Appendix A – Maps

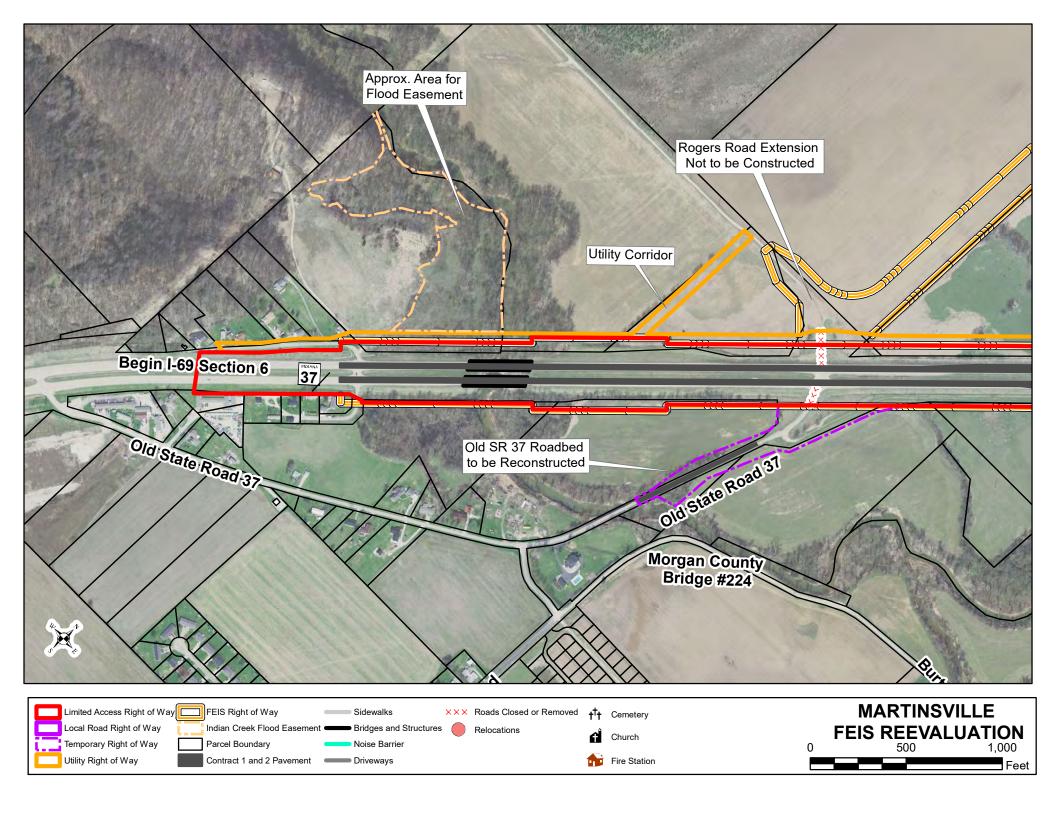
Reevaluation Statement #1

