6 3 C Μ SICL Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

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Project/Site: Interstate 57 (FAI 57)		_City/County	: Marion	Sampling Date	e: 9/2/2020	
Applicant/Owner: IDOT District 8				State: IL Sampling Poir	nt 7A	
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 15, T1N, R2E		
Landform (hillslope, terrace, etc.): Upland			ocal relief (c	concave, convex, none): Convex	(	
Slope (%): <2 Lat: 38.52452		Long: -88.9	,	Datum: N		
Soil Map Unit Name: Orthents, Silty, Undulating				NWI classification: PUB0		
Are climatic/hydrologic conditions on the site typical for this	n time of ve	ar? Ye	o (If )	<del></del>	<u> </u>	
	-		5 (11.1	no explain in Remarks.)	.0	
Are Vegetation No, Soil No, or Hydrology No				Are "Normal Circumstances" pre		_
Are Vegetation No, Soil No, or Hydrology No	naturally pr	oblematic?		(If needed, explain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	showing	sampling	point lo	cations, transects, impor	tant features,	etc
Hydrophytic Vegetation Present? NoNo						
Hydric Soil Present? No		Is the	Sampled A	Area within		
Wetland Hydrology Present? No			land?	No		
Remarks: Community type is upland forest.						
NECETATION Has a design of a last						
<b>VEGETATION</b> - Use scientific names of plants.		<u> </u>				
Tron Stratum (Diat aiza: 20 ft radius	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 ft radius 1. Diospyros virginiana	30	Yes	FAC	<ul> <li>Number of Dominant Species</li> <li>That are OBL, FACW, or FAC:</li> </ul>	1 (A)	١
Sassafras albidum	30	Yes	FACU	Total Number of Dominant	1 (A)	,
3. Pinus strobus	25	Yes	FACU	Species Across All Strata:	6 (B)	١
4. Salix nigra	3	No	OBL	Percent of Dominant Species	(B)	,
5				That are OBL, FACW, or FAC:	17% (A/	/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)	88	= Total Co	/er	Prevalence Index worksheet:		
1. Sassafras albidum	20	Yes	FACU		Multiply by:	
Elaeagnus umbellata	15	Yes	UPL	T	1 =	
3. Juniperus virginiana	10	No	FACU	T	2 =	
4. Acer rubrum	5	No	FAC			
5. <u>Diospyros virginiana</u>	5	No	FAC		3 =	
	60	= Total Cov	/er		4 =	
Herb Stratum (Plot size: 5 ft radius)				UPL species x	5 =	
Lonicera japonica	80	Yes	FACU	Column Totals (A)	)(B)	
2. Rubus allegheniensis	10	No	FACU	Prevalence Index =B/A	<b>√</b> =	
3. Sanicula odorata 4.	5	No	FAC	Hydrophytic Vegetation Indica	ators	
E				1-Rapid Test for Hydrophytic		
6				2-Dominance Test is >50%	g	
7.				3-Prevalence Index is < or =	=3.0 <sup>1</sup>	
8.				4-Morphological Adaptations		tina
9.				data in Remarks or on a sep		9
10				Problematic Hydrophytic Ve	getation1 (Explain)	
Woody Vine Stratum (Plot size: 30 ft radius)	95	_ = Total Co	/er	<sup>1</sup> Indicators of hydric soil and we must be present, unless disturb		
1. Lonicera japonica	1	No	FACU	Hydrophytic	o. p. solomano.	
Toxicodendron radicans	1	No	FAC	Vegetation		
	2	= Total Cov	/er	Present? No	_	
Remarks: (Include photo numbers here or on a separate	sheet.)			•		
Additional species are present in one or more strata, the	,	total cover m	ay be great	er than the sum of the individual	cover values listed	Í
on this form.						

Sampling Point: 7A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Matrix Depth (inches) Color (moist) % Color (moist) % Type<sup>1</sup> Loc2 Texture Remarks 0-2 10YR 3/1 100 SII 2-10 2.5Y 5/2 100 SIL Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Compaction Type: **Hydric Soil Present?** No Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Interstate 57 (FAI 57)		City/County:	Marion		Sampling Date:	9/3/2020	
Applicant/Owner: IDOT District 8				State: IL	Sampling Point	8A	
Investigator(s): Nieset and Miernicki		Section	on, Townsh	nip, Range: Sec	. 15, T1N, R2E		
Landform (hillslope, terrace, etc.): Excavated depression					none): Concave	)	
Slope (%): _<1	l	_ong:88.96	247		Datum: NA	AD 83	
Soil Map Unit Name: NRCS mapped Water; revised to Undeter	rmined			NWI clas	sification: PUBG	x	
Are climatic/hydrologic conditions on the site typical for this time	e of yea	ar? Yes	(If n	o explain in Rem	narks.)		
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> signii		· ·			cumstances" pres	sent? Y	'es
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> natur	rally pro	blematic?		(If needed, expla	ain any answers i	n Remarks.	)
SUMMARY OF FINDINGS - Attach site map show	wing s	sampling	point loc	cations, trans	sects, import	ant featu	res, etc
Hydrophytic Vegetation Present?							
Hydric Soil Present?		Is the	Sampled A	rea within			
Wetland Hydrology Present?		a Wetl			No		
Remarks: Community type is deepwater aquatic habitat. This site is a deepwater aquatic habitat with an average water Delineation Manual (Environmental Laboratory 1987) it is ther describe this site.							to
VEGETATION - Use scientific names of plants.		<u> </u>	1 P 4	T			
	olute Cover	Dominant Species?	Indicator Status	Dominance Te			
1		•		Number of Don That are OBL,	ninant Species FACW, or FAC:		_ (A)
3.				Total Number of Species Across			(B)
4 5		= Total Cove	er	Percent of Dom That are OBL,	ninant Species FACW, or FAC:		_ (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Ind			
1.					ver of: M		-
2				OBL species FACW species		=	=
4				FAC species	x 3	=	_
5				FACU species	x 4	=	_
Herb Stratum (Plot size: 5 ft radius )	0	= Total Cove	er	UPL species		=	_
1.				Column Totals			(B)
2.				Preval	ence Index =B/A		_ ` `
3. 4.				Hydrophytic Ve	egetation Indicat	ors	=
5.				1-Rapid Tes	t for Hydrophytic	Vegetation	
6					e Test is >50%		
7. 8.					e Index is < or =3	-	
9.					gical Adaptations arks or on a sepa		
10.				-	Hydrophytic Veg	,	
Woody Vine Stratum (Plot size: 30 ft radius)	0	= Total Cove	er		ydric soil and wet		
1.				Hydrophytic			
2	0	= Total Cove	er	Vegetation Present?			
Percent of the dealer would be the control of the c				1 10301111			
Remarks: (Include photo numbers here or on a separate shee	et.)						

Profile Des	cription: (Describe to	the depth nee				confirm t	he absence o	f indicators.)	
Depth _	Matrix			Features		. 2	<b>-</b> .		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Remarks	
wne: C-Cor	centration, D=Depleti	on PM-Paduca	nd Matriy MS_Mac	ked Sand	1 Graine		<sup>2</sup> Loos	ation: PL=Pore Lining, M	-Matrix
ydric Soil Ir		on, Kivi=Keduce	eu Matrix, MS=Mas	keu Sanc	J Grairis.			Problematic Hydric So	
Histosol		Γ	Sandy Gleyed M	1atrix (S4	<b>l</b> )			Prairie Redox (A16)	
 Histic Ep	ipedon (A2)		☐ Sandy Redox (S	55)			_	urface (S7)	
Black His	stic (A3)		Stripped Matrix	(S6)			_	anganese Masses (F12)	
 Hydroge	n Sulfide (A4)		Loamy Mucky M	lineral (F	1)		_	hallow Dark Surface (TF	
Stratified	Layers (A5)		Loamy Gleyed N	/latrix (F2	2)			Explain in Remarks)	,
2 cm Mu			Depleted Matrix						
Depleted	Below Dark Surface	(A11)	 _ Redox Dark Sur		)				
Thick Da	rk Surface (A12)		Depleted Dark S	Surface (F	F7)			s of hydrophytic vegetati	
Sandy M	ucky Mineral (S1)		Redox Depressi					drology must be present	, unles
5 cm Mu	cky Peat or Peat (S3)						d	sturbed or problematic.	
estrictive L	ayer (if observed):								
Гуре:						н	vdric Soil Pre	sent?	
Depth (inche	s).						,		
emarks:	<u> </u>								
emarks:	<u> </u>							ndary Indicators	
emarks: YDROLO	GY	e is required: che						ndary Indicators mum of two is required)	
YDROLO Vetland Hyd vrimary Indica Surface W	GY rology Indicators: ators (minimum of one	e is required: che	☐ Water-Stained		(B9)		(mini		
YDROLO Vetland Hyd Irimary Indica Surface W High Wate	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2)	e is required: che	<ul><li></li></ul>	(B13)	` '		(mini	mum of two is required)	
YDROLO Vetland Hyd rimary Indica Surface W High Wate Saturation	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3)	e is required: che	<ul><li></li></ul>	(B13) Plants (B1	14)		(mini 	mum of two is required) Surface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table	(C2)
YDROLO Vetland Hyd rimary Indica Surface W High Wate Saturation Water Mar	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1)	e is required: che	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf	(B13) Plants (B1 ide Odor	14) (C1)		(mini   S   C   C	mum of two is required) Surface Soil Cracks (B6) Orainage Patterns (B10)	(C2)
YDROLO Vetland Hyd rimary Indica Surface W High Wate Saturation Water Mar	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) rks (B1) Deposits (B2)	e is required: che	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize	(B13) Plants (B° ide Odor ospheres	14) (C1) on Living	g Roots (C	(mini) 	mum of two is required) furface Soil Cracks (B6) frainage Patterns (B10) fry-Season Water Table frayfish Burrows (C8) faturation Visible on Aeri	. ,
YDROLO Vetland Hyd rimary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depo	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3)	e is required: che	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R	(B13) Plants (B2) ide Odor ospheres educed I	14) (C1) on Living	•	(mini)   S   C   C   C   C   S	mum of two is required) Gurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aerimagery (C9)	al
YDROLO Vetland Hyd rimary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depoi	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4)	e is required: che	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re	(B13) Plants (B' ide Odor ospheres educed I eduction	14) (C1) on Living ron (C4) in Tilled S	•	(mini	mum of two is required) Gurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri Gragery (C9) Gunted or Stressed Plan	al ts (D1)
YDROLO Vetland Hyd vimary Indica Surface W High Wate Saturation Water Mar Sediment Drift Depos Iron Depos	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)		Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	(B13) Plants (B7 ide Odor ospheres educed le eduction face (C7	14) (C1) on Living ron (C4) in Tilled \$	•	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Surface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Saturation Visible on Aeri magery (C9) Stunted or Stressed Plan Geomorphic Position (D2)	al ts (D1)
YDROLOGICAL PROPERTY OF THE PR	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image	gery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	•	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Gurface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri Gragery (C9) Gunted or Stressed Plan	al ts (D1)
YDROLO Vetland Hyd rimary Indica Surface W High Water Saturation Water Mar Sediment Drift Depos Algal Mate Iron Depos Inundation Sparsely	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image	gery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	•	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Surface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Saturation Visible on Aeri magery (C9) Stunted or Stressed Plan Geomorphic Position (D2)	al ts (D1)
YDROLO Vetland Hyd Vetland Hyd Vetland Hyd Vetland Hyd Vetland Hyd Surface W High Water Saturation Water Mar Sediment Drift Depos Algal Mate Iron Depos Inundation Sparsely Vetlation	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image degetated Concave Su ations:	gery (B7)	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	•	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Surface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Saturation Visible on Aeri magery (C9) Stunted or Stressed Plan Geomorphic Position (D2)	al ts (D1)
YDROLOGATION OF THE PROPERTY O	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image regetated Concave Su ations: r Present?	gery (B7) ırface (B8) Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	•	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Surface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Saturation Visible on Aeri magery (C9) Stunted or Stressed Plan Geomorphic Position (D2)	al ts (D1)
YDROLOGY Vetland Hydrimary Indication Surface W High Water Mare Sediment Drift Deposed Inundation In Sparsely Water Water Water Water Water Water Water Water Table F	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image (egetated Concave Su ations: r Present?	gery (B7) ırface (B8) Depth (inches Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	Soils (C6)	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Gurface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri magery (C9) Gunted or Stressed Plan Geomorphic Position (D2 FAC-Neutral Test (D5)	al ts (D1)
YDROLOGATION OF THE PROPERTY O	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image regetated Concave Surfactions: r Present? Present?	gery (B7) ırface (B8) Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain	(B13) Plants (B' ide Odor pspheres educed li eduction face (C7 Data (D)	14) (C1) con Living ron (C4) in Tilled S	Soils (C6)	(mini   S   C   C   C   C   C   C   C   C   C	mum of two is required) Gurface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri magery (C9) Gunted or Stressed Plan Geomorphic Position (D2 FAC-Neutral Test (D5)	al ts (D1)
YDROLOGIVetland Hydrimary Indical Surface W High Water Mar Sediment Drift Deposition Deposition Deposition Deposition Sparsely Water Table Faturation Prencludes capi	rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image regetated Concave Surfactions: r Present? Present?	gery (B7) urface (B8) _ Depth (inches _ Depth (inches _ Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain s):	Plants (B' ide Odor ospheres educed li eduction face (C7 Data (D) in Rema	14) (C1) on Living ron (C4) in Tilled 5 () 9) arks)	Wetland	(mini	mum of two is required) Gurface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri magery (C9) Gunted or Stressed Plan Geomorphic Position (D2 FAC-Neutral Test (D5)	al ts (D1)
YDROLOGIVetland Hydrimary Indical Surface W High Water Mar Sediment Drift Deposition Deposition Deposition Deposition Sparsely Virface Water Table Faturation Prencludes capi	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image (egetated Concave Su ations: r Present? esent? llary fringe)	gery (B7) urface (B8) _ Depth (inches _ Depth (inches _ Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain s):	Plants (B' ide Odor ospheres educed li eduction face (C7 Data (D) in Rema	14) (C1) on Living ron (C4) in Tilled 5 () 9) arks)	Wetland	(mini	mum of two is required) Gurface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri magery (C9) Gunted or Stressed Plan Geomorphic Position (D2 FAC-Neutral Test (D5)	al ts (D1)
YDROLOGIVetland Hydrimary Indical Surface W High Water Mar Sediment Drift Deposition Deposition Deposition Deposition Sparsely Virface Water Table Faturation Prencludes capi	GY rology Indicators: ators (minimum of one ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image (egetated Concave Su ations: r Present? esent? llary fringe)	gery (B7) urface (B8) Depth (inches Depth (inches Depth (inches	Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Sur Gauge or Well Other (Explain s):	Plants (B' ide Odor ospheres educed li eduction face (C7 Data (D) in Rema	14) (C1) on Living ron (C4) in Tilled 5 () 9) arks)	Wetland	(mini	mum of two is required) Gurface Soil Cracks (B6) Prainage Patterns (B10) Pry-Season Water Table Crayfish Burrows (C8) Gaturation Visible on Aeri magery (C9) Gunted or Stressed Plan Geomorphic Position (D2 FAC-Neutral Test (D5)	al ts (D1)

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sampling Dat	te: 9/2/2020			
Applicant/Owner: IDOT District 8				State: IL Sampling Point 9A				
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 15, T1N, R2E				
Landform (hillslope, terrace, etc.): Upland			ocal relief (	concave, convex, none): Convex				
		Long: -88.9		Datum: I				
Soil Map Unit Name: Orthents, Silty, Undulating		<u> </u>		NWI classification: PUB				
Are climatic/hydrologic conditions on the site typical for the	is time of ve	ear? Ye	e (If	no explain in Remarks.)				
	-		(11		rocent? Voc			
Are Vegetation No, Soil No, or Hydrology No	<del></del>			Are "Normal Circumstances" pr				
Are Vegetation No, Soil No, or Hydrology No	_naturally pr	oblematic?		(If needed, explain any answers	s in Remarks.)			
SUMMARY OF FINDINGS - Attach site map	showing	sampling	point lo	cations, transects, impo	rtant features, etc			
Hydrophytic Vegetation Present? NoNo								
Hydric Soil Present? No		Is the	Sampled A	Area within				
Wetland Hydrology Present? No			land?	No				
Remarks: Community type is upland forest.								
VECETATION. Has according a consequent								
<b>VEGETATION</b> - Use scientific names of plants		Daminant	la dia atau					
Tree Stratum (Plot size: 30 ft radius	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:				
Sassafras albidum	30	Yes	FACU	Number of Dominant Species That are OBL, FACW, or FAC	: 1 (A)			
Diospyros virginiana	20	Yes	FAC	Total Number of Dominant	· (A)			
3. Quercus imbricaria	20	Yes	FACU	Species Across All Strata:	7 (B)			
4. Prunus serotina	7	No	FACU	Percent of Dominant Species	(В)			
5. Carpinus caroliniana	5	No	FAC	That are OBL, FACW, or FAC	: 14% (A/B)			
0 1: (0) 1 0: (0) 45 ft and inc.	82	_ = Total Co	ver		(A/B)			
Sapling/Shrub Stratum (Plot size: 15 ft radius)	4.5		LIBI	Prevalence Index worksheet:				
1. Elaeagnus umbellata	15	Yes	UPL		Multiply by:			
Lonicera maackii     Symphoricarpos occidentalis	10 10	Yes	UPL UPL	<u> </u>	1 =			
Symphonicarpos occidentalis     Quercus imbricaria	2	Yes	FACU	FACW species x	2 =			
Quercus imbricana     Rosa multiflora	2	No No	FACU	FAC species x	3 =			
5. Nosa maianora		= Total Co			4 =			
Herb Stratum (Plot size: 5 ft radius )	39	_ = 10tal Co	ver	-	5 =			
Symphoricarpos occidentalis	40	Yes	UPL	<u> </u>	(B)			
2. Parthenocissus quinquefolia	10	No	FACU					
3. Sanicula odorata	5	No	FAC	Prevalence Index =B/				
4.				Hydrophytic Vegetation Indic				
5				1-Rapid Test for Hydrophyt	-			
6.				2-Dominance Test is >50%				
7				3-Prevalence Index is < or :				
8				4-Morphological Adaptation				
9 10.				data in Remarks or on a se	•			
10.				7	• • • • • •			
Woody Vine Stratum (Plot size: 30 ft radius)	55	_ = Total Co	ver	<sup>1</sup> Indicators of hydric soil and w must be present, unless distur				
Toxicodendron radicans	2	No	FAC	Hydrophytic				
2. Lonicera japonica	1	No	FACU	Vegetation				
	4	_ = Total Co	ver	Present? No	_			
Remarks: (Include photo numbers here or on a separate	e sheet )							
Additional species are present in one or more strata, th	•	total cover m	av he areat	er than the sum of the individual	cover values listed			
on this form.		00701 111	, 20 groat	and sam of the marvidual	Taraba nata			
I.								

Sampling Point: 9A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Matrix Depth Color (moist) (inches) % Color (moist) Type<sup>1</sup> Loc2 Texture Remarks 0-9 2.5Y 5/3 100 SII 9-12+ 2.5Y 5/3 99 7.5YR 5/6 1 С Μ SIL Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: ☐ Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** No Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:

Project/Site: Interstate 57 (FAI 57)		_City/County	: Marion	Sampl	ling Date: 9	9/3/2020	
Applicant/Owner: IDOT District 8				State: IL Sample	ling Point_1	10A	
Investigator(s): Nieset and Miernicki		Sect	ion, Towns	hip, Range: Sec. 15, T1I	N, R2E		
Landform (hillslope, terrace, etc.): Depression				concave, convex, none):			
Slope (%): 1-2 Lat: 38.52251		Long: -88.9	6180	Da	atum: NA[	D 83	
Soil Map Unit Name: Mapped as Bluford SIL, 2-5% slope	s; revised to	Undetermin	ed	NWI classification	n: PUBGh		
Are climatic/hydrologic conditions on the site typical for th				no explain in Remarks.)			
Are Vegetation No , Soil No , or Hydrology No	-			Are "Normal Circumstar	nces" prese	ent? Y	es
Are Vegetation No , Soil No , or Hydrology No	<del>_</del>			(If needed, explain any a	•		
SUMMARY OF FINDINGS - Attach site map			point lo	cations, transects,	importa	nt featur	es, etc
Hydrophytic Vegetation Present? Yes				· · · · · · · · · · · · · · · · · · ·			
Hydric Soil Present? Yes		ls the	Sampled /	Area within			
Wetland Hydrology Present? Yes			land?	Yes Yes			
· · · · · · · · · · · · · · · · · · ·							
Remarks: Community type is forested wetland.							
<b>VEGETATION</b> - Use scientific names of plants		<b>.</b>	1 2 .	T			
Tree Stratum (Plot size: 30 ft radius	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work			
1. Betula nigra	60	Yes	FACW	<ul> <li>Number of Dominant S</li> <li>That are OBL, FACW,</li> </ul>		3	(A)
2. Acer rubrum	20	Yes	FAC	Total Number of Domin			_ ( )
3. 4.				Species Across All Stra		3	_ (B)
5.				Percent of Dominant Sport That are OBL, FACW,		100%	(4.45)
Opening (Object Organisms (Plantains 45 th reading)	80	= Total Cov	ver .		-		_ (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index work  Total % Cover of:		Itinly by:	
1				OBL species		:	
3.				FACW species		:	
4				FAC species	x 3 =	=	
5.	0	= Total Cov	·or	FACU species			
Herb Stratum (Plot size: 5 ft radius)		= 10ta1 C01	rei	UPL species	x 5 =		
1. Wolffia columbiana	40	Yes	OBL	Column Totals	(A)		(B)
2. Spirodela polyrhiza	10 5	No	OBL	Prevalence Inc	dex =B/A =		
Ludwigia peploides var. glabrescens     4.	5	No	OBL	Hydrophytic Vegetatio	n Indicato	rs	
5.				1-Rapid Test for Hyd	drophytic V	egetation	
6				✓ 2-Dominance Test is			
7.				3-Prevalence Index			
9.				4-Morphological Ada data in Remarks or o			pporting
10.				Problematic Hydropl		,	olain)
Woody Vine Stratum (Plot size: 30 ft radius)	55	-	ver	<sup>1</sup> Indicators of hydric soi must be present, unless			
1.				Hydrophytic	-		
2	0	= Total Cov	/er	Vegetation Present?	Yes		
Remarks: (Include photo numbers here or on a separate	e sheet.)						

SOIL Sampling Point: 10A

Profile Des	crintion: (Des	scribe to	the depth n	eeded to docu	ıment the indi	icator or	confirm t	he absenc	e of inc	licators )
	•		are acpair i					inc abscinc	0 01 1110	11001013.)
Depth _		latrix			edox Features		2	T		5 .
(inches) 0-5	Color (mo 5Y 5/1	oist)	% 98	Color (mois 7.5YR 5/6	st) % 2	Type <sup>1</sup> C	Loc <sup>2</sup>	Texture SIL		Remarks
5-10	2.5Y 4/1		95	7.5YR 4/4	5	C	PL & M	SIL		
10-15	10YR 5/1		95	7.5YR 4/6	5	C	PL & M	SIL		_
1								2.		
		=Depletior	n, RM=Redu	iced Matrix, MS	=Masked San	d Grains.				: PL=Pore Lining, M=Matrix
Hydric Soil I								Indicators	for Pro	blematic Hydric Soils <sup>3</sup> :
Histosol	` ,			_ ′	eyed Matrix (S4	1)		Coa	ast Prair	ie Redox (A16)
	pipedon (A2)			Sandy Re				Dar	k Surfac	ce (S7)
Black Hi	, ,				/latrix (S6)			Iron	n-Manga	nese Masses (F12)
	n Sulfide (A4)			_ ·	ucky Mineral (F	,		Ver	y Shallo	w Dark Surface (TF12)
	d Layers (A5)				eyed Matrix (F	2)		Oth	er (Expl	ain in Remarks)
2 cm Mu	ıck (A10)			✓ Depleted I	Matrix (F3)					
	d Below Dark S	,	(11)	Redox Da	rk Surface (F6	)				
Thick Da	ark Surface (A	12)		Depleted I	Dark Surface (	F7)				nydrophytic vegetation and
	lucky Mineral (	` '		Redox De	pressions (F8)			wetland		ogy must be present, unless bed or problematic.
5 cm Mu	icky Peat or Pe	eat (S3)							uisturi	bed of problematic.
Restrictive L	ayer (if obser	ved):								
Type:		•					ш	ydric Soil	Drosoni	? Yes
Depth (inche	es):			_				yaric con	i resem	
	· ·									
Remarks:										
HYDROLO	GY									
	lrology Indica	tors:						Si	econdar	y Indicators
-	•		s required: (	check all that a	nnly)					of two is required)
✓ Surface W		11 01 0110 1	o roquirou. (		tained Leaves	(B9)			Surfa	ce Soil Cracks (B6)
✓ High Wate	` ,				Fauna (B13)	(D3)			_	age Patterns (B10)
✓ Saturation	, ,				uatic Plants (B	1.1\				eason Water Table (C2)
Water Ma					en Sulfide Odor				_ ,	` '
	Deposits (B2)			_ , ,		` '	- Daata (C	_		ish Burrows (C8)
					Rhizospheres			,3) <u> </u>		ation Visible on Aerial ery (C9)
☐ Drift Depo	. ,				e of Reduced			Γ	U	ed or Stressed Plants (D1)
Iron Depo	or Crust (B4)			<del></del>	ron Reduction		Solis (C6)		_	norphic Position (D2)
	` ,	rial Image	om. (DZ)		ck Surface (C7					Neutral Test (D5)
	Visible on Ae	Ū	, ,		or Well Data (D	,			_	reducti rest (Do)
Sparsely V	egetated Con	cave Sur	lace (bo)	U Other (E	xplain in Rema	arks)				
Field Observ		Voo	Donth (inch	200):	Æ					
Surface Water		Yes	Depth (inch		<5					
Water Table		Yes	Depth (inch	· —	0					
Saturation Pr		Yes	Depth (inch	nes):	0		Wetland	d Hydrolog	gy Pres	ent? Yes
(includes cap		troom ac:	iao monitor	ing well coriol	nhotos provies	ie inenes	etions) if a	vailable:		
Pescupe Ked	oiueu Dala (Si	ueani gal	ag <del>e</del> , monitor	ing well, aerial	priotos, previot	us mspec	AIOHS), II a	valiable.		
Remarks:										

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sampling	g Date: 9/3/2020	
Applicant/Owner: IDOT District 8				State: IL Sampling	g Point 11A	
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	nip, Range: Sec. 22, T1N,	R2E	
Landform (hillslope, terrace, etc.): Excavated depression			ocal relief (c	concave, convex, none): Co	oncave	
Slope (%): 1 Lat: _38.51813			6180	Datu	um: NAD 83	
				NWI classification:	U	
Are climatic/hydrologic conditions on the site typical for this				no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No s		-		Are "Normal Circumstance	es" present? Y	'es
Are Vegetation No , Soil No , or Hydrology No r				(If needed, explain any ans		
				•		•
SUMMARY OF FINDINGS - Attach site map s	nowing	sampling	point io	cations, transects, in	nportant teatu	res, etc
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes			Sampled A			
Wetland Hydrology Present? Yes		a Wet	land?	Yes		
Remarks: Community type is wet meadow.		<u> </u>				
<b>VEGETATION</b> - Use scientific names of plants.						
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksh	neet:	
Tree Stratum (Plot size: 30 ft radius 1.	70 COVE	Opecies:	Status	Number of Dominant Spe That are OBL, FACW, or		_ (A)
2.				Total Number of Dominar		
3. 4.				Species Across All Strata	-	(B)
5.				<ul> <li>Percent of Dominant Spentral That are OBL, FACW, or</li> </ul>		(A /D)
Carling/Charle Status (Diet airc. 15 ft rodius)	0	= Total Co	ver			(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index worksh  Total % Cover of:		
1				OBL species	x 1 =	-
3.				FACW species	x 2 =	<del>_</del>
4.				FAC species	x 3 =	_
5				FACU species	x 4 =	_
Herb Stratum (Plot size: 5 ft radius )	0	= Total Co	ver	UPL species	x 5 =	<del>_</del>
Leersia oryzoides	50	Yes	OBL	· -	(A)	(B)
2. Campsis radicans	15	Yes	FACU		(//) x =B/A =	_
3. Eupatorium serotinum	15	Yes	FAC			
4. Asclepias incarnata	10	No	OBL	Hydrophytic Vegetation I		
5. Agrostis gigantea 6. Carex vulpinoidea	5 5	No No	FACW FACW	<ul><li>1-Rapid Test for Hydro</li><li>✓ 2-Dominance Test is &gt;</li></ul>		
7. Rumex crispus	3	No	FAC	3-Prevalence Index is		
8.		110	17.0	4-Morphological Adapt		ınnortina
9.				data in Remarks or on		
10				Problematic Hydrophy	tic Vegetation1 (Ex	plain)
Woody Vine Stratum (Plot size: 30 ft radius)	·	= Total Co	ver	<sup>1</sup> Indicators of hydric soil a must be present, unless of		
1.				Hydrophytic		
2	0	= Total Co	ver	Vegetation	Yes	
Remarks: (Include photo numbers here or on a separate	sheet.)			1	-	

SOIL Sampling Point: 11A

Profile Des	scription: (Describe to	the depth r	needed to document	the indi	cator or	confirm t	he absen	ce of ind	licators.)
Depth .	Matrix		Redox F	eatures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture		Remarks
0-6	10YR 4/2	97	7.5YR 4/6	3	С	PL & M	SIL		
6-12	2.5Y 5/1	98	7.5YR 3/4	2	С	PL	L		
1							2		
	ncentration, D=Depletion	n, RM=Redu	iced Matrix, MS=Mask	ed Sand	Grains.				PL=Pore Lining, M=Matrix
Hydric Soil I				-1 (0.4					blematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Gleyed M	•	)				ie Redox (A16)
	pipedon (A2)		Sandy Redox (S					ark Surfac	
	istic (A3) en Sulfide (A4)		Stripped Matrix ( Loamy Mucky Mi		1)			_	nese Masses (F12)
	d Layers (A5)		Loamy Gleyed M					•	w Dark Surface (TF12)
	uck (A10)		✓ Depleted Matrix		,		∐ Ot	ner (Expl	ain in Remarks)
_	d Below Dark Surface (A	A11)	Redox Dark Surf	. ,					
	ark Surface (A12)	,	☐ Depleted Dark S	` '	7)		<sup>3</sup> Indic	ators of h	hydrophytic vegetation and
	Mucky Mineral (S1)		Redox Depression	,	,			d hydrolo	ogy must be present, unless
	ucky Peat or Peat (S3)			` ,				distur	ped or problematic.
Restrictive I	_ayer (if observed):								
Type:	ayor (ii oboor rou).						vdric Soil	l Dracant	
Depth (inche	es):		_			П,	yarıc son	resem	:? <u>Yes</u>
	, -								
Remarks:									
HYDROLO	GY								
-	drology Indicators:								y Indicators
	cators (minimum of one	is required:					(	minimum	of two is required)
Surface V	,		Water-Stained		(B9)			_	ce Soil Cracks (B6)
	er Table (A2)		Aquatic Fauna					_	age Patterns (B10)
Saturation			True Aquatic P	•	,				eason Water Table (C2)
Water Ma	` '		Hydrogen Sulfi						ish Burrows (C8)
	Deposits (B2)		Oxidized Rhizo	•		g Roots (C	<i>J</i> 3)	_	ation Visible on Aerial ery (C9)
Drift Depo	or Crust (B4)		Presence of Re			Caila (CC)		~	ed or Stressed Plants (D1)
Iron Depo			Recent Iron Re			Solis (C6)			norphic Position (D2)
	n Visible on Aerial Imag	erv (R7)	☐ Thin Muck Surf					_	Neutral Test (D5)
_	Vegetated Concave Sur	, ,	Other (Explain	`	,			_	,
		1400 (20)	U Other (Explain	III Keilla	iko)				
Field Observ Surface Water		Depth (incl	nes):						
Water Table		Depth (incl	· -						
Saturation Pr		Depth (incl	· —			Wetland	d Hydrolo	av Pres	ent? Yes
(includes cap		_ Dopar (into		_		***Guali	a riyarolo	y i iest	JIR. 165
Describe Red	corded Data (stream gai	uge, monitor	ing well, aerial photos	, previou	s inspec	tions), if a	vailable:		
Remarks:									
. tomano.									

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sa	ampling Date: 9/2/2020
Applicant/Owner: IDOT District 8				State: ILSa	ampling Point 12A
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 15,	T1N, R2E
Landform (hillslope, terrace, etc.): Excavated channel/ditch		L	ocal relief (	concave, convex, non-	e): Concave
Slope (%): 2-3 Lat: 38.52028		Long: -88.9	96025		Datum: NAD 83
					ation: U
Are climatic/hydrologic conditions on the site typical for this time of					
Are Vegetation No , Soil No , or Hydrology No signific					stances" present? Yes
Are Vegetation No , Soil No , or Hydrology No natural					nny answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show					
Hydrophytic Vegetation Present? Yes	Ŭ		· ·	,	, ,
Hydric Soil Present? Yes		ls the	Sampled .	Area within	
Wetland Hydrology Present? Yes			tland?	Yes	_
Remarks: Community type is wet meadow.					
VEGETATION - Use scientific names of plants.					
Absol		Dominant	Indicator	Dominance Test w	orksheet:
Tree Stratum (Plot size: 30 ft radius % Co			Status	Number of Dominal	
2				Total Number of Do	ominant ` ,
3. 4.				Species Across All	(B)
5.				<ul><li>Percent of Dominar</li><li>That are OBL, FAC</li></ul>	W or EAC:
	0	= Total Co	ver	Prevalence Index v	(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)					f: Multiply by:
1. 2.				OBL species	x 1 =
3				FACW species	x 2 =
45.				FAC species	x 3 =
-	0	= Total Co	vor	FACU species	x 4 =
Herb Stratum (Plot size: 5 ft radius )	U	_ = 10tal C0	vei	UPL species	x 5 =
	40	Yes	OBL	Column Totals	(A) (B)
,	35	Yes	FACW	Prevalence	e Index =B/A =
3	10 10	No No	FACW OBL	Hydrophytic Veget	ation Indicators
	5	No	FACW		Hydrophytic Vegetation
6.				2-Dominance Te	
7.				3-Prevalence Inc	
8. 9.					Adaptations <sup>1</sup> (Provide supporting or on a separate sheet)
9				_	Irophytic Vegetation¹ (Explain)
	00	= Total Co	ver	¹Indicators of hydric	s soil and wetland hydrology nless disturbed or problematic.
Woody Vine Stratum (Plot size: 30 ft radius)  1.				Hydrophytic	

SOIL Sampling Point: 12A

Profile Des	cription: (Describe to	the depth n	eeded to document	the indic	ator or	confirm t	the absen	ce of inc	licators.)
Depth _	Matrix		Redox F	Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture		Remarks
0-5	10YR 4/2	95	5YR 4/6	5	С	PL & M	SIL		
5-12	10YR 5/2	87	5YR 4/6	10	<u>C</u>	PL & M	SIL		
5-12			2.5Y 6/1	3	D	М			
-									
	centration, D=Depletion	n, RM=Redu	ced Matrix, MS=Masl	ked Sand	Grains.				PL=Pore Lining, M=Matrix
Hydric Soil Ir							Indicator	s for Pro	blematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Gleyed M	, ,			□ Co	oast Prair	ie Redox (A16)
	ipedon (A2)		Sandy Redox (S				☐ Da	ark Surfac	ce (S7)
Black His			Stripped Matrix				Irc	n-Manga	nese Masses (F12)
	n Sulfide (A4)		Loamy Mucky M				□ Ve	ery Shallo	w Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed N		)		Ot	her (Expl	ain in Remarks)
2 cm Mu			✓ Depleted Matrix						
	Below Dark Surface (A	A11)	Redox Dark Sur	` '	_\		3		
	rk Surface (A12)		Depleted Dark S	,	7)				nydrophytic vegetation and ogy must be present, unless
	ucky Mineral (S1)		Redox Depressi	ons (F8)			wotlai		ped or problematic.
	cky Peat or Peat (S3)								
Restrictive L	ayer (if observed):								
Type:			=			Н	lydric Soi	l Present	? Yes
Depth (inche	s):		=						
Remarks:									
HYDROLO	GY								
	rology Indicators:							Secondar	y Indicators
_	ators (minimum of one i	s required: o	check all that apply)						of two is required)
Surface W	•		Water-Stained	Leaves (	B9)		-	Surfa	ce Soil Cracks (B6)
	r Table (A2)		Aquatic Fauna	,	_0,			_	age Patterns (B10)
Saturation	` '		☐ True Aquatic F		4)				eason Water Table (C2)
☐ Water Mar			Hydrogen Sulf					-	ish Burrows (C8)
	Deposits (B2)		Oxidized Rhizo		. ,	a Roots (C		-	ation Visible on Aerial
Drift Depo			☐ Presence of R	•		J (e	,		ery (C9)
_ :	or Crust (B4)		Recent Iron Re			Soils (C6)	)	Stunte	ed or Stressed Plants (D1)
Iron Depos			Thin Muck Sur			(,		✓ Geom	norphic Position (D2)
Inundation	Visible on Aerial Image	ery (B7)	Gauge or Well					✓ FAC-I	Neutral Test (D5)
☐ Sparsely \	egetated Concave Sur	face (B8)	Other (Explain						
Field Observ	ations:								
Surface Water		Depth (inch	nes):						
Water Table I	Present? No	Depth (inch	nes):						
Saturation Pre		Depth (inch	nes):			Wetland	d Hydrolo	gy Prese	ent? Yes_
(includes capi	• • •								
Describe Rec	orded Data (stream gau	uge, monitori	ing well, aerial photos	s, previous	s inspec	tions), if a	available:		
Remarks:									

Project/Site: Interstate 57 (FAI 57)	С	ity/County	: Marion	Samp	oling Date: 9/3/2020	
Applicant/Owner: IDOT District 8				State: IL Samp	ling Point 13A	
Investigator(s): Nieset and Miernicki		Sect	ion, Townsl	nip, Range: Sec. 22, T1	N, R2E	
Landform (hillslope, terrace, etc.): Depression						
				D		
Soil Map Unit Name: Orthents, Silty, Undulating						
Are climatic/hydrologic conditions on the site typical for this time of				no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No significa	-			Are "Normal Circumstar	nces" present?	/es
Are Vegetation No , Soil No , or Hydrology No naturally				(If needed, explain any		
<del></del>						
SUMMARY OF FINDINGS - Attach site map showing	ng sa	ampling	point lo	cations, transects,	important featu	res, etc
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes			•	Area within		
Wetland Hydrology Present? Yes		a Wet	land?	Yes		
Remarks: Community type is marsh.						
VEGETATION - Use scientific names of plants.						
Absolu	te D	ominant	Indicator	Dominance Test work	kshoot:	
Tree Stratum (Plot size: 30 ft radius % Cov		Species?	Status	<ul> <li>Number of Dominant S</li> <li>That are OBL, FACW,</li> </ul>	Species	(A)
2.				Total Number of Domir	-	_ (^)
3.				Species Across All Stra	ata:	(B)
5.				Percent of Dominant S That are OBL, FACW,		
0	=	Total Cov	er			(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index worl		
1.				OBL species	Multiply by:	_
2. 3.				FACW species	x 1 =	_
4.				FAC species	x 2 = x 3 =	_
5				FACU species	x 4 =	
Herb Stratum (Plot size: 5 ft radius )	=	Total Cov	er	UPL species	x 5 =	_
· ———	0	Yes	OBL		(A)	(B)
2. Leersia oryzoides 20		Yes	OBL		dex =B/A =	_
3. Juncus torreyi		Yes	FACW			_
4. Agrostis gigantea 10		No	FACW	Hydrophytic Vegetatio  ✓ 1-Rapid Test for Hydrophytics		
5. Cyperus esculentus 10 6. Echinochloa muricata 10		No No	FACW OBL	2-Dominance Test is		
7. Asclepias incarnata 5		No	OBL	3-Prevalence Index		
8.				7 🖵	aptations ¹(Provide s	upporting
9.					on a separate sheet)	
10				☐ Problematic Hydrop	hytic Vegetation¹ (Ex	plain)
Woody Vine Stratum (Plot size: 30 ft radius)		Total Cov	rer	<sup>1</sup> Indicators of hydric so must be present, unles		
1				Hydrophytic		
	=	Total Cov	er er	Vegetation Present?	Yes	
Remarks: (Include photo numbers here or on a separate sheet.)				1		

SOIL Sampling Point: 13A

Profile De	Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Re	emarks		
0-5	10YR 4/2	97	2.5YR 4/8	3	С	PL	SIL				
5-10	5Y 5/1	85	7.5YR 4/6	15	С	PL & M	SICL				
10-16	5Y 6/1	80	10YR 5/8	20	С	М	SICL				
	ncentration, D=Depletion	n, RM=Redu	uced Matrix, MS=Masl	ked Sand	Grains.				L=Pore Lining, M=Matrix		
Hydric Soil							Indicators	for Proble	ematic Hydric Soils3:		
Histoso	· /		Sandy Gleyed M	` '	)		Coa	st Prairie I	Redox (A16)		
	pipedon (A2)		Sandy Redox (S				Darl	k Surface	(S7)		
	listic (A3)		Stripped Matrix (		4.			_	se Masses (F12)		
	en Sulfide (A4)		Loamy Mucky M				Very	/ Shallow I	Dark Surface (TF12)		
	d Layers (A5)		Loamy Gleyed N		()		Othe	er (Explain	in Remarks)		
	uck (A10)	A 4 4 \	✓ Depleted Matrix								
	d Below Dark Surface (	A11)	Redox Dark Sur	` '	- <del></del> \		31	( <b>(</b>	lander d'arramata d'arramat		
	ark Surface (A12)		Depleted Dark S	,	-7)				rophytic vegetation and must be present, unless		
	Mucky Mineral (S1)		Redox Depressi	ons (F8)			Wettaria		d or problematic.		
	ucky Peat or Peat (S3)								·		
	Layer (if observed):										
Type:			_			H	ydric Soil I	Present?	Yes		
Depth (inch	es):		_								
Remarks:											
HYDROLO	)GY										
	drology Indicators:						Se	condary li	ndicators		
-	cators (minimum of one	is required:	check all that apply)						two is required)		
	Vater (A1)	•	Water-Stained	Leaves (	(B9)		Ī	Surface	Soil Cracks (B6)		
	er Table (A2)		Aquatic Fauna		,		Ē	_	e Patterns (B10)		
Saturation			True Aquatic F		4)		Ē	_	son Water Table (C2)		
Water Ma			Hydrogen Sulfi	•	,		_	-	Burrows (C8)		
Sediment	Deposits (B2)		Oxidized Rhizo	spheres	on Livino	Roots (C		-	on Visible on Aerial		
Drift Depo			Presence of R	•	`	,	, _	_ Imagery	(C9)		
Algal Mat	or Crust (B4)		Recent Iron Re			Soils (C6)			or Stressed Plants (D1)		
☐ Iron Depo	osits (B5)		Thin Muck Sur	face (C7)	)		•	Geomor	phic Position (D2)		
Inundatio	n Visible on Aerial Imag	jery (B7)	Gauge or Well				<b>✓</b>	FAC-Ne	utral Test (D5)		
Sparsely	Vegetated Concave Su	rface (B8)	Other (Explain	in Rema	rks)						
Field Obser	vations:										
Surface Wat	er Present? No	Depth (incl	hes):								
Water Table	Present? No	Depth (incl	hes):								
Saturation P		Depth (incl	hes):			Wetland	d Hydrolog	y Present	? Yes		
,	cludes capillary fringe) scribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Describe Re	corded Data (stream ga	uge, monitor	ring well, aerial photos	s, previou	s inspec	tions), if a	vailable:				
Remarks:											

Applicant/Owner: IDOT District 8 State: IL Sampling Point 14A  Investigator(s): Nieset and Miernicki Section, Township, Range: Sec. 22, T1N, R2E  Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave	Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sampling D	ate: 9/3/2020	
Local relief (concave, convex, none): Concave	Applicant/Owner: IDOT District 8				State: IL Sampling Po	oint 14A	
Landform (hillslope, terrace, etc.): Depression  Loal relief (concave, convex, none): Concave  Slope (%): <1	Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 22, T1N, R2	E	
Soil Map Unit Name: Wakeland SIL, 0-2% slopes, frequently flooded Are climatichydrologic conditions on the site typical for this time of year?  Are Vegetation No , Soil No , or Hydrology No significantly disturber?  Are Vegetation No , Soil No , or Hydrology No naturally problematic?  Are Vegetation No , Soil No , or Hydrology No naturally problematic?  Are Vegetation No , Soil No , or Hydrology No naturally problematic?  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present?  Yes  Hydriophytic Vegetation Present?  Yes  Wetland Hydrology Present?  Yes  Nominant Species  That are OBL, FACW, or FAC:  1 Acer secharinum  (Plot size: 15 ft radius)  1 Acer secharinum  (Plot size: 15 ft radius)  1 Acer secharinum  Yes  FACW Species  X 1 =  FAC species  X 2 =  FACW Species  X 2 =  FACW Species  X 3 =  FACW Species  X 2 =  FACW Species  X 3 =  FACW Species  X 2 =  FACW Species  X 3 =  FACW Species  X 4 =  Wetland Hydrology Present?  Yes  Wetland Hydrology Present?	Landform (hillslope, terrace, etc.): Depression			ocal relief (d	concave, convex, none): Conc	ave	
Soil Map Unit Name: Wakeland SIL, 0-2% slopes, frequently flooded  Are climatichydrologic conditions on the site typical for this time of year? Yes	Slope (%): <1 Lat: 38.51838		Long: -88.9	5985	Datum:	NAD 83	
Are Vegetation No , Soil No , or Hydrology No  anturally 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		ently flooded			NWI classification: U		
Are Vegetation No , Soil No , or Hydrology No  anturally 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	· <u> </u>	•		s (If	no explain in Remarks.)		
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		-		`	•	present? Y	'es
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes					,	· -	
Hydrophytic Vegetation Present?   Yes   Hydric Soil Present?   Yes   Yes   Wetland Hydrology Present?   Yes   Wetland?   Yes   Yes   Wetland?   Yes		_		noint lo			
Second Present?   Yes   Wetland Hydrology Present?   Yes   Wetland?   Yes   Yes   Wetland?   Yes   Yes   Wetland?   Yes   Wetland.   Yes   Yes   Wetland?   Yes   Yes   Wetland?   Yes	<u>.</u>	<u> </u>		, po	canono, nanocoto, mp		100, 01.
VEGETATION - Use scientific names of plants:   VEGETATION - Use scientific names of plants:   Absolute   % Cover   Species?   Status   Species	Hydric Soil Present? Yes		lo the	Compled	Arao within		
VEGETATION - Use scientific names of plants.   Absolute   Species   Status   Number of Dominant   Number of Domi				•			
VEGETATION - Use scientific names of plants.  Tree Stratum (Plot size: 30 ft radius)  1. Acer saccharinum  65 Yes FACW 2. Populus delioides 15 No FAC 3. Umus americana 10 No FACW 5. Sapiling/Shrub Stratum (Plot size: 15 ft radius) 1. Acer saccharinum  7. Yes FACW 2. Fach (Plot size: 15 ft radius) 1. Acer saccharinum  80 = Total Cover 100% (A/B) 11 = Total Cover 11 = Total Cover 100% (A/B) 11 = Total Cover 100% (A/B) 11 = Total Cover 100% (A/B) 11 = Total Cover 11 = Total Cover 100% (A/B) 100	wettalid Hydrology Heselit: <u>Tes</u>						
Definition   Provided   Provide	VEGETATION - Use scientific names of plants						
1.	Tree Stratum (Plot size: 30 ft radius						
2. Populus deltoides	· · —	65	Yes	FACW			(A)
Sapling/Shrub Stratum   (Plot size: 15 ft radius)   Sapling/Shrub Stratum   Sapling/Shrub Shrub Shr					•		_ (~)
Sapling/Shrub Stratum   (Plot size: 15 ft radius)   90		10	No	FACW	Species Across All Strata:	6	_ (B)
Sapling/Shrub Stratum   (Plot size: 15 ft radius)   1. Acer saccharinum   5							
1. Acer saccharinum 5 Yes FACW OBL species x 1 =  3. Ulmus americana 3 Yes FACW OBL species x 2 =  4.		90	= Total Co	ver	That are OBL, FACVV, OF FA	J. 100%	_ (A/B)
2. Fraxinus lanceolata       3       Yes       FACW       OBL species       x 1 =	· · · · · · · · · · · · · · · · · · ·	_	_	=			
3. Ulmus americana 3. Yes FACW 4. FACW species x 2 =  FAC species x 3 =  FACU species x 4 =  UPL species x 4 =  UPL species x 5 =  Column Totals (A) (B)  Aster lanceolatus 20 Yes FAC Prevalence Index = B/A =  4. Cinna arundinacea 10 No OBL  4. Cinna arundinacea 10 No FACW 5. Chasmanthium latifolium 5 No FACW 1-Rapid Test for Hydrophytic Vegetation Indicators 6. Carex sp. 2 No -  2. No -  2. Prevalence Index = B/A =  Hydrophytic Vegetation Indicators 1-Rapid Test for Hydrophytic Vegetation  9.					=		-
FAC species x3 = FACU species x4 = UPL species x5 = UPL s						-	=
Herb Stratum (Plot size: 5 ft radius )					· ——		=
Herb Stratum (Plot size: 5 ft radius )	5						_
1. Lysimachia nummularia 40 Yes FACW 2. Aster lanceolatus 20 Yes FAC 3. Carex lupulina 10 No OBL 4. Cinna arundinacea 10 No FACW 5. Chasmanthium latifolium 5 No FACW 6. Carex sp. 2 No -  10 Prevalence Index =B/A =  Hydrophytic Vegetation Indicators  1 1-Rapid Test for Hydrophytic Vegetation  2 2-Dominance Test is >50%  3-Prevalence Index is < or =3.0¹  4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  10 Problematic Hydrophytic Vegetation  4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  1 Problematic Hydrophytic Vegetation¹ (Explain)  1 No FAC  Hydrophytic Vegetation² (Plot size: 30 ft radius)  1 No FAC  Hydrophytic Vegetation  4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation² (Explain)  Hydrophytic Vegetation  Yes  Yes	Herb Stratum (Plot size: 5 ft radius )	11	_ = Total Co	ver			_
2. Aster lanceolatus 2. Carex lupulina 2. Carex lupulina 3. Carex lupulina 4. Cinna arundinacea 5. Chasmanthium latifolium 5. No FACW 6. Carex sp. 7. 2 No - 7. 3-Prevalence Index =B/A =  Hydrophytic Vegetation Indicators 1 -Rapid Test for Hydrophytic Vegetation 2 -Dominance Test is >50% 3 -Prevalence Index is < or =3.0¹ 4 -Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ Problematic Hydrophytic Vegetation¹ Problematic Hydrophytic Vegetation¹ 1 No FAC  Hydrophytic Vegetation  1 No FAC  Hydrophytic Vegetation Yes	,	40	Yes	FACW	· —		(B)
3. Carex lupulina 4. Cinna arundinacea 5. Chasmanthium latifolium 6. Carex sp. 7. 2 No - 8. 9. 2 No - 9. 10.							_ (-)
5. Chasmanthium latifolium  6. Carex sp.  7. 2 No -  8. 3-Prevalence Index is < or = 3.0¹  4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  10. 87 = Total Cover  Woody Vine Stratum (Plot size: 30 ft radius)  1. Toxicodendron radicans  1. No FAC  1. Rapid Test for Hydrophytic Vegetation  1. No FAC  1. Rapid Test for Hydrophytic Vegetation  1. No FAC  1. Rapid Test for Hydrophytic Vegetation  1. No FAC  1. No FAC  1. Hydrophytic  1. Vegetation  1. Provide supporting  1. No FAC  1. Hydrophytic  1. Hydrophytic  1. Vegetation  1. Provide supporting  1. No FAC  1. Hydrophytic  1. Vegetation  1. Present?  1. Yes							=
6. Carex sp.  2 No -  3-Prevalence Index is < or =3.0¹  4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  Woody Vine Stratum (Plot size: 30 ft radius)  1. Toxicodendron radicans  1 No FAC  Hydrophytic  Vegetation Present?  Yes							
7	6 Caray an						
8. 4-Morphological Adaptations ¹(Provide supporting data in Remarks or on a separate sheet)  10. Problematic Hydrophytic Vegetation¹ (Explain)  1. Toxicodendron radicans  1. No FAC  1. Toxicodendron radicans  2. Toxicodendron radicans  2. Toxicodendron radicans  2. Toxicodendron radicans  3. Toxicodendron radicans  4. Hydrophytic Vegetation  4					3-Prevalence Index is < o	r =3.01	
10. Problematic Hydrophytic Vegetation¹ (Explain)  Woody Vine Stratum (Plot size: 30 ft radius)  1. Toxicodendron radicans  1. No FAC  Hydrophytic  Vegetation  Yes  Yes	8						upporting
Woody Vine Stratum (Plot size: 30 ft radius)   87	-				<del>-</del>	. ,	nlain)
Moody Vine Stratum (Plot size: 30 ft radius)   must be present, unless disturbed or problematic.	10	07	Tatal Car			, ,	
1. Toxicodendron radicans 1. No. FAC 2. Hydrophytic Vegetation Present? Yes	Woody Vine Stratum (Plot size: 30 ft radius)	87	_ = Total Co	ver			
Vegetation Present? Yes		1	No	FAC	' '		
Remarks: (Include photo numbers here or on a separate sheet.)	2	1	= Total Co	ver	Vegetation Vac		
	Remarks: (Include photo numbers here or on a separate	e sheet.)					

SOIL Sampling Point: 14A

Profile Des	cription: (Describe to	the depth r	needed to document	the indic	ator or	confirm t	the absen	ce of in	dicators.)
Depth _	Matrix		Redox I	- eatures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture		Remarks
0-6	10YR 4/1	95	5YR 4/6	5	C	PL & M	SIL		
6-12	2.5Y 5/1	97	7.5YR 5/6	3	С	М	SIL		
-									
-									
1							2		
	centration, D=Depletion	on, RM=Redu	uced Matrix, MS=Mas	ked Sand	Grains.				n: PL=Pore Lining, M=Matrix
Hydric Soil In				1-4-: (C.4)					oblematic Hydric Soils <sup>3</sup> :
Histosol	` ,		Sandy Gleyed M	, ,	)				rie Redox (A16)
Black His	oipedon (A2)		Sandy Redox (S Stripped Matrix					ark Surfa	
	n Sulfide (A4)		Loamy Mucky M		1)		_	•	anese Masses (F12)
	Layers (A5)		Loamy Gleyed N						ow Dark Surface (TF12)
2 cm Mu			✓ Depleted Matrix		,		∐ Ot	ner (Exp	lain in Remarks)
	l Below Dark Surface (	A11)	Redox Dark Sur						
_ :	rk Surface (A12)	, ,	Depleted Dark S	` '	7)		³ Indic	cators of	hydrophytic vegetation and
	ucky Mineral (S1)		Redox Depressi		,			nd hydrol	ogy must be present, unless
	cky Peat or Peat (S3)			` ,				distur	rbed or problematic.
	ayer (if observed):								
Type:	ayer (ii observea).							. D	10 V
Depth (inche	s):					Н	lydric Soi	i Presen	it? <u>Yes</u>
	-,		_						
Remarks:									
HYDROLO	GY								
-	rology Indicators:								ry Indicators
l	ators (minimum of one	is required:					(	`	n of two is required)
Surface W	` '		Water-Stained	,	B9)				ace Soil Cracks (B6)
	r Table (A2)		Aquatic Fauna						nage Patterns (B10)
Saturation			True Aquatic F						Season Water Table (C2)
Water Mar			Hydrogen Sulf					_ ′	fish Burrows (C8)
	Deposits (B2)		Oxidized Rhizo	•		g Roots (C	<i>3</i> 3)	_	ration Visible on Aerial ery (C9)
Drift Depo			Presence of R			0-:1- (00)			ted or Stressed Plants (D1)
Iron Depos	or Crust (B4)		Recent Iron Re			Solis (C6)			morphic Position (D2)
· ·	Sits (199) Visible on Aerial Imag	nery (R7)	☐ Thin Muck Sur ☐ Gauge or Well	, ,				=	-Neutral Test (D5)
	egetated Concave Su	, , ,	Other (Explain	•	•				,
		11400 (50)		III Kellia	iks)				
Field Observ Surface Wate		Depth (inc	hes):						
Water Table F	-	_       . Depth (inc	· · ·						
Saturation Pre	esent? No	_ Depth (inc	· · ·			Wetlan	d Hydrolo	ogy Pres	ent? Yes
	orded Data (stream ga	auge monitor	ring well aerial photos	nreviou	s inspec	tions) if a	availahle.		
	(ooa gc			., p. 5115u	<b>.</b>	,,			
Remarks:									

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sam	pling Date: 9/	/3/2020
Applicant/Owner: IDOT District 8				State: IL Sam	pling Point 1	5A
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 22, T	1N, R2E	
Landform (hillslope, terrace, etc.): Enclosed depression			ocal relief (	concave, convex, none):	Concave	
Slope (%): 1 Lat: _38.51585		Long: -88.9	6135		Datum: NAD	83
Soil Map Unit Name: NRCS mapped Wakeland SIL; revis	ed to Birds			NWI classificati	on: U	
Are climatic/hydrologic conditions on the site typical for thi	s time of ye	ar? Ye	s (If	 no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No	-	-		Are "Normal Circumsta	ances" prese	nt? Yes
Are Vegetation No , Soil No , or Hydrology No				(If needed, explain any	•	
SUMMARY OF FINDINGS - Attach site map	_		point lo			
Hydrophytic Vegetation Present? Yes			-			
Hydric Soil Present? Yes		Is the	Sampled	Area within		
Wetland Hydrology Present? Yes			land?	Yes_		
Remarks: Community type is wet floodplain forest.						
VEGETATION - Use scientific names of plants.	Absolute	Dominant	Indicator			
Tree Stratum (Plot size: 30 ft radius	% Cover	Species?	Status	Dominance Test wo		
1. Populus deltoides	50	Yes	FAC	<ul> <li>Number of Dominant</li> <li>That are OBL, FACW</li> </ul>		4 (A)
2. Acer saccharinum	10	No	FACW	Total Number of Dom	_	(//
3. <u>Ulmus americana</u>	10	No	FACW	Species Across All St	:rata:	4 (B)
4. Acer rubrum	5	No	FAC	Percent of Dominant		( )
5. Salix nigra	5 80	No = Total Co	OBL	_ That are OBL, FACW	, or FAC: _	100% (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)		_ = 10(a) 00	VCI	Prevalence Index wo	rksheet:	
1.				Total % Cover of:	<u>Mult</u>	tiply by:
2				OBL species	x 1 =	
3.				FACW species	x 2 =	
4 5.				FAC species	x 3 =	
·	0	= Total Co	ıor	FACU species		
Herb Stratum (Plot size: 5 ft radius)		_ = 10ta1 C0	VEI	UPL species	x 5 =	<u> </u>
Ludwigia palustris var. americana	25	Yes	OBL	Column Totals	(A)	(B)
2. Spirodela polyrhiza	25	Yes	OBL	Prevalence Ir		
3. Wolffia columbiana	20	Yes	OBL	Hydrophytic Vegetati	•	
4. <u>Leersia oryzoides</u> 5.	15	No	OBL	1-Rapid Test for H		
				✓ 2-Dominance Test		2gotation
6				3-Prevalence Inde		1
8.				4-Morphological A	daptations 1(F	Provide supporting
9				data in Remarks o	r on a separa	ate sheet)
10				Problematic Hydro	phytic Vegeta	ation¹ (Explain)
Woody Vine Stratum (Plot size: 30 ft radius)	85	= Total Co		<sup>1</sup> Indicators of hydric s must be present, unle		
Toxicodendron radicans     Vitis riparia	1 1	No No	FAC FACW	Hydrophytic		
2. vito riparia	2	= Total Co		Vegetation Present?	Yes	
Remarks: (Include photo numbers here or on a separate	sheet \	=				
Tromaino, (moidde photo humbers fiere of off a separate	311 <b>66</b> 1.)					

SOIL

Sampling Point: 15A

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

Profile De	scription: (Describ	e to the depth r	needed to document	the indic	cator or	confirm	the absend	ce of indic	ators.)
Depth	Matrix	<u> </u>	Redox	Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc2	Texture	R	emarks
0-1	10YR 3/1	100					SIL		
1-12	5Y 5/1	97	5YR 4/6	3	С	PL & M	SIL		
	•	oletion, RM=Redu	uced Matrix, MS=Mas	ked Sand	Grains.				PL=Pore Lining, M=Matrix
Hydric Soil							Indicators	for Probl	ematic Hydric Soils <sup>3</sup> :
Histoso	` '		Sandy Gleyed N	, ,	)		Co	ast Prairie	Redox (A16)
	pipedon (A2)		Sandy Redox (S				☐ Da	rk Surface	(S7)
	istic (A3)		Stripped Matrix				☐ Iron	n-Mangane	ese Masses (F12)
	en Sulfide (A4)		Loamy Mucky N				Vei	ry Shallow	Dark Surface (TF12)
	d Layers (A5)		Loamy Gleyed I		()		Oth	ner (Explair	n in Remarks)
	uck (A10)	(Δ44)	Depleted Matrix	. ,					
	d Below Dark Surfa	ice (ATT)	Redox Dark Sur	` '			3 India	atara of bu	drophytic vegetation and
	ark Surface (A12)		☐ Depleted Dark S	,	-7)				y must be present, unless
	Mucky Mineral (S1) ucky Peat or Peat (	63/	Redox Depress	10115 (F6)					d or problematic.
	Layer (if observed)	):							
Type:	\		_			Н	lydric Soil	Present?	Yes
Depth (inch	es):		=						
Remarks:									
HYDROLO	GY								
Wetland Hy	drology Indicators	:					S	econdary I	Indicators
-			check all that apply)				(r	minimum o	f two is required)
✓ Surface V	Vater (A1)			d Leaves (	(B9)			Surface	Soil Cracks (B6)
✓ High Wat	er Table (A2)		Aquatic Fauna	a (B13)				Drainag	e Patterns (B10)
✓ Saturation	n (A3)		✓ True Aquatic F	Plants (B1	4)			Dry-Sea	ason Water Table (C2)
	arks (B1)		Hydrogen Sulf	fide Odor	(C1)		[·	✓ Crayfish	n Burrows (C8)
Sediment	Deposits (B2)		Oxidized Rhiz	ospheres	on Livin	g Roots (0	C3)	Saturati	on Visible on Aerial
☐ Drift Depo	osits (B3)		Presence of R	Reduced Ir	on (C4)		_	Imagery	, ,
Algal Mat	or Crust (B4)		Recent Iron R	eduction i	n Tilled	Soils (C6)		_	or Stressed Plants (D1)
☐ Iron Depo	` '		☐ Thin Muck Su	rface (C7)	)				rphic Position (D2)
	n Visible on Aerial I	3 , ( ,	Gauge or Wel	l Data (D9	9)		Ŀ	✓ FAC-Ne	eutral Test (D5)
☐ Sparsely	Vegetated Concave	e Surface (B8)	Other (Explain	in Rema	rks)				
Field Obser		. 5							
Surface Wat		<u>es</u> Depth (incl	· -						
Water Table		es Depth (incl							
Saturation P (includes car		<u>es</u> Depth (incl	hes): 0			Wetlan	d Hydrolo	gy Presen	t? Yes
		m dauge monitor	ring well, aerial photo	s previou	s inspec	rtions) if a	available.		
Doddibe Ne	co. dod Data (otreat	gaago, monitoi	mg won, aonai prioto	c, providu	o mopec	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	avanabio.		
_									
Remarks:									

Project/Site: Interstate 57 (FAI 57)		City/County	: Marion	Samp	ling Date: 9/21/2020	
Applicant/Owner: IDOT District 8				State: IL Samp	ling Point 16A	
Investigator(s): Nieset and Miernicki		Sec	tion, Townsl	nip, Range: Sec. 23, T1	N, R2E	
Landform (hillslope, terrace, etc.): Excavated channel/ditch						
Slope (%): <1 Lat: 38.51122		Long: -88.9	5940	D	atum: NAD 83	
				NWI classificatio	n: U	
Are climatic/hydrologic conditions on the site typical for this time				no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No signific		-		Are "Normal Circumstar	nces" present?	'es
Are Vegetation No , Soil No , or Hydrology No natura				(If needed, explain any		-
				,		,
SUMMARY OF FINDINGS - Attach site map show	ing :	sampling	point lo	cations, transects,	important featu	res, etc
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes			Sampled A	rea within		
Wetland Hydrology Present? Yes		a Wet	land?	Yes		
Remarks: Community type is wet meadow.						
Trainer Community type to not meadon.						
VEGETATION - Use scientific names of plants.						
Abso	lute	Dominant	Indicator	Dominance Test work	rahaati	
Tree Stratum (Plot size: 30 ft radius % Co		Species?	Status	Number of Dominant S		
1				That are OBL, FACW,		(A)
2				Total Number of Domir		
3. 4.				Species Across All Stra	-	_ (B)
5.				<ul> <li>Percent of Dominant S</li> <li>That are OBL, FACW,</li> </ul>		
	0	= Total Cov	/er			_ (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index worl		
1.				1	Multiply by:	-
2. 3.				OBL species	x 1 =	_
4.				FACW species	x 2 =	=
5				FAC species	x 3 =	=
	0	= Total Co	/er	FACU species	x 4 =	_
Herb Stratum (Plot size: 5 ft radius )	45	V	EA (C) A (	UPL species	x 5 =	- <u></u>
	45 20	Yes Yes	FACW FACW	Column Totals	(A)	_ (B)
3. Festuca arundinacea	10	No	FACU	Prevalence Inc	dex =B/A =	=-
4. Asclepias incarnata	5	No	OBL	Hydrophytic Vegetatio	n Indicators	
5. Carex vulpinoidea	5	No	FACW	✓ 1-Rapid Test for Hy		
6. Diospyros virginiana	5	No	FAC	2-Dominance Test i		
7. Eupatorium serotinum	5	No	FAC FAC	3-Prevalence Index		
8. Iva annua 9. Lonicera japonica	2	No No	FACU	4-Morphological Ada	aptations ¹(Provide su on a separate sheet)	upporting
10. Toxicodendron radicans	2	No	FAC		hytic Vegetation¹ (Ex	olain)
-	104	= Total Cov		¹Indicators of hydric so		
Woody Vine Stratum (Plot size: 30 ft radius)		= Total Co	/EI	must be present, unles		
1.				Hydrophytic		
2		T		Vegetation	Yes	
	0	= Total Cov	/er	Present? -	165	
Remarks: (Include photo numbers here or on a separate sheet	.)					

Sampling Point: 16A SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Matrix Redox Features Depth (inches) Color (moist) % Color (moist) Type Loc2 Texture Remarks 0-4 10YR 5/2 99 7.5YR 4/6 SII 4-12 10YR 5/2 98 7.5YR 4/6 2 С Μ SIL Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Location: PL=Pore Lining, M=Matrix **Hydric Soil Indicators:** Indicators for Problematic Hydric Soils<sup>3</sup>: ☐ Sandy Gleyed Matrix (S4) Histosol (A1) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Dark Surface (S7) ☐ Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) 2 cm Muck (A10) ✓ Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and Thick Dark Surface (A12) Depleted Dark Surface (F7) wetland hydrology must be present, unless Sandy Mucky Mineral (S1) Redox Depressions (F8) disturbed or problematic. 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: **Hydric Soil Present?** Yes Depth (inches): Remarks: **HYDROLOGY Wetland Hydrology Indicators:** Secondary Indicators (minimum of two is required) Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) ☐ Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) ☐ Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) ✓ Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Drift Deposits (B3) Imagery (C9) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) ✓ Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): No Saturation Present? No Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	s	Sampling Date: 9/21/20	20
Applicant/Owner: IDOT District 8				State: IL S	Sampling Point 17A	
					6, T1N, R2E	
Landform (hillslope, terrace, etc.): Excavated channel/ditc	h	L	ocal relief (d	concave, convex, no	ne): Concave	
Slope (%): <2 Lat: <u>38.50517</u>		Long: -88.9	5904		Datum: NAD 83	
Soil Map Unit Name: Bluford SIL, 0-2% slopes				NWI classifi	cation: U	
Are climatic/hydrologic conditions on the site typical for this	s time of ye	ar? Ye	es (If	no explain in Remarl	ks.)	
Are Vegetation No , Soil No , or Hydrology No s	significantly	/ disturbed?		Are "Normal Circur	mstances" present?	Yes
Are Vegetation No , Soil No , or Hydrology No r	naturally pr	oblematic?		(If needed, explain	any answers in Remai	rks.)
SUMMARY OF FINDINGS - Attach site map s	howing	sampling	point lo	cations, transe	cts, important fea	atures, etc
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes		Is the	Sampled A	Area within		
Wetland Hydrology Present? Yes			land?	Yes	<u></u>	
Remarks: Community type is wet meadow.						
VEGETATION - Use scientific names of plants.						
	Absolute	Dominant	Indicator	Dominance Test	worksheet:	
Tree Stratum (Plot size: 30 ft radius 1.	% Cover		Status	Number of Domina		(A)
2				Total Number of D	Dominant	(7.)
3.				Species Across A	<del></del>	(B)
5.				Percent of Domina That are OBL, FA	C) A /	
Opening (Objects Opening Color)	0	= Total Co	ver			(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index Total % Cover	of: Multiply by	<i>/</i> ·
1				OBL species	x 1 =	
3				FACW species	x 2 =	
4 5.				FAC species	x 3 =	
J	0	= Total Co	ver.	FACU species	x 4 =	
Herb Stratum (Plot size: 5 ft radius )		_ = 10ta100	VCI	UPL species	x 5 =	
1. Agrostis gigantea	35	Yes	FACW	Column Totals	(A)	(B)
Bidens aristosa     Scirpus georgianus	30 15	Yes No	FACW OBL	Prevalenc	ce Index =B/A =	
4. Toxicodendron radicans	15	No	FAC	Hydrophytic Vege	tation Indicators	
5. Campsis radicans	10	No	FACU	4 <b>—</b> '	or Hydrophytic Vegetati	ion
6. Solidago canadensis	5	No	FACU	2-Dominance T		
7. 8.				3-Prevalence Ir	ndex is < or =3.01 al Adaptations 1(Provide	a supporting
9.				data in Remark	s or on a separate she drophytic Vegetation <sup>1</sup>	eet)
Woody Vine Stratum (Plot size: 30 ft radius)	110	_ = Total Co	ver		ic soil and wetland hyd unless disturbed or pro	
1	0	= Total Co	ver	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 Matrix Redox Features												
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Re	emarks			
0-3	10YR 4/2	99	5YR 4/6	1	С	М	SIL					
3-7	10YR 5/2	98	7.5YR 5/8	2	С	М	SIL					
7-12	10YR 5/1	80	7.5YR 5/8	3	С	М	SICL					
7-12	10YR 5/2	17										
-												
									<del></del>			
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix												
Hydric Soil I	ndicators:						Indicators	for Proble	ematic Hydric Soils <sup>3</sup> :			
Histosol	(A1)		Sandy Gleyed M	latrix (S4)	)		☐ Coa	ast Prairie I	Redox (A16)			
☐ Histic Ep	pipedon (A2)		Sandy Redox (S5)				Dark Surface (S7)					
☐ Black Hi	stic (A3)		Stripped Matrix (	S6)			_		se Masses (F12)			
Hydroge	n Sulfide (A4)		Loamy Mucky M	ineral (F	1)			•	Dark Surface (TF12)			
Stratified	l Layers (A5)		Loamy Gleyed M	1atrix (F2	)				in Remarks)			
2 cm Mu	ck (A10)		Depleted Matrix	(F3)				` '	,			
Depleted	l Below Dark Surface (	A11)	Redox Dark Surf	face (F6)								
Thick Da	ark Surface (A12)		Depleted Dark S	urface (F	7)				drophytic vegetation and			
Sandy M	lucky Mineral (S1)		Redox Depression	ons (F8)			wetland		must be present, unless d or problematic.			
5 cm Mu	cky Peat or Peat (S3)							disturbet	or problematic.			
Restrictive L	ayer (if observed):											
Type:	,						lydric Soil	Drocont?	Yes			
Depth (inche	s):		_				iyunc 30ii	i ieseiit:	163			
	·											
Remarks:												
<b>HYDROLO</b>	GY											
Wetland Hyd	rology Indicators:						Se	econdary li	ndicators			
Primary Indic	ators (minimum of one	is required: o	check all that apply)				<u>(n</u>	ninimum of	two is required)			
Surface W	ater (A1)			Leaves (	(B9)			Surface	Soil Cracks (B6)			
☐ High Wate	er Table (A2)		Aquatic Fauna			☐ Drainage Patterns (B10)						
Saturation	(A3)		☐ True Aquatic P	quatic Plants (B14)					son Water Table (C2)			
	rks (B1)		Hydrogen Sulfi	de Odor	(C1)		✓ Crayfish Burrows (C8)					
Sediment	Deposits (B2)		Oxidized Rhizo	spheres	on Living	Roots (	_	-	on Visible on Aerial			
Drift Depo	sits (B3)		☐ Presence of Re	educed Ir	ed Iron (C4) Imagery (C9)							
Algal Mat	or Crust (B4)		Recent Iron Re	eduction i	n Tilled S	oils (C6)	) _	_	or Stressed Plants (D1)			
☐ Iron Depo:	sits (B5)		☐ Thin Muck Sur	face (C7)	)			✓ Geomorphic Position (D2)				
Inundation	Visible on Aerial Imag	jery (B7)	Gauge or Well	Data (D9	9)		•	✓ FAC-Ne	utral Test (D5)			
☐ Sparsely \	egetated Concave Su	rface (B8)	Other (Explain	in Rema	rks)							
Field Observ	ations:											
Surface Water		Depth (incl	nes):									
Water Table I	Present? No	Depth (incl	nes):									
Saturation Pr	esent? No	Depth (incl	nes):	_		Wetlan	d Hydrolog	gy Present	? Yes			
(includes cap		_ ' '	· <del>-</del>				,					
Describe Rec	orded Data (stream ga	uge, monitor	ing well, aerial photos	, previou	s inspecti	ions), if a	available:					
Remarks:												

Project/Site: Interstate 57 (FAI 57)		_City/County	: Marion	Sampl	ling Date: 9/21/2020		
Applicant/Owner: IDOT District 8				State: IL Sampl	ling Point 18A		
Investigator(s): Nieset and Miernicki	Section, Township, Range: Sec. 26, T1N, R2E						
Landform (hillslope, terrace, etc.): Depression				oncave, convex, none):			
Slope (%): <2 Lat: 38.50314		Long: -88.9	5875	Da	atum: NAD 83		
Soil Map Unit Name: Hoyleton SIL, 2-5% slopes		<u> </u>		NWI classification	· ·		
Are climatic/hydrologic conditions on the site typical for this t	ime of vea	ar? Ye	s (If r	no explain in Remarks.)			
Are Vegetation Yes , Soil No , or Hydrology No sig	-			Are "Normal Circumstan	nces" present? Y	es	
Are Vegetation No , Soil No , or Hydrology No na				(If needed, explain any a			
<del></del>			noint lo	•			
SUMMARY OF FINDINGS - Attach site map sh Hydrophytic Vegetation Present? Yes	lowing	Samping	point io	cations, transects,	important leatu	res, etc	
Hydric Soil Present? <u>Yes</u>		Is the a Wet	Sampled A	rea within Yes			
Wetland Hydrology Present? Yes		a wei	iaiiu f				
Remarks: Community type is wet meadow.							
<b>VEGETATION</b> - Use scientific names of plants.				T			
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	sheet:		
Tree Stratum (Plot size: 30 ft radius	70 COVE	оресіез:	Status	Number of Dominant S That are OBL, FACW, or		(A)	
2.				Total Number of Domin			
4.				Species Across All Stra	-	_ (B)	
5.				Percent of Dominant Sp That are OBL, FACW, or		(A (D)	
Conline (Chruh Ctrotum (Diet eine 15 ft radius)	0	= Total Cov	er er			_ (A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index work	sneet: Multiply by:		
1				OBL species	x 1 =	-	
3.				FACW species	x 2 =	_	
4				FAC species	x 3 =	=	
5	•	T		FACU species	x 4 =	_	
Herb Stratum (Plot size: 5 ft radius )	0	= Total Cov	er er	UPL species	x 5 =	=	
1. Euthamia graminifolia	30	Yes	FACW	Column Totals	(A)	(B)	
2. Asclepias incarnata	25	Yes	OBL		lex =B/A =	-	
3. Agrostis gigantea	20	Yes	FACW	Hydrophytic Vegetation		-	
Panicum dichotomiflorum     Carex squarrosa	20 10	Yes No	FACW OBL	✓ 1-Rapid Test for Hyd			
6. Helianthus grosseserratus	5	No	FACW	2-Dominance Test is	· · ·		
7. Cyperus esculentus	3	No	FACW	3-Prevalence Index			
8. Persicaria punctata	3	No	OBL	4-Morphological Ada		pporting	
9. Lonicera japonica	2	No	FACU	data in Remarks or o	on a separate sheet)		
10				✓ Problematic Hydropl	hytic Vegetation¹ (Ex	olain)	
Woody Vine Stratum (Plot size: 30 ft radius)		= Total Cov	ver	<sup>1</sup> Indicators of hydric soi must be present, unless			
1 2				Hydrophytic			
	0	= Total Cov	ver .	Vegetation Present?	Yes		
Remarks: (Include photo numbers here or on a separate sh	neet.)						