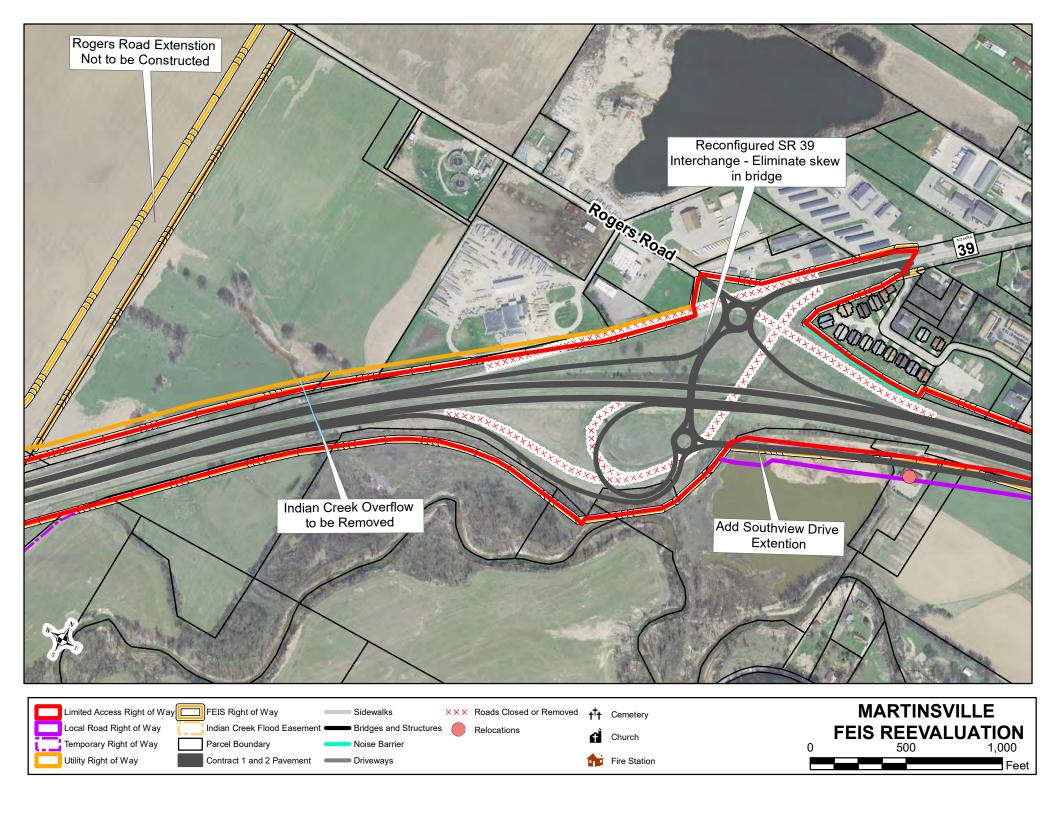


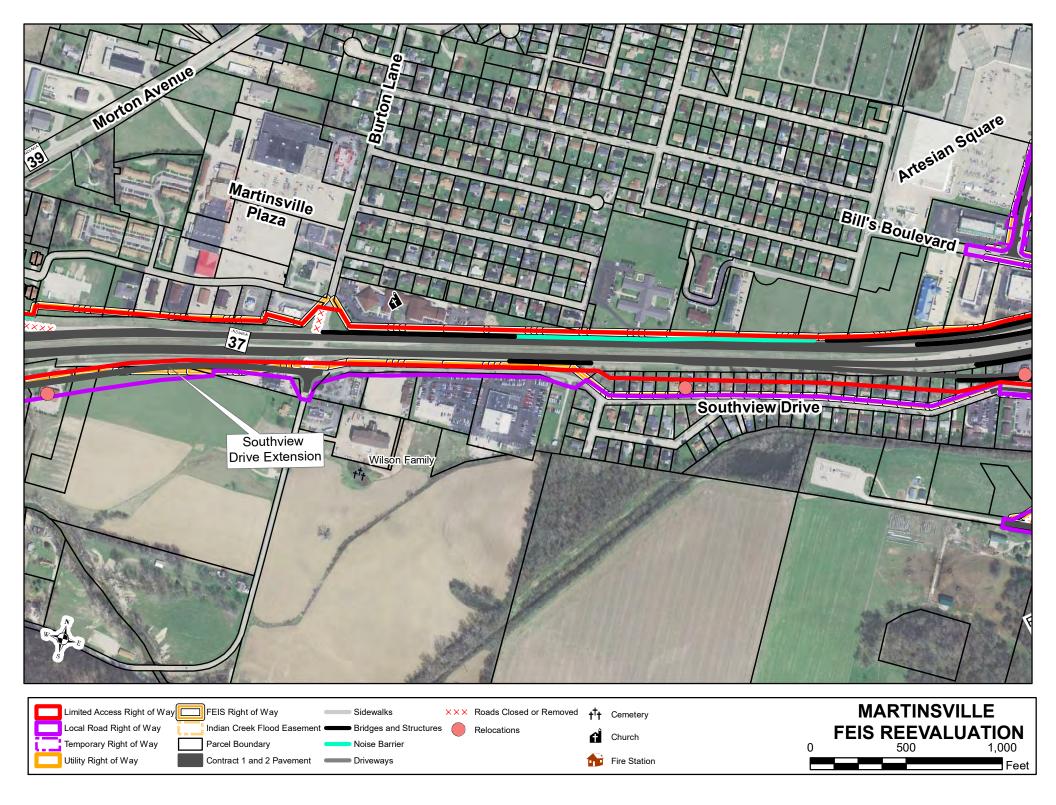