SOIL Sampling Point: 18A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth Matrix Redox Features											
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	R	emarks		
0-2	10YR 4/2	100					SIL				
2-5	10YR 4/2	99	7.5YR 4/6	1	С	PL & M	SIL				
5-10	10YR 5/2	98	5YR 3/4	2	С	M	SIL				
10-15	10YR 5/2	97	7.5YR 4/6	3	С	M	SIL				
<sup>1</sup> Type: C=Cor	centration, D=Depletion	on, RM=Redu	iced Matrix, MS=Mas	ked Sand	Grains.		2	Location: F	PL=Pore Lining, M=Matrix		
Hydric Soil Ir	ndicators:						Indicator	s for Prob	lematic Hydric Soils <sup>3</sup> :		
Histosol	(A1)		Sandy Gleyed M	latrix (S4)			Co	ast Prairie	Redox (A16)		
	ipedon (A2)		Sandy Redox (S	55)				rk Surface			
Black His	stic (A3)		Stripped Matrix	(S6)			☐ Iro	n-Mangane	ese Masses (F12)		
Hydroge	n Sulfide (A4)		Loamy Mucky M	lineral (F1	)		☐ Ve	ry Shallow	Dark Surface (TF12)		
	Layers (A5)		Loamy Gleyed N				Ot	her (Explai	n in Remarks)		
2 cm Mu			Depleted Matrix	. ,							
_ :	Below Dark Surface	(A11)	Redox Dark Sur	` ,							
	rk Surface (A12)		Depleted Dark S	,	7)				drophytic vegetation and		
	ucky Mineral (S1)		Redox Depressi	ons (F8)			wetian		y must be present, unless ed or problematic.		
5 cm Mu	cky Peat or Peat (S3)							alotarbo	a or problematic.		
Restrictive L	ayer (if observed):										
Type:			_			H	ydric Soil	Present?	Yes		
Depth (inche	s):		_				-				
Remarks:						ı					
HYDROLO											
_	rology Indicators:							Secondary minimum c	Indicators  If two is required)		
l	ators (minimum of one	e is required:			20)			_			
Surface W	` '		☐ Water-Stained	,	39)			_	Soil Cracks (B6)		
_ •	r Table (A2)		Aquatic Fauna		4	Drainage Patterns (B10)					
Saturation			True Aquatic F				☐ Dry-Season Water Table (C2)				
Water Mar			☐ Hydrogen Sulf				ا ا		n Burrows (C8)		
	Deposits (B2)		Oxidized Rhize	•		g Roots (C	J3)	Saturat Imager	ion Visible on Aerial		
Drift Depo	` '		☐ Presence of R			0-11- (00)	1		or Stressed Plants (D1)		
	or Crust (B4)		Recent Iron R		ı ı ıııea ;	5011S (C6)			rphic Position (D2)		
Iron Depos	Visible on Aerial Imag	aon. (P7)	Thin Muck Sur		`				eutral Test (D5)		
	egetated Concave Su	. , ,	Gauge or Well						, a.i.a. 1 301 (2 3)		
,		illace (Do)	Other (Explain	in Remar	KS)						
Field Observ Surface Wate		Depth (incl	nes).								
Water Table F	-	Depth (incl	· -								
		<del>-</del> ' '	· -			Motlon	ما لايمايما	au Drasan	42 Vaa		
Saturation Pre (includes capi		_ Depth (incl	j.			vvetiano	u myarolo	gy Preser	t? <u>Yes</u>		
	orded Data (stream ga	auge, monitor	ing well, aerial photos	s, previous	inspec	tions), if a	vailable:				
	, 3	<del>-</del>				,.					
Domorto											
Remarks:											

Project/Site: Interstate 57 (FAI 57)		_City/County	: Marion	Samp	oling Date: 9/10/2	020			
Applicant/Owner: IDOT District 8		State: IL Sampling Point 19A							
Investigator(s): Nieset and Miernicki		Section, Township, Range: Sec. 26, T1N, R2E							
Landform (hillslope, terrace, etc.): _Excavated channel/o	litch	Local relief (concave, convex, none): Concave							
Slope (%): _<2		Long: <u>-88.9</u>	5995	D	atum: NAD 83				
Soil Map Unit Name: Racoon SIL, 0-2% slopes				NWI classificatio	n: R4SBC				
Are climatic/hydrologic conditions on the site typical for the	his time of yea	ar? Ye	s (If	no explain in Remarks.)					
Are Vegetation No , Soil No , or Hydrology No	_significantly	disturbed?		Are "Normal Circumsta	nces" present?	Yes			
Are Vegetation No , Soil No , or Hydrology No	_naturally pro	oblematic?		(If needed, explain any	answers in Rema	arks.)			
SUMMARY OF FINDINGS - Attach site map	showing	sampling	point lo	cations, transects,	important fe	atures, etc			
Hydrophytic Vegetation Present? Yes									
Hydric Soil Present? Yes		Is the Sampled Area within							
Wetland Hydrology Present? Yes			land?	Yes					
Remarks: Community type is forested wetland.									
Remarks. Community type is forested welland.									
<b>VEGETATION</b> - Use scientific names of plant	S.								
T 0:	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	ksheet:				
Tree Stratum (Plot size: 30 ft radius  1. Ulmus americana	40	Yes	FACW	<ul> <li>Number of Dominant S</li> <li>That are OBL, FACW,</li> </ul>		(4)			
Fraxinus lanceolata	10	Yes	FACW	Total Number of Domin		(A)			
3.				Species Across All Str	-1-	(B)			
4.				Percent of Dominant S	Species	(D)			
5	50	= Total Cov	/or	_ That are OBL, FACW,	or FAC:	(A/B)			
Sapling/Shrub Stratum (Plot size: 15 ft radius)		= 10tai 00	701	Prevalence Index wor	ksheet:				
1. Fraxinus lanceolata	10	Yes	FACW	Total % Cover of:					
2.				OBL species	x 1 =				
3. 4.				FACW species	x 2 =				
5.				FAC species	x 3 =				
	10	= Total Cov	/er	FACU species	x 4 =				
Herb Stratum (Plot size: 5 ft radius )	05	V	EA 0)4/	UPL species	x 5 =				
Phalaris arundinacea     Toxicodendron radicans	95 5	Yes No	FACW FAC	Column Totals	(A)	(B)			
3		110	1710		dex =B/A =				
4				Hydrophytic Vegetation					
5.				✓ 1-Rapid Test for Hy     ✓ 2-Dominance Test i	, ,	ition			
6				3-Prevalence Index					
8.				4-Morphological Ad		de supporting			
9.				data in Remarks or	on a separate sh	neet)			
10				Problematic Hydrop	hytic Vegetation	(Explain)			
Woody Vine Stratum (Plot size: 30 ft radius)	100	= Total Cov	/er	<sup>1</sup> Indicators of hydric so must be present, unles	,	0,			
1. Toxicodendron radicans	2	No	FAC	Hydrophytic					
2. Campsis radicans	1	No	FACU	- Vegetation	Voc				
	4	= Total Cov	/er	Present?	Yes				
Remarks: (Include photo numbers here or on a separa	te sheet.)								
Additional species are present in one or more strata, to on this form.	herefore the to	otal cover m	ay be great	er than the sum of the in	dividual cover va	lues listed			

SOIL Sampling Point: 19A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth	M	atrix		Redox Features								
(inches)	Color (mo	oist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	· [	Remarks		
0-1	10YR 3/2		100					SIL				
1-5	10YR 3/2		98	5YR 4/6	2	С	M	SICL				
5-9	10YR 5/2		95	5YR 3/4	5	С	M	SICI				
9-15	2.5Y 5/2		90	7.5YR 4/6	10	С	PL & M	SIL				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix												
Hydric Soil	Indicators:						I	Indicator	s for Prol	olematic Hydri	c Soils³:	
☐ Histoso	I (A1)			Sandy Gleyed I	Matrix (S4)			Co	oast Prairie	e Redox (A16)		
Histic E	pipedon (A2)			Sandy Redox (		Dark Surface (S7)						
☐ Black H	listic (A3)			Stripped Matrix	(S6)			Irc	n-Mangar	nese Masses (F	12)	
	en Sulfide (A4)			Loamy Mucky N	Mineral (F1	)		□ Ve	ery Shallov	v Dark Surface	(TF12)	
Stratifie	d Layers (A5)			Loamy Gleyed	Matrix (F2)			Ot	ther (Expla	in in Remarks)		
2 cm M	uck (A10)			✓ Depleted Matrix	(F3)			_				
Deplete	d Below Dark S	Surface (A1	1)	Redox Dark Su	rface (F6)							
Thick D	ark Surface (A1	2)		Depleted Dark	Surface (F	7)				ydrophytic veg		
Sandy N	Mucky Mineral (	S1)		Redox Depress	ions (F8)			wetlar		gy must be pre- ed or problema		
5 cm M	ucky Peat or Pe	eat (S3)							aistaib	ca or probleme	illo.	
Restrictive I	Layer (if observ	ved):										
Type:							н	vdric Soi	I Present	? Yes		
Depth (inch	es):							yu 00.		. <u> </u>		
Damadia												
Remarks:												
HYDROLO	GY											
Wetland Hy	drology Indicat	tors:								Indicators		
Primary India	cators (minimun	n of one is	required: c	heck all that apply)				(	(minimum	of two is requir	ed)	
Surface V	Vater (A1)			Water-Stained	d Leaves (	39)			Surfac	e Soil Cracks (	B6)	
☐ High Wat	er Table (A2)			Aquatic Fauna	a (B13)				Draina	ge Patterns (B	10)	
Saturation	n (A3)			True Aquatic	Plants (B1	4)		☐ Dry-Season Water Table (C2)				
☐ Water Ma	arks (B1)			Hydrogen Sul	fide Odor (	C1)			Crayfish Burrows (C8)			
Sediment	Deposits (B2)			Oxidized Rhiz	ospheres	on Livin	g Roots (C	23)	Satura	tion Visible on	Aerial	
☐ Drift Depo	osits (B3)			Presence of F	Reduced Ire	on (C4)			Image	• ' '		
Algal Mat	or Crust (B4)			Recent Iron R	eduction in	Tilled	Soils (C6)		_	d or Stressed I	` ,	
☐ Iron Depo	osits (B5)			☐ Thin Muck Su	rface (C7)				_	orphic Position	` '	
Inundatio	n Visible on Aeı	rial Imager	y (B7)	☐ Gauge or We	ll Data (D9	)	▼ FAC-Neutral Test (D5)					
Sparsely	Vegetated Con-	cave Surfa	ice (B8)	Other (Explain	n in Remar	ks)						
Field Obser	vations:					-						
Surface Wat		No	Depth (inch	es):								
Water Table	Present?	No	Depth (inch	es):								
Saturation P	resent?	No	Depth (inch	es):	_		Wetland	d Hydrold	ogy Prese	nt? Yes		
(includes car	_		, , , , , , ,	, <u> </u>				,	3,			
Describe Re	corded Data (st	ream gaug	ge, monitori	ng well, aerial photo	s, previous	sinspec	tions), if a	vailable:				
Remarks:												

US Army Corps of Engineers Midwest Region - Version 2.0

Project/Site: Interstate 57 (FAI 57) City/County: Marion Sampling Date: 9/10/202	)				
Applicant/Owner: IDOT District 8 State: IL Sampling Point 20A	State: IL Sampling Point 20A				
Investigator(s): Nieset and Miernicki  Section, Township, Range: Sec. 26, T1N, R2E					
Landform (hillslope, terrace, etc.): Excavated channel/ditch Local relief (concave, convex, none): Concave					
Slope (%): <2 Lat: <u>38.49273</u> Long: <u>-88.95997</u> Datum: <u>NAD 83</u>					
Soil Map Unit Name: Racoon SIL, 0-2% 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?					
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remark	ŝ.)				
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important feat	ures, etc				
Hydrophytic Vegetation Present? Yes					
Hydric Soil Present? Yes Is the Sampled Area within					
Wetland Hydrology Present? Yes a Wetland? Yes					
Remarks: Community type is wet meadow.					
VEGETATION - Use scientific names of plants.					
Absolute Dominant Indicator Dominance Test worksheet:					
Tree Stratum (Plot size: 30 ft radius	(A)				
2 Total Number of Dominant	` ′				
3 Species Across All Strata:4	(B)				
5. Percent of Dominant Species That are OBL, FACW, or FAC: 75%					
0 = Total Cover	(A/B)				
Sapling/Shrub Stratum (Plot size: 15 ft radius)  Prevalence Index worksheet:					
1. Fraxinus lanceolata  10 Yes FACW Total % Cover of: Multiply by:					
2 OBL species x 1 =					
FACW species X2 =					
5. FAC species x 3 =	_				
10 = Total Cover FACU species x 4 =	_				
Herb Stratum (Plot size: 5 ft radius)  UPL species x 5 =					
1. Bidens aristosa 25 Yes FACW Column Totals (A) 2. Juncus brachycarpus 25 Yes FACW Providence Index = P(A)	(B)				
3. Campsis radicans  20 Yes FACU  Prevalence Index =B/A =					
4. Pycnanthemum tenuifolium 10 No FAC <b>Hydrophytic Vegetation Indicators</b>					
5. Scirpus georgianus 10 No OBL 1-Rapid Test for Hydrophytic Vegetation	ก				
6. Echinochloa muricata 5 No OBL   ✓ 2-Dominance Test is >50%					
7. Iva annua 5 No FAC 3-Prevalence Index is < or =3.01					
8. Toxicodendron radicans 5 No FAC 4-Morphological Adaptations ¹(Provide 9. Solidago canadensis 3 No FACU data in Remarks or on a separate sheet					
10. Vernonia missurica  2 No FAC  Problematic Hydrophytic Vegetation¹ (B	,				
Troblemate Tryatophysic Vegetation (E	. ,				
Woody Vine Stratum (Plot size: 30 ft radius)  110 = Total Cover    ¹Indicators of hydric soil and wetland hydromust be present, unless disturbed or prob  1.    Hydrophytic					
2. Hydrophytic Vegetation					
0 = Total Cover Present? Yes					
Remarks: (Include photo numbers here or on a separate sheet.)					

SOIL Sampling Point: 20A

Profile De	scription: (Describe to	the depth r	needed to document	the indi	cator or	confirm	the absence	of indicators.)
Depth	Matrix		Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Remarks
0-1	10YR 3/1	99	10YR 4/6	1	С	PL	SIL	
1-2	10YR 4/2	98	5YR 4/6	2	С	M	SIL	
2-12	10YR 5/2	98	7.5YR 4/6	2	С	М	SICL	
<sup>1</sup> Type: C=Co	oncentration, D=Depletion	n, RM=Redu	uced Matrix, MS=Mas	ked Sand	d Grains.		² Lo	cation: PL=Pore Lining, M=Matrix
Hydric Soil							Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histoso	l (A1)		Sandy Gleyed N	1atrix (S4	.)		Coas	st Prairie Redox (A16)
Histic E	pipedon (A2)		Sandy Redox (S	55)			☐ Dark	Surface (S7)
☐ Black H	listic (A3)		Stripped Matrix	(S6)			Iron-	Manganese Masses (F12)
☐ Hydrog	en Sulfide (A4)		Loamy Mucky M	lineral (F	1)		☐ Very	Shallow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loamy Gleyed N	∕latrix (F2	2)		Othe	r (Explain in Remarks)
2 cm M	uck (A10)		Depleted Matrix					
	ed Below Dark Surface (	A11)	Redox Dark Sur	` '				
	ark Surface (A12)		Depleted Dark S	,	<del>-</del> 7)			ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Redox Depressi	ons (F8)			wetland i	nydrology must be present, unless disturbed or problematic.
5 cm M	ucky Peat or Peat (S3)							distarbed of problematic.
Restrictive	Layer (if observed):							
Туре:			_			н	lydric Soil P	resent? Yes
Depth (inch	es):		_				,	
Remarks:								
ixemaiks.								
HYDROLO	OGY							
-	drology Indicators:							condary Indicators
	cators (minimum of one	is required:					(1111	nimum of two is required)
	Water (A1)		Water-Stained		(B9)			Surface Soil Cracks (B6)
	ter Table (A2)		Aquatic Fauna					Drainage Patterns (B10)
Saturatio			True Aquatic F	•	•			Dry-Season Water Table (C2)
Water Ma	` ,		Hydrogen Sulf	ide Odor	(C1)		✓	Crayfish Burrows (C8)
Sedimen	t Deposits (B2)		Oxidized Rhize	ospheres	on Living	Roots (	C3)	Saturation Visible on Aerial
	osits (B3)		Presence of R	educed I	ron (C4)			Imagery (C9)
	t or Crust (B4)		Recent Iron Re			Soils (C6)		Stunted or Stressed Plants (D1)
Iron Depo	` '		Thin Muck Sur	face (C7	)			Geomorphic Position (D2)
_	n Visible on Aerial Imag	, ,	Gauge or Well	Data (D	9)		•	FAC-Neutral Test (D5)
☐ Sparsely	Vegetated Concave Su	rface (B8)	Other (Explain	in Rema	ırks)			
Field Obser								
Surface Wat	ter Present? No	Depth (inc	· -					
Water Table	Present? No	Depth (inc	hes):					
Saturation P		Depth (inc	hes):			Wetlan	d Hydrology	Present? Yes
'	pillary fringe)		at a second of the second					
Describe Re	corded Data (stream ga	uge, monitoi	ring well, aerial photos	s, previou	ıs ınspect	ions), if a	available:	
Remarks:								

Project/Site: Interstate 57 (FAI 57)		_City/County	/: Marion		_ Sampling	Date: 9/10/20	)20		
Applicant/Owner: IDOT District 8				State: IL	_ Sampling	Point 21A			
Investigator(s): Nieset and Miernicki		Sect	ion, Township, Range: Sec. 26, T1N, R2E						
Landform (hillslope, terrace, etc.): Excavated channel/ditch		Lo	ocal relief (c	oncave, convex,	none): Cor	ncave			
Slope (%): <1 Lat: <u>38.49083</u>									
Soil Map Unit Name: Bluford SIL, 2-5% slopes				NWI clas	sification: U	l			
Are climatic/hydrologic conditions on the site typical for this tim	e of yea	ar? Ye	s (If r	no explain in Ren	narks.)				
Are Vegetation No , Soil No , or Hydrology No signi	ficantly	disturbed?		Are "Normal Cir	cumstances	s" present? _	Yes		
Are Vegetation No , Soil No , or Hydrology No natur	rally pro	oblematic?		(If needed, expl	ain any ansv	wers in Rema	rks.)		
SUMMARY OF FINDINGS - Attach site map sho	wing	sampling	point lo	cations, trans	sects, im	portant fea	atures, etc		
Hydrophytic Vegetation Present? Yes									
Hydric Soil Present? Yes		Is the	Sampled A	Area within					
Wetland Hydrology Present? Yes			land?		'es				
Remarks: Community type is marsh.									
VEGETATION - Use scientific names of plants.									
	olute	Dominant	Indicator	Dominance Te	est workshe	et:			
Tree Stratum (Plot size: 30 ft radius % 0	Cover	Species?	Status	Number of Dor That are OBL,			(A)		
2				Total Number			(' ')		
3.				Species Across			(B)		
5.				Percent of Don That are OBL,		٠, ٠,			
Opening (Ohard Ottobary (Districts 45 ft redition)	0	= Total Cov	⁄er			-	(A/B)		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Ind		eet: Multiply_b	٧٠		
1				OBL species	01 01.	x 1 =	•		
J				FACW species	<u> </u>	•			
4 5.				FAC species		x 3 =			
- C.	0	= Total Cov	/er	FACU species		x 4 =			
Herb Stratum (Plot size: 5 ft radius )				UPL species		x 5 =			
1. Phragmites australis	90	Yes	FACW	Column Totals		(A)	(B)		
Agrostis gigantea     Rumex crispus	5 2	No No	FACW FAC	Preval	ence Index :	=B/A =			
4.				Hydrophytic Ve	•				
5				✓ 1-Rapid Tes	, ,	, 0	ion		
6. 7				2-Dominand 3-Prevalence					
7. 8.				1 —		tions ¹(Provid	e supportina		
9				data in Rem	arks or on a	a separate she c Vegetation¹	eet)		
Woody Vine Stratum (Plot size: 30 ft radius)			ver	<sup>1</sup> Indicators of h must be preser					
1. 2.	0	= Total Cov	/er	Hydrophytic Vegetation Present?	Y6	es_			
Remarks: (Include photo numbers here or on a separate sheet	et.)								

SOIL Sampling Point: 21A

Profile Des	cription: (Describe to	the depth n	eeded to document	the indic	cator or o	confirm	the absence	ce of indic	ators.)
Depth _	Matrix		Redox F	eatures					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Re	emarks
0-6	10YR 5/3	98	7.5YR 4/6	2	С	М	SICL		
6-12	10YR 4/2	95	5YR 3/4	2	С	M	SIL		
6-12			7.5YR 4/6	3	С	М			
-									
	ncentration, D=Depletio	n, RM=Redu	ced Matrix, MS=Mask	ced Sand	Grains.				L=Pore Lining, M=Matrix
Hydric Soil II							Indicators	for Proble	ematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Gleyed M	• •	)		Coa	ast Prairie	Redox (A16)
	pipedon (A2)		Sandy Redox (S				Daı	rk Surface	(S7)
Black Hi			Stripped Matrix (				Iror	n-Mangane	se Masses (F12)
	n Sulfide (A4)		Loamy Mucky M				Ver	ry Shallow	Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed M		)		Oth	ner (Explain	n in Remarks)
2 cm Mu			✓ Depleted Matrix						
_ :	Below Dark Surface (A	A11)	Redox Dark Surf	` ,	\		3.1		
	ark Surface (A12)		Depleted Dark S	,	· 7)				drophytic vegetation and must be present, unless
	lucky Mineral (S1)		Redox Depression	ons (F8)			Wotland		d or problematic.
	cky Peat or Peat (S3)								
Restrictive L	ayer (if observed):								
Type:			=			Н	lydric Soil	Present?	Yes
Depth (inche	s):		_						
Remarks:									
HYDROLO	GY								
	rology Indicators:						9	econdary I	ndicators
_	ators (minimum of one	is required: c	check all that annly)						f two is required)
Surface W	•	io roquirou. c	Water-Stained	Leaves (	'B9)		<u> </u>	Surface	Soil Cracks (B6)
	er Table (A2)		Aquatic Fauna	,	(00)			_	e Patterns (B10)
Saturation	` '		☐ True Aquatic P		4)				son Water Table (C2)
Water Mai			Hydrogen Sulfi				Г		Burrows (C8)
	Deposits (B2)		Oxidized Rhizo			Roots (	C3) [	-	on Visible on Aerial
Drift Depo			☐ Presence of Re	•	ū	(1,0010 (		Imagery	
_ :	or Crust (B4)		Recent Iron Re			Soils (CA)	, [	Stunted	or Stressed Plants (D1)
Iron Depos			☐ Thin Muck Surf			, ce ( e e )	′ <u>.</u>	Geomor	phic Position (D2)
	Visible on Aerial Imag	ery (B7)	Gauge or Well				•	✓ FAC-Ne	utral Test (D5)
	egetated Concave Sur	, ,	Other (Explain						
Field Observ	rations:				/				
Surface Water		Depth (inch	nes):						
Water Table I	Present? No	Depth (inch	nes):						
Saturation Pro	esent? No	Depth (inch	nes):			Wetlan	d Hydrolog	gy Present	t? Yes
(includes cap		- ' '	,						
Describe Rec	orded Data (stream ga	uge, monitori	ing well, aerial photos	, previou	s inspect	ions), if a	available:		
Remarks:									

Project/Site: Interstate 57 (FAI 57)		City/County	: Marion	Samplin	g Date: 9/10/202	20
Applicant/Owner: IDOT District 8				State: IL Samplin	g Point 22A	
Investigator(s): Nieset and Miernicki		Sect	ion, Townsl	nip, Range: Sec. 35, T1N,	R2E	
Landform (hillslope, terrace, etc.): Excavated channel/ditch			ocal relief (c	concave, convex, none): C	concave	
Slope (%): <u>2-3</u> Lat: <u>38.48973</u>		Long: -88.9	6005	Date	um: NAD 83	
Soil Map Unit Name: Bluford SIL, 0-2% slopes				NWI classification:	U	
Are climatic/hydrologic conditions on the site typical for this	time of vea	ar? Ye	s (If ı	no explain in Remarks.)		
Are Vegetation No , Soil No , or Hydrology No s	-			Are "Normal Circumstance	es" present?	Yes
Are Vegetation No , Soil No , or Hydrology No n				(If needed, explain any an		
SUMMARY OF FINDINGS - Attach site map s	howing	sampling	point lo	cations, transects, ir	nportant teat	tures, etc
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes				Area within		
Wetland Hydrology Present? Yes		a Wet	land?	Yes		
Remarks: Community type is wet meadow.						
<b>VEGETATION</b> - Use scientific names of plants.						
	Absolute	Dominant	Indicator	Dominance Test works	heet:	
Tree Stratum (Plot size: 30 ft radius 1.	% Cover	Species?	Status	Number of Dominant Spe That are OBL, FACW, or		(A)
2.				Total Number of Domina		` ,
3. 4.				Species Across All Strata	-	(B)
5.				<ul> <li>Percent of Dominant Spe That are OBL, FACW, or</li> </ul>		<b>6</b> (1.15)
O 11 (O) 1 O (O) (D) 1 45 ft and live)	0	= Total Cov	⁄er			(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index works  Total % Cover of:		
1				OBL species	x 1 =	
3.				FACW species	x 2 =	<del></del>
4.				FAC species	x 3 =	<del></del>
5				FACU species	x 4 =	
Herb Stratum (Plot size: 5 ft radius )	0	= Total Cov	er er	UPL species	x 5 =	
Agrostis gigantea	30	Yes	FACW	Column Totals	(A)	(B)
2. Bidens aristosa	30	Yes	FACW	Prevalence Inde		
3. Apocynum cannabinum	25	Yes	FAC			
4. Toxicodendron radicans	10	No	FAC	Hydrophytic Vegetation		
5. Helianthus grosseserratus	<u>8</u> 5	No	FACW FAC	1-Rapid Test for Hydro		)TI
6. Iva annua 7. Vernonia missurica	<u> </u>	No No	FAC	✓ 2-Dominance Test is >     ✓ 2-Dominance Test is >		
Solidago canadensis	2	No	FACU	3-Prevalence Index is		
0		110	1 700	4-Morphological Adap data in Remarks or on		
9. 10.				Problematic Hydrophy	•	,
	115	= Total Cov	or	¹Indicators of hydric soil a	,	. ,
Woody Vine Stratum (Plot size: 30 ft radius)			/ei	must be present, unless		
1.				Hydrophytic		
2	0	= Total Cov	/er	Vegetation Present?	Yes	
Demonto, (Include whate guest-see have as a second		. 5.2. 550		i resent:		
Remarks: (Include photo numbers here or on a separate s	sneet.)					

SOIL Sampling Point: 22A

Profile De	scription: (Describe to	the depth r	needed to document	the indi	cator or	confirm	the absenc	e of indica	ators.)
Depth	Matrix		Redox	Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Re	marks
0-3	10YR 5/3	100					SIL		
3-6	10YR 5/2	98	7.5YR 4/6	2	С	M	SIL		
6-10	10YR 5/2	97	7.5YR 5/8	3	С	М	SIL		
	oncentration, D=Depletion	n, RM=Redu	uced Matrix, MS=Mas	ked Sand	Grains.				_=Pore Lining, M=Matrix
Hydric Soil							Indicators	for Proble	ematic Hydric Soils <sup>3</sup> :
Histoso	,		Sandy Gleyed M	•	)		Coa	st Prairie F	Redox (A16)
	pipedon (A2)		Sandy Redox (S				Darl	k Surface (	S7)
	listic (A3)		Stripped Matrix				Iron	-Manganes	se Masses (F12)
	en Sulfide (A4)		Loamy Mucky M				Very	/ Shallow [	Dark Surface (TF12)
	ed Layers (A5)		Loamy Gleyed N		.)		Othe	er (Explain	in Remarks)
	uck (A10)	A 4 4 \	✓ Depleted Matrix						
	ed Below Dark Surface (	A11)	Redox Dark Sur	` '	\		31	( <b>(</b>	manda d'a coma de Cara de d
_	Oark Surface (A12)		Depleted Dark S	,	-7)				rophytic vegetation and must be present, unless
	Mucky Mineral (S1)		Redox Depressi	ons (F8)			Wottana		or problematic.
	ucky Peat or Peat (S3)					1			•
	Layer (if observed):								
Type:			_			Н	lydric Soil I	Present?	Yes
Depth (inch	es): <u>10</u>		_						
Remarks:									
HYDROLO	OGY								
Wetland Hy	drology Indicators:						Se	condary Ir	ndicators
Primary Indi	cators (minimum of one	is required:	check all that apply)				(m	inimum of	two is required)
☐ Surface \	Vater (A1)			Leaves	(B9)			Surface	Soil Cracks (B6)
☐ High Wat	ter Table (A2)		Aquatic Fauna	(B13)				Drainage	Patterns (B10)
☐ Saturatio	n (A3)		True Aquatic F	Plants (B1	4)			Dry-Seas	son Water Table (C2)
	arks (B1)		Hydrogen Sulf	ide Odor	(C1)		•	Crayfish	Burrows (C8)
Sedimen	t Deposits (B2)		Oxidized Rhize	ospheres	on Living	Roots (	C3)	Saturation	on Visible on Aerial
☐ Drift Dep	osits (B3)		Presence of R	educed I	on (C4)			Imagery	• •
Algal Mat	t or Crust (B4)		Recent Iron Re	eduction i	n Tilled S	Soils (C6)			or Stressed Plants (D1)
☐ Iron Depo	osits (B5)		Thin Muck Sur	face (C7)	)		=		ohic Position (D2)
Inundation	n Visible on Aerial Imag	jery (B7)	☐ Gauge or Well	Data (D9	9)		✓	¹ FAC-Ne≀	utral Test (D5)
Sparsely	Vegetated Concave Su	rface (B8)	Other (Explain	in Rema	rks)				
Field Obser	vations:								
Surface Wat	ter Present? No	Depth (inc	hes):						
Water Table	Present? No	Depth (inc	hes):						
Saturation P		Depth (inc	hes):			Wetlan	d Hydrolog	y Present	? <u>Yes</u>
'	pillary fringe)		ring wall serial state.		a la== - : :	ional "	wellett:		
Describe Re	corded Data (stream ga	iuge, monitoi	iing weii, aeriai photos	s, previou	s inspect	ions), it a	avaliable:		
Remarks:									
İ									

Project/Site: Interstate 57 (FAI 57)		_City/Count	y: Marion	Sampling t	Date: 9/21/2020	
Applicant/Owner: IDOT District 8				State: IL Sampling F	Point 23A	
Investigator(s): Nieset and Miernicki		Sec	tion, Towns	hip, Range: Sec. 35, T1N, R	2E	
			ocal relief (	concave, convex, none): Con	cave	
Slope (%): <1 Lat: 38.47894		Long: -88.9	5922	Datum	: NAD 83	
Soil Map Unit Name: Creal SIL, 2-5% slopes, rarely floor		<u> </u>		NWI classification: U		
Are climatic/hydrologic conditions on the site typical for the		ar? Vo	oc (If	no explain in Remarks.)		
	-				l necont?	/00
Are Vegetation No, Soil No, or Hydrology No				Are "Normal Circumstances"		
Are Vegetation No , Soil No , or Hydrology No	_naturally pr	oblematic?		(If needed, explain any answ	ers in Remarks.	.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling	point lo	cations, transects, imp	ortant featu	res, e
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes		Is the	Sampled	Area within		
Wetland Hydrology Present? Yes			land?	Yes_		
Veliand Hydrology Freschit: 165						
Remarks: Community type is forested wetland.						
<b>VEGETATION</b> - Use scientific names of plants	3.					
	Absolute	Dominant	Indicator	Dominance Test workshee	et:	
Tree Stratum (Plot size: 30 ft radius	% Cover	Species?	Status	Number of Dominant Specie		
1. Acer saccharinum	40	Yes	FACW	That are OBL, FACW, or FA	AC: 7	(A)
Quercus palustris     Ulmus rubra	20 15	Yes Yes	FACW FAC	Total Number of Dominant Species Across All Strata:	7	
4.	10	103	170	Percent of Dominant Specie		(B)
5.				That are OBL, FACW, or FA		(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)	75	= Total Co	ver	Prevalence Index workshe		(A/D)
1. Ulmus rubra	5	Yes	FAC	Total % Cover of:	Multiply by:	
2.		103	170	OBL species	x 1 =	-
3.				FACW species	x 2 =	_
4				FAC species	x 3 =	-
5				FACU species	x 4 =	-
Herb Stratum (Plot size: 5 ft radius )	5	= Total Co	ver	UPL species	x5=	_
1. Aster lanceolatus	20	Yes	FAC	Column Totals	-	– (B)
Persicaria hydropiperoides	15	Yes	OBL		(A)	_ (B)
3. Senecio glabellus	15	Yes	FACW	Prevalence Index =	-	_
4. Glyceria striata	10	No	OBL	Hydrophytic Vegetation Inc		
5. Carex squarrosa	5	No	OBL	1-Rapid Test for Hydroph	-	
6. <u>Cinna arundinacea</u> 7.	5	No	FACW	2-Dominance Test is >50 3-Prevalence Index is < 0		
8.				3-Prevalence index is < 0		unnortin
9.				data in Remarks or on a		
10		-		Problematic Hydrophytic	Vegetation <sup>1</sup> (Ex	plain)
	70	= Total Co	ver	¹Indicators of hydric soil and		
Woody Vine Stratum (Plot size: 30 ft radius)  1. Toxicodendron radicans	1	No	FAC	must be present, unless dis	turbed or proble	matic.
2.	I	No	FAC	Hydrophytic		
<del></del> -		= Total Co	uor.	Vegetation Present? Ye	s	
	1					

SOIL Sampling Point: 23A

I I O I I I C D C 3	cription: (Describe to	the depth n	eeded to document	the indi	cator or o	confirm	the absence of	of indicators.)
	Matrix			Features				· · · · · · · · · · · · · · · · · · ·
Depth _ (inches)	Color (moist)	<u></u> %	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Remarks
0-4	10YR 4/1	97	5YR 4/6	1	C	M	SIL	, tomano
0-4			2.5Y 6/2	2	D	М		
4-12	10YR 5/2	98	7.5YR 4/6	2	С	М	SIL	
12-15+	10YR 5/2	97	7.5YR 4/6	3	С	M	SIL	
<sup>1</sup> Type: C=Cor	ncentration, D=Depleti	on, RM=Redu	ced Matrix, MS=Mas	ked Sand	l Grains.		² Loc	ation: PL=Pore Lining, M=Matrix
Hydric Soil II	ndicators:						Indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gleyed N	/latrix (S4	)		Coast	Prairie Redox (A16)
Histic Ep	pipedon (A2)		Sandy Redox (S	S5)			_	Surface (S7)
Black Hi	stic (A3)		Stripped Matrix	(S6)				anganese Masses (F12)
Hydroge	n Sulfide (A4)		Loamy Mucky N	lineral (F	1)			Shallow Dark Surface (TF12)
Stratified	l Layers (A5)		Loamy Gleyed I	Matrix (F2	2)			(Explain in Remarks)
2 cm Mu	ick (A10)		✓ Depleted Matrix	(F3)			_	,
Depleted	Below Dark Surface	(A11)	Redox Dark Sur	face (F6)				
Thick Da	ark Surface (A12)		Depleted Dark S	Surface (F	7)			s of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Redox Depress	ons (F8)				/drology must be present, unless listurbed or problematic.
5 cm Mu	cky Peat or Peat (S3)							isturbed or problematic.
Restrictive L	ayer (if observed):							
Type:			_				Hydric Soil Pre	esent? Yes
Depth (inche	es):		_			•	.,	<u> </u>
Remarks:								
itemarks.								
HYDROLO	GY							
_	rology Indicators:							ondary Indicators
Primary Indica	ators (minimum of one	e is required: c	heck all that apply)				(min	imum of two is required)
Surface W	ater (A1)			Leaves	(B9)			Surface Soil Cracks (B6)
High Wate	er Table (A2)		Aquatic Fauna	a (B13)			I	Orainage Patterns (B10)
Saturation	(A3)		☐ True Aquatic I	Plants (B1	14)		]	Ory-Season Water Table (C2)
Water Mai	rks (B1)		Hydrogen Sulf	ide Odor	(C1)		<b>✓</b> (	Crayfish Burrows (C8)
Sediment	Deposits (B2)		Oxidized Rhiz	ospheres	on Living	g Roots (		Saturation Visible on Aerial
Drift Depo	sits (B3)		☐ Presence of R	educed I	ron (C4)			magery (C9)
Algal Mat	or Crust (B4)		Recent Iron R	eduction i	in Tilled S	Soils (C6	')	Stunted or Stressed Plants (D1)
Iron Depos	` '		☐ Thin Muck Su	rface (C7)	)		=	Geomorphic Position (D2)
	Visible on Aerial Ima	<b>5</b> , ,	Gauge or Wel	Data (D	9)		<b>✓</b> 1	FAC-Neutral Test (D5)
✓ Sparsely \	egetated Concave Su	ırface (B8)	Other (Explain	in Rema	rks)			
Field Observ								
Surface Wate	er Present? No	_ Depth (inch	es):					
	Present? No	Depth (inch	es):					
Water Table I	1000111.					Wetlar	nd Hydrology	Present? Yes
Saturation Pro	esent? No	Depth (inch	ies):					
Saturation Pro (includes cap	esent? No illary fringe)	_ ` `	•			ion=\ '	ovoile bla	<del></del>
Saturation Pro (includes cap	esent? No	_ ` `	•	s, previou	s inspect	tions), if	available:	
Saturation Pro (includes cap	esent? No illary fringe)	_ ` `	•	s, previou	s inspect	tions), if	available:	<del></del>
Saturation Pro (includes cap	esent? No illary fringe)	_ ` `	•	s, previou	s inspect	tions), if	available:	

Project/Site: Interstate 57 (FAI 57)		City/County	: Marion	Sa	mpling Date: 9/10/202	20	
Applicant/Owner: IDOT District 8				State: IL Sa	mpling Point 24A		
Investigator(s): Nieset and Miernicki	tion, Towns	nship, Range: Sec. 34, T1N, R2E					
Landform (hillslope, terrace, etc.): Excavated depression	n	Lo	ocal relief (d	concave, convex, none	e): Concave		
Slope (%): <u>1-2</u> Lat: <u>38.47635</u>	L	ong: <u>-88.9</u>	6009		Datum: NAD 83		
Soil Map Unit Name: Bluford SIL, 2-5% slopes				NWI classifica	ation: U		
Are climatic/hydrologic conditions on the site typical for t	his time of yea	r? Ye	s (If	no explain in Remarks	s.)		
Are Vegetation No , Soil No , or Hydrology No	_significantly	disturbed?		Are "Normal Circums	stances" present?	Yes	
Are Vegetation No , Soil No , or Hydrology No	_naturally prol	blematic?		(If needed, explain a	ny answers in Remar	ks.)	
SUMMARY OF FINDINGS - Attach site map	showing s	ampling	point lo	cations, transect	ts, important fea	tures, etc	
Hydrophytic Vegetation Present? Yes							
Hydric Soil Present? Yes		Is the	Sampled A	Area within			
Wetland Hydrology Present? Yes			land?	Yes	_		
Remarks: Community type is wet meadow.							
remaine. Community type is wet meadow.							
VEGETATION - Use scientific names of plant				T			
Tree Stratum (Diet size: 20 ft redius		Dominant Species?	Indicator Status	Dominance Test w			
Tree Stratum (Plot size: 30 ft radius 1.			<u> </u>	<ul> <li>Number of Dominar</li> <li>That are OBL, FAC</li> </ul>		(A)	
2				Total Number of Do	minant	(7.0)	
3.				Species Across All		(B)	
5.				<ul><li>Percent of Dominar</li><li>That are OBL, FAC</li></ul>	ΛΛ/ FΛC.	()	
Opening (Objects Opening Charles)	0	= Total Cov	/er			(A/B)	
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index w	/orksneet: f: Multiply by		
1				OBL species	x 1 =		
3					x 2 =		
4 5.				FAC species	x 3 =		
J	0 :	= Total Cov	/or	FACU species	x 4 =		
Herb Stratum (Plot size: 5 ft radius )		= 10tai 00	701	UPL species	x 5 =		
Echinochloa muricata	65	Yes	OBL	Column Totals	(A)	(B)	
Persicaria punctata     Setaria glauca	10 10	No No	OBL FAC	Prevalence	Index =B/A =		
Cyperus esculentus	5	No	FACW	Hydrophytic Vegeta	ation Indicators		
5. Iva annua	5	No	FAC	_ ·	Hydrophytic Vegetation	on	
6. Ipomoea lacunosa	2	No	FACW	2-Dominance Te			
7. 8.				3-Prevalence Inc	iex is < or =3.0° Adaptations ¹(Provide	supporting	
9.					or on a separate she		
10				Problematic Hyd	rophytic Vegetation1 (	Explain)	
Woody Vine Stratum (Plot size: 30 ft radius)		= Total Cov	/er		soil and wetland hyd nless disturbed or prob		
1				Hydrophytic			
		= Total Cov	/er	Vegetation Present?	Yes		
Pomorko: (Ingludo abeta aumbare lasta a a a a a a							
Remarks: (Include photo numbers here or on a separa	te sneet.)						
1							

SOIL Sampling Point: 24A

Profile Des	crintion: (Descr	ibe to the denth r	needed to document	the indic	ator or	confirm t	he absenc	e of indica	ators )
	. `	•			o.		4500110	o or maioc	
Depth _	Mat			Features 0/	<b>-</b> 1	. 2	T t	_	
(inches) 0-2	Color (mois 10YR 3/2	t) % 99	Color (moist) 7.5YR 4/6	<u>%</u> 1	Type <sup>1</sup> C	Loc <sup>2</sup>	Texture SIL	Re	marks
2-5	10YR 3/2	98	5YR 4/6	2	C	PL & M	SIL		
5-9	2.5Y 4/2	98	7.5YR 4/6	2	C	PL	SICL		
9-15	2.5Y 5/2	97	7.5YR 4/6	3	C	PL + M	SICL		
	2.0 . 0/2	<u></u>					0.02		
-									
<sup>1</sup> Type: C=Cor	ncentration, D=D	epletion, RM=Redu	iced Matrix, MS=Mas	ked Sand	Grains.				_=Pore Lining, M=Matrix
Hydric Soil I	ndicators:						Indicators	for Proble	ematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Gleyed M	1atrix (S4)			☐ Coa	st Prairie F	Redox (A16)
☐ Histic Ep	oipedon (A2)		Sandy Redox (S	55)				k Surface (	` '
Black Hi	stic (A3)		Stripped Matrix	(S6)					se Masses (F12)
Hydroge	n Sulfide (A4)		Loamy Mucky M	lineral (F1	)			_	Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed N	•	,				in Remarks)
	ick (A10)		✓ Depleted Matrix					ei (Expiairi	iii Keiliaiks)
_	d Below Dark Sur	face (A11)	Redox Dark Sur	` '					
	ark Surface (A12)	,	Depleted Dark S	` '	7)		3 Indica	tore of hyd	rophytic vegetation and
	lucky Mineral (S1		Redox Depressi	,	• ,				must be present, unless
	icky Peat or Peat	,	Redux Deplessi	0113 (1 0)					or problematic.
5 CITI IVIC	icky real of real	(33)							
Restrictive L	ayer (if observe	d):							
Type:			_			н	ydric Soil	Present?	Yes
Depth (inche	es):		_				•		
Remarks:									
Remarks.									
İ									
HYDROLO	GY								
		re:					9/	ocondon/ Ir	odicators
-	Irology Indicato		abook all that apply					econdary Ir ninimum of	two is required)
		or one is required: (	check all that apply)		D0)		<u></u>	_	
Surface W	` ,		Water-Stained	,	B9)		L	_	Soil Cracks (B6)
	er Table (A2)		Aquatic Fauna				Ĺ		Patterns (B10)
Saturation	` '		True Aquatic F	•	•		L		son Water Table (C2)
Water Ma	` '		Hydrogen Sulf				· · · · · · · · · · · · · · · · · · ·		Burrows (C8)
Sediment	Deposits (B2)		Oxidized Rhize	ospheres	on Livin	g Roots (C	C3)		n Visible on Aerial
☐ Drift Depo	sits (B3)		Presence of R	educed Ir	on (C4)			Imagery	` '
Algal Mat	or Crust (B4)		Recent Iron Re	eduction in	n Tilled	Soils (C6)	L	_	or Stressed Plants (D1)
☐ Iron Depo	sits (B5)		Thin Muck Sur	face (C7)			•	✓ Geomorp	phic Position (D2)
Inundation	Nisible on Aeria	l Imagery (B7)	Gauge or Well				V	🖊 FAC-Neu	utral Test (D5)
Sparsely \	egetated Conca	ve Surface (B8)	Other (Explain	•	,				
Field Observ	otional	. ,			,				
Surface Water		No Depth (incl	nes):						
Water Table		No Depth (incl	· -						
		· ` `	· -			144 41			• •
Saturation Pr (includes cap		No Depth (incl	nes):			Wetian	d Hydrolog	ly Present	? <u>Yes</u>
,		am daude monitor	ring well, aerial photos	nreviou	e inener	rtions) if a	vailable:		
Describe Med	orueu Dala (Sile	am gauge, monitor	ing weii, aenai photos	, previous	s mopet	niona), n a	valiable.		
Remarks:									

Project/Site: Interstate 57 (FAI 57)	City	//County	y: Marion	sa	mpling Date: 9/21/2020
Applicant/Owner: IDOT District 8				State: IL Sa	mpling Point 24B
Investigator(s): Nieset and Miernicki		Sect	tion, Townsl	hip, Range: Sec. 35,	T1N, R2E
Landform (hillslope, terrace, etc.): Excavated channel/ditch		Lo	ocal relief (c	concave, convex, none	e): Concave
Slope (%): <1 Lat: 38.47775	Lon	g: <u>-88.9</u>	5945		Datum: NAD 83
Soil Map Unit Name: Bluford SIL, 2-5% slopes				NWI classifica	ation: U
Are climatic/hydrologic conditions on the site typical for this time of	year?	Ye	s (If i	no explain in Remarks	s.)
Are Vegetation No , Soil No , or Hydrology No significar					stances" present? Yes
Are Vegetation No , Soil No , or Hydrology No naturally	-				ny answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin					
Hydrophytic Vegetation Present? Yes					
Hydric Soil Present? Yes		Is the	Sampled A	Area within	
Wetland Hydrology Present? Yes			land?	Yes	
Remarks: Community type is wet meadow.					
VEGETATION - Use scientific names of plants.					
Absolut		minant ecies?	Indicator	Dominance Test w	orksheet:
Tree Stratum (Plot size: 30 ft radius 76 Covernation 1.			Status	Number of Dominar That are OBL, FAC	
2.				Total Number of Do	minant
3.				Species Across All	(D)
5.				<ul><li>Percent of Dominar</li><li>That are OBL, FAC</li></ul>	Λ/ or ΕΛC:
	= T	otal Cov	/er		(A/B)
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Prevalence Index w	f: Multiply by:
1. 2.				OBL species	x 1 =
3.				FACW species	x 2 =
4				FAC species	x 3 =
5		otal Cov		FACU species	x 4 =
Herb Stratum (Plot size: 5 ft radius )	= '	otal Co	/EI	UPL species	x 5 =
1. Bidens aristosa 35	j	Yes	FACW	Column Totals	(A) (B)
<ul><li>2. Agrostis gigantea</li><li>3. Echinochloa muricata</li><li>20</li></ul>		Yes	FACW OBL	Prevalence	Index =B/A =
4. Juncus brachycarpus 10		No No	FACW	Hydrophytic Vegeta	ation Indicators
5. Pycnanthemum tenuifolium 5		No	FAC	✓ 1-Rapid Test for	Hydrophytic Vegetation
6. Setaria glauca 5		No	FAC	2-Dominance Te	
7. Diospyros virginiana 2		No	FAC	3-Prevalence Inc	
8. 9.					Adaptations <sup>1</sup> (Provide supporting or on a separate sheet)
10.					rophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size: 30 ft radius)  1.		otal Cov	/er		soil and wetland hydrology lless disturbed or problematic.
				Hydrophytic Vegetation	

SOIL Sampling Point: 24B

Profile Des	cription: (Describe to	the depth n	needed to document	the indic	ator or o	confirm t	the absence	e of indicators.)
Depth _	Matrix		Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc²	Texture	Remarks
0-1	10YR 4/2	99	7.5YR 5/8	1	С	M	SICL	
1-6	10YR 4/2	97	7.5YR 5/8	2	С	M	SICL	
1-6 6-10	2.5Y 5/2	07	10YR 5/2 7.5YR 4/6	1	D	M M	SICL	
10-15	10YR 6/2	97 95	7.5YR 4/6	<u>3</u> 5	C	M	SICL	
10 10	10111 0/2		7.011( 1/0				0.02	
							2	
	centration, D=Depletion	n, RM=Redu	uced Matrix, MS=Mas	ked Sand	Grains.			ocation: PL=Pore Lining, M=Matrix
Hydric Soil Ir							Indicators f	for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Gleyed N	, ,	)		Coas	st Prairie Redox (A16)
	ipedon (A2)		Sandy Redox (S				Dark	Surface (S7)
Black His			Stripped Matrix				Iron-	Manganese Masses (F12)
	n Sulfide (A4)		Loamy Mucky M					Shallow Dark Surface (TF12)
	Layers (A5)		Loamy Gleyed N		)		Othe	er (Explain in Remarks)
2 cm Mu		* * * *	✓ Depleted Matrix					
	Below Dark Surface (	A11)	Redox Dark Sur	` '			3	
	rk Surface (A12)		Depleted Dark S		7)			ors of hydrophytic vegetation and hydrology must be present, unless
	ucky Mineral (S1)		Redox Depressi	ions (F8)			welland	disturbed or problematic.
	cky Peat or Peat (S3)							
Restrictive L	ayer (if observed):							
Type:			_			н	lydric Soil P	resent? Yes_
Depth (inche	s):		_					
Remarks:						·		
HYDROLO	C.V.							
	rology Indicators:						Sec	condary Indicators
_	ators (minimum of one	is required:	check all that apply)					inimum of two is required)
Surface W			Water-Stained	l Leaves (	B9)			Surface Soil Cracks (B6)
	r Table (A2)		Aquatic Fauna	,	20)			Drainage Patterns (B10)
Saturation	` '		True Aquatic F		4)			Dry-Season Water Table (C2)
Water Mar			Hydrogen Sulf					Crayfish Burrows (C8)
	Deposits (B2)		Oxidized Rhize			Roots ((		Saturation Visible on Aerial
Drift Depos			Presence of R		J	110000 (1		Imagery (C9)
_ :	or Crust (B4)		Recent Iron R			Soils (C6)	,	Stunted or Stressed Plants (D1)
☐ Iron Depos			☐ Thin Muck Sui			, o.i.o (00)	<b>'</b>	Geomorphic Position (D2)
!= :	Visible on Aerial Imag	erv (B7)	Gauge or Wel				✓	FAC-Neutral Test (D5)
	egetated Concave Su	, , ,	Other (Explain					
Field Observ	ations:	. ,						
Surface Wate		Depth (incl	hes):					
Water Table F	Present? No	Depth (incl	hes):					
Saturation Pre	esent? No	Depth (incl	hes):	_		Wetlan	d Hydrology	y Present? Yes
(includes capi	llary fringe)	- ' '	, <u> </u>					
Describe Rec	orded Data (stream ga	luge, monitor	ring well, aerial photos	s, previou	s inspect	ions), if a	available:	
Remarks:								

US Army Corps of Engineers Midwest Region - Version 2.0

#### **APPENDIX B**

### **Wetland Plant Species Lists**

Site 1 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Bidens aristosa	swamp marigold	Н	FACW	1
Iva annua	marsh elder	н	FAC	0
Agrimonia parviflora	swamp agrimony	Н	FACW	5
Agrostis gigantea	red top	Н	FACW	0
Ambrosia artemisiifolia	common ragweed	Н	FACU	0
Ambrosia trifida	giant ragweed	Н	FAC	0
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias incarnata	swamp milkweed	Н	OBL	4
Asclepias syriaca	common milkweed	Н	FACU	0
Calystegia sepium	American bindweed	H	FAC	1
Campsis radicans	trumpet creeper	H	FACU	2
Carex frankii	bristly cattail sedge	н	OBL	4
Chamaecrista fasciculata	golden cassia	н	FACU	1
Cyperus esculentus	field nut sedge	н	FACW	0
Desmodium illinoense	Illinois tick trefoil	н	UPL	5
Diospyros virginiana	persimmon	HS	FAC	2
Echinochloa muricata	spiny barnyard grass	H	OBL	0
Elymus virginicus	Virginia wild rye	н	FACW	4
Eupatorium serotinum	late boneset	H	FACV	1
Euthamia graminifolia		H	FACW	3
Festuca arundinacea*	grass-leaved goldenrod tall fescue	Н	FACU	3
				-
Fraxinus lanceolata	green ash	HS	FACW	2
Helianthus grosseserratus	sawtooth sunflower	H	FACW	2
Juncus brachycarpus	short-fruited rush	H	FACW	5
Juncus gerardii*	black grass	H	OBL	-
Juncus tenuis	path rush	H	FAC	0
Leersia oryzoides	rice cut grass	H	OBL	3
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Ludwigia alternifolia	seedbox	Н	OBL	5
Lycopus americanus	common water horehound	Н	OBL	3
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Penstemon digitalis	foxglove beard tongue	Н	FAC	4
Persicaria lapathifolia	curttop lady's thumb	Н	FACW	0
Rumex crispus*	curly dock	Н	FAC	-
Salix interior	sandbar willow	HS	FACW	1
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Sida spinosa*	prickly sida	Н	FACU	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Toxicodendron radicans	poison ivy	Н	FAC	1
Tridens flavus	common purpletop	Н	UPL	1
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Xanthium strumarium	cocklebur	Н	FAC	0
Non-native species E	Bold species are dominant in the denoted strat	um	Mean C =	= 2.0

<sup>\*</sup>Non-native species Bold species are dominant in the denoted stratum Mean C = 2.0 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 12.2

Site 2 - Marsh

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Leersia oryzoides	rice cut grass	Н	OBL	3
Phragmites australis*	common reed	Н	FACW	-
Toxicodendron radicans	poison ivy	Н	FAC	1
Agrostis gigantea	red top	Н	FACW	0
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias syriaca	common milkweed	Н	FACU	0
Carex tribuloides	awl-fruited oval sedge	Н	OBL	3
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cyperus echinatus	hedgehog club rush	Н	FAC	2
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	S	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
lva annua	marsh elder	Н	FAC	0
luncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Parthenocissus quinquefolia	Virginia creeper	Н	FACU	2
Setaria glauca*	pigeon grass	Н	FAC	-
Tridens flavus	common purpletop	Н	UPL	1
Vernonia missurica	Missouri ironweed	Н	FAC	5
*Non-native species Bold sp	pecies are dominant in the denoted s	tratum	Mean C =	= 1.4
H = Herb, T = Tree, S = Sapling/Shr	rub, W = Woody Vine		FQI :	= 5.8

Site 3 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Leersia oryzoides	rice cut grass	Н	OBL	3
Phragmites australis*	common reed	Н	FACW	-
Agrostis gigantea	red top	Н	FACW	0
Ambrosia artemisiifolia	common ragweed	Н	FACU	0
Ammannia coccinea	long-leaved ammannia	Н	OBL	5
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias syriaca	common milkweed	Н	FACU	0
Bidens aristosa	swamp marigold	Н	FACW	1
Carex tribuloides	awl-fruited oval sedge	Н	OBL	3
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	Н	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Fraxinus lanceolata	green ash	Н	FACW	2
Iva annua	marsh elder	Н	FAC	0
Juncus tenuis	path rush	Н	FAC	0
Paspalum sp.	bead grass	Н	-	-
Setaria glauca*	pigeon grass	Н	FAC	-
Sorghastrum nutans	Indian grass	Н	FACU	4
Toxicodendron radicans	poison ivy	Н	FAC	1
Tridens flavus	common purpletop	Н	UPL	1
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
*Non-native species	Bold species are dominant in the denoted stra	atum	Mean C	= 17

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 1.7 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 7.3

Site 4 - Wet shrubland

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Agrostis gigantea	red top	Н	FACW	0
Fraxinus lanceolata	green ash	HS	FACW	2
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias incarnata	swamp milkweed	Н	OBL	4
Campsis radicans	trumpet creeper	Н	FACU	2
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cyperus esculentus	field nut sedge	Н	FACW	0
Desmodium illinoense	Illinois tick trefoil	Н	UPL	5
Diospyros virginiana	persimmon	Н	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eupatorium perfoliatum	common boneset	Н	OBL	4
Euthamia graminifolia	grass-leaved goldenrod	Н	FACW	3
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
lva annua	marsh elder	Н	FAC	0
Juncus gerardii*	black grass	Н	OBL	-
Juncus tenuis	path rush	Н	FAC	0
Juncus torreyi	Torrey's rush	Н	FACW	3
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Lonicera maackii*	Amur honeysuckle	Н	UPL	-
Paspalum sp.	bead grass	Н	-	-
Rubus allegheniensis	common blackberry	Н	FACU	2
Setaria glauca*	pigeon grass	Н	FAC	-
Toxicodendron radicans	poison ivy	Н	FAC	1
Tridens flavus	common purpletop	Н	UPL	1
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
*Non-native species Bold	species are dominant in the denoted s	stratum	Mean C =	= 2.0
II IIamb T Tuan C Cambina/Ch	· ·		FO!	0.2

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.2

Site 5 - Marsh

Strata  H H H H H	FAC OBL FACW	Conservatism 2 3
Н Н Н	OBL FACW	
H H	FACW	3
Н		•
= =		-
н	OBL	4
'''	FAC	5
Н	FACW	0
Н	FACU	0
Н	OBL	5
Н	FACW	2
Н	FACW	1
Н	FACU	2
Н	FACW	0
Н	FAC	2
Н	OBL	0
Н	FACW	3
HST	FACW	2
Н	FACW	2
Н	FAC	0
Н	OBL	-
Н	FAC	0
Н	FACW	3
Н	FACU	-
Н	FAC	4
Н	FAC	-
T	OBL	3
Н	FAC	-
Н	FAC	1
Н	OBL	-
S	FACW	5
Н	FACW	3
Н	FAC	5
	H H H T H H H H	H FAC H FACW H FACU H FAC T OBL H FAC H FAC H FAC T OBL H FAC H FAC H FAC H FAC H FAC

<sup>\*</sup>Non-native species Bold species are dominant in the denoted stratum Mean C = 2.3 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.4

Site 6 - Marsh

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Agrostis gigantea	red top	Н	FACW	0
Bidens aristosa	swamp marigold	Н	FACW	1
Phragmites australis*	common reed	Н	FACW	-
Apocynum cannabinum	dogbane	Н	FAC	2
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cornus drummondii	rough-leaved dogwood	S	FAC	2
Cyperus esculentus	field nut sedge	Н	FACW	0
Desmodium illinoense	Illinois tick trefoil	Н	UPL	5
Diospyros virginiana	persimmon	S	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Festuca arundinacea*	tall fescue	Н	FACU	-
Fraxinus lanceolata	green ash	HS	FACW	2
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
luncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Paspalum sp.	bead grass	Н	-	-
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Sorghastrum nutans	Indian grass	Н	FACU	4
Toxicodendron radicans	poison ivy	Н	FAC	1
Tridens flavus	common purpletop	Н	UPL	1
Vernonia missurica	Missouri ironweed	Н	FAC	5
*Non-native species Bold sp	pecies are dominant in the denoted stra	ntum	Mean C =	= 1.9

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 1.9 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.5

Site 10 - Forested wetland

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Acer rubrum	red maple	HT	FAC	5
Betula nigra	river birch	ST	FACW	4
Wolffia columbiana	water meal	Н	OBL	5
Acer saccharinum	silver maple	Т	FACW	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex sp.	sedge	Н	-	-
Carex tribuloides	awl-fruited oval sedge	Н	OBL	3
Carya sp.	hickory	Н	-	-
Cinna arundinacea	common wood reed	Н	FACW	5
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eclipta prostrata	yerba de tajo	Н	FACW	2
Elaeagnus umbellata*	autumn olive	S	UPL	-
Elymus virginicus	Virginia wild rye	Н	FACW	4
Fraxinus lanceolata	green ash	HS	FACW	2
Geum canadense	white avens	Н	FAC	2
Leersia oryzoides	rice cut grass	Н	OBL	3
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Ludwigia peploides var. glabrescens	creeping primrose willow	Н	OBL	5
Parthenocissus quinquefolia	Virginia creeper	Н	FACU	2
Rosa multiflora*	Japanese rose	S	FACU	-
Sida spinosa*	prickly sida	Н	FACU	-
Smilax tamnoides	bristly green brier	Н	FAC	3
Solidago canadensis	Canada goldenrod	Н	FACU	1
Spirodela polyrhiza	great duckweed	Н	OBL	5
Symphoricarpos occidentalis	wolfberry	HS	UPL	6
Toxicodendron radicans	poison ivy	Н	FAC	1

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 3.1 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 13.6

Site 11 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	<b>Indicator Status</b>	Conservatism
Agrostis gigantea	red top	Н	FACW	0
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Leersia oryzoides	rice cut grass	Н	OBL	3
Acer negundo	box elder	HS	FAC	1
Ammannia coccinea	long-leaved ammannia	Н	OBL	5
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias incarnata	swamp milkweed	Н	OBL	4
Asclepias syriaca	common milkweed	Н	FACU	0
Bidens aristosa	swamp marigold	Н	FACW	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cyperus esculentus	field nut sedge	Н	FACW	0
Desmodium illinoense	Illinois tick trefoil	Н	UPL	5
Diospyros virginiana	persimmon	Н	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Eupatorium serotinum	late boneset	Н	FAC	1
Festuca arundinacea*	tall fescue	Н	FACU	-
Fraxinus lanceolata	green ash	HS	FACW	2
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
Iva annua	marsh elder	Н	FAC	0
Juncus gerardii*	black grass	Н	OBL	-
Juncus tenuis	path rush	Н	FAC	0
Juncus torreyi	Torrey's rush	Н	FACW	3
Persicaria lapathifolia	curttop lady's thumb	Н	FACW	0
Persicaria vulgaris*	lady's thumb	Н	FACW	-
Phragmites australis*	common reed	Н	FACW	-
Populus deltoides	eastern cottonwood	T	FAC	2
Rumex crispus*	curly dock	Н	FAC	-
Setaria glauca*	pigeon grass	Н	FAC	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Teucrium canadense	germander	Н	FACW	3
Toxicodendron radicans	poison ivy	Н	FAC	1
Typha angustifolia*	narrow-leaved cattail	Н	OBL	-
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Xanthium strumarium	cocklebur	Н	FAC	0

\*Non-native species Bold species are dominant in the denoted stratum
H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine

Mean C = 1.8 FQI = 9.7

Site 12 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Leersia oryzoides	rice cut grass	Н	OBL	3
Agrostis gigantea	red top	Н	FACW	0
Ambrosia artemisiifolia	common ragweed	Н	FACU	0
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias syriaca	common milkweed	Н	FACU	0
Asclepias verticillata	horsetail milkweed	Н	FACU	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex frankii	bristly cattail sedge	Н	OBL	4
Carex normalis	spreading oval sedge	Н	FACW	4
Carex squarrosa	narrow-leaved cattail sedge	Н	OBL	5
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	HS	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eupatorium serotinum	late boneset	Н	FAC	1
Fraxinus lanceolata	green ash	Н	FACW	2
luncus gerardii*	black grass	Н	OBL	-
luncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Panicum capillare	old witch grass	Н	FAC	0
Paspalum sp.	bead grass	Н	-	-
Phalaris arundinacea*	reed canary grass	Н	FACW	-
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Rumex crispus*	curly dock	Н	FAC	-
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Solanum carolinense	horse nettle	Н	FACU	0
Solidago canadensis	Canada goldenrod	Н	FACU	1
Teucrium canadense	germander	Н	FACW	3
Toxicodendron radicans	poison ivy	Н	FAC	1
Ulmus americana	American elm	Н	FACW	5
Verbena hastata	blue vervain	Н	FACW	3
Verbena urticifolia	white vervain	Н	FAC	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Vitis riparia	riverbank grape	Н	FACW	2

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.1 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.1

Site 13 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Apocynum cannabinum	dogbane	Н	FAC	2
Juncus torreyi	Torrey's rush	Н	FACW	3
Leersia oryzoides	rice cut grass	Н	OBL	3
Typha angustifolia*	narrow-leaved cattail	н	OBL	-
Agrostis gigantea	red top	Н	FACW	0
Asclepias incarnata	swamp milkweed	Н	OBL	4
Campsis radicans	trumpet creeper	Н	FACU	2
Carex molesta	field oval sedge	Н	FAC	2
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	Н	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eupatorium serotinum	late boneset	Н	FAC	1
Festuca arundinacea*	tall fescue	Н	FACU	-
Fraxinus lanceolata	green ash	Н	FACW	2
lva annua	marsh elder	Н	FAC	0
Juncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Lycopus americanus	common water horehound	Н	OBL	3
Melilotus sp.*	sweet clover	Н	D	-
Rumex crispus*	curly dock	Н	FAC	-
Salix nigra	black willow	S	OBL	3
Setaria glauca*	pigeon grass	Н	FAC	-
Verbena hastata	blue vervain	Н	FACW	3
Verbena urticifolia	white vervain	Н	FAC	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Vitis riparia	riverbank grape	Н	FACW	2
*Non-native species Bold	species are dominant in the denoted stra	tum	Mean C =	= 2.0
II - Ilorb T - Troc C - Conling/C			FO!	0.4

H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.4

When possible, the wetland indicator status has been determined for taxa identified only to the genus level (D = nonhydrophytic; H =hydrophytic).

Site 14 – Wet floodplain forest

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Acer saccharinum	silver maple	H <b>ST</b>	FACW	1
Aster lanceolatus	panicled aster	Н	FAC	3
Lysimachia nummularia*	moneywort	Н	FACW	-
Populus deltoides	eastern cottonwood	HS <b>T</b>	FAC	2
Ulmus americana	American elm	HS <b>T</b>	FACW	5
Acalypha rhomboidea	three-seeded mercury	Н	FACU	0
Acer negundo	box elder	ST	FAC	1
Ambrosia trifida	giant ragweed	Н	FAC	0
Antenoron virginianum	Virginia knotweed	Н	FAC	3
Asimina triloba	pawpaw	S	FAC	4
Betula nigra	river birch	HT	FACW	4
Boehmeria cylindrica	false nettle	Н	OBL	3
Campsis radicans	trumpet creeper	Н	FACU	2
Carex lupulina	common hop sedge	Н	OBL	5
Carex sp.	sedge	Н	-	-
Carex tribuloides	awl-fruited oval sedge	Н	OBL	3
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Cephalanthus occidentalis	buttonbush	S	OBL	4
Chasmanthium latifolium	sea oats	Н	FACW	4
Cinna arundinacea	common wood reed	Н	FACW	5
Elymus virginicus	Virginia wild rye	Н	FACW	4
Fraxinus lanceolata	green ash	HS	FACW	2
Geum canadense	white avens	Н	FAC	2
Impatiens capensis	spotted touch-me-not	Н	FACW	2
Laportea canadensis	Canada wood nettle	Н	FACW	2
Ludwigia peploides var. glabrescens	creeping primrose willow	Н	OBL	5
Lycopus virginicus	bugle weed	Н	OBL	5
Panicum capillare	old witch grass	Н	FAC	0
Parthenocissus quinquefolia	Virginia creeper	Н	FACU	2
Persicaria hydropiperoides	mild water pepper	Н	OBL	4
Platanus occidentalis	sycamore	ST	FACW	3
Pluchea camphorata	camphor weed	Н	FACW	7
Quercus palustris	pin oak	T	FACW	4
Senecio glabellus	butterweed	Н	FACW	0
Setaria glauca*	pigeon grass	Н	FAC	-
Silphium perfoliatum	cup plant	Н	FACW	4
Smilax tamnoides	bristly green brier	Н	FAC	3
Solidago canadensis	Canada goldenrod	Н	FACU	1
Toxicodendron radicans	poison ivy	HW	FAC	1
Verbesina alternifolia	wingstem	Н	FACW	4

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.9 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 17.6

Site 15 - Wet floodplain forest

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Acer saccharinum	silver maple	ST	FACW	1
Aster lanceolatus	panicled aster	Н	FAC	3
Cinna arundinacea	common wood reed	Н	FACW	5
Leersia oryzoides	rice cut grass	Н	OBL	3
Lysimachia nummularia*	moneywort	Н	FACW	-
Populus deltoides	eastern cottonwood	ST	FAC	2
Ulmus americana	American elm	ST	FACW	5
Acer negundo	box elder	Т	FAC	1
Acer rubrum	red maple	T	FAC	5
Alisma subcordatum	common water plantain	Н	OBL	2
Antenoron virginianum	Virginia knotweed	Н	FAC	3
Asimina triloba	pawpaw	HS	FAC	4
Betula nigra	river birch	T	FACW	4
Bidens frondosa	common beggar's ticks	Н	FACW	1
Boehmeria cylindrica	false nettle	Н	OBL	3
Campsis radicans	trumpet creeper	Н	FACU	2
Carex lupulina	common hop sedge	Н	OBL	5
Cephalanthus occidentalis	buttonbush	S	OBL	4
Chasmanthium latifolium	sea oats	Н	FACW	4
Eclipta prostrata	yerba de tajo	Н	FACW	2
Elaeagnus umbellata*	autumn olive	S	UPL	-
Elymus virginicus	Virginia wild rye	Н	FACW	4
Eupatorium serotinum	late boneset	Н	FAC	1
Impatiens capensis	spotted touch-me-not	Н	FACW	2
Laportea canadensis	Canada wood nettle	Н	FACW	2
Lonicera maackii*	Amur honeysuckle	S	UPL	-
Ludwigia palustris var. americana	marsh purslane	Н	OBL	4
Persicaria hydropiperoides	mild water pepper	Н	OBL	4
Persicaria vulgaris*	lady's thumb	Н	FACW	-
Phyla lanceolata	fog fruit	Н	OBL	1
Rosa multiflora*	Japanese rose	S	FACU	-
Salix nigra	black willow	Т	OBL	3
Senecio glabellus	butterweed	Н	FACW	0
Spirodela polyrhiza	great duckweed	Н	OBL	5
Toxicodendron radicans	poison ivy	HW	FAC	1
Verbesina alternifolia	wingstem	Н	FACW	4
Vitis riparia	riverbank grape	HW	FACW	2
Wolffia columbiana	water meal	Н	OBL	5

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.9 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 16.9

Site 16 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Agrostis gigantea	red top	Н	FACW	0
Bidens aristosa	swamp marigold	Н	FACW	1
Leersia oryzoides	rice cut grass	Н	OBL	3
Asclepias incarnata	swamp milkweed	Н	OBL	4
Campsis radicans	trumpet creeper	Н	FACU	2
Carex sp.	sedge	Н	-	-
Carex tribuloides	awl-fruited oval sedge	Н	OBL	3
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Cyperus esculentus	field nut sedge	Н	FACW	0
Desmodium illinoense	Illinois tick trefoil	Н	UPL	5
Diospyros virginiana	persimmon	HS	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eupatorium serotinum	late boneset	Н	FAC	1
Euthamia graminifolia	grass-leaved goldenrod	Н	FACW	3
Festuca arundinacea*	tall fescue	Н	FACU	-
Fraxinus lanceolata	green ash	Н	FACW	2
lva annua	marsh elder	Н	FAC	0
Juncus gerardii*	black grass	Н	OBL	-
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Ludwigia alternifolia	seedbox	Н	OBL	5
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Quercus palustris	pin oak	T	FACW	4
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Toxicodendron radicans	poison ivy	Н	FAC	1
Typha angustifolia*	narrow-leaved cattail	Н	OBL	-
Ulmus rubra	slippery elm	S	FAC	3
Vernonia missurica	Missouri ironweed	Н	FAC	5

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.3 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.4

Site 17 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Agrostis gigantea	red top	Н	FACW	0
Bidens aristosa	swamp marigold	н	FACW	1
Campsis radicans	trumpet creeper	н	FACU	2
Phragmites australis*	common reed	н	FACW	-
Toxicodendron radicans	poison ivy	н	FAC	1
Ambrosia trifida	giant ragweed	Н	FAC	0
Asclepias incarnata	swamp milkweed	Н	OBL	4
Aster lanceolatus	panicled aster	Н	FAC	3
Cinna arundinacea	common wood reed	Н	FACW	5
Cyperus echinatus	hedgehog club rush	Н	FAC	2
Cyperus esculentus	field nut sedge	Н	FACW	0
Desmodium illinoense	Illinois tick trefoil	Н	UPL	5
Diospyros virginiana	persimmon	HS	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Eupatorium serotinum	late boneset	Н	FAC	1
Euthamia graminifolia	grass-leaved goldenrod	Н	FACW	3
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
Liquidambar styraciflua	sweet gum	S	FACW	6
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Solidago canadensis	Canada goldenrod	Н	FACU	1
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Vitis riparia	riverbank grape	Н	FACW	2

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.4 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 11.7

Site 18 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Agrostis gigantea	red top	Н	FACW	0
Asclepias incarnata	swamp milkweed	н	OBL	4
Euthamia graminifolia	grass-leaved goldenrod	Н	FACW	3
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Ambrosia trifida	giant ragweed	Н	FAC	0
Asclepias syriaca	common milkweed	Н	FACU	0
Aster lanceolatus	panicled aster	Н	FAC	3
Bidens aristosa	swamp marigold	Н	FACW	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex squarrosa	narrow-leaved cattail sedge	Н	OBL	5
Cyperus esculentus	field nut sedge	Н	FACW	0
Eupatorium serotinum	late boneset	Н	FAC	1
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
luncus gerardii*	black grass	Н	OBL	-
luncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Lycopus americanus	common water horehound	Н	OBL	3
Medicago sativa*	alfalfa	Н	FACU	-
Persicaria punctata	smartweed	Н	OBL	3
Quercus palustris	pin oak	Н	FACW	4
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.1 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.6

Site 19 - Forested wetland

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Ambrosia trifida	giant ragweed	Н	FAC	0
Fraxinus lanceolata	green ash	H <b>S</b> T	FACW	2
Phalaris arundinacea*	reed canary grass	H	FACW	-
Ulmus americana	American elm	ST	FACW	5
Acer rubrum	red maple	HST	FAC	5
Apocynum cannabinum	dogbane	H	FAC	2
Aster lanceolatus	panicled aster	H	FAC	3
Bidens aristosa	swamp marigold	H	FACW	1
Bidens frondosa	common beggar's ticks	Н	FACW	1
Campsis radicans	trumpet creeper	HW	FACU	2
Carex squarrosa	narrow-leaved cattail sedge	Н	OBL	5
Carya illinoiensis	pecan	S	FACW	6
Catalpa bignonioides*	common catalpa	Н	FACU	-
Cinna arundinacea	common wood reed	Н	FACW	5
Diospyros virginiana	persimmon	ST	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Elymus virginicus	Virginia wild rye	Н	FACW	4
Eupatorium perfoliatum	common boneset	Н	OBL	4
Eupatorium serotinum	late boneset	Н	FAC	1
Fallopia scandens	climbing false buckwheat	Н	FAC	2
Geum canadense	white avens	Н	FAC	2
Glyceria striata	fowl manna grass	Н	OBL	4
lva annua	marsh elder	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Lycopus americanus	common water horehound	Н	OBL	3
Parthenocissus quinquefolia	Virginia creeper	HW	FACU	2
Persicaria hydropiperoides	mild water pepper	Н	OBL	4
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Quercus palustris	pin oak	Т	FACW	4
Quercus rubra	northern red oak	Т	FACU	5
Rosa multiflora*	Japanese rose	HS	FACU	-
Rubus allegheniensis	common blackberry	Н	FACU	2
Salix nigra	black willow	T	OBL	3
Scirpus georgianus	bristleless dark green rush	H	OBL	4
Senecio glabellus	butterweed	H	FACW	0
Solidago canadensis	Canada goldenrod	н	FACU	1
Symphoricarpos occidentalis	wolfberry	S	UPL	6
Toxicodendron radicans	poison ivy	HW	FAC	1
Typha angustifolia*	narrow-leaved cattail	H	OBL	-
Vernonia missurica	Missouri ironweed	H	FAC	5
	pecies are dominant in the denoted stra		Mean C =	

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.9 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 16.9