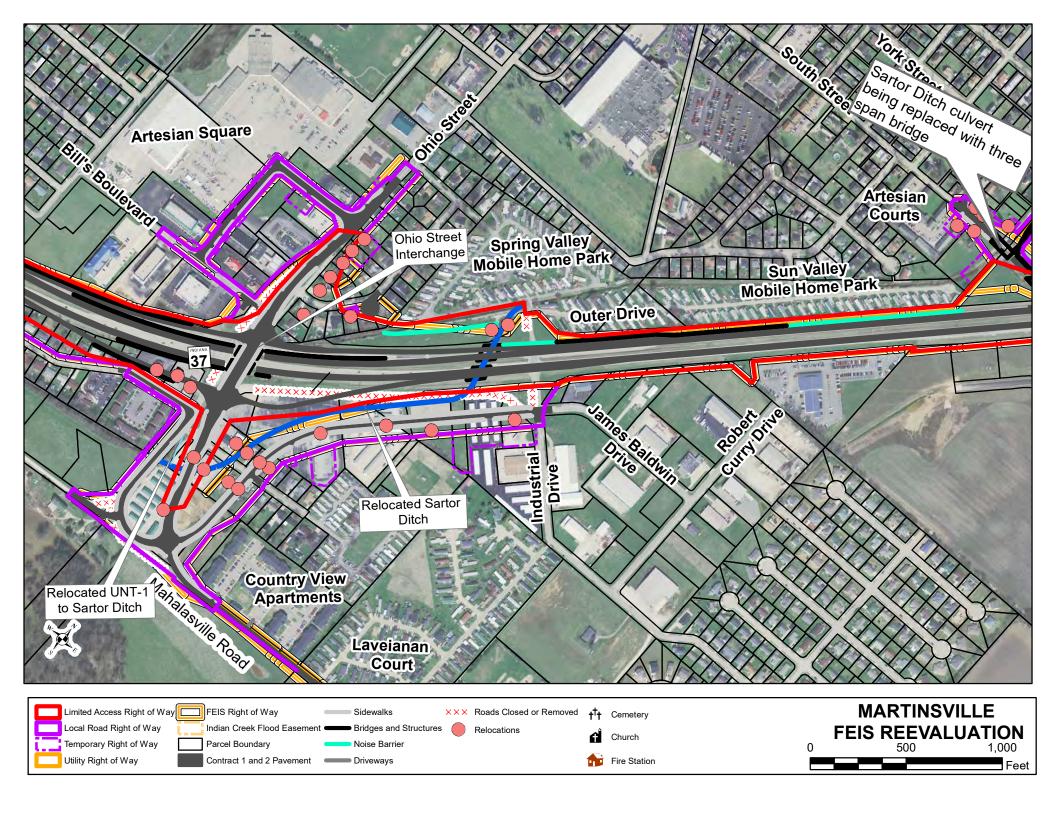
Appendix A1: Segment 6.1

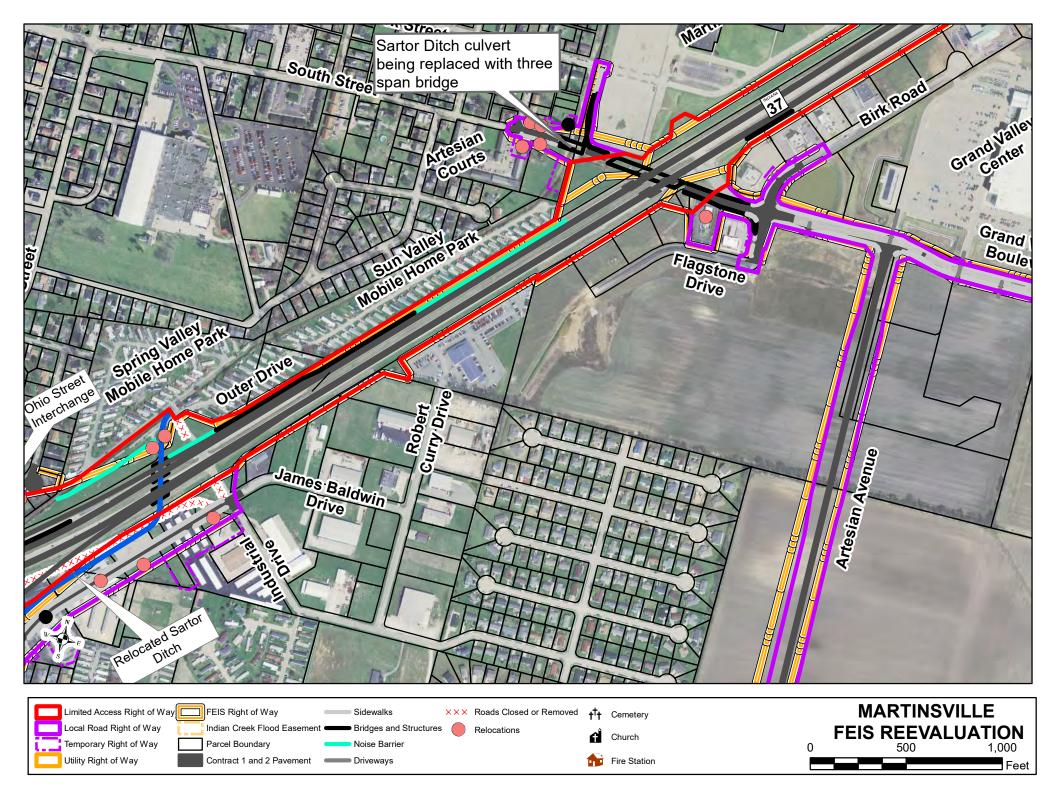