Site 20 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Bidens aristosa	swamp marigold	Н	FACW	1
Fraxinus lanceolata	green ash	HS	FACW	2
lva annua	marsh elder	Н	FAC	0
Juncus brachycarpus	short-fruited rush	Н	FACW	5
Agrostis gigantea	red top	Н	FACW	0
Ambrosia trifida	giant ragweed	Н	FAC	0
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias incarnata	swamp milkweed	Н	OBL	4
Asclepias syriaca	common milkweed	Н	FACU	0
Aster lateriflorus	side-flowering aster	Н	FACW	2
Campsis radicans	trumpet creeper	Н	FACU	2
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cyperus echinatus	hedgehog club rush	Н	FAC	2
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	HT	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Elymus virginicus	Virginia wild rye	Н	FACW	4
Eupatorium perfoliatum	common boneset	Н	OBL	4
Eupatorium serotinum	late boneset	Н	FAC	1
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
Juncus gerardii*	black grass	Н	OBL	-
Liquidambar styraciflua	sweet gum	S	FACW	6
Phalaris arundinacea*	reed canary grass	Н	FACW	-
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Quercus palustris	pin oak	Т	FACW	4
Schizachyrium scoparium	little bluestem	Н	FACU	5
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria glauca*	pigeon grass	Н	FAC	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Toxicodendron radicans	poison ivy	Н	FAC	1
Vernonia missurica	Missouri ironweed	Н	FAC	5
Vitis riparia	riverbank grape	Н	FACW	2
Xanthium strumarium	cocklebur	Н	FAC	0

<sup>\*</sup>Non-native species Bold species are dominant in the denoted stratum Mean H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine F

Mean C = 2.2 FQI = 12.0

Site 21 - Marsh

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Cyperus esculentus	field nut sedge	H	FACW	0
lva annua	marsh elder	н	FAC	0
Persicaria pensylvanica	pinkweed	н	FACW	1
Phragmites australis*	common reed	Н	FACW	_
Agrostis gigantea	red top	Н	FACW	0
Ammannia coccinea	long-leaved ammannia	Н	OBL	5
Apocynum cannabinum	dogbane	Н	FAC	2
Asclepias incarnata	swamp milkweed	Н	OBL	4
Carex normalis	spreading oval sedge	Н	FACW	4
Carex vulpinoidea	brown fox sedge	Н	FACW	3
Dipsacus fullonum*	common teasel	Н	FACU	-
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Erechtites hieracifolia	fireweed	Н	FAC	2
Eupatorium serotinum	late boneset	Н	FAC	1
Fraxinus lanceolata	green ash	Н	FACW	2
Panicum capillare	old witch grass	Н	FAC	0
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Paspalum floridanum	giant bead grass	Н	FACW	7
Populus deltoides	eastern cottonwood	Н	FAC	2
Rumex crispus*	curly dock	Н	FAC	-
Setaria glauca*	pigeon grass	Н	FAC	-
Sida spinosa*	prickly sida	Н	FACU	-
Solidago canadensis	Canada goldenrod	Н	FACU	1
Sorghastrum nutans	Indian grass	Н	FACU	4
Verbena hastata	blue vervain	Н	FACW	3
Xanthium strumarium	cocklebur	Н	FAC	0
*Non-native species	Bold species are dominant in the denoted st	ratum	Mean C	= 2.0

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 2.0 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 8.9

Site 22 - Wet meadow

Scientific Name	Common Name	Strata	Wetland Indicator Status	Coefficient of Conservatism
Agrostis gigantea	red top	Н	FACW	0
Bidens aristosa	swamp marigold	 Н	FACW	1
Fraxinus lanceolata	green ash	.: Н	FACW	2
Toxicodendron radicans	poison ivy	 Н	FAC	1
Ambrosia trifida	giant ragweed	н	FAC	0
Ambrosia trijida Apocynum cannabinum	dogbane	н	FAC	2
Asclepias incarnata	swamp milkweed	H	OBL	4
Aster lanceolatus	panicled aster	H	FAC	3
	•	Н	FACW	3 1
Bidens frondosa Campsis radicans	common beggar's ticks	П Н	FACU	2
Carrex tribuloides	trumpet creeper		OBL	
	awl-fruited oval sedge	Н	FACW	3
Carex vulpinoidea	brown fox sedge	H		3
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cinna arundinacea	common wood reed	H	FACW	5
Cornus drummondii	rough-leaved dogwood	HS	FAC	2
Cyperus esculentus	field nut sedge	Н	FACW	0
Diospyros virginiana	persimmon	HST	FAC	2
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Elymus virginicus	Virginia wild rye	Н	FACW	4
Eupatorium perfoliatum	common boneset	Н	OBL	4
Eupatorium serotinum	late boneset	Н	FAC	1
Fallopia scandens	climbing false buckwheat	Н	FAC	2
Festuca arundinacea*	tall fescue	Н	FACU	-
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
lva annua	marsh elder	Н	FAC	0
Leersia oryzoides	rice cut grass	Н	OBL	3
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Ludwigia alternifolia	seedbox	Н	OBL	5
Mimulus alatus	winged monkey flower	Н	OBL	6
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Paspalum floridanum	giant bead grass	Н	FACW	7
Persicaria pensylvanica	pinkweed	Н	FACW	1
Quercus palustris	pin oak	Н	FACW	4
Rubus allegheniensis	common blackberry	Н	FACU	2
Salix interior	sandbar willow	S	FACW	1
Salix nigra	black willow	S	OBL	3
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Setaria faberi*	giant foxtail	н	FACU	-
Smilax tamnoides	bristly green brier	 Н	FAC	3
Solidago canadensis	Canada goldenrod	н	FACU	1
Symphoricarpos occidentalis	wolfberry	., Н	UPL	6
Typha angustifolia*	narrow-leaved cattail	н	OBL	-
Ulmus americana	American elm	H	FACW	- 5
Verbena hastata	blue vervain	H	FACW	
				3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Xanthium strumarium	cocklebur	Н	FAC	0

\*Non-native species Bold species are dominant in the denoted stratum H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine

Mean C = 2.5

FQI = 16.0

Site 23 - Forested wetland

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Acer saccharinum	silver maple	HS <b>T</b>	FACW	1
Aster lanceolatus	panicled aster	Н	FAC	3
Quercus palustris	pin oak	ST	FACW	4
Toxicodendron radicans	poison ivy	HW	FAC	1
Ulmus rubra	slippery elm	ST	FAC	3
Asclepias incarnata	swamp milkweed	Н	OBL	4
Bidens frondosa	common beggar's ticks	Н	FACW	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex squarrosa	narrow-leaved cattail sedge	Н	OBL	5
Celtis occidentalis	hackberry	ST	FAC	3
Cinna arundinacea	common wood reed	Н	FACW	5
Crataegus mollis	downy hawthorn	T	FAC	2
Diospyros virginiana	persimmon	HT	FAC	2
Elymus virginicus	Virginia wild rye	Н	FACW	4
Eupatorium perfoliatum	common boneset	Н	OBL	4
Euthamia graminifolia	grass-leaved goldenrod	Н	FACW	3
Glyceria striata	fowl manna grass	Н	OBL	4
lva annua	marsh elder	Н	FAC	0
Leersia oryzoides	rice cut grass	Н	OBL	3
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Mimulus alatus	winged monkey flower	Н	OBL	6
Onoclea sensibilis	sensitive fern	Н	FACW	5
Panicum dichotomiflorum	fall panicum	Н	FACW	0
Parthenocissus quinquefolia	Virginia creeper	Н	FACU	2
Persicaria hydropiperoides	mild water pepper	Н	OBL	4
Persicaria pensylvanica	pinkweed	Н	FACW	1
Phalaris arundinacea*	reed canary grass	Н	FACW	-
Phragmites australis*	common reed	Н	FACW	-
Populus deltoides	eastern cottonwood	HT	FAC	2
Salix nigra	black willow	ST	OBL	3
Scirpus cyperinus	wool grass	Н	OBL	5
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Senecio glabellus	butterweed	Н	FACW	0
Vitis riparia	riverbank grape	Н	FACW	2

<sup>\*</sup>Non-native species Bold species are dominant in the denoted stratum Mean C = 2.8 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 15.8

Site 24 - Wet meadow

			Wetland	Coefficient of
Scientific Name	Common Name	Strata	Indicator Status	Conservatism
Agrostis gigantea	red top	Н	FACW	0
Echinochloa muricata	spiny barnyard grass	Н	OBL	0
Iva annua	marsh elder	Н	FAC	0
Setaria glauca*	pigeon grass	Н	FAC	-
Apocynum cannabinum	dogbane	Н	FAC	2
Bidens aristosa	swamp marigold	Н	FACW	1
Bidens frondosa	common beggar's ticks	Н	FACW	1
Calystegia sepium	American bindweed	Н	FAC	1
Campsis radicans	trumpet creeper	Н	FACU	2
Carex molesta	field oval sedge	Н	FAC	2
Carex sp.	sedge	Н	-	-
Chamaecrista fasciculata	golden cassia	Н	FACU	1
Cyperus esculentus	field nut sedge	Н	FACW	0
Daucus carota*	Queen Anne's lace	Н	UPL	-
Diospyros virginiana	persimmon	HS	FAC	2
Dipsacus fullonum*	common teasel	Н	FACU	-
Eupatorium serotinum	late boneset	Н	FAC	1
Fraxinus lanceolata	green ash	Н	FACW	2
Helianthus grosseserratus	sawtooth sunflower	Н	FACW	2
Ipomoea lacunosa	small morning glory	Н	FACW	1
Juncus brachycarpus	short-fruited rush	Н	FACW	5
Juncus tenuis	path rush	Н	FAC	0
Lonicera japonica*	Japanese honeysuckle	Н	FACU	-
Panicum anceps	beaked panic grass	Н	FACW	3
Paspalum sp.	bead grass	Н	-	-
Persicaria punctata	smartweed	Н	OBL	3
Phragmites australis*	common reed	Н	FACW	-
Pycnanthemum tenuifolium	slender mountain mint	Н	FAC	4
Rudbeckia hirta	black-eyed Susan	Н	FACU	2
Rumex crispus*	curly dock	Н	FAC	-
Scirpus georgianus	bristleless dark green rush	Н	OBL	4
Toxicodendron radicans	poison ivy	Н	FAC	1
Typha angustifolia*	narrow-leaved cattail	Н	OBL	-
Verbena hastata	blue vervain	Н	FACW	3
Vernonia missurica	Missouri ironweed	Н	FAC	5
Vitis riparia	riverbank grape	Н	FACW	2
Xanthium strumarium	cocklebur	Н	FAC	0

\*Non-native species Bold species are dominant in the denoted stratum Mean C = 1.8 H = Herb, T = Tree, S = Sapling/Shrub, W = Woody Vine FQI = 9.4

#### **APPENDIX C**

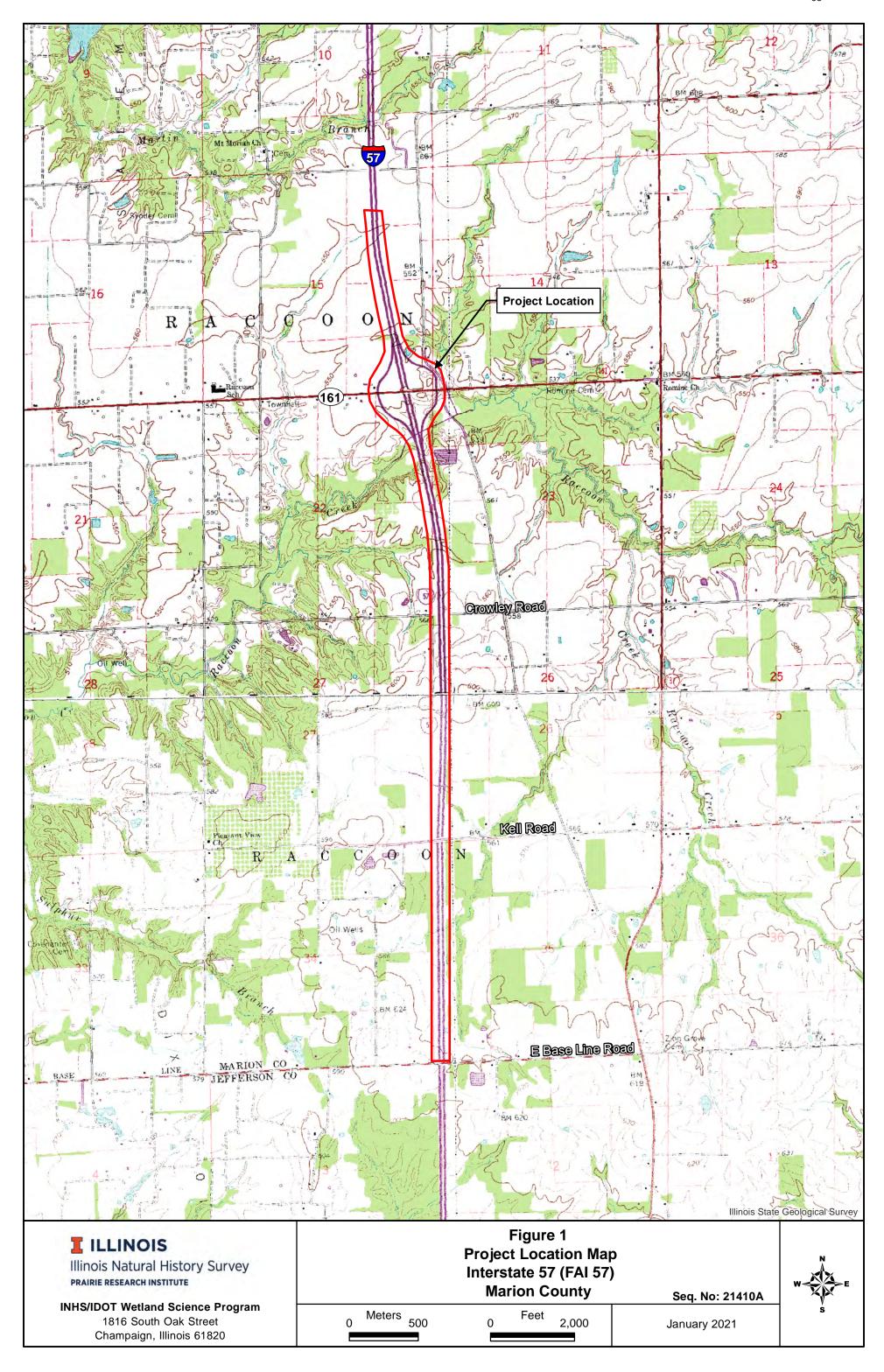
#### **Figures**

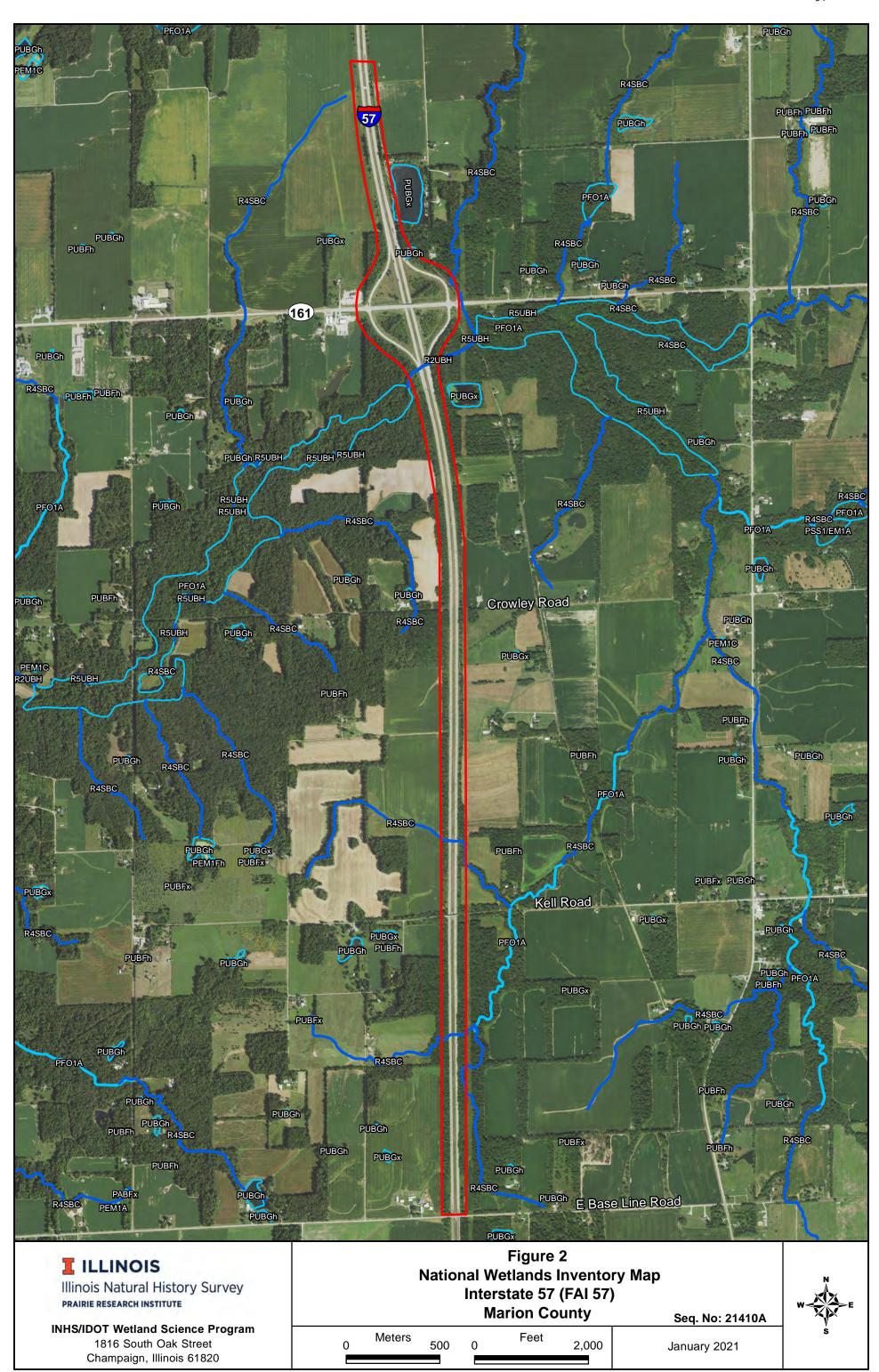
Figure 1 – Project Location Map

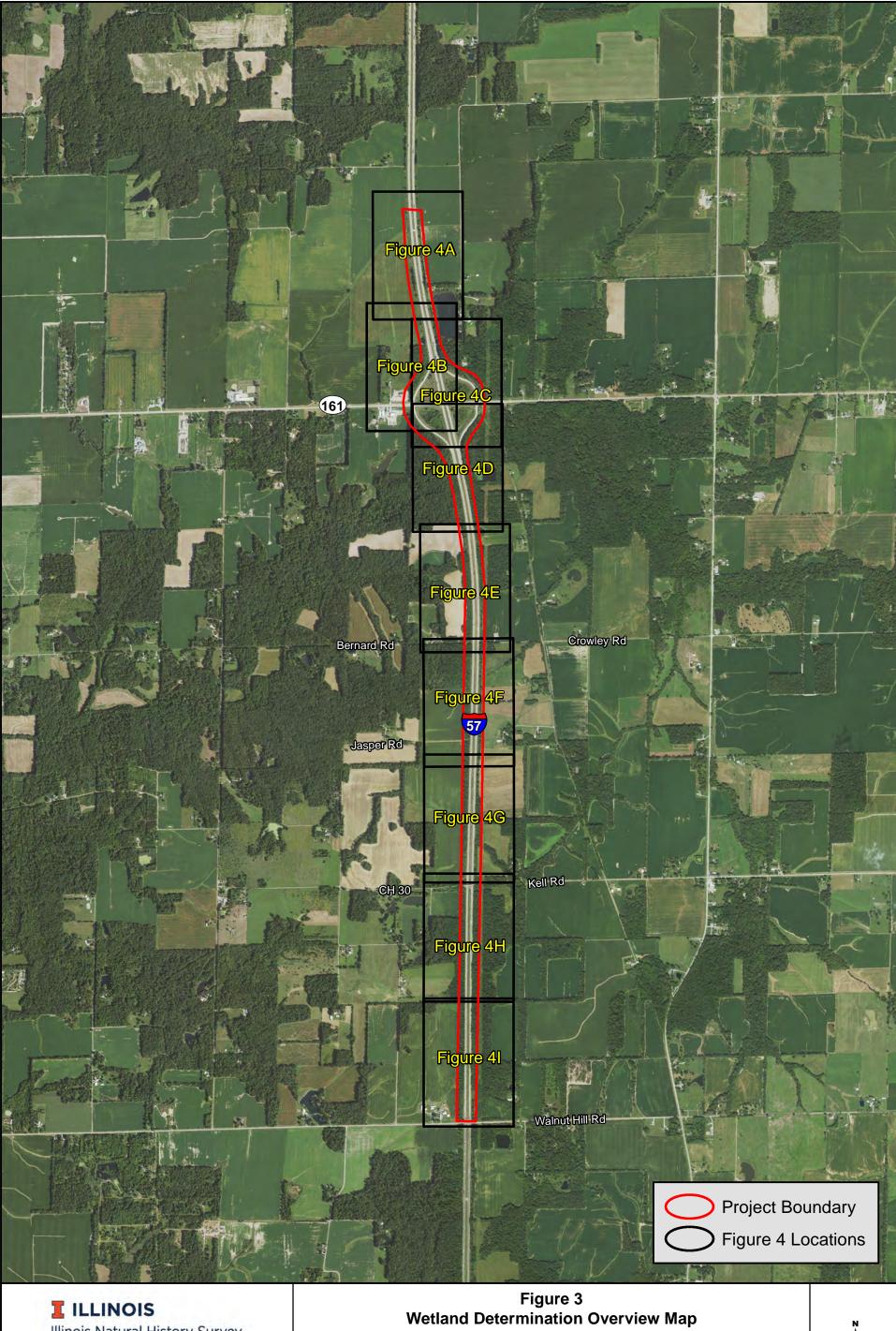
Figure 2 – National Wetlands Inventory Map

Figure 3 – Wetland Determination Overview Map

**Figure 4 – Wetland Determination Maps** 







Illinois Natural History Survey PRAIRIE RESEARCH INSTITUTE

**INHS/IDOT Wetland Science Program** 

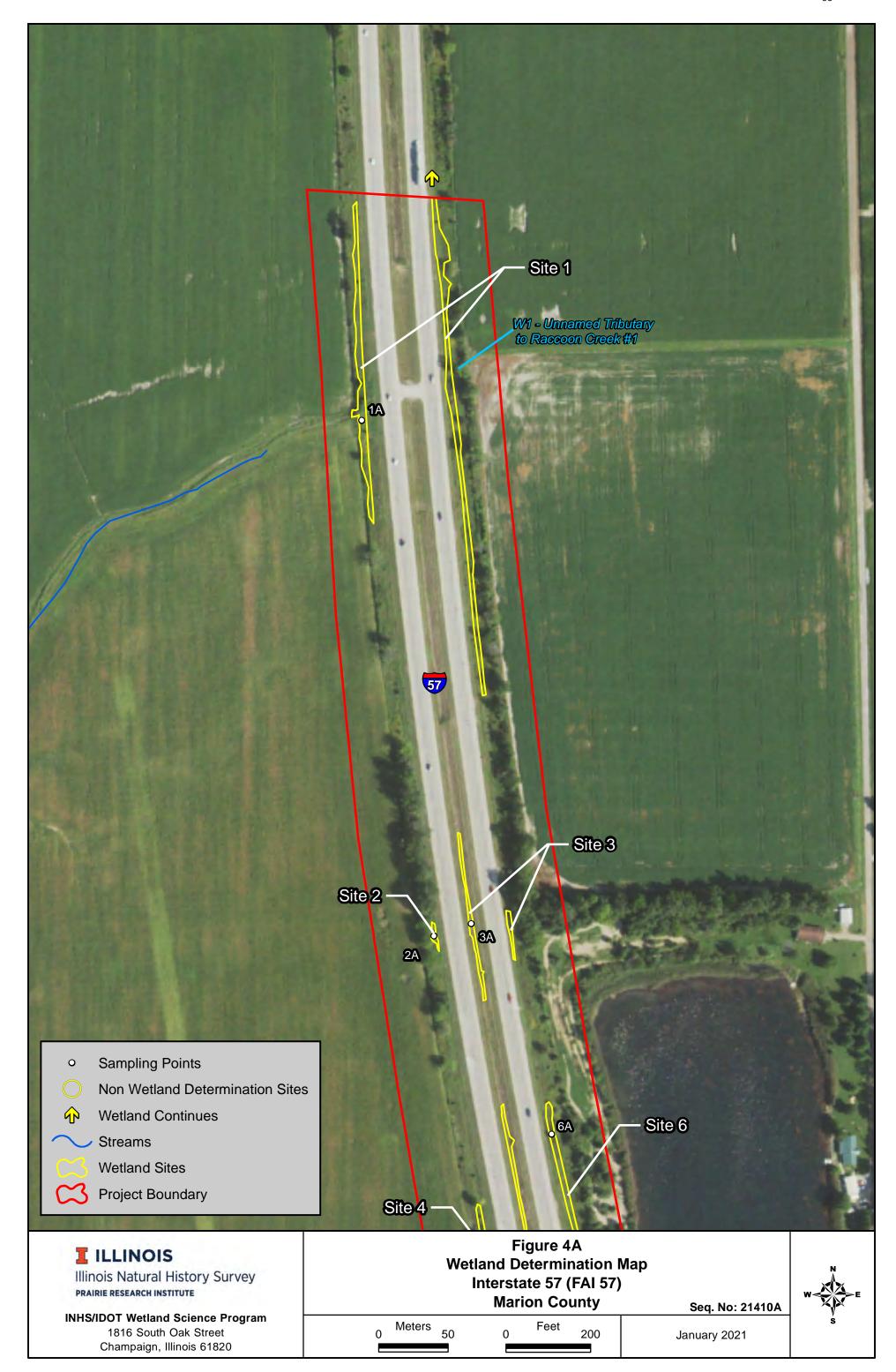
1816 South Oak Street Champaign, Illinois 61820 Interstate 57 (FAI 57) **Marion County** 

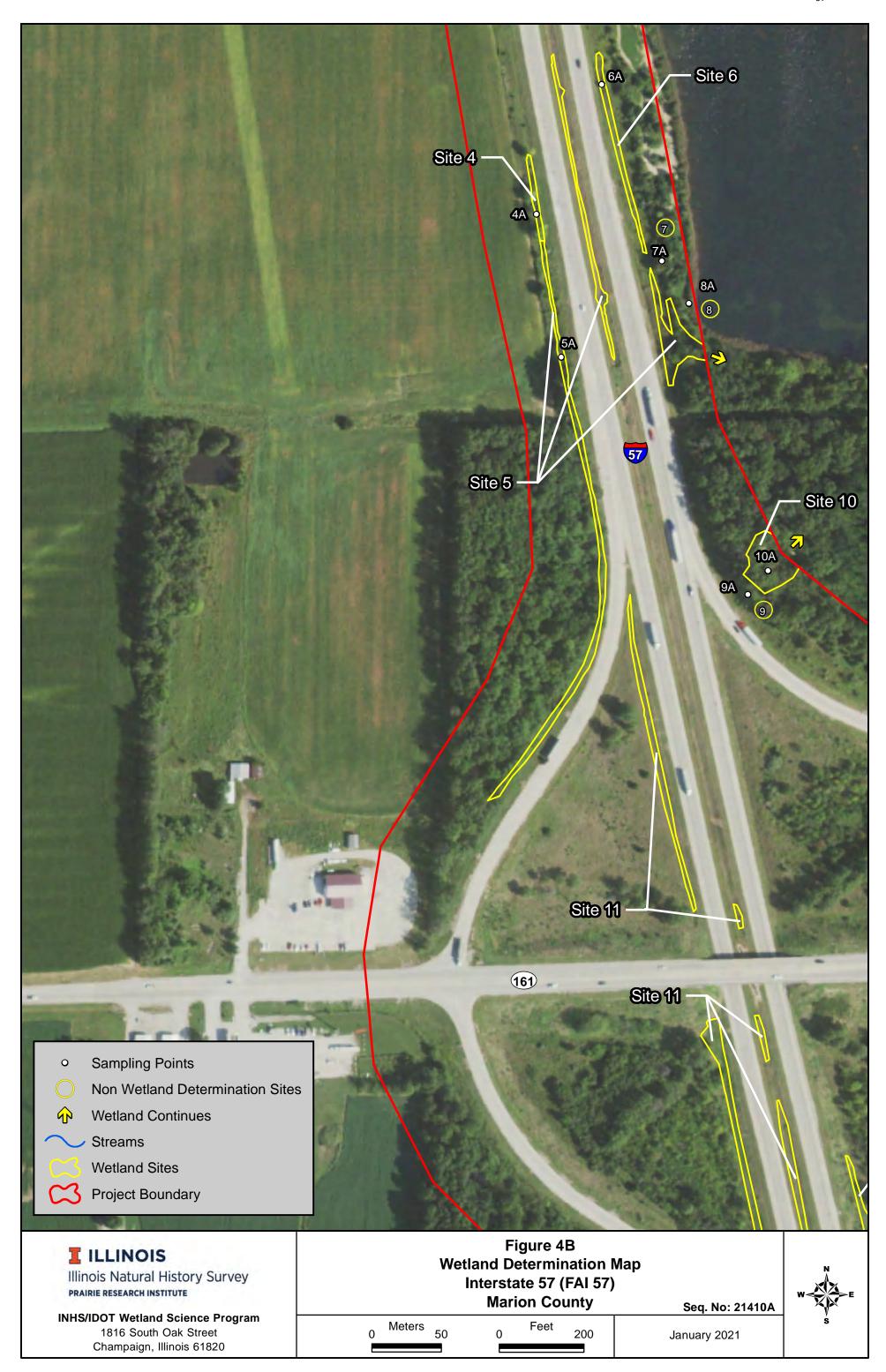
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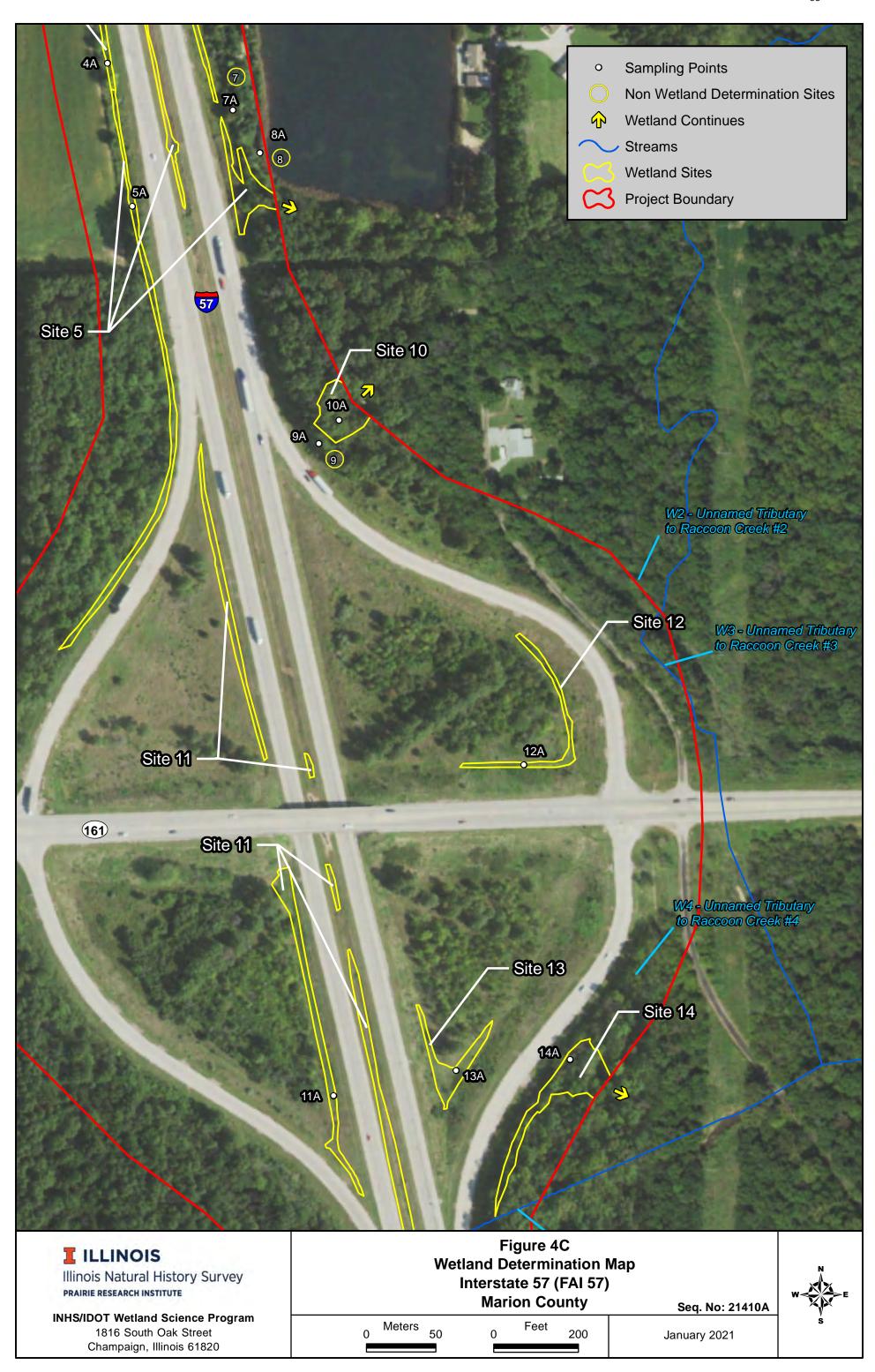
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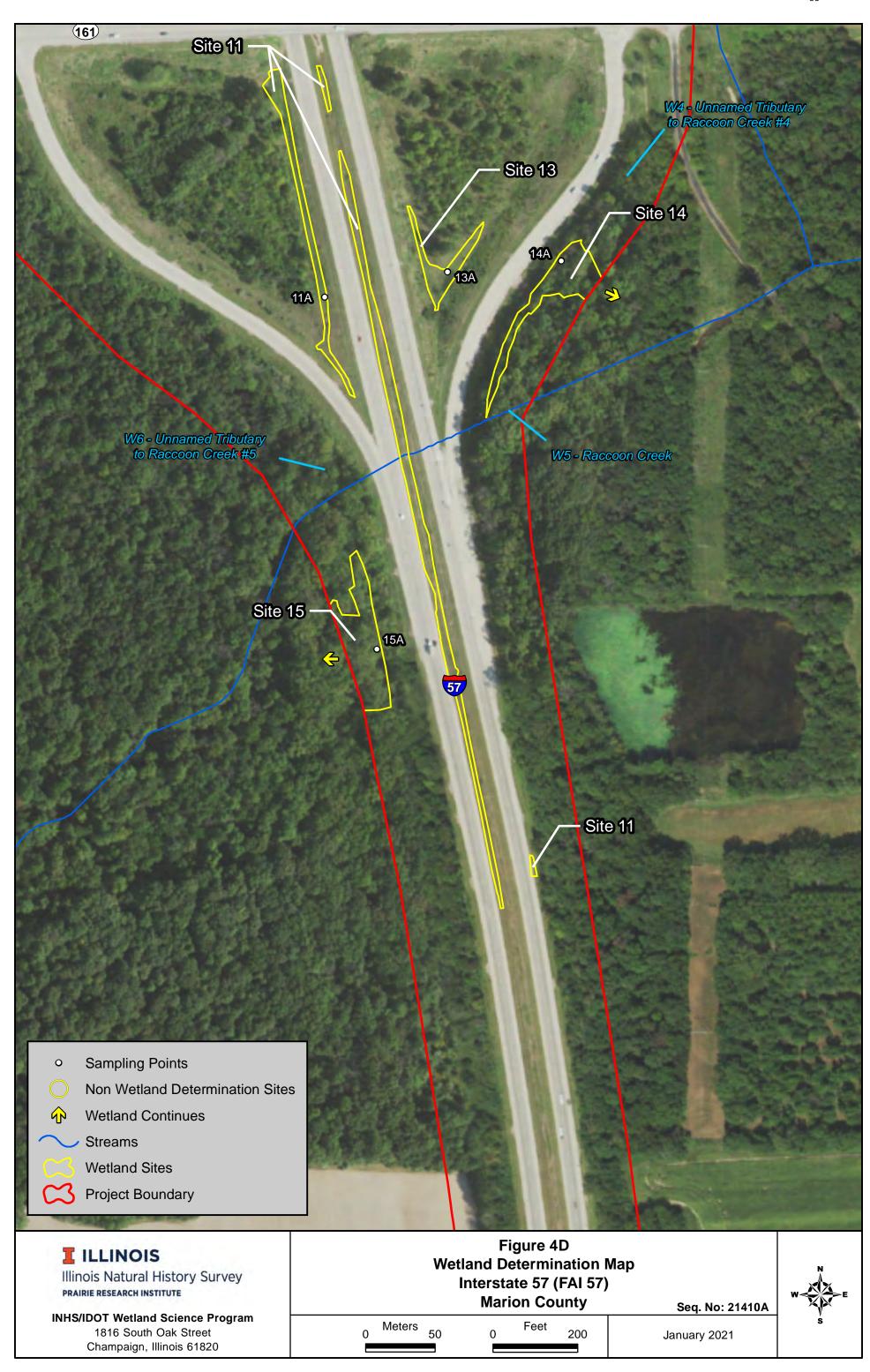
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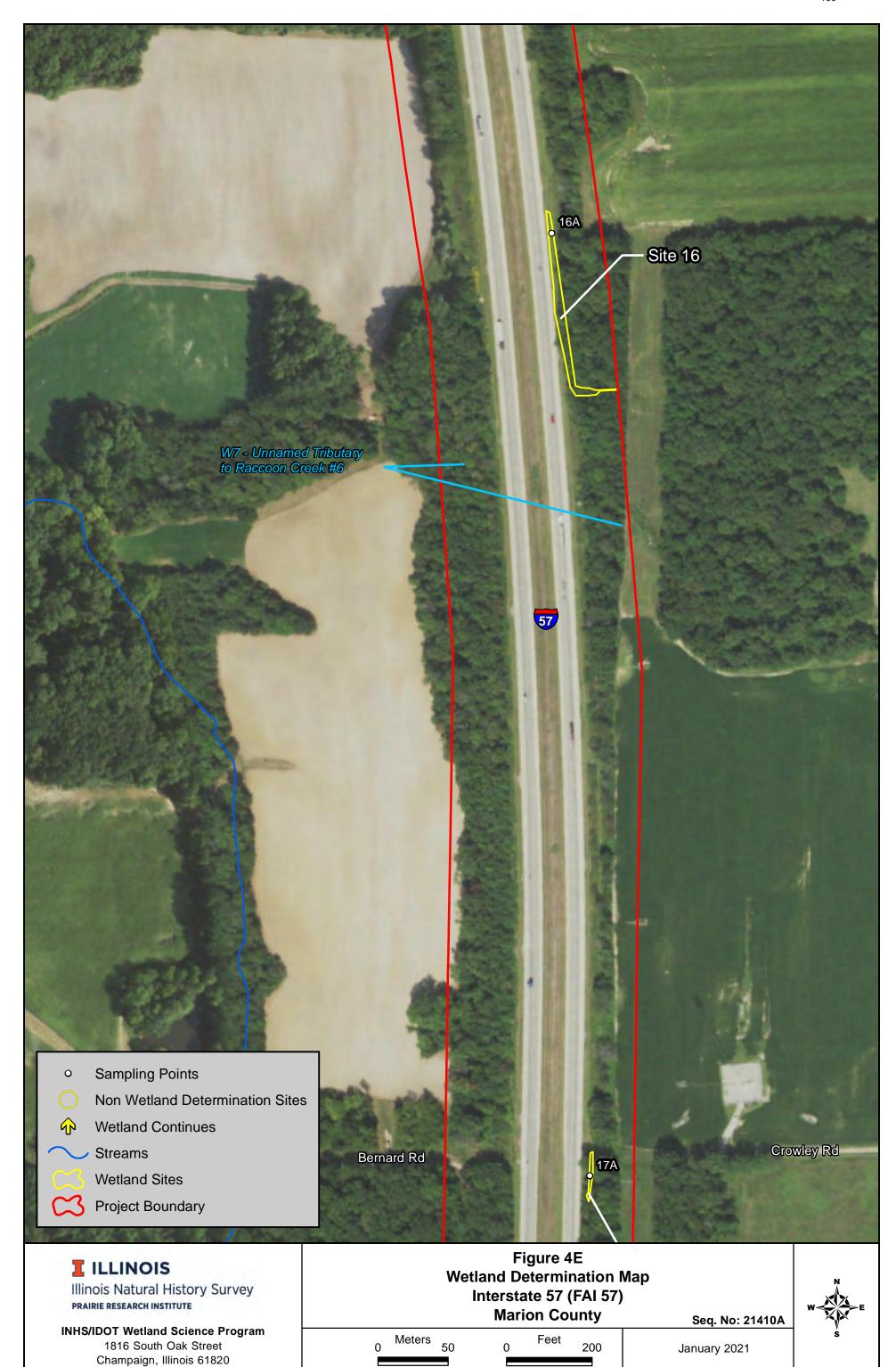
January 2021

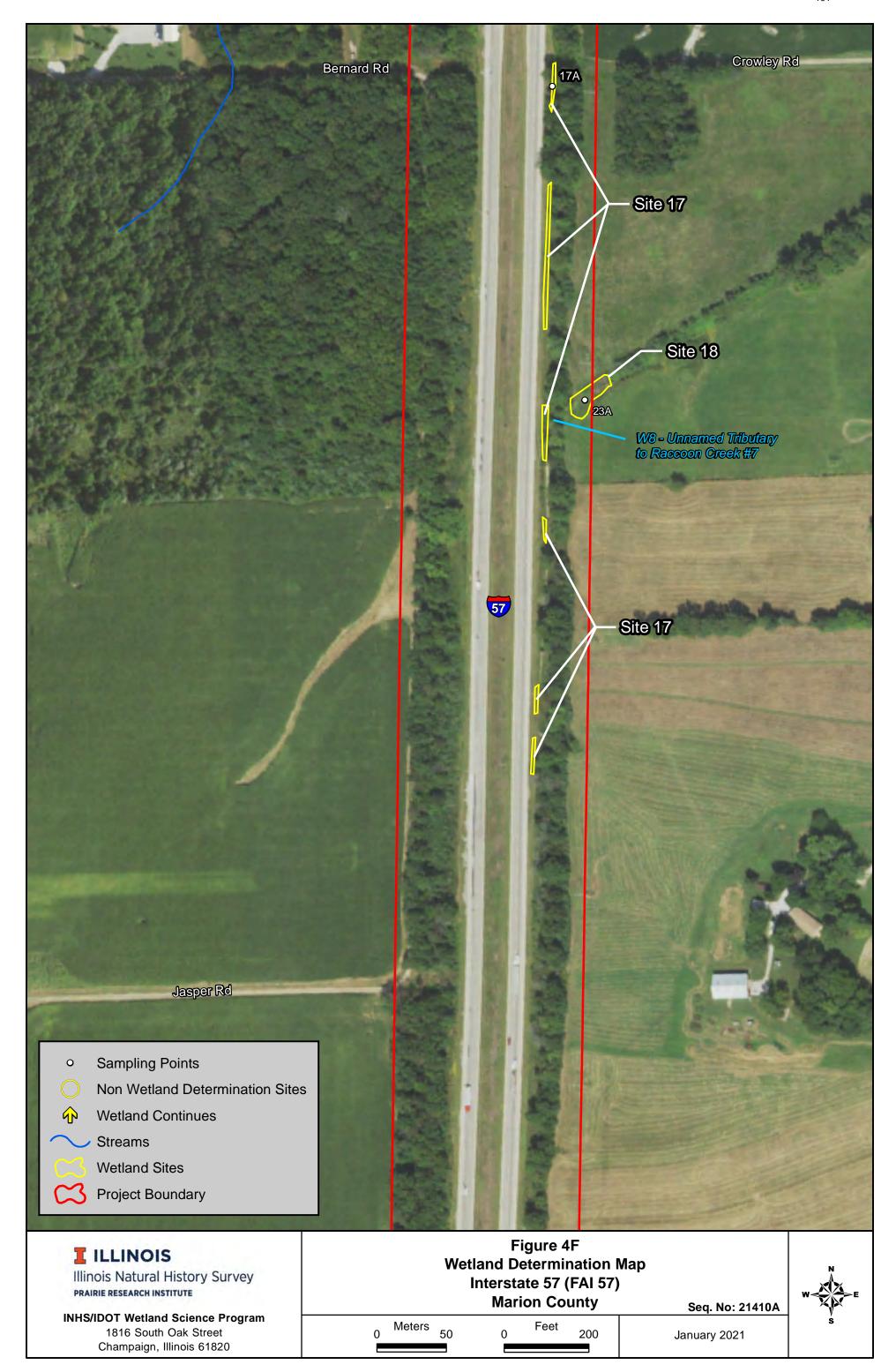


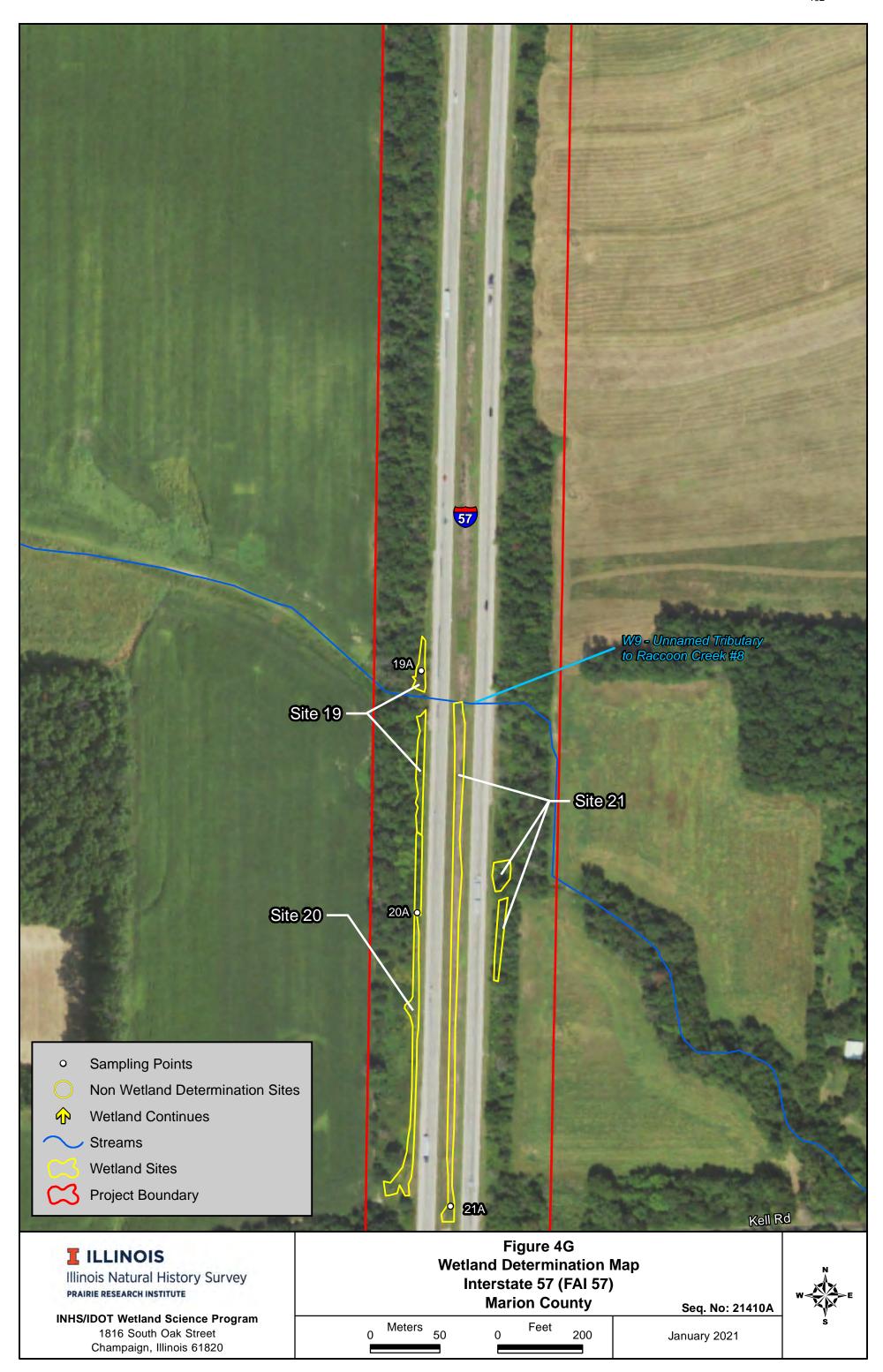


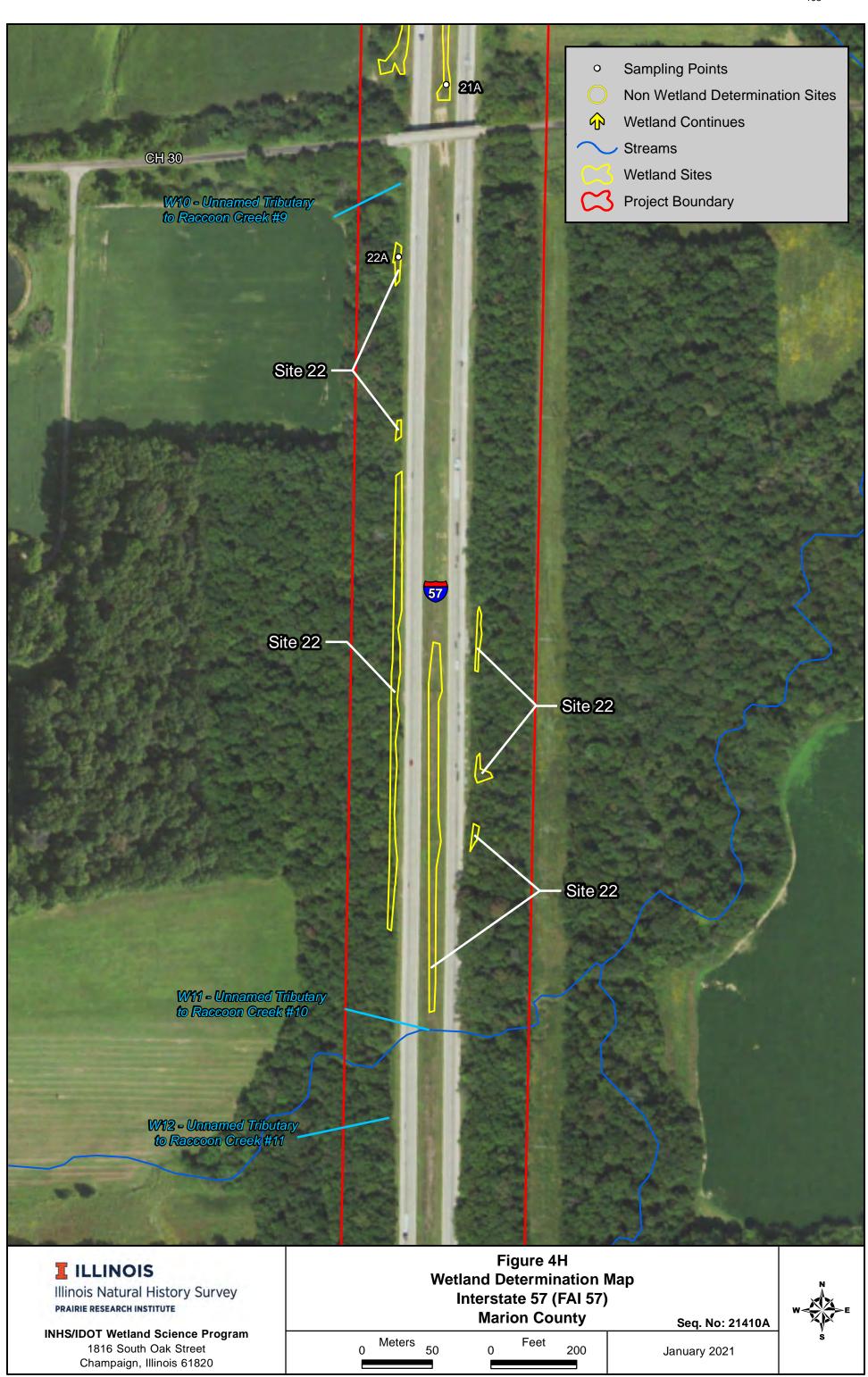


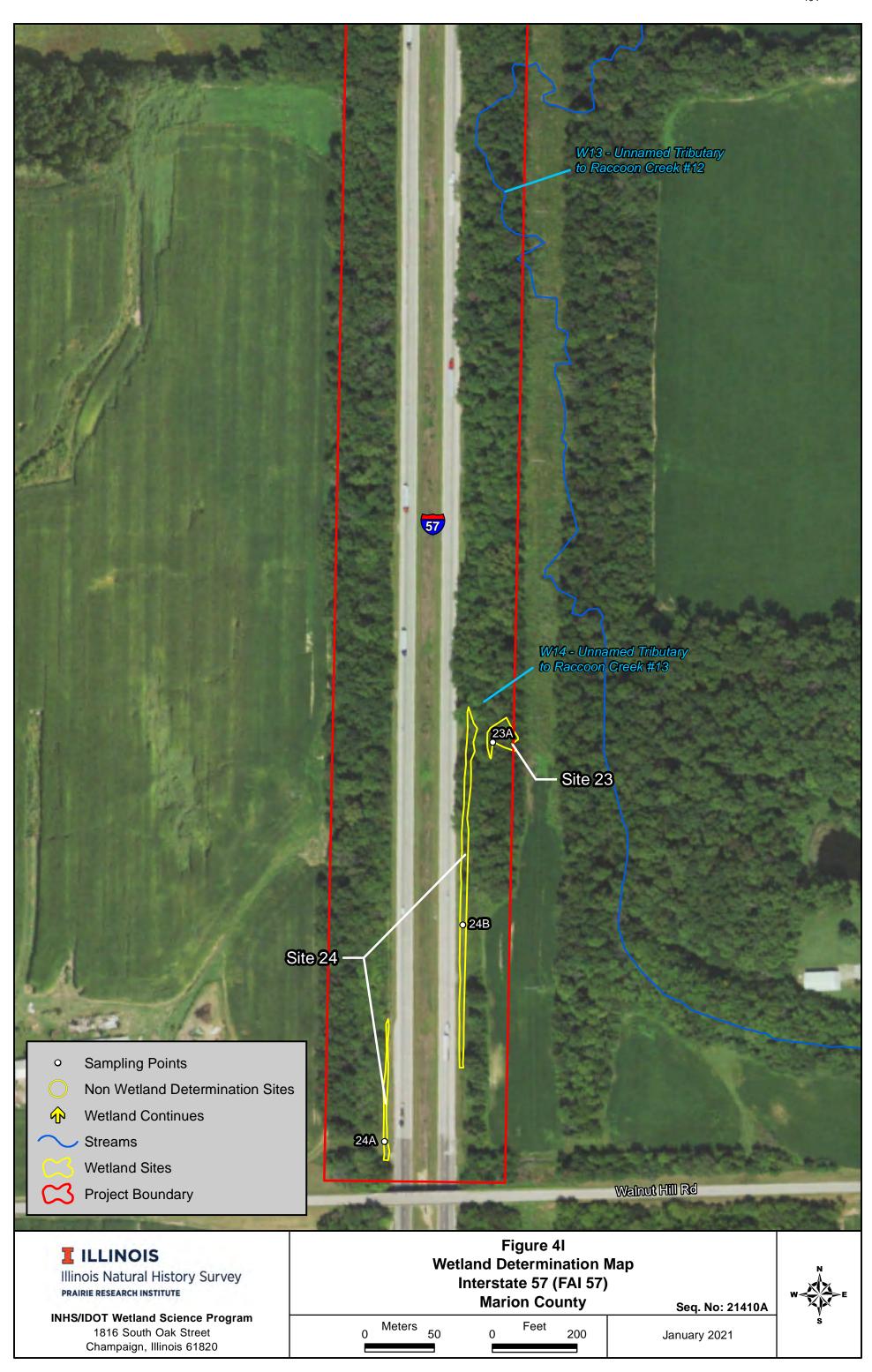












## Wetlands

Submi	ittal Date:	02/1	14/2018	Sequence	No:	21410	0							
Distric	et: 8		Reques	sting Agend	y: DOH						Pr	oject No:		
Contra	act #: 76F	79					Job N	o.:	D-	98-064-12	2			
Count	ies: Mari	on										<u> </u>		
Route:         FAI 57         Marked:         I-57														
Street	:							S	ectio	on: 61-(1,	: 61-(1,1-1,1-2,2)RS-1			
Munic	Municipality(ies):							Project l	Leng	th:	km		miles	
FromT	Γο (At): I-	57 fror	n Jeffer	son County I	Line to just	N of I	L 161			·	•			
Quadr	angle: Sa	alem S	outh/Ke	II		Town	ship-F	Range-Se	ectio	n: T1N-	R2E-Se	ec 15,23,26,	35	
Antici	pated Des	ign Ap	proval:	09/1	14/2018		Clea	ed for D	esigı	n Approva	al:	09/08/202	20	
Cleare	ed for Lett	ing:	12/07	7/2021	Mitigation	: Ye	es	Mitig	atior	n Complet	ed:			
Wetla	and Impac	ts Eva	luation											_
Submittal Date:							08/25/2021 Submitted By:							
Does	the proje	ct have	e wetlar	nd impacts?	?	Yes		Туре	e:	Permanen	ıt			
	and mini			es considere impacts to		Desi	gns we	ere looke	d at to	o minimize	e area.			
Summarize briefly why there are no practicable alternatives to the use of the wetland(s):												d stream wo tion at Caho	rk and ROW, okia Site.	,
Wetla	and mitiga	tion is	being	proposed:		wetla	and ba	nk site				✓ Review	wed	
Mem	no Date:		12/07	7/2021	Memo By	y: Kimberly Burkwald								
	This office has reviewed the Wetland Impact Evaluation. Wetland impacts were minimize as much as possible but due to widening and shoulder work as well as in stream work and land acquiaition, there are unavoidable wetland impacts. The project will impact 6.45 acres of wetlands including 3.94 acres of wet meadow and wet shrubland, 0.83 acres of forested wetland, and 1.68 acres of marsh. Some of the impacts are considered significant impacts and qualify as destruction due to impacts larger than 0.5 acres to a single wetland. The appropriate mitigation ratios have been applied as required under IWPA. In Kind mitigation credits will be deducted from the IDOT District 8 CahokiaWetland Mitigation Site ledger in the amount of 16.815 acres. Therefore, review for wetlands under Part 1090 is terminated.													
Mem	no Date:		09/08	3/2020	Memo By	<b>/</b> :	Kimbe	erly Burk	wald					
Memo:  The National Wetlands Inventory, Ducks Unlimited Wetlands Inventory, ground level and aerial photos, USDA Soil Survey, and topographic quadrangle maps were examined. The original scope of work was such that wetland delineations were not required. However, because there will be in stream work and right of way acquisition and possible tree removal, wetland delineations are required. The Illinois Natural History Survey has been tasked to conduct wetland delineations. Their report is anticipated in October 2020.  Therefore, Review for Wetlands under Part 1090 remains open until the wetland report has been received and any wetland impacts are evaluated.														
Wetla	and Impac	ts and	Mitigat	ion Require	ed									
Site No.	Туре		T&E	Nature Preserve	Natural Area	Esser Habi		Size (acres)		Acres of mpact	Ratio	Acres Compens		
	Wet Mead		No			No	1	0.56	F	.560		1 -	.680	
' Basin	L .		Quadra				FQ		L	.500	5.0	<u>'</u>		
_	ribe the w	ork:	- Quaura	gic				12.2						
2	Marsh		No	No	No I	No		0.01		.010	2.0		.020	
Basin Quadrangle						FQ	<b>I</b> 5.8	_						
Desci	ribe the w			- 1			1 🗀							
3 Wet Mead No No No No					No.		0.08	Г	.080	1.5		.120		
Basin Quadrangle			10	FO		L	.000	1.5		20				
	Basin Quadrangle FQI 7.3  Describe the work:													

4 Wet Shrub	No	No	No	No	0.06	.060	1.5	.090
Basin		rangle	140	140	FQI 9.2	.000	1.5	.030
Describe the work:								
5 Marsh	No	No	No	No	0.75	.750	3.0	2.250
Basin	_	rangle	140	140	FQI 11.4	.730	5.0	2.230
Describe the work:	Quau	angic			1 9(1 1 1			
6 Marsh	No	No	No	No	0.13	.130	1.5	105
Basin		rangle	INO	INO	FQI 8.5	.130	1.5	.195
Describe the work:	Quau	aligie			1 41 0.5			
	NI-	NIa	NI-	Nia	0.00	200	2.0	500
10 Forested	No	No	No	No	0.26	.260	2.0	.520
Basin Describe the work:	Quau	rangle			<b>FQI</b> 13.6			
	N1-	NI-	NI-	NI-	4.07	4.070	0.0	0.040
11 Wet Mead	No	No	No	No	1.27	1.270	3.0	3.810
Basin	Quad	rangle			<b>FQI</b> 9.7			
Describe the work:		1		1				
12 Wet Mead	No	No	No	No	0.16	.160	2.0	.320
Basin	Quad	rangle			<b>FQI</b> 11.1			
Describe the work:		T	1	T				
13 Marsh	No	No	No	No	0.19	.190	2.0	.380
Basin	Quad	rangle			<b>FQI</b> 9.4			
Describe the work:								
14 Forested	No	No	No	No	0.42	.420	2.0	.840
Basin	Quad	rangle			<b>FQI</b> 17.6			
Describe the work:								
16 Wet Mead	No	No	No	No	0.18	.180	2.0	.360
Basin	Quad	rangle			<b>FQI</b> 11.4			
Describe the work:								
17 Wet Mead	No	No	No	No	0.14	.140	2.0	.280
Basin	Quad	rangle			<b>FQI</b> 11.7			
Describe the work:								
19 Forested	No	No	No	No	0.15	.150	2.0	.300
Basin	Quad	rangle			<b>FQI</b> 16.9			
Describe the work:								
20 Wet Mead		No	No	No	0.31	.310	2.0	.620
Basin	Quad	rangle			<b>FQI</b> 12.0			
Describe the work:								
21 Marsh	No	No	No	No	0.60	.600	3.0	1.800
Basin	Quad	rangle			<b>FQI</b> 8.9			
Describe the work:								
22 Wet Mead	No	No	No	No	0.87	.870	3.0	2.610
Basin	Quad	rangle		•	<b>FQI</b> 16.0			
Describe the work:								
24 Wet Mead	No	No	No	No	0.31	.310	2.0	.620
Basin	Quad	rangle			<b>FQI</b> 9.4	L		
Describe the work:					7			
					Total	6.450		16.815

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

FAI 57 (I-57)
Section 61-(1,1-1,1-2,2)RS-2
From Jefferson County Line to 0.7 miles North of IL Route 161
Marion County

The scope of work for the following project consists of pavement removal and replacement between the Jefferson County line to 0.7 miles north of IL Route 161. There will also be ramp reconstruction at I-57 at IL 161 which will cause the need for a culvert extension at Raccoon Creek. The proposed project is along I-57 and located in a rural area adjacent to agricultural fields, wooded areas, floodplains, surface water bodies, and wetlands. See attached location map exhibit for the project.

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

#### A1. 2016 Identification and Characterization of the Affected Water Body

Raccoon Creek

- Hydrologic Unit Code (HUD): 0714020208
- AUID IL ROK
- Layer: 305(b) Streams 2016
- Causes: 322
  - 1. 322: Oxygen, dissolved
- Sources: 58, 156
  - 1. 58: Impacts from hydrostructure flow, regulation/modification
  - 2. 156: Agriculture
- Use attainment: N582, X583, X585, X586, F590
  - 1. N582: Not supporting aquatic life
  - 2. X583: Not assessed fish consumption
  - 3. X585: Not assessed primary contact
  - 4. X586: Secondary contact
  - 5. F590: Fully supporting aesthetic quality

## A2. 2018 Identification and Characterization of the Affected Water Body

Raccoon Creek

Designated Use	Cause			
Aesthetic Quality	Total Suspended Solids (TSS)			
Aquatic Life	Terbufos			
Fish Consumption	Mercury			
Fish Consumption	Polychlorinated biphenyls			

- Priority: Medium
- Raccoon Creek is listed not supporting aquatic life and not supporting fish consumption.
   This may be caused by the mercury, polychlorinated biphenyls, and Terbufos that the 2016 Identification and Characterization of the Affected Water Body shows is caused by dissolved oxygen with the sources being agriculture and impacts from hydrostructure flow, regulation/modification.
- Raccoon Creek 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 Raccoon Creek at the project location for a biologically significant stream under the IDNR publication: Integrating Multiple Taxa in a Biological Stream Rating System
- Raccoon Creek at the project location is not an Illinois Natural Areas Inventory site
- The drainage area for Raccoon Creek is 12.52 square miles
- The following wetland sites will be impacted:

Site	Type of Wetland	Floristic Quality Index	Mean C	
1	Wet meadow	12.2	2	
2	Marsh	5.8	2	
3	Wet meadow	7.3	1.7	
4	Wet shrubland	9.2	2	
5	Marsh	11.4	2.3	
6	Marsh	8.5	1.9	
10	Forested	13.6	3.1	
11	Wet meadow	9.7	1.8	
12	Wet meadow	11.1	2.1	
13	Marsh	9.4	2	
14	Forested	17.6	2.9	
16	Wet meadow	11.4	2.3	
17	Wet meadow	11.7	2.4	
19	Forested	16.9	2.9	
20	Wet meadow	12	2.2	
21	Marsh	8.9	2	
22	Wet meadow	16	2.5	
24	Wet meadow	9.4	1.8	

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

It has been determined that there will be a total of 6.45 acres of impact to wetlands. The following is a breakdown of wetland impacts:

Site	Type of Wetland	Floristic Quality Index	Type of Impact	Impact in Acres	Mitigation Ratio	Calculated Acres of Mitigation
1	Wet meadow	12.2	Permanent	0.56	3	1.68
2	Marsh	5.8	Permanent	0.01	2	0.02
3	Wet meadow	7.3	Permanent	0.08	1.5	0.12
4	Wet shrubland	9.2	Permanent	0.06	1.5	0.9
5	Marsh	11.4	Permanent	0.75	3	2.25
6	Marsh	8.5	Permanent	0.13	1.5	0.195
10	Forested	13.6	Permanent	0.26	2	0.52
11	Wet meadow	9.7	Permanent	1.27	3	3.81
12	Wet meadow	11.1	Permanent	0.16	2	0.32
13	Marsh	9.4	Permanent	0.19	2	0.38
14	Forested	17.6	Permanent	0.42	2	0.84
16	Wet meadow	11.4	Permanent	0.18	2	0.36
17	Wet meadow	11.7	Permanent	0.14	2	0.28
19	Forested	16.9	Permanent	0.15	2	0.3
20	Wet meadow	12	Permanent	0.31	2	0.62
21	Marsh	8.9	Permanent	0.6	3	1.8
22	Wet meadow	16	Permanent	0.87	3	2.61
24	Wet meadow	9.4	Permanent	0.31	2	0.62

Wetland impacts are mitigated at the IDOT Cahokia Wetland Mitigation Bank.

The following is an environmental commitment for the proposed project:

• 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.

#### 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 improve the pavement condition, repair bridges and improve safety on I-57 in Marion County. In 2014, emergency repairs were conducted to the existing pavement within the project limits due to pavement failures. For this project, there will be full removal and replacement of the existing pavement. In addition, there will be ramp reconstruction at I-57 at IL 161 in order to meet the current profile and sight distance requirements for a design speed of 55 mph. There needs to be a culvert extension at Raccoon Creek due to the ramp reconstruction. The social benefit for the proposed activity is roadway safety.

#### D. Assessment of Alternatives

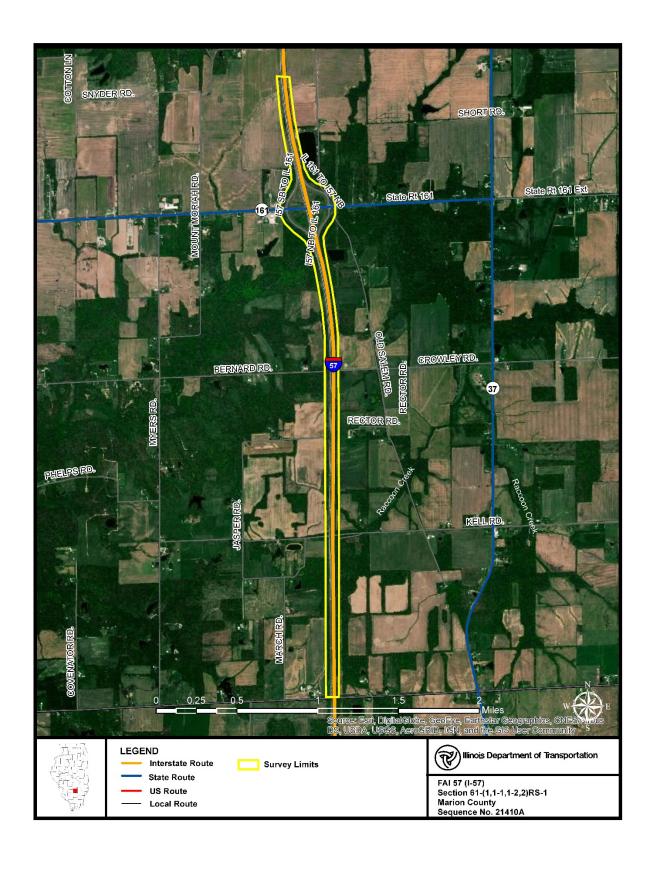
There was not an alternatives analysis as is done for an Environmental Assessment or an Environmental Impact Statement project. This project involved resurfacing pavement and improving the ramps to meet design policy on an already existing interchange at I-57 at IL 161. As minimal ROW as possible will be impacted in order to meet design policy.

## 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.

Mayor, Centralia	9/8/2020	Project introduction
Mayor, Mt. Vernon	9/8/2020	Project introduction
Mayor, Salem	9/8/2020	Project introduction
Mayor, Effingham	9/8/2020	Project introduction
State Representative Terri Bryant	9/8/2020	Project introduction
State Senator Jason Plummer	9/8/2020	Project introduction
State Senator Paul Schimpf	9/8/2020	Project introduction
Dix Village President	9/8/2020	Project introduction
US Fish & Wildlife Service	10/14/2020	Coordination for any listed threatened or endangered species
		Concurrence letter of project within the range of the Indiana bat and the Northern long-
US Fish & Wildlife Service	12/7/2021	eared bat

In addition, the Illinois Department of Transportation sent an updated Natural Resources Review memo was updated on December 7, 2021.



#### S.W.P.P.P INFORMATION

Soil Type	Soil Symbol	Drainage	Permeability	Flooding	Slopes (%)	Water Erosion	Wind Erosion
Cisne Silt Loam	2A	Poorly	Very Slow - Moderately Slow	None	0 - 2	Low	Low
Hoyleton Silt Loam	3A	Somewhat Poorly	Slow - Moderately Slow	None	0 - 2	Low	Low
Hoyleton Silt Loam	3B	Somewhat Poorly	Slow - Moderately Slow	None	2 - 5	Moderate	Low
Hoyleton Silt Loam, Eroded	3B2	Somewhat Poorly	Slow - Moderately Slow	None	2 - 5	Moderate	Low
Atlas Silt Loam, Eroded	7C2	Somewhat Poorly	Slow - Moderately Slow	None	5 - 10	High	Low
Atlas Silt Loam, Eroded	7D2	Somewhat Poorly	Slow - Moderately Slow	None	10 - 18	High	Low
Hickory Silt Loam	8F	Well	Moderately Slow - Moderate	None	18 - 35	High	Low
Wynoose Silt Loam	12A	Poorly	Very Slow - Slow	None	0 - 2	Low	Low
Bluford Silt Loam	13A	Somewhat Poorly	Slow	None	0 - 2	Low	Low
Bluford Silt Loam	13B	Somewhat Poorly	Slow	None	2 - 5	Moderate	Low
Bluford Silt Loam, Eroded	13B2	Somewhat Poorly	Slow	None	2 - 5	Moderate	Low
Ava Silt Loam	14B	Moderately Well	Very Slow - Moderately Slow	None	2 - 5	Moderate	Low
Ava Silt Loam, Eroded	14C2	Moderately Well	Very Slow - Moderately Slow	None	5 - 10	Moderate	Low
Racoon Silt Loam	109A	Poorly	Slow - Moderately Slow	None	0 - 2	Low	Low
Passport Silt Loam, Eroded	652C2	Somewhat Poorly	Slow	None	5 - 10	Moderate	Low
Passport Silt Loam, Eroded	652D2	Somewhat Poorly	Slow	None	10 - 18	High	Low
Orthents Silty, Undulating	801B	Somewhat Poorly	Moderately Slow - Moderate	None	N/A	Moderate	Moderate
Passport-Grantfork Silt Loam, Eroded	888C2	Somewhat Poorly	Slow	None	5 - 10	Moderate - High	Low
Hoyleton-Darmstadt Silt Loam	912A	Somewhat Poorly	Slow - Moderately Slow	None	0 - 2	Low	Low
Hoyleton-Darmstadt Silt Loam, Eroded	912B2	Somewhat Poorly	Slow - Moderately Slow	None	2 - 5	Moderate	Low
Atlas-Grantfork Silt Loam, Eroded	914C2	Somewhat Poorly	Slow - Moderately Slow	None	5 - 10	High	Low
Hickory-Passport Silt Loam, Eroded	947D2	Well	Moderately Slow - Moderate	None	10 - 18	High	Low
Hickory-Gasport Silt Loam	967F	Well	Moderately Slow - Moderate	None	18 - 35	High	Low
Cisne-Huey Silt Loam	991A	Poorly	Very Slow - Moderately Slow	None	0 - 2	Low	Low
Bonnie Silt Loam, Sodic	3108T	Poorly	Slow	Frequent	0 - 2	Low	Low
Holton Silt Loam	3225A	Somewhat Poorly	Moderate - Moderately Rapid	Frequent	0 - 2	Low	Low
Wakeland Silt Loam	3333A	Somewhat Poorly	Moderate	Frequent	0 - 2	Low	Low
Creal Silt Loam	7337B	Somewhat Poorly	Moderately Slow	Rare (Jan - June)	2 - 5	Low	Low

**EXAMPLE**: SOIL TYPE (SOIL SYMBOL) - a DRAINAGE soil with PERMEABILITY permeability. This soil is FLOODING flooded with SLOPES slopes. This soil has a WATER EROSION susceptibility to water erosion and a WIND EROSION susceptibility to wind erosion.

To: Keith Roberts Attn: Jennifer Hunt

From: Jack Elston By: Brad Koldehoff

Subject: Cultural Resources - No Historic Properties Affected Clearance

Date: May 4, 2020

Marion County FAI 57, I-57 South of Marion Sec. 61-(1,1-1,1-2,2)RS-1 Job No. D-98-064-12 Seq. 21410A

For the above referenced undertaking, IDOT's qualified Cultural Resources staff hereby make a "No Historic Properties Affected" finding pursuant to Section 106 of the National Historic Preservation Act.

This finding concludes the Section 106 process in accordance with the stipulations of the Programmatic Agreement Regarding Section 106 Implementation for Federal-Aid Transportation Projects in the State of Illinois, executed March 6, 2018 by FHWA, Illinois SHPO, IDOT and the Advisory Council on Historic Preservation.

No further cultural resources coordination is required for this undertaking, unless design modifications or new information indicate that historic properties may be affected. If so, then, additional coordination with my office is required.

Brad H. Koldehoff

Bral Kolleho

Cultural Resources Unit Chief Bureau of Design & Environment

BK:km



## United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

Southern Illinois Sub-Office Southern Illinois Sub-office 8588 Route 148 Marion, IL 62959-5822

Phone: (618) 997-3344 Fax: (618) 997-8961

http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: December 07, 2021

Consultation code: 03E18100-2018-I-0417 Event Code: 03E18100-2022-E-00363

Project Name: 21410 I 57 shoulders and bridge overlay

Subject: Concurrence verification letter for the '21410 I 57 shoulders and bridge overlay'

project under the revised February 5, 2018, 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 to verify that the **21410 I 57 shoulders and bridge overlay** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, 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 shown 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 may affect, but is <u>not likely to adversely affect</u> (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 <u>not</u> 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.

**For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities:** If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

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, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

Monarch Butterfly Danaus plexippus Candidate

## **Project Description**

The following project name and description was collected in IPaC as part of the endangered species review process.

#### Name

21410 I 57 shoulders and bridge overlay

#### Description

The proposed project is for shoulder replacement and bridge overlay on several structures along I 57 from the Jefferson County Line to just north of IL 161. There will be no right-of-way acquisition or temporary easements required for the completion of this project. Additionally, there will be no in stream work and no tree removal . Due to the scope of work, there will be excavation within the State's Right-of-Way.

## **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 concurrence provided in the revised February 5, 2018, 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<sup>[1]</sup>?
  - [1] See Indiana bat species profile

#### Automatically answered

Yes

- 2. Is the project within the range of the Northern long-eared bat<sup>[1]</sup>?
  - [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<sup>[1]</sup> activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)
  - [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting. No
- 5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces<sup>[1]</sup>?
  - [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

- 6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum<sup>[1]</sup>?
  - [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

7. Is the project located **within** a karst area?

- 8. Is there *any* suitable<sup>[1]</sup> summer habitat for Indiana Bat or NLEB **within** the project action area<sup>[2]</sup>? (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.
  - [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the national consultation FAQs.