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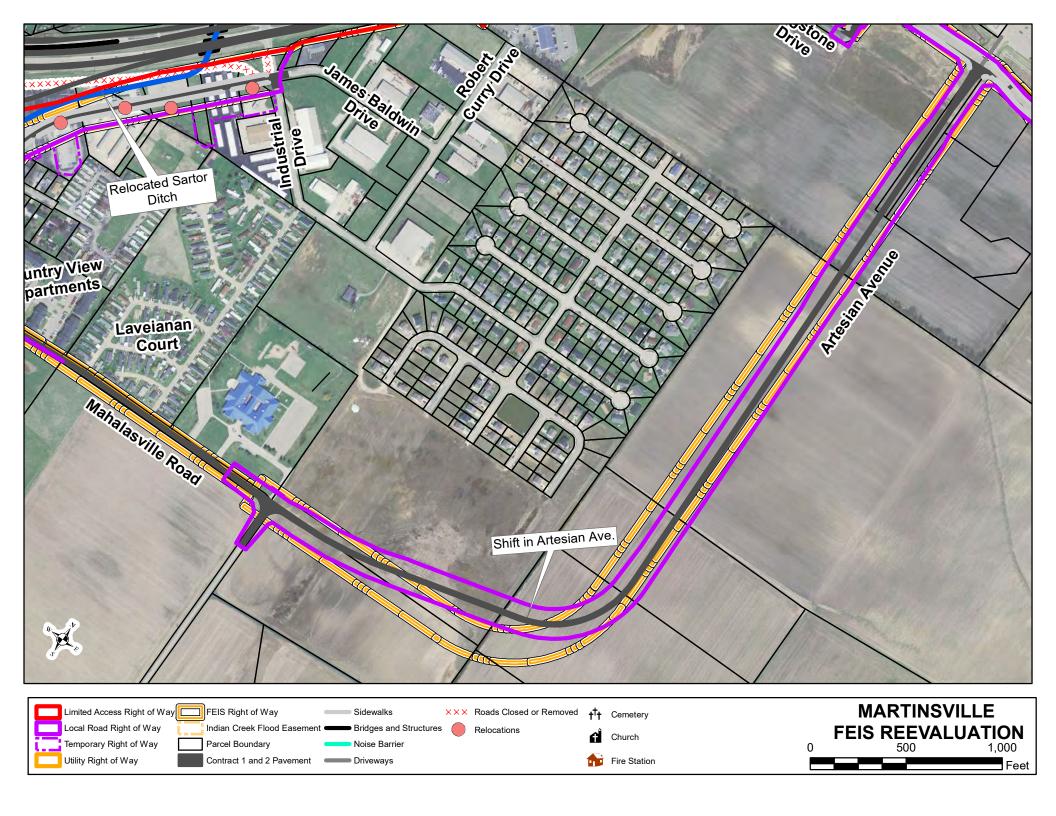


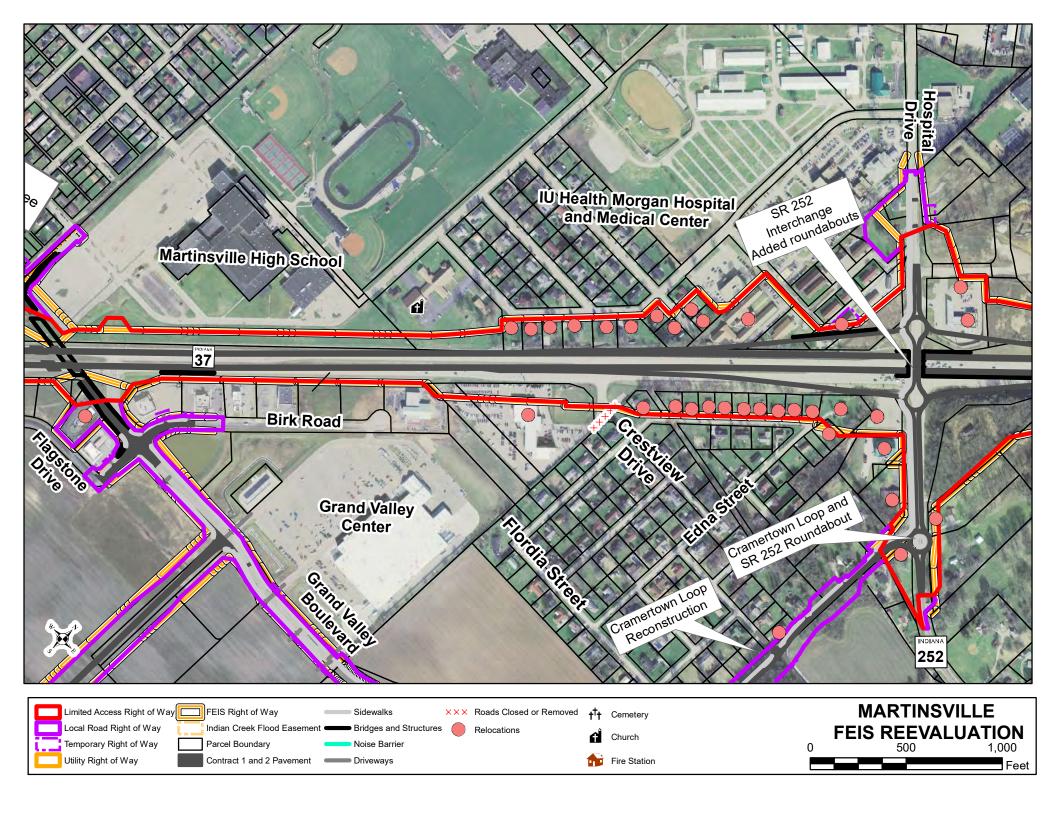


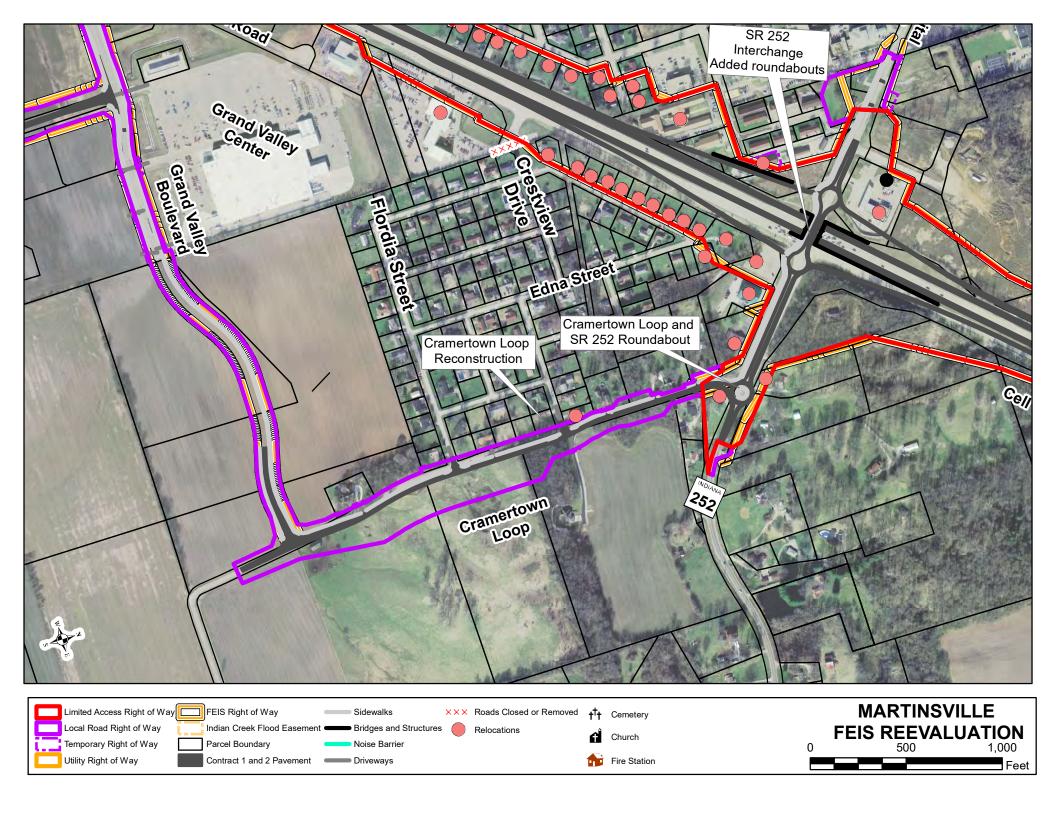


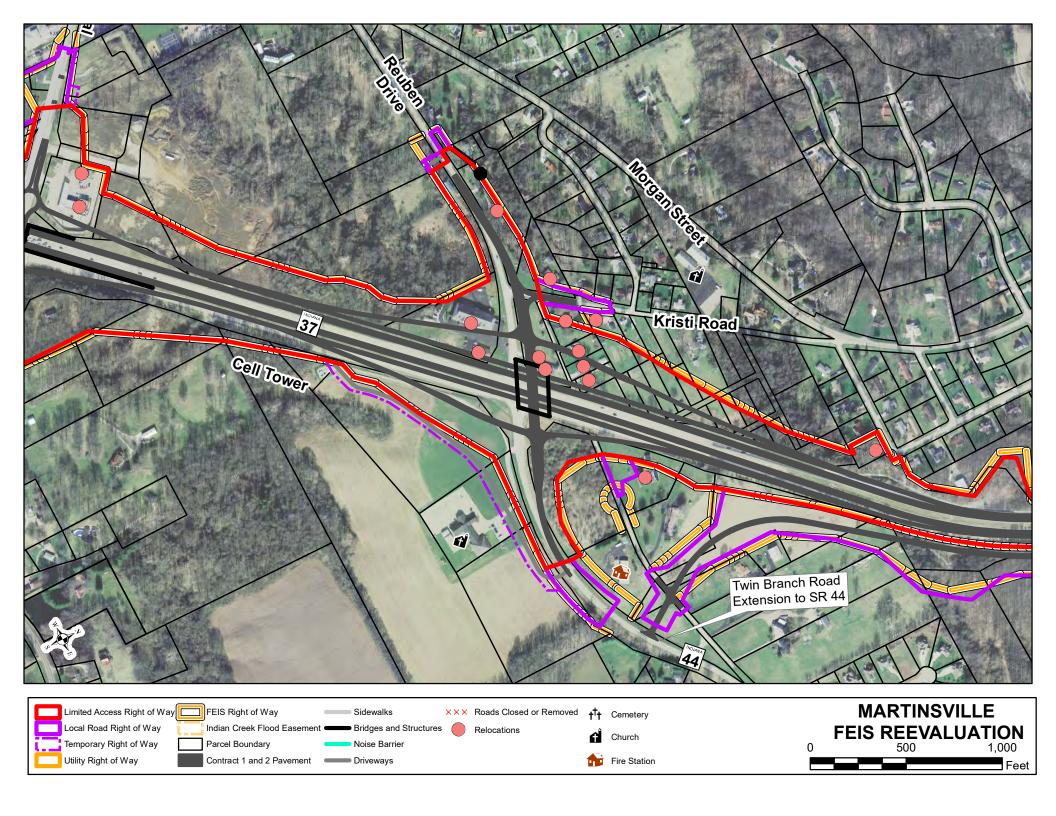


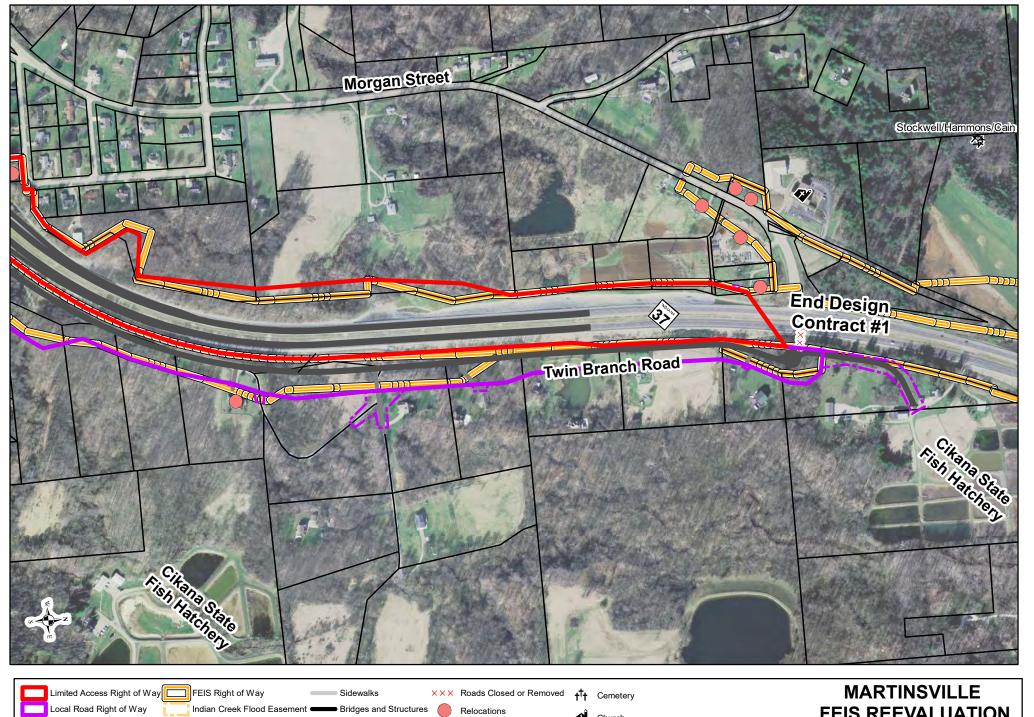


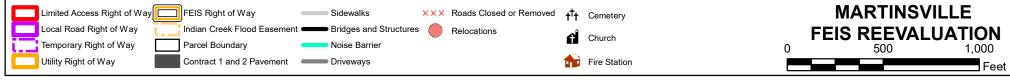






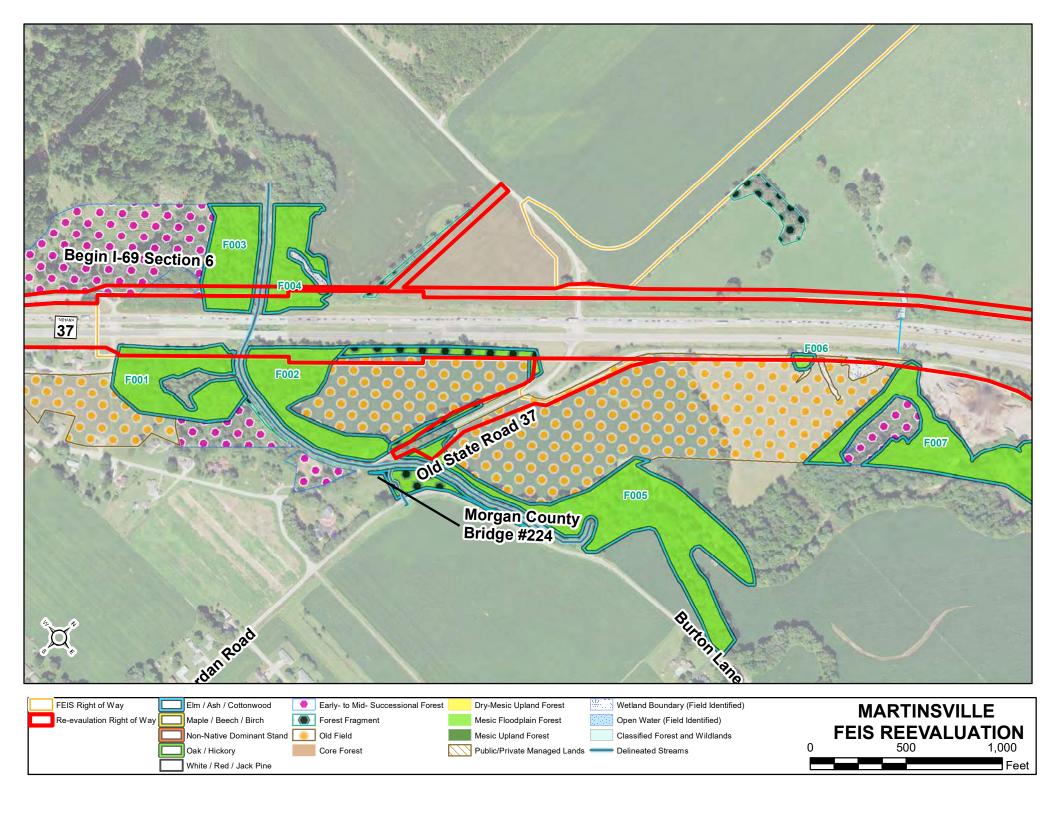


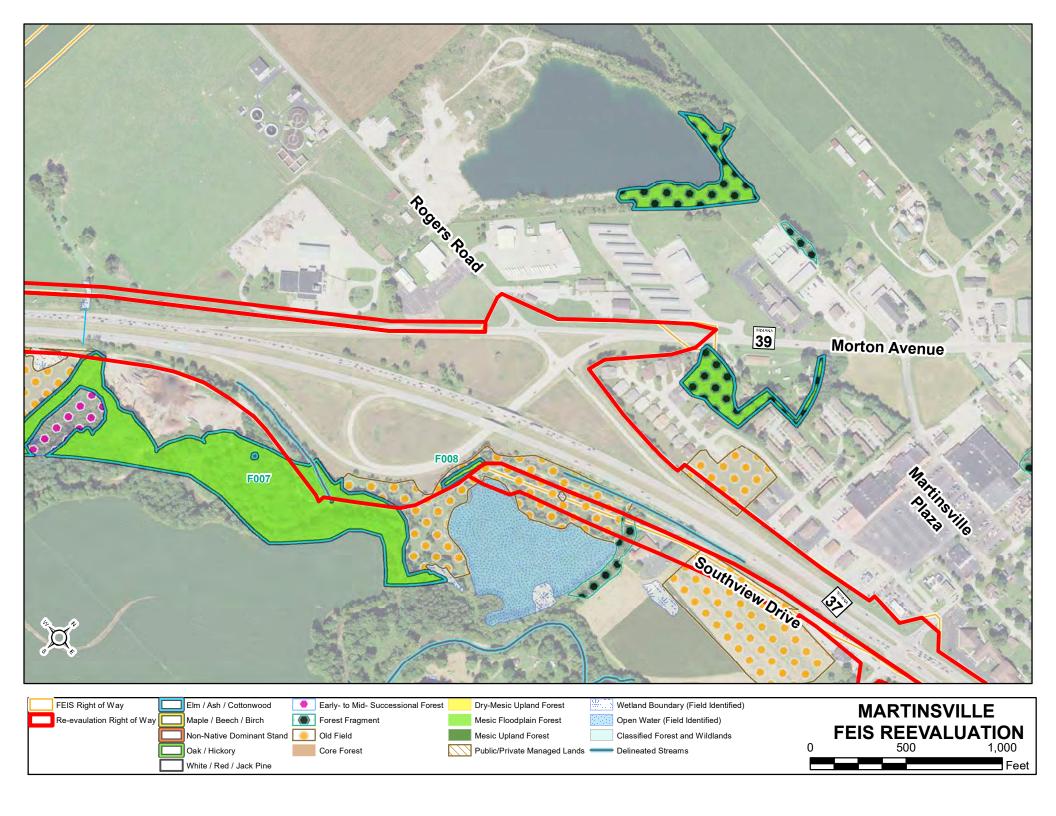


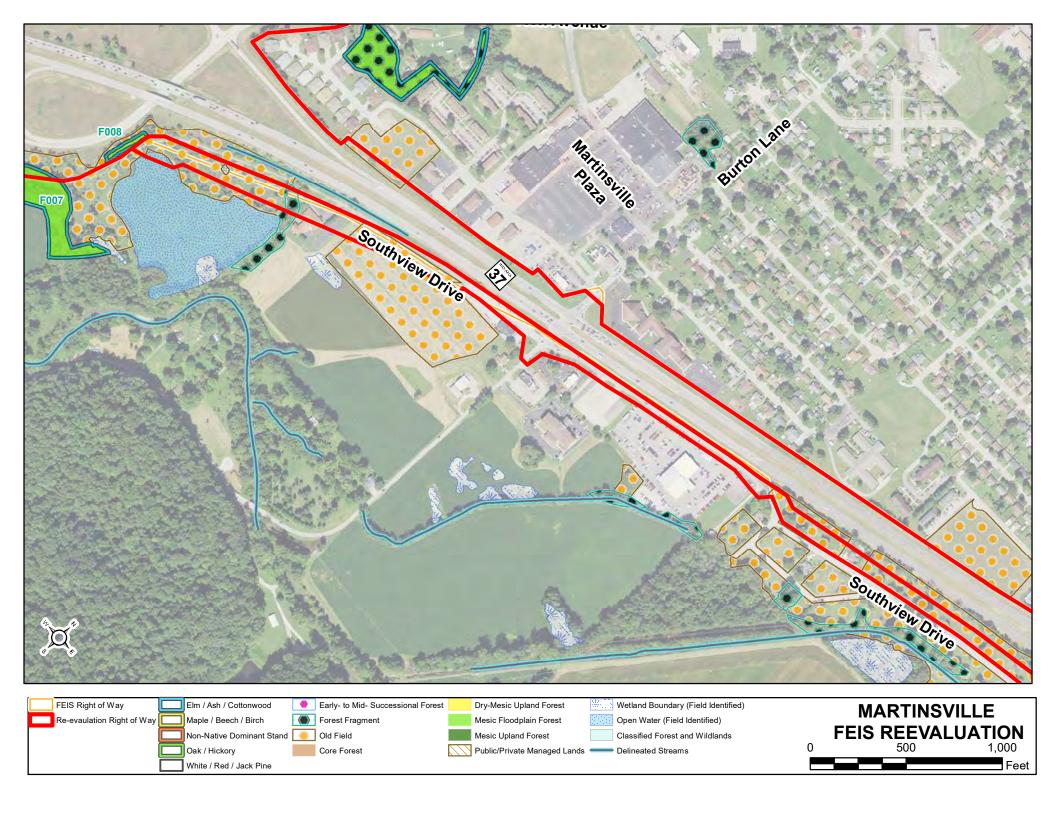