Yes

- 9. Will the project remove *any* suitable summer habitat<sup>[1]</sup> and/or remove/trim any existing trees **within** suitable summer habitat?
  - [1] See the Service's <u>summer survey guidance</u> for our current definitions of suitable habitat. *Yes*
- 10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail? *No*
- 11. Have presence/probable absence (P/A) summer surveys<sup>[1][2]</sup> been conducted<sup>[3][4]</sup> **within** the suitable habitat located within your project action area?
  - [1] See the Service's <u>summer survey guidance</u> 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 hibernacula) 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] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.
  - [4] Negative presence/probable absence survey results obtained using the <u>summer survey guidance</u> are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

- 12. Does the project include activities **within documented Indiana bat habitat**<sup>[1][2]</sup>?
  - [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

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

- 14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur<sup>[1]</sup>?
  - [1] Coordinate with the local Service Field Office for appropriate dates.
  - B) During the inactive season
- 15. Does the project include activities within documented NLEB habitat<sup>[1][2]</sup>?
  - [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

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

- 17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?
  - B) During the inactive season
- 18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces? *Yes*
- 19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

20. Are *all* trees that are being removed clearly demarcated?

Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

No

22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

23. Does the project include slash pile burning?

No

- 24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)? *Yes*
- 25. Is there *any* suitable habitat<sup>[1]</sup> for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)
  - [1] See the Service's current <u>summer survey guidance</u> for our current definitions of suitable habitat. *Yes*
- 26. Has a bridge assessment<sup>[1]</sup> been conducted **within** the last 24 months<sup>[2]</sup> to determine if the bridge is being used by bats?
  - [1] See <u>User Guide Appendix D</u> for bridge/structure assessment guidance
  - [2] Assessments must be completed no more than 2 years 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

- HPSCAN\_20200909164340555\_2020-09-09\_164516816 1.pdf <a href="https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043660">https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043660</a>
- HPSCAN\_20200909164340555\_2020-09-09\_164516816.pdf <a href="https://ecos.fws.gov/">https://ecos.fws.gov/</a>
   ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/
   projectDocuments/108043661
- HPSCAN-20200909163555005-2020-09-09-163729674.pdf <a href="https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043662">https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043662</a>
- HPSCAN-20200909164123709-2020-09-09-164313849.pdf <a href="https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043663">https://ecos.fws.gov/ipac/project/CKJG6ZHPZVBC3KL5AR3OIXHQOQ/projectDocuments/108043663</a>

- 27. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)<sup>[1]</sup>?
  - [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

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

28. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

29. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

- 30. Will the project involve the use of **temporary** lighting *during* the active season?
- 31. Will the project install new or replace existing **permanent** lighting? *No*
- 32. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

No

33. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

34. Will the project raise the road profile **above the tree canopy**?

35. Are the project activities that are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

#### Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

36. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

#### Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

37. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

#### Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

38. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

#### Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

#### 39. 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

#### 40. 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<sup>[1]</sup> in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word "trees" as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS' current summer survey guidance for our latest definitions of suitable habitat.

Yes

#### 41. Tree Removal AMM 3

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

#### 42. Tree Removal AMM 4

Can the project avoid cutting down/removal of *all* (1) **documented**<sup>[1]</sup> Indiana bat or NLEB roosts<sup>[2]</sup> (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

- [1] The word documented means habitat where bats have actually been captured and/or tracked.
- [2] 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.)

Yes

### **Project Questionnaire**

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

Yes

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

No

- 3. How many acres<sup>[1]</sup> of trees are proposed for removal between 0-100 feet of the existing road/rail surface?
  - [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

8.75

- 4. Please describe the proposed bridge work: *bridge overlay, shoulder repair, in stream work*
- 5. Please state the timing of all proposed bridge work: *uknown likley summer or spring*
- 6. Please enter the date of the bridge assessment: *09/09/2020*

## **Avoidance And Minimization Measures (AMMs)**

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

#### TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with <u>no bats observed</u>.

#### TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

#### **TREE REMOVAL AMM 4**

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or

**documented** foraging habitat any time of year.

#### **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 avoid tree removal.

# 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 22, 2021. 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 may 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 <u>only</u> be used to verify project applicability with the Service's <u>February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects</u>. 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 <u>not</u> 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.

Sequence #: 21410 A

FAI 57

Reconstruction Br Repair

#### Resource in Vicinity of Project Polygon

\*Ducks Unlimited Wetlands

\*National Wetlands Inventory

#### INAI & NP w/in 1 mile

\*none found

#### No Resource Found

\*INAI

\*T&E

\*Nature Preserve

\*INHS Wetland

\*Roadside Prairie Inventory

County: MARION

Section(PLSS): 3 1N2E14

Area: 0.39084 sq. miles = 250.13661 acres

Report created by Burkwaldk

Threatened & Endangered Species (T&E)

Nature Preserve (NP)

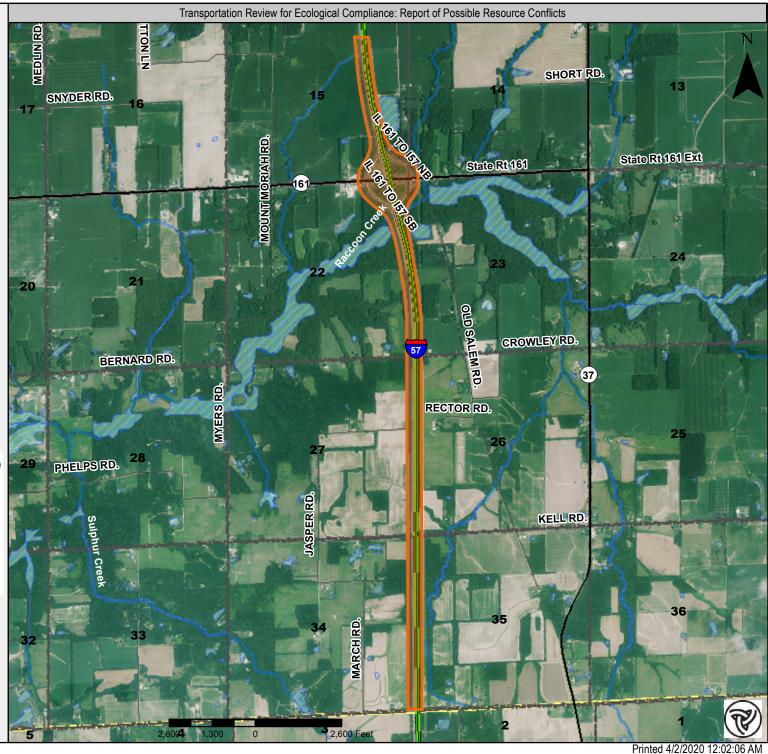
Illinois Natural Areas Inventory (INAI)

Wetlands
INHS Wetland

Roadside Prairie Inventory



Include as additional documentation with permit applications (USACE).





## United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

Southern Illinois Sub-Office Southern Illinois Sub-office 8588 Route 148 Marion, IL 62959-5822

Phone: (618) 997-3344 Fax: (618) 997-8961

http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: December 07, 2021

Consultation Code: 03E18100-2018-SLI-0417

Event Code: 03E18100-2022-E-00361

Project Name: 21410 I 57 shoulders and bridge overlay

Subject: Updated list of threatened and endangered species that may occur in your proposed

project location or may be affected by your proposed project

#### To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat. Under the ESA, it is the responsibility of the Federal action agency or its designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service to make "no effect" determinations. If you determine that your proposed action will have "no effect" on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally-listed threatened or endangered fish or wildlife species without the appropriate permit.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <a href="http://ecos.fws.gov/ipac/">http://ecos.fws.gov/ipac/</a> at regular intervals during project planning and implementation and

completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website <a href="http://www.fws.gov/midwest/endangered/section7/s7process/index.html">http://www.fws.gov/midwest/endangered/section7/s7process/index.html</a>. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website <u>USFWS Midwest Region - Bald and Golden Eagle Permits</u> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

#### Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries

## **Official Species List**

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

This species list is provided by:

Southern Illinois Sub-Office Southern Illinois Sub-office 8588 Route 148 Marion, IL 62959-5822 (618) 997-3344

### **Project Summary**

Consultation Code: 03E18100-2018-SLI-0417

Event Code: Some(03E18100-2022-E-00361)

Project Name: 21410 I 57 shoulders and bridge overlay

Project Type: TRANSPORTATION

Project Description: The proposed project is for shoulder replacement and bridge overlay on

several structures along I 57 from the Jefferson County Line to just north

of IL 161. There will be no right-of-way acquisition or temporary

easements required for the completion of this project. Additionally, there will be no in stream work and no tree removal . Due to the scope of work,

there will be excavation within the State's Right-of-Way.

#### **Project Location:**

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@38.50393637694205">https://www.google.com/maps/@38.50393637694205</a>,-88.95945190038141,14z



Counties: Marion County, Illinois

### **Endangered Species Act Species**

There is a total of 3 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

#### **Mammals**

NAME STATUS

#### Indiana Bat Myotis sodalis

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/5949

#### Northern Long-eared Bat Myotis septentrionalis

Threatened

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>

#### **Insects**

NAME STATUS

#### Monarch Butterfly *Danaus plexippus*

Candidate

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

#### **Critical habitats**

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

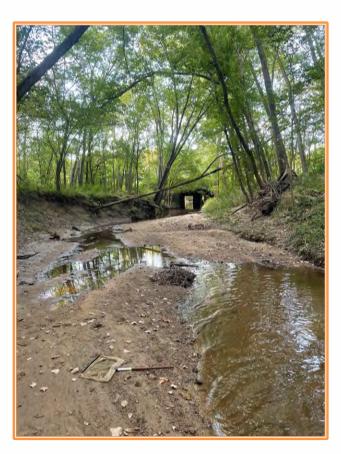
# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## Survey for Fishes in Raccoon Creek at the Interstate 57 (IDOT FAI 57), Marion County, Illinois

IDOT Sequence Number: 21410A



Prepared by: Jeremy S. Tiemann

INHS/IDOT Statewide Biological Survey & Assessment Program 2021:58

October 2021



#### PROJECT SUMMARY

This report is submitted in response to a request made by the Illinois Department of Transportation (IDOT) to the Illinois Natural History Survey (INHS) to conduct a three-parameter survey (fish, macroinvertebrates, and water quality and physical characterization) in Raccoon Creek at the Interstate 57 (IDOT FAI 57 / I-57) crossing, 7.5 miles south of Salem, Marion County, Illinois. Construction on will occur along Interstate 57 (IDOT FAI 57) from just north of Illinois Route 161 (IL 161), south to the Jefferson County line. The project includes instream work and replacement/rehabilitation of >40-year-old culverts within the I-57 / IL 161 interchange, along with shoulder reconstruction along I-57.

A survey for fishes was conducted in Raccoon Creek at the Interstate 57 crossing by INHS personnel on 29 September 2021. Fishes were collected from old Salem Road, downstream to the I-57 crossing (approximately 170 yards). We used a Midwest Lakes Electrofishing Infinity Xtreme powered by a Lithium smart 24v 19.2 amp-hr battery set at 200v along both banks (=dual pass) for 45 minutes.

Eight species of fishes were collected during these surveys. All taxa encountered are common inhabitants of northern Illinois headwater streams. None of the species collected during this survey are listed as threatened or endangered at the federal or state level, nor are they candidates for listing in Illinois.

A separate report will summarize the results of the survey for aquatic macroinvertebrates, the values recorded during measurement of physical and chemical water quality parameters in the field and those resulting from laboratory analyses for physicochemical constituents of raw water samples collected in the field, and the information resulting from physical characterization of the stream.

Surveys Lead By: Jeremy S. Tiemann, Aquatic Zoologist

Kathryn E. Conatser, INHS Hourly Assistant Aaron L. Devin, INHS Hourly Assistant

Edited by: Mark J. Wetzel, INHS Research Affiliate

GIS Layers: Janet L. Jarvis, INHS GIS and Remote Sensing Specialist

University of Illinois

Prairie Research Institute Illinois Natural History Survey

Statewide Biological Survey and Assessment Program

1816 South Oak Street Champaign, Illinois 61820

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**Cover photo**: Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing, 7.5 miles south of Salem, Marion County, Illinois (Latitude 38.5180° North, Longitude 88.9583° West) by INHS personnel on 29 September 2021 (J.S. Tiemann photo). Picture facing downstream in a westerly direction, with the I-57 culvert in the background.

#### INTRODUCTION

This report is submitted in response made by Kimberly Burkwald of the Illinois Department of Transportation (IDOT) to Rachel Vinsel and Wendy Schelsky of the Illinois Natural History Survey (INHS) on 26 August 2021 for a three-parameter survey (fish, macroinvertebrates, and water quality and physical characterization) in Raccoon Creek at the Interstate 57 (IDOT FAI 57 / I-57) crossing, 7.5 miles south of Salem, Marion County, Illinois [IDOT Sequence No. 21410A; IDOT Job No. D-98-064-12; IDOT Contract No. 76F79; IDOT Section No. 61-(1,1-1,1-2,2)RS-1; INHS Project No. FS-1550]. Construction on will occur along a 6.1-mile section of Interstate 57 from just north of Illinois Route 161 (IL 161), south to the Jefferson County line. The project includes instream work and replacement/rehabilitation of >40-year-old culverts within the I-57 / IL 161 interchange, along with shoulerd reconstruction along I-57.

This report summarizes the results of the survey for fishes conducted in Raccoon Creek at the Interstate 57 crossing by INHS personnel on 29 September 2021. A separate report will summarize the results of the survey for aquatic macroinvertebrates, the values recorded during measurement of physical and chemical water quality parameters in the field and those resulting from laboratory analyses for physicochemical constituents of raw water samples collected in the field, and the information resulting from physical characterization of the stream.

#### **PROJECT LOCATION**

The Interstate 57 (IDOT FAI 57) project area consisted of one perennial stream site (Figure 1):

1) Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing, located approximately 7.5 miles south of Salem, Marion County, Illinois (Latitude 38.5180° North, Longitude 88.9583° West) (cover photo).

**Appendix 1** references a shapefile with sampling point information for the Interstate 57 (IDOT FAI 57) crossing as discussed in this report.

#### HABITAT CHARACTERIZATION

Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing was visited by INHS personnel on 29 September 2021 (cover photo). We examined a reach of the stream (approximately 170 yards in length) from old Salem Road, downstream (WSW), to the I-57 crossing. The stream ranged between 1 foot and 25 feet (mean: 15 feet) in width and from <1 inch to ~4 feet (mean: 2 feet) in depth. Substrates were predominantly clay hardpan and sand; woody debris and some undercut banks were present but aquatic vegetation was not observed. Raccoon Creek was not flowing during our visit. The banks along this stream in the project area were steeply sloped and tree lined.

#### **BACKGROUND**

Raccoon Creek is a tributary of Crooked Creek (Kaskaskia River basin). This small (<100 mi²) basin originates near Kell in Marion County and flows in a westerly direction before depositing its waters into Crooked Creek at the north edge of Centralia. The conversion of native prairies to cropland has resulted in several anthropogenic alterations in the Kaskaskia River drainage (Page et al. 1992), and the Crooked Creek basin (i.e., Raccoon Creek) is no exception as it has

been channelized and drain tiles have been added to the row-crop agricultural fields. Although Raccoon Creek was not included [or discussed] in The Biological Stream Characterization (Bertrand et al. 1996), Crooked Creek was rated therein as a "C" Stream (Moderate Aquatic Resource). The INHS Fish Collection database (Champaign) has limited data for the Crooked Creek basin since 1960 (29 species), especially Raccoon Creek (only 5 species) (INHS 2021).

#### **METHODS**

A survey for fishes was conducted in Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing on 29 September 2021 at 10:30 a.m. by INHS personnel J.S. Tiemann, K.E. Conatser and A.L. Devine. Fishes were collected from old Salem Road, downstream to the I-57 crossing (approximately 170 yards). We used a Midwest Lakes Electrofishing Infinity Xtreme powered by a Lithium smart 24v 19.2 amp-hr battery set at 200v along both banks (=dual pass) for 45 minutes. One person operated the backpack electrofisher by manipulating the anode with one hand while flicking the cathode with the other (free) hand. The other two team members netted fishes while also carrying the aerated bucket that served as a live-well. Available habitat types were covered. Efforts were made to cover all available habitat types present at the site, including areas of differing substrates.

All fishes were identified, counted, and released. Nomenclature for fishes discussed in this report follows Page and Burr (2011) except that subspecies are not recognized. The current status of threatened and endangered species of fishes discussed in this report are taken from U.S. Department of Interior, Fish and Wildlife Service (USDI, FWS) (1996, 1997) and Illinois Endangered Species Protection Board (IESPB) (2020). All fishes were collected and processed according to Institute of Animal Care and Use Committee (IACUC) protocol # 16057.

#### **RESULTS AND DISCUSSION**

Eight species of fishes were collected from Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing on 29 September 2021 (**Table 1**). All taxa encountered are common inhabitants of northern Illinois headwater streams (Smith 1979). None of the species collected during this survey are listed as threatened or endangered at the federal or state level, nor are they candidates for listing in Illinois (IESPB 2020). None of the species collected are considered intolerant species (Bertrand et al. 1996). Three of the species (38%) collected – Golden Shiner (*Notemigonus crysoleucas*), Creek Chub (*Semotilus atromaculatus*), and Green Sunfish (*Lepomis cyanellus*) – are listed as "tolerant" by Smogor (2000). These species adapt well to changing environmental conditions.

#### **ACKNOWLEDGMENTS**

K.E. Conatser (INHS) and A.L. Devine (INHS) assisted in the field survey; J.L. Jarvis (INHS) prepared the map in **Figure 1** and associated shape file referenced in **Appendix 1**; N. Maass (IDNR) provide element occurrence records; and M.J. Wetzel (INHS) edited the report.

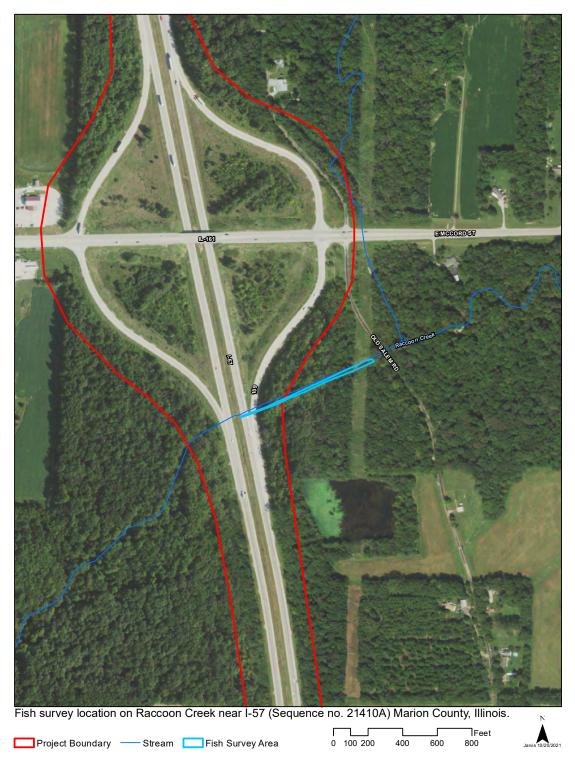
#### LITERATURE CITED

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- U.S. Department of Interior, Fish and Wildlife Service (USDI, FWS). 1997. Endangered and threatened wildlife and plants. Federal Register, 50 CFR Part 17.11 and 17.12. October 31, 1996. 46 pp. [This document is a compilation and special reprint, current as of October 31, 1996, that was printed by the U.S. Government Printing Office in 1997].

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**Table 1**. List of fish species and number of individuals collected in Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing, 7.5 miles south of Salem, Marion County, Illinois (Latitude 38.5180° North, Longitude 88.9583° West) by INHS personnel on 29 September 2021. None of the species collected during this survey are listed as threatened or endangered at the federal or state level, nor are they candidates for listing in Illinois (IESPB 2020).

Family	Scientific name	Common name	# individ
Leuciscidae	Notemigonus crysoleucas	Golden Shiner	1
	Semotilus atromaculatus	Creek Chub	15
Catostomidae	Erimyzon claviformis	Western Creek Chubsucker	6
Aphredoderidae	Aphredoderus sayanus	Pirate Perch	1
Fundulidae	Fundulus notatus	Blackstripe Topminnow	63
Centrarchidae	Lepomis cyanellus	Green Sunfish	3
	Lepomis macrochirus	Bluegill	24
	Micropterus salmoides	Largemouth Bass	4



**Figure 1.** Map of Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing, 7.5 miles south of Salem, Marion County, Illinois (Latitude 38.5180° North, Longitude 88.9583° West), where a survey for fishes was conducted by INHS personnel on 29 September 2021 (Map created by J.L. Jarvis, INHS GIS and Remote Sensing Specialist).

### **Appendix 1**

This appendix cover page references < 21410A\_Fish\_Survey\_GIS.zip > containing an ArcGIS shapefile with sampling point information for the site discussed in this report. Specifically, this shapefile includes site information for Raccoon Creek at the Interstate 57 (IDOT FAI 57) crossing, 7.5 miles south of Salem, Marion County, Illinois (Latitude 38.5180° North, Longitude 88.9583° West), where a survey for fishes was conducted by INHS personnel on 29 September 2021.

The ArcGIS shapefile and this report were both submitted to IDOT via the IDOT Site Assessment Tracking System extranet website (Frostycap) on 22 October 2021.

## Three Parameter Water Quality Estimation in Raccoon Creek, at Interstate 57 crossing, in Marion County, Illinois



IDOT Sequence Numbers: 21410A

Prepared by: Jason L. Robinson

INHS/IDOT Statewide Biological Survey & Assessment Program

2021: 85

December 2021



#### **Project Summary**

This report is submitted in response to a request from IDOT for INHS personnel to assess existing stream habitat and the potential for three-parameter benthic macroinvertebrate condition assessment in Raccoon Creek (within the IDOT Sequence No. 21401A project corridor, Marion County, Illinois). Habitat surveys and biological sampling were conducted on 29 September 2021. No stream flow was detected within the sampled segment during sampling, but downstream segments (with markedly different instream conditions) did exhibit flow just above the threshold of observability. This segment ranked as "Poor", relative to the distribution of these features among wadeable streams in Illinois. Shifting sands and deep undercut banks, likely associated with high-discharge flow events, were the predominant habitats in the sampled reach. Benthic macroinvertebrate abundance and diversity was low; a total of 277 benthic macroinvertebrates were identified from the entire sample of the collection from Raccoon Creek in the proposed IDOT Sequence Seq. 21410A project area on 29 September 2021. Twelve terminal taxa were recorded from this sample, representing 3 phyla, 5 classes, 10 orders and 12 families. Three EPT taxa and 2 intolerant taxa were identified from this site.

Signed:	Wendy musherkey	
Date:	12/10/2021	

Conducted By: Dr. Jason L. Robinson (field surveys, benthic macroinvertebrate identification, report writing), Mark J. Wetzel (benthic macroinvertebrate identification, report editing), Janet L. Jarvis (GIS and Maps),

GIS Layers: Janet Jarvis, Remote Sensing Specialist

University of Illinois Prairie Research Institute Illinois Natural History Survey

Statewide Biological Survey and Assessment Program

1816 South Oak Street Champaign, Illinois 61820

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Taxa denoted by * have not been assigned tolerance values by ILEPA 24
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#### **Appendix 1.** This appendix cover page references

< 21410A\_Macroinvert\_Survey\_GIS.shp> - an ArcGIS shapefile with sampling point information for Site FS1550 (Raccoon Creek at Interstate 57) within the IDOT Sequence 21410A project corridor (Marion County, IL), where surveys for aquatic

macroinvertebrates, habitat assessments, stream characterizations and water quality sampling were conducted by INHS personnel on 29 September 2021 26
Appendix 2. Values for water quality parameters resulting from analyses of raw water samples collected by INHS personnel from Site FS1550 on Raccoon Creek, just downstream (West-Southwest) of Interstate 57 crossing, within the IDOT Sequence 21410A project corridor (Marion County, IL) on 29 September 2021

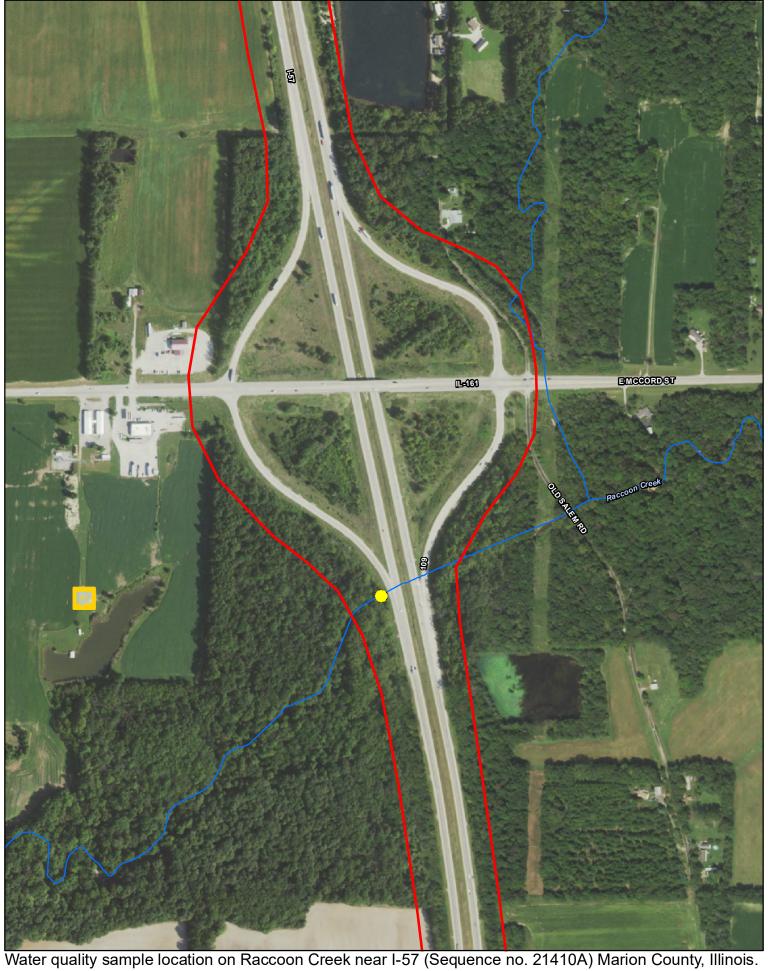
**Cover Photo:** Raccoon Creek at **Site FS1550**, just downstream (West-Southwest) of the Interstate 57 stream crossing, on 29 September 2021, in Marion County, IL. Photo credit: J.L. Robinson, INHS.

#### INTRODUCTION

This report is part of a response to a recent Further Studies Transmittal from Kim Burkwald, Illinois Department of Transportation, Springfield (IDOT) to Rachel Vinsel and Wendy Schelsky, Illinois Natural History Survey (INHS) dated 26 August 2021. IDOT requested that INHS conduct three parameter (biological, chemical and physical) water quality surveys in the proposed IDOT Sequence 21410A project corridor (Interstate 57 from just north of East McCord Street (Illinois State Route 161), south for approximately 3 miles, to East Base Line Road (also known as Walnut Road and Walnut Hill Road), located just north of the Marion and Jefferson county line in south-central Illinois. We performed site reconnaissance from aerial photography, GIS layers, and in the course of a field visit. IDOT tasked us specifically to assess in-stream habitat, benthic macroinvertebrates and chemical water quality in suitable streams in the project corridor (Figure 1). INHS entomologist Jason L. Robinson determined the suitability of stream sampling sites from aerial photography, GIS, and the U.S. Geological Survey StreamStats Application (2021), and observations recorded during a site visit conducted 29 September 2021 to characterize stream habitat, complete field water quality monitoring and collect water samples for laboratory analyses. The results from the U.S. Geological Survey StreamStats Application (2021) showed three small streams in the project corridor that did not provide perennial flow and did not fit minimum watershed area criteria for habitat and benthic macroinvertebrate assessment.

#### PROJECT CORRIDOR

Raccoon Creek, at the Interstate 57 stream crossing (Site FS1550 in the IDOT Sequence No. 21410A project corridor in Marion County, Illinois), has a watershed area of approximately 12.5 mi<sup>2</sup> (Figure 2). Raccoon Creek, ultimately a tributary of the Kaskaskia River, flows northerly and westerly to meet Crooked Creek just downstream of the Raccoon Creek Reservoir just northwest of Central City, Illinois. Crooked Creek flows west to join the Kaskaskia River southeast of Damiansville. The watershed sourcing the stream where we conducted the work in this report is fan-shaped, comprised of several small and unnamed branch tributaries that mostly drain northwards and westerly before joining Raccoon Creek just upstream (east) of the Interstate 57 crossing. The study watershed drains a mixture of forested, agricultural and residential land uses in Marion County, Illinois. We excluded from study, on the basis of absence of permanent flow and watershed minimum area criteria, three smaller watersheds crossing Interstate 57. The northernmost watershed in the study area (Figure 3) is an unnamed intermittent tributary of Raccoon Creek with a watershed area of 0.09 mi<sup>2</sup>. South of Raccoon Creek, flowing westerly underneath Interstate 57 (Figure 4) is the smallest unnamed and intermittent tributary of Raccoon Creek in this study, with a watershed area of 0.06 mi<sup>2</sup>. Still further south, just north of Kell Road (Figure 5), is an unnamed and intermittent headwaters tributary of Raccoon Creek that has a watershed area of 0.35 mi<sup>2</sup>.



valer quality sample location on Raccoon Creek near 1-57 (Sequence no. 214 to A) Manon County, Illino

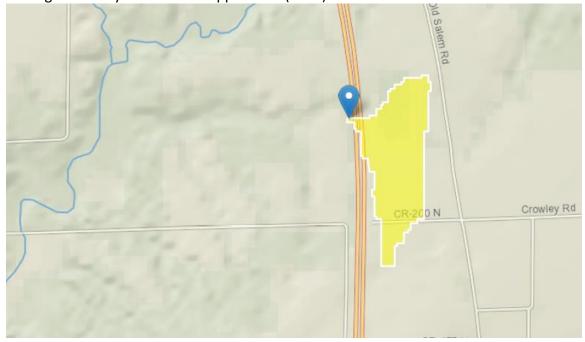


**Figure 2.** Raccoon Creek at the Interstate 57 crossing (38.51684, -88.96173) (blue balloon), has a watershed area of approximately 12.58 mi<sup>2</sup>. Watershed delineation by U.S. Geological Survey StreamStats Application (2021).

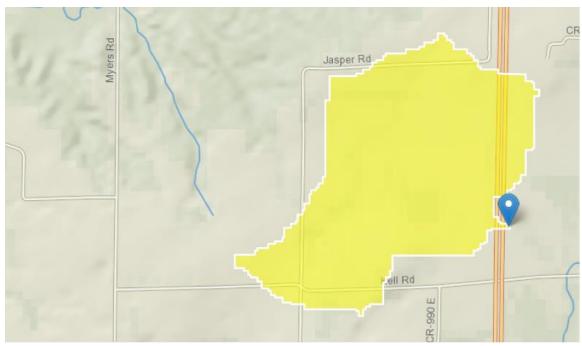
**Site selection**. Initial site reconnaissance we performed from aerial maps, GIS and the results from the U.S. Geological Survey StreamStats Application (2021). Selection of the sampling sites were dictated by project design, stream access and field conditions. Several smaller intermittent streams in the project area were not sampleable per the watershed area rule; Raccoon Creek was sampled downstream (west-southwest) of the Interstate 57 crossing, in order to accumulate all of the flow from the eastern side of the interstate before entering the assessment area. The exact location of sampling site chosen with the primary goal of meeting minimum sufficient watershed and flow criteria, and the secondary goal to sample the best possible habitat present in the reach identified for assessment. Habitat features varied little over the course of several hundred meters downstream of the culvert from which Raccoon Creek exits from underneath Interstate 57. The information in **Appendix 1** references a GIS shapefile with sampling point information for Raccoon Creek, in the Sequence 21410A (Interstate 57) project area (Marion and Jefferson Counties, Illinois).



**Figure 3.** At the Interstate 57 crossing, the unnamed tributary of Raccoon Creek (blue balloon) has an area of approximately 0.09 mi<sup>2</sup>. Watershed delineation by U.S. Geological Survey StreamStats Application (2021).



**Figure 4.** At the confluence with Interstate 57 (blue balloon) the intermittent tributary of Raccoon Creek has the smallest watershed area (0.06 mi<sup>2</sup>). Watershed delineation by U.S. Geological Survey StreamStats Application (2021).



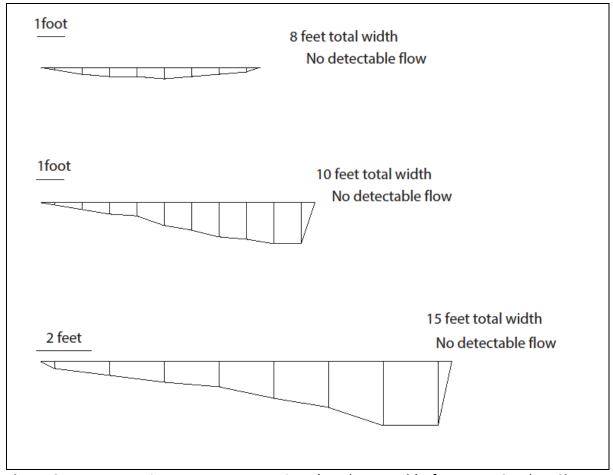
**Figure 5.** The largest unnamed intermittent tributary of Raccoon Creek in the project corridor is still too small for sampling (0.35 mi<sup>2</sup>) at the Interstate 57 crossing. Watershed delineation by U.S. Geological Survey StreamStats Application (2021).

#### PHYSICAL CHARACTERIZATION OF STREAM

Stream measurements — Site FS1550: INHS personnel assessed Site FS1550 (Raccoon Creek, downstream of Interstate 57) on 29 September 2021. Width, depth and flow were measured along 3 cross-stream transects (Figure 6), within 50 meters distance of the culvert exit. Transects were chosen to represent the variability in conditions at the sampling site. Average width in this segment was 11 feet, while average depth was 9.7 inches (ranging from 1 -28 inches). Discharge velocities in the thalweg were below the threshold of visual detection at all three transects (Figure 6). Average depths were skewed towards higher numbers by deep water near undercut banks, possibly as a result of increased flows during flooding constrained by the culvert crossing underneath Interstate 57 (Figure 7). Further downstream (west-southwest) of the sample site, below a large pool and deposits of sand (Figure 8), some flow was evident in a narrowed channel (Figure 9).

**Substrates**— Substrates observed in the sampled segment at **Site FS1550** were dominated by sand (90%), with silt and clay contributing 5% of the stream bottom in the sampled reach, respectively. Seasonal flooding likely influences the distribution and quality of of benthic habitat structure in this reach, depositing silt and fine particles downstream of the very narrow culvert constriction (**Figure 7**). The stream gradient is very low, instream base flows small, and fluvial sand deposits extensive along the

stream banks and channel, except for directly downstream of the outflow of the box culverty underneath Interstate 57.



**Figure 6.** Representative stream cross sections (south to north) of Raccoon Creek at **Site FS1550** in Marion County, Illinois recorded by INHS personnel on 29 September 2021.



**Figure 7.** Raccoon Creek **Site 1550**, facing east towards the downstream exit from a culvert crossing underneath Interstate 57 (IDOT Seq. No. 21410A) in Marion County, Illinois, on 29 September 2021 (Photo credit: J.L. Robinson, INHS).

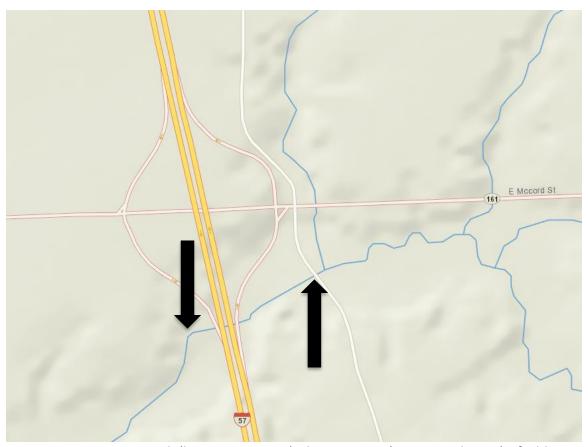
**Riparian vegetation** — The riparian zone and surrounding landscape of the unnamed tributary, downstream of the sample site, is mostly forested. This remains true at the scale of the larger project area, save the interruption of the stream by Interstate 57 and the box culvert through which it passes underneath. Although not sampled for this project, maps of the area appear to indicate the likelihood that the stream channel of Raccoon Creek immediately upstream of Interstate 57 and Old Salem Road has been straightened (Figure 10).



**Figure 8.** Large deposits of sand, deposited during high-discharge flow events in Raccoon Creek, are the dominant riparian habitat element downstream (west) of Interstate 57 in Marion County, Illinois on 29 September 2021 (Photo credit: J.L. Robinson, INHS).



**Figure 9.** Instream sand deposits reduce channel dimensions significantly, allowing detection of instream flows in narrowed sections of Raccoon Creek, downstream (west) Interstate 57 stream crossing, in Marion County, Illinois, on 29 September 2021 (Photo credit: J.L. Robinson, INHS).



**Figure 10.** Raccoon Creek (between arrows), downstream (west- southwest) of Old Salem Road, extending to downstream (west) of the Interstate 57 crossing, has likely been straightened (map created from U.S. Geological Survey StreamStats Application (2021).

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## HABITAT ASSESSMENTS, STREAM CHARACTERIZATIONS, AND SURVEYS FOR AQUATIC MACROINVERTEBRATES

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#### **METHODS**

On 29 September 2021, INHS personnel J.L. Robinson visited the project corridor to complete habitat assessments, stream characterizations, take photographs, and conduct surveys for aquatic macroinvertebrates in Raccoon Creek, downstream of Interstate 57, in the proposed IDOT Sequence 21410A project corridor in Marion County, IL (Figure 1).

#### SITE ASSESSMENT

Site assessment (based upon habitation conditions) is used to evaluate, and then select, sites suitable for sampling fishes, freshwater mussels, aquatic macroinvertebrates, and conducting water quality monitoring. These assessments are primarily useful for larger projects where numerous possible sampling locations are possible, allowing for site selection, as well as assessment of the relationship between habitat quality and biotic integrity. For small projects with one to few sites, site assessments serve to characterize the habitat quality, and sites may be sampled in spite of scoring poorly in site assessment.

Site assessment utilizes the Qualitative Stream Habitat Assessment Procedure (SHAP) in Appendix E-9 of the Illinois Environmental Protection Agency (ILEPA) Division of Water Pollution Control (DWPC) Field QA Manual (DWPC-ILEPA 1994). This approach is described in detail in the section 5.0 Qualitative Stream Habitat Assessment Procedures (SHAP) of the DWPC Field QA Manual (DWPC-ILEPA 1994, Appendix E-5.1). Based on the assessment of 15 parameters, this assessment results in a total score, providing an overall habitat quality rating for the stream reach. The total raw score could, theoretically, range from 15 to 208 (Table 1), but because different metrics may be better or worse, extreme values for the total score are unlikely. Overall score cutoff points for "poor", "fair", "good" and "excellent" are not provided by ILEPA, but guidance based on relative similarity of sites to reference conditions is provided (**Table 2**). The scores and metrics differ from the U.S. EPA Habitat Assessment approach (Plafkin et al. 1989, Barbour et al. 1999), though the general approach is similar. To allow evaluation of habitat assessments in cases where there is only a single site (with no comparisons among sites possible), and to allow more detailed understanding of individual sites, we first report the overall habitat assessment score then plot the individual metrics after

adjusting them to a standardized scale to allow comparisons. The standardized scale ranges from 0 to 100 for each metric, and the value is calculated as

$$X_s = ((X-1)/(X_{max}-1)) \times 100$$

where  $X_s$  is the standardized metric value, X is the metric value, and  $X_{max}$  is the maximum possible value for the metric.

**Table 1.** Habitat metrics and habitat quality categories for the qualitative Stream Habitat Assessment Procedure (SHAP). Minimum and maximum values for metrics from DWPC-ILEPA (1994: Table 5.1). The maximum value for "Excellent" is used as  $X_{\text{max}}$  in calculation of the standardized metric value (see methods).

		Habitat Quality Categories							
		Poor		Fair		Good	ł	Excel	lent
Metr	ic	Min	Max	Min	Max	Min	Max	Min	Max
Subs	trate and In-stream Cov	er							
1	<b>Bottom Substrate</b>	1	5	6	10	11	15	16	20
2	Deposition	1	3	4	6	7	9	10	12
3	Substrate Stability	1	4	5	8	9	12	13	16
4	In-stream Cover	1	3	4	6	7	9	10	12
5	Pool Substrate	1	5	6	10	11	15	16	20
Chan	nel Morphology and Hy	drolog	У						
6	<b>Pool Quality</b>	1	4	5	8	9	12	13	16
7	<b>Pool Variability</b>	1	4	5	8	9	12	13	16
8	<b>Channel Alteration</b>	1	2	3	4	5	6	7	8
9	<b>Channel Sinuosity</b>	1	3	4	6	7	9	10	12
10	Width/Depth	1	4	5	8	9	12	13	16
11	<b>Hydrologic Diversity</b>	1	3	4	6	7	9	10	12
Ripar	rian and Bank Features								
12	Canopy Cover	1	3	4	6	7	9	10	12
13	<b>Bank Vegetation</b>	1	4	5	8	9	12	13	16
14	Immediate Land	1	2	3	4	5	6	7	8
	Use								
15	Flow Related	1	3	4	6	7	9	10	12
	Refugia								

**Table 2.** Stream habitat percent similarity categories for site comparability assessments from Michigan Department of Natural Resources (1991), as given in the DWPC Field QA Manual [DWPC-ILEPA 1994: Table 5.2]).

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Habitat Q	uality Category	<b>Percent Similarity</b>
Excellent	Very Similar to Reference	>= 90%
Good	Slightly Different	75-89%
Fair	Moderately Different	60-74%
Poor	Substantially Different	<=59%

#### TYPES AND PROPORTIONS OF PERTINENT MACROINVERTEBRATE HABITATS

Aquatic macroinvertebrate sampling using the ILEPA 20-Jab Allocation method (ILEPA 2011a), which we use in the present study, requires that the types and amounts of pertinent habitats be determined in advance. We follow the methods given in ILEPA (2011b) to allocate the 20 jabs to appropriate bank and bottom habitats across a 300-foot long stream reach, which constitutes a sampling site. When suitably qualified, trained, and experienced personnel are conducting the sampling, we use the *Nontransect habitat characterization method* (ILEPA 2011b); otherwise, the *11-transect habitat characterization method* (ILEPA 2011b), is used. Regardless, at each site we create three stream profiles and measure average flow (ft/sec).

#### **SAMPLING AQUATIC MACROINVERTEBRATES**

Site sampling of aquatic macroinvertebrates utilizes the 20-jab allocation method (ILEPA 2011a) with jabs allocated based on methods described above. Sample collection and preservation follows the standard operating procedures given by ILEPA (2011a). The 20 jabs are combined in the field to produce a single sample, preserved with 95% ethanol, and then taken to the laboratory for processing.

#### LABORATORY PROCESSING, IDENTIFICATION, ANALYSES, AND CALCULATION OF mIBI

In the laboratory, samples are sorted, subsampled (when appropriate) with specimens picked from samples, then counted and identified following ILEPA methodology (ILEPA 2011c). Laboratory subsampling typically results in a random subsample comprised of ~300 (+/- 60) aquatic macroinvertebrate specimens, but in some instances fewer than 300 individual macroinvertebrates are collected in the entire sample. In these circumstances, the entire sample is processed. For this project, due to low abundance

in the sample, the entire sample from **Site 1550** on Raccoon Creek was sampled. Specimens are identified to the lowest level of taxonomic resolution using Merritt et al. (2008), Morse et al. (2017), Page (1985), Thorp and Covich (2001), Wetzel (1992), Kathman and Brinkhurst (1998), Wetzel et al. (2009), Wetzel et al. (2021), Reynolds and Wetzel (2021), and pertinent literature cited within these references.

For each taxon, a tolerance value and functional feeding group is assigned based on values from ILEPA (2010). Using the identifications, counts, tolerance values, and functional feeding groups for the taxa present in the sample, we calculate site-level scores for seven metrics (**Table 3**). Note that Coleoptera Taxa, Intolerant Taxa, and Total Taxa metrics *do not* include taxa which are not considered aquatic by ILEPA – that is, these metrics do not include taxa for which there is no taxon tolerance value (ILEPA 2010).

**Table 3.** Seven metrics calculated for aquatic macroinvertebrates with response of metric to perturbation and best values (ILEPA 2011c: Table 1).

\_\_\_\_\_\_

	Response to	Best
Metric	Perturbation	Value
Coleoptera Taxa	Decrease	5
Ephemeroptera Taxa	Decrease	10.2
Total Taxa	Decrease	46
Intolerant Taxa	Decrease	9
MBI	Increase	4.9
Percent Scraper	Decrease	29.6
Percent EPT	Decrease	74

After calculation of metrics in **Table 3**, metrics are standardized and then averaged to produce the final macroinvertebrate Index of Biotic Integrity (mIBI), as described in ILEPA (2011c). The mIBI provides a basis for categorizing sites into mIBI quality categories based upon analyses of the aquatic macroinvertebrate fauna (**Table 4**).

Calculation of the seven metrics and the mIBI is carried out in the R statistical analysis software (R Core Team 2012), reading in a reference file of tolerance values and functional feeding groups for all Illinois aquatic macroinvertebrates based on ILEPA (2010). Project aquatic macroinvertebrate identifications and counts are read in as a second file, with a code for each taxon allowing matching of the two files and assignment of functional feeding groups and tolerance values. Within R, packages *plyr* (Wickham 2011) and *reshape* (Wickham 2007) are called to facilitate completion of analyses.

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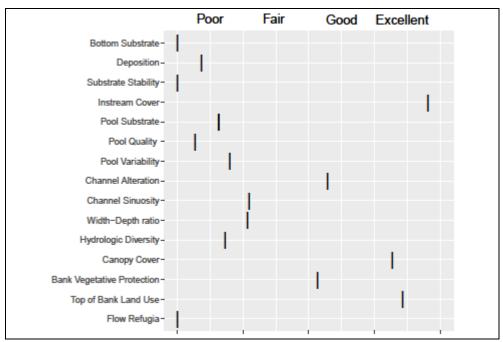
 Table 4.
 Macroinvertebrate IBI quality categories (ILEPA 2011c: Table 2).

mIBI Index Score Lower Upper		_	
			Narrative
Boundary	Boundary	Comparison to Reference	Description
73.0	100.0	>75th percentile	Exceptional
41.8	72.9	>10th percentile	Good
20.9	41.8	bisect 10th percentile (upper)	Fair
0.0	20.8	bisect 10th percentile (lower)	Poor

#### **RESULTS AND DISCUSSION**

#### HABITAT ASSESSMENT

**Site FS1550**— Physical habitat assessment of Raccoon Creek in the Seq. 21410A project corridor (Marion County, Illinois), scored **71** on the **raw** field score, and **34.1** on the standardized **IEPA SHAP** scale – a score associated with **Poor** values (i.e. a poor correspondence with expected natural conditions; **Table 2**). Despite this "poor" score, when we plot individual site metrics from this reach against the standardized range of values, three measures of benthic habitat quality in this stream section scored as "fair" (**Figure 11**): instream cover, canopy cover and top of bank land use. The undercut banks contributed to enhancing the instream cover score, since these habitats provide refugia and cover to stream organisms in this section of Raccoon Creek during all levels of discharge.



**Figure 11.** The fifteen metrics used to calculate the habitat assessment score, adjusted to standardized metric values, as scored for Raccoon Creek at **Site FS1550** by INHS personnel on 29 September 2021.

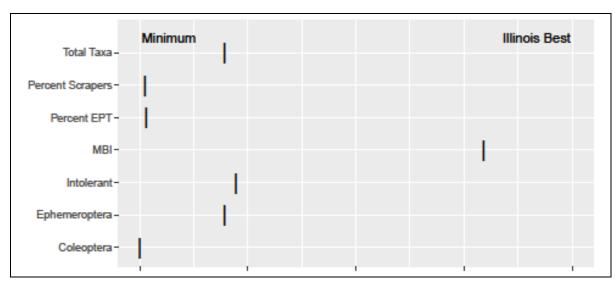
#### **AQUATIC MACROINVERTEBRATES**

**Site FS1550**— Benthic macroinvertebrate abundance was notably low, in the field collection. Due to this paucity of individuals, the entire sample was identified (**Figure 12**). A total of 277 macroinvertebrates were identified from the sample collected from Raccoon Creek, at Interstate 57, in Marion County, Illinois, on 29 September 2021. Twelve terminal taxa were recorded from this sample, representing 3 phyla, 5 classes, 10 orders and 12 families.

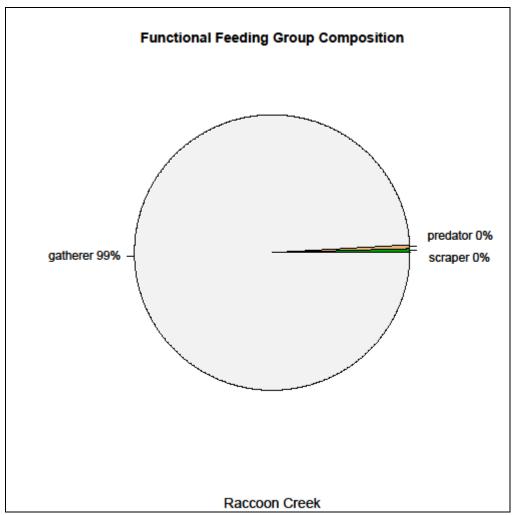


**Figure 12.** The sample from **Site 1550** was particularly depauperate, in terms of individual benthic macrovinvertebrate density and diversity. The entire sample was sorted, and all specimens were identified and enumerated for inclusion in this report.

One benthic macroinvertebrate metric (MBI) was in the higher range of observed values in Illinois, but most macroinvertebrate metrics were in the lower fraction of the possible range of values (Figure 13). Chironomids were by far the dominant taxa at the site, comprising 61.0% of the total number of individuals in the sample (Table 5). Raccoon Creek at Site 1550, just downstream (west-southwest) of the Interstate 57 crossing, scored a 6.1 on the MBI tolerance metric. This score is in the upper quartile of expected IL values and 20.5 on the mIBI composite metric (in the upper range of "Poor" values in the narrative description; Table 4). Collector-gatherers accounted for 99.1% of the individuals in the assemblage with known trophic status (Figure 14; trophic relations for 55 individuals in this sample were unknown, including mites, cladocerans, and copepods). Cladocerans and copepods, in particular, are more frequently associated with lentic habitats than stream habitats (Robinson, pers. observations). We collected two intolerant taxa, and three EPT taxa, from this site.



**Figure 13**. Aquatic macroinvertebrate summary metrics from sample collected at **Site FS1550**, Raccoon Creek at Interstate 57, in the IDOT Sequence 21410A project corridor, Marion County, Illinois by INHS personnel on 29 September 2021.



**Figure 14.** Proportions of functional feeding groups (FFG) of aquatic macroinvertebrates present in the sample collected from **Site FS1550** on Raccoon Creek in Marion County, Illinois by INHS personnel on 29 September 2021.

No federal or state listed taxa were observed during the course of this sampling (USDI-FWS 1996, USDI-FWS 1997, USDI-FWS 1999, Mankowski 2010, IESPB 2015). **Appendix 1** is a shapefile of the project area and stream sampling site. **Appendix 2** gives laboratory measurements of water quality parameters from water samples collected 2 October 2020 and shipped to PDC Laboratories, Inc. (Hazelwood, Missouri) the following day.

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**Table 5.** List of aquatic macroinvertebrates identified from the sample collected by INHS personnel from **Site FS1550** in Raccoon Creek in Marion County, Illinois on 29 September 2021. Taxa denoted by \* have not been assigned tolerance values by ILEPA.

Phylum: Class Order: Family Stage Count Taxon Annelida: Clitellata Tubificida: Naididae 18 Stylaria lacustris Ν Arthropoda: Crustacea Amphipoda: Gammaridae Gammarus sp. 11 Ν Cladocera Cladocera \* 6 Copepoda Copepoda \* Ν 10 Arachnida: Acarii Acarii \* Ν 10 Arthropoda: Insecta Diptera: Chironomidae Chironomidae 169 Diptera: Ephydridae 2 Ephydridae L Ephemeroptera: Caenidae 47 Caenis sp. Ν Ephemeroptera: Ameletidae Ameletus sp. 1 Odonata: Coenagrionidae Enallagma sp. Ν 1 Trichoptera: Hydroptilidae Hydroptilidae Ρ 1

## **ACKNOWLEDGEMENTS**

Jennifer Solomon (PDC Laboratories, Inc., Hazelwood, Missouri) facilitated laboratory assessment of water quality. The map in **Figure 1** was created by Janet L. Jarvis, INHS GIS and Remote Sensing Specialist. Mark J. Wetzel provided identifications for the annelid taxa collected during this study and edited the draft version of this report.

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# **APPENDIX 1**

This appendix cover page references < 21410A\_Macroinvert\_Survey\_GIS.shp> - an ArcGIS shapefile - with sampling point information for Site FS1550 (Raccoon Creek) within the IDOT Sequence No. 21410A project corridor (Marion County, Illinois), where surveys for aquatic macroinvertebrates, habitat assessments, stream characterizations and water quality sampling were conducted by INHS personnel on 29 September 2021. The ArcGIS shapefile and this report were both submitted to IDOT (via the IDOT Site Assessment Tracking System extranet website).

# **APPENDIX 2**

Values for water quality parameters resulting from analyses of raw water samples collected by INHS personnel from **Site FS1550** on Raccoon Creek at the Interstate 57 crossing, within the IDOT Sequence No. 21410A project corridor (Marion County, Illinois) on 29 September 2021.



#### **ANALYTICAL RESULTS**

Sample: EJ00050-01 Name: 10 Sample Grab

Matrix: Surface Water - Regular Sample

**Sampled:** 09/30/21 14:30 **Received:** 10/01/21 10:50 **PO #**: P2093718

Parameter Result Unit Qualifier Prepared Dilution MRL Analyzed Analyst Method Miscellaneous - Pace Analytical - Green Bay 0.5 Mercury - subcontracted ng/L 10/12/21 10:10 Subcontracted

## **ANALYTICAL RESULTS**

Sample: EJ00050-01 Name: 10 Sample Grab

Matrix: Surface Water - Regular Sample

**Sampled:** 09/30/21 14:30 **Received:** 10/01/21 10:50

PO #: P2093718

Parameter	Result Unit Qualifier Prepared		Dilution	Dilution MRL		Analyst	alyst Method		
Anions - STL									
Chloride	21	mg/L		10/01/21 16:22	10	5.0	10/01/21 16:27	DAS	EPA 300.0
Fluoride	< 0.50	mg/L	Xa	10/05/21 14:33	1	0.50	10/06/21 00:34	DAS	EPA 300.0*
Nitrate-N	< 0.50	mg/L	Х	10/05/21 14:33	1	0.50	10/06/21 00:34	DAS	EPA 300.0
Nitrite-N	< 0.50	mg/L		10/01/21 16:22	1	0.50	10/01/21 18:13	DAS	EPA 300.0
Sulfate	87	mg/L		10/01/21 16:22	25	12	10/01/21 17:20	DAS	EPA 300.0
General Chemistry - PIA									
Oil & Grease - total	< 5.1	mg/L		10/05/21 06:06	1.013069	5.1	10/05/21 06:06	DLE	EPA 1664A
General Chemistry - STL									
Cyanide	< 0.0050	mg/L		10/14/21 07:30	1	0.0050	10/14/21 19:01	CLH	SM 4500-CN C E*
Cyanide - weak acid dissociable	< 0.0050	mg/L		10/14/21 07:30	1	0.0050	10/14/21 19:01	CLH	ASTM 1310*
Cyanide - weak acid dissociable	< 0.0050	mg/L	С	10/11/21 10:55	1	0.0050	10/11/21 16:56	CLH	ASTM 1310*
Hexavalent chromium	< 0.005	mg/L		10/01/21 12:23	1	0.005	10/01/21 12:23	BCH	SM 3500-Cr B*
Phenol	< 0.050	mg/L		10/08/21 16:41	1	0.050	10/08/21 16:52	CLH	EPA 420.1
Solids - total suspended solids (TSS)	10	mg/L		10/05/21 13:38	1	4.0	10/05/21 16:50	SJP	SM 2540D
Total Nitrogen	< 1.0	mg/L		10/07/21 16:13	1	1.0	10/11/21 16:32	ВСН	calculated
Nutrients - STL									
Total Kjeldahl Nitrogen (TKN)	< 1.0	mg/L		10/07/21 16:13	1	1.0	10/11/21 16:32	ВСН	OIA/PAI-DK03 & EPA 351.2 REV 2*
Ammonia-N	< 0.50	mg/L		10/05/21 12:13	1	0.50	10/05/21 16:04	ВСН	EPA 350.1 REV2

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# **ANALYTICAL RESULTS**

Sample: EJ00050-01 Name: 10 Sample Grab

Matrix: Surface Water - Regular Sample

Sampled: 09/30/21 14:30

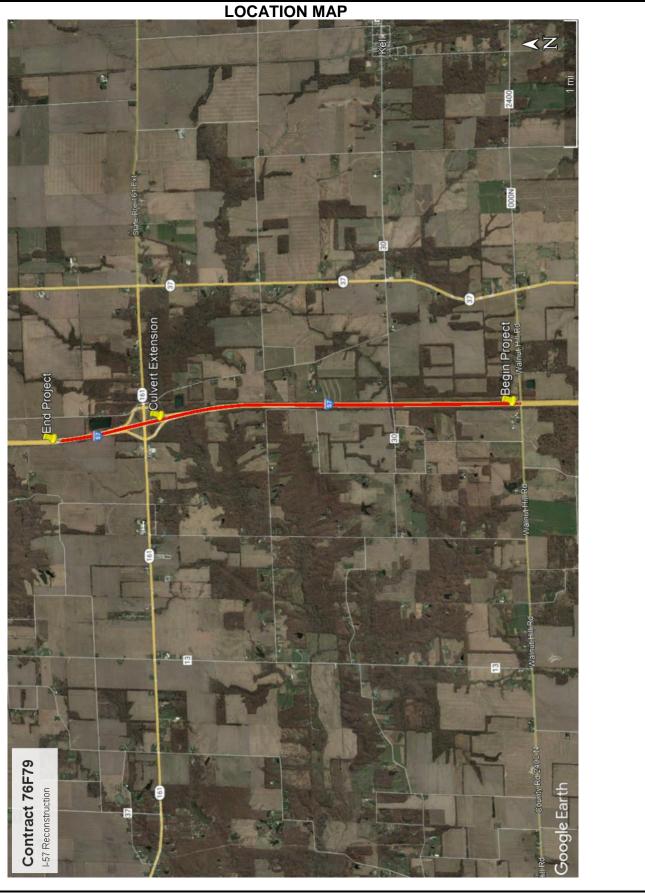
**Received:** 10/01/21 10:50 **PO #:** P2093718

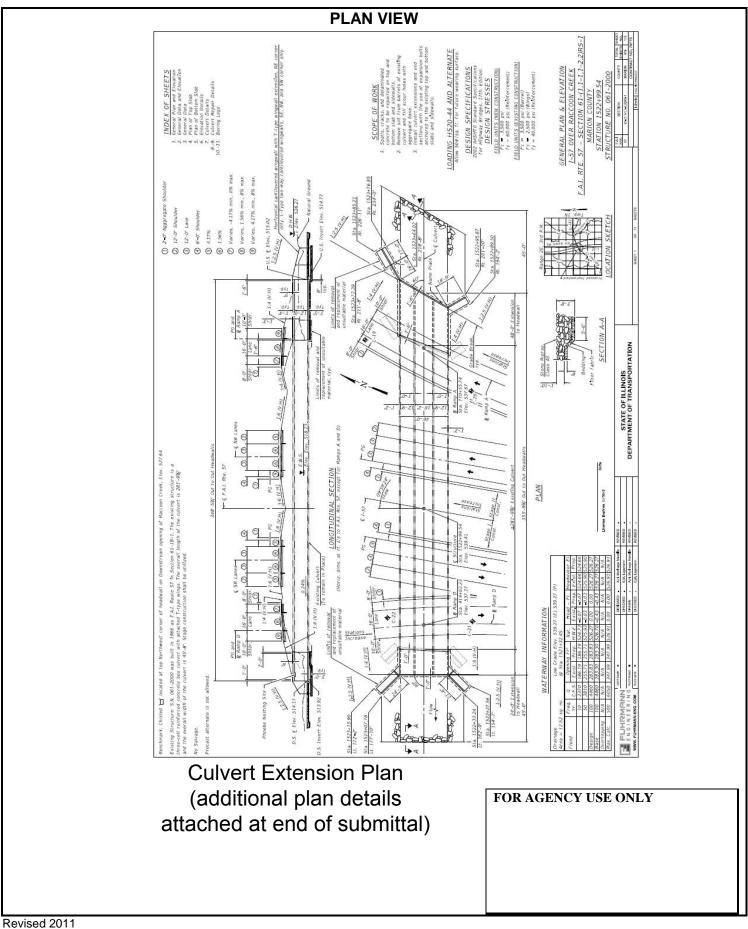
Parameter	Result	Unit	Qualifier Prepared	Dilution	MRL	Analyzed	Analyst	Method
Soluble Metals - STL								
Iron	0.0406	mg/L	10/05/21 18:31	1	0.0300	10/06/21 07:47	KAM	EPA 200.7 REV 4.4
<u>Total Metals - STL</u>								
Arsenic	< 0.0250	mg/L	10/01/21 14:48	1	0.0250	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Barium	0.0651	mg/L	10/01/21 14:48	1	0.0100	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Hardness	164	mg/L	10/01/21 14:48	1	0.237	10/04/21 11:50	JMW1	SM 2340B 1997
Cadmium	< 0.00100	mg/L	10/01/21 14:48	1	0.00100	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Calcium	41.8	mg/L	10/01/21 14:48	1	0.0950	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Chromium	< 0.00500	mg/L	10/01/21 14:48	1	0.00500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Copper	< 0.00500	mg/L	10/01/21 14:48	1	0.00500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Iron	1.15	mg/L	10/01/21 14:48	1	0.0300	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Lead	< 0.0400	mg/L	10/01/21 14:48	1	0.0400	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Magnesium	14.5	mg/L	10/01/21 14:48	1	0.0500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Manganese	0.792	mg/L	10/01/21 14:48	1	0.00300	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Nickel	< 0.00500	mg/L	10/01/21 14:48	1	0.00500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Selenium	< 0.0400	mg/L	10/01/21 14:48	1	0.0400	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Silver	< 0.00500	mg/L	10/01/21 14:48	1	0.00500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Phosphorus	0.135	mg/L	10/01/21 14:48	1	0.0500	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4
Zinc	< 0.0100	mg/L	10/01/21 14:48	1	0.0100	10/04/21 11:50	JMW1	EPA 200.7 REV 4.4

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	JOIN	T APPLICATION TEMPS 1 AND			LINOIS					
Application Number		TIEWS I AND	ND 2 FOR AGENCY USE  2. Date Received							
3. and 4. (SEE SPECIAL INSTRI	JCTIONS) NAME	, MAILING ADDRESS	AND TELEPH	ONE NUMBI	ERS					
3a. Applicant's Name			Property Owner Name  4. Authorized Agent (an agent is not required)  erent from applicant)							
Keith Roberts, PE Acting Region 5 Engineer Illinois Department of Transportat District 8 1102 Eastport Plaza Drive Collinsville, IL 62234-6198	ion		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		Applicant's Phone N	os. w/area code	е	Agent's Phone	e Nos. w/area				
code Business: 618-346-3100		Business:			code Busines	s: 618-346-3	3181			
Residence:		Residence:			Residence:					
Cell:		Cell:			Cell:					
Fax:		Fax:			Fax: 618-34	6-3203				
		STATEMENT	OF AUTHORIZ	ZATION						
I hereby authorize, upon request, supplemental inform	mation in support	IIto		alf as my age	ent in the proces	ssing of this app	olication and t	o furnish,		
Applicant's S 5. ADJOINING PROPERTY C		nom and Downstra	om of the west	or body one	Date	Dooch of Dro	vicat)			
Name	Mailing Ad		ani oi ine waii	er body and	ı Willilli ViSual		w/area code			
a.	Walling 7 to	id 1000				T HOHO IVO.	warda daa	,		
		See Attached								
b.		ooo / maorioa								
C.										
d.										
6. PROJECT TITLE:										
I-57 Pave	ement and Ramp	Reconstruction								
7. PROJECT LOCATION From	Jefferson County	line to 0.7 miles North	n of IL 161 Inter	change						
Project Start	Project End	Culvert Extension	UTMs 165							
LATITUDE: 38.516983	38.530152	38.516983	Northing:	Project \$ 4260447		ject End 6468.64 N	Culvert E 426500	xtension 00.38 N		
LONGITUDE: -88.961104	-88.964415	-88.961104	Easting:	329047		3771.80 E		28.47 E		
STREET, ROAD, OR OTHER DE	SCRIPTIVE LOC	ATION	LEGAL	QUARTER			ISHIP NO.	RANGE		
I-57			DESCRIPT	NW Kell SW Salen	35-34, 27-2	26,	IN	2E		
☐ IN OR ☒ NEAR CITY OF Municipality Name Kell, IL; Walnut Hill, IL	WATERWAY RIVER MILE (if applicable) Creek									
COUNTY Marion	STATE IL	ZIP CODE 62893 62801								
Revised 2011 Corps of Engineers	IL Dept of Nat	ural Resources	☐ IL E Agency		ital Protection		Applicant's	з Сору		

8. PROJECT DESCRIPTION (Include all features) This project consists of the pavement, interchange ramp reconfiguration, a significant culvert widening, mir underdrain installation, and the earthwork, traffic control, temporary pavement of project begins at the Jefferson County line and extends to 0.7 miles north of the pavements, and the four interchange ramps at IL 161, the alignment remains the outside shoulders in order to accommodate stage traffic and to improve safety, and 12ft outside paved shoulders. The four interchange ramps will be re-align paved width as the existing, one 16ft lane with 8ft and 10ft shoulders. Vertical necessary. Approximately 223,202 cubic yards of Earth Excavation, 46,768 cu Subbase Granular Material, Type B 12", 85,827 square yards of Subbase Granused to reconstruct the pavement and reconfigure the interchange ramps. App Stone Riprap, Class A4, and 699 square yards of Stone Riprap, Class A5 will be	nor bridge repairs to the overhead structures, drainage improvements, pipe cross-overs, and miscellaneous items required to complete the work. The EL 161 interchange. With the exception of the temporary cross-over the same as the existing alignment with minor widening of the inside and and the proposed typical section consists of 2 - 12ft wide lanes with a 6ft inside ed to incorporate policy taper/transition lengths and will have the same profile changes are minimal, therefore extensive shoulder earthwork is not bic yards of Subbase Granular Material, Type B, 133,812 square yards of cular Material, Type C 4", 917 tons of Aggregate Base Course, Type A will be proximately 116 square yards of Stone Riprap, Class A3, 686 square yards of
PURPOSE AND NEED OF PROJECT:     The project's purpose is to replace a failed pavement structure and to improve	ve safety.
COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDO	GED AND/OR FILL MATERIAL IS TO BE DISCHARGED
10. REASON(S) FOR DISCHARGE:	
See attached Antidegradation Assessment	
11. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF E	EACH TYPE IN CUBIC YARDS FOR WATERWAYS:
TVDE	
See attached Antidegradation Asses AMOUNT IN CUBIC YARDS:	sment
12. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILL	ED (See Instructions)
3.94 acres of wet meadow and wet shrubland, 0.83 acres of forested wetland,	and 1.68 acres of marsh
13. DESCRIPTION OF AVOIDANCE, MINIMIZATION AND COMPENSATION	(See instructions)
See attached Antidegradation Assessment	
14. Date activity is proposed to commence	Date activity is expected to be completed
May of 2022	October of 2023
15. Is any portion of the activity for which authorization is Yes sought now complete?  Month and Year the activity was completed	NO X NOTE: If answer is "YES" give reasons in the Project Description and Remarks section. Indicate the existing work on drawings.
List all approvals or certification and denials received from other Federal, i other activities described in this application.	nterstate, state, or local agencies for structures, construction, discharges or
Issuing Agency Type of Approval Identification No	Date of Application Date of Approval Date of Denial
17. CONSENT TO ENTER PROPERTY LISTED IN PART 7 ABOVE IS HERE	BY GRANTED. Yes No
18. APPLICATION VERIFICATION (SEE SPECIAL INSTRUCTIONS) Application is hereby made for the activities described herein. I certify that I an best of my knowledge and belief, such information is true, complete, and accur activities.	n familiar with the information contained in the application, and that to the rate. I further certify that I possess the authority to undertake the proposed
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 Revised 2011	☐ IL Environmental Protection ☐ Applicant's Copy Agency





	Parcel Info Owner Info								
Number	Address	Town	State	Zip	Name	Address	Town	State	Zip
1535300011	4071 Walnut Hill Road	Walnut Hill	IL	62893	Walter and Susan Lapie	4071 Walnut Hill Road	Walnut Hill	IL	62893
1534400002	3963 Walnut Hill Road	Walnut Hill	IL	62893	Revocable Liv Tr Donald and	3963 Walnut Hill Road	Walnut Hill	IL	62893
1534200010	250 March Road	Walnut Hill	IL	62893	Peggy Hester Michael Caldwell	250 March Road	Walnut Hill	IL	62893
1535100008	281 Old Salem Road	Kell	IL	62853	George and Cynthia Oglesby	1230 Racetrack Road	Centralia	IL	62801
1534200019 1534200020	312 March Road	Walnut Hill NA	IL	62893	Mack Jr and Anna Schmitt	312 March Road	Walnut Hill	IL IL	62893
			Mack Schmitt Jr	312 March Road C/O James Klingenberg 405	Walnut Hill		62893		
1534200004		NA			Charles Klingenberg	N Walnut	Centralia	IL	62801
1534200002	305 March Road	Walnut Hill	IL	62893	Harry Braddock and Cindy Lynn McCleary	C/O Olive June Braddock 301 Jasper Road	Walnut Hill	IL	62893
1534200029	3881 Kell Road	Centralia	IL	62801	Aaron and Melissa Shaw	3881 Kell Road	Centralia	IL	62801
1534200025	3846 Kell Road	Centralia	IL	62801	Cody Winkler	3846 Kell Road	Centralia	IL	62801
1535100001		NA		•	Travis Oglesby	1724 Gragg	Centralia	IL	62801
1535100004		NA			Travis and George Oglesby	1796 Satellite Blvd Unit 1404	Duluth	GA	30097
1535200010		NA			William and Amy Mathena	741 St Route 37	Kell	IL	62853
1526300007		NA			William and Amy Mathena	741 St Route 37	Kell	IL	62853
1526300005	4105 Kell Road	Salem	IL	62881	Jada Webb	2106 Maplewood Ave	Salen	IL	62801
1526300006	4075 Kell Road	Centralia	IL	62801	Edward McCracken Jr and	4075 Kell Road	Centralia	IL	62801
	4075 KEII NOAU		IL	02001	Jolean Harvey				
1526300002		NA			William and Amy Mathena	741 St Route 37	Kell	IL	62853
1527400003		NA			Timothy and Matthew Pheonix	28200 W 4th St.	Centralia	IL	62801
1527400001		NA			Charles Klingenberg	C/O James Klingenberg 405 N Walnut	Centralia	IL	62801
1527200007	NA				Timothy and Matthew Pheonix	28200 W 4th St.	Centralia	IL	62801
1527400004	NA		Timothy and Matthew Pheonix	28201 W 4th St.	Centralia	IL	62801		
1526100010	639 Old Salem Rd.	Salem	IL	62853	Revocable Living Trust Paul and Linda Rector	639 Old Salem Rd.	Salem	IL	62853
1527200006		NA			Timothy and Matthew Pheonix	28200 W 4th St.	Centralia	IL	62801
1527200005		NA			James Michael Clark Et. Al.	2121 University Drive	Charleston	IL	61920
1527200004	Jasper Road	Centralia	IL	62801	Ryan and April Kent	3939 Bernard Road	Centralia	IL	62801
1527200003	Bernard Road	Centralia	IL	62801	Ryan and April Kent	3939 Bernard Road	Centralia	IL	62801
1522400005	3939 Bernard Road	Centralia	IL	62801	Ryan and April Kent	3939 Bernard Road	Centralia	IL	62801
1526100008	Old Salem Road	Kell	IL	62853	Revocable Living Trust Paul and Linda Rector	639 Old Salem Rd.	Salem	IL	62853
1526100007	711 Old Salem Road	Kell	IL	62853	Draven Hutchings and Brittany Miller	711 Old Salem Road	Kell	IL	62853
1526100009	729 Old Salem Road	Kell	IL	62853	Charles and Debra Branch	729 Old Salem Road	Kell	IL	62853
1523300007	867 Old Salem Road	Centralia	IL	62801	C/O David and Margaret	2958 Wellen Road	Highland	IL	62801
1523300009	Crowley Road	Kell	IL	62853	Holthaus C/O Property Tax Dept	PO Box 723597	Atlanta	GA	31139
1522400002	crowicy nodu	NA	i.	02033	Ryan and April Kent	3939 Bernard Road	Centralia	IL	62801
1523300001	957 Old Salem Road	Centralia	IL	62801	Dennis and Doris Els	957 Old Salem Road	Centralia	IL	62801
1523100006	1026 Old Salem Road	Centralia	IL	62801	Phillip Collin	3016 West Dunes Highway	Michigan City	IN	46360
1522200007		NA		•	William and Amy Mathena	741 St Route 37	Kell	IL	62853
1522200017	State Route 161	Centralia	IL	62801	Kenneth Thomas Et. Al.	4005 State Route 161	Kell	IL	62853
1523100014	1074 Old Salem Road	Centralia	IL	62801	William and Amy Mathena	741 St Route 37	Kell	IL	62853
1523100002	1099 Old Salem Road	Centralia	IL	62801	Robert Johnson	1687 Community Beach Road	Odin	IL	62870
1523100008	4002 State Route 161	Kell	IL	62853	Thomas Baker	4002 State Route 161	Kell	IL	62853
1514300014	4005 State Route 161	Kell	IL	62853	Kenneth Thomas	4005 State Route 161	Kell	IL	62853
1523100015		NA		1	Glen Carpenter Et. Al.	2302 State Route 37	Salem	IL	62881
1514300004	4025 State Route 161	Kell	IL	62853	Daniel and Brittany Foutch	4025 State Route 161	Kell	IL	62853
1522200016	State Route 161	Centralia	IL	62801	Daryl Ramsour	25518 St Route 161 C/O SBA Properties 8051	Centralia	IL	62801
1522200014	State Route 161	Centralia	IL 	62801	Daryl Ramsour	Congress Ave	Boca Raton	FL 	33487
1522200011 1522200015	3846 State Route 161	Centralia NA	IL	62801	Herman Rowcliff	1532 S. Poplar 4086 Pontoon Road	Centralia Granite City	IL IL	62801 62040
1522200015	3858 State Route 161	Centralia	IL	62801	Jears Market Inc. Jears Market Inc.	4086 Pontoon Road	Granite City Granite City	IL IL	62040
1515400003		NA			Robert and Shelby Heser	224 S Pine	Centralia	IL	62801
1515400007	State Route 161	Centralia	IL	62801	ESPI Commercials, LLC.	822 129th Infantry Drive	Joliet	IL	60435
1515400006	3855 State Route 161	Centralia	IL	62801	Olympic Property #1, LLC.	3336 Olympic Lane	Centralia	IL	62801

Parcel Info					Owner Info					
Number	Address	Town	State	Zip	Name	Address	Town	State	Zip	
1515400019	3853 State Route 161	Centralia	IL	62801	Ruth Kent	3450 State Route 161	Centralia	IL	62801	
1515400014	1260 Old Salem Road	Kell	IL	62853	Rebecca Hocking and Robert Spencer	1260 Old Salem Road	Kell	IL	62853	
1515400013	1262 Old Salem Road	Kell	IL	62853	Thomas Rozella Et. Al.	409 S 29th St	Herrin	IL	62948	
1515400027	1275 Old Salem Road	Kell	IL	62853	Karon and Charles Mills	1275 Old Salem Road	Kell	IL	62853	
1515400021	1343 Old Salem Road	Kell	IL	62853	Richard Glasgow	1343 Old Salem Road	Kell	IL	62853	
1515400023	1347 Old Salem Road	Kell	IL	62853	Donald and Nancy Glasgow	1347 Old Salem Road	Kell	IL	62853	
1515400022		NA			Kenneth Thomas	4005 State Route 161	Kell	IL	62853	
1515400025	1244 Old Salem Road	Kell	IL	62853	Bryce Jeffords and Taylor Jones	1344 Old Salem Road	Kell	IL	62853	
1515400026	1372 Old Salem Road	Kell	IL	62853	Scott and Amanda Carpenter	1372 Old Salem Road	Kell	IL	62853	
1515400016	1383 Old Salem Road	Kell	IL	62853	Andrew Crundwell	1383 Old Salem Road	Kell	IL	62853	
1515200007		NA			Gerald White	3766 White Farm Road	Centralia	IL	62801	
1515200004		NA			Blair Farms LLC.	C/O Kenneth W Blair R/A 1201 W 7th St	Centralia	IL	62801	
1515200002		NA			Barbara and Glen Carpenter	2302 State Route 37	Salem	IL	62881	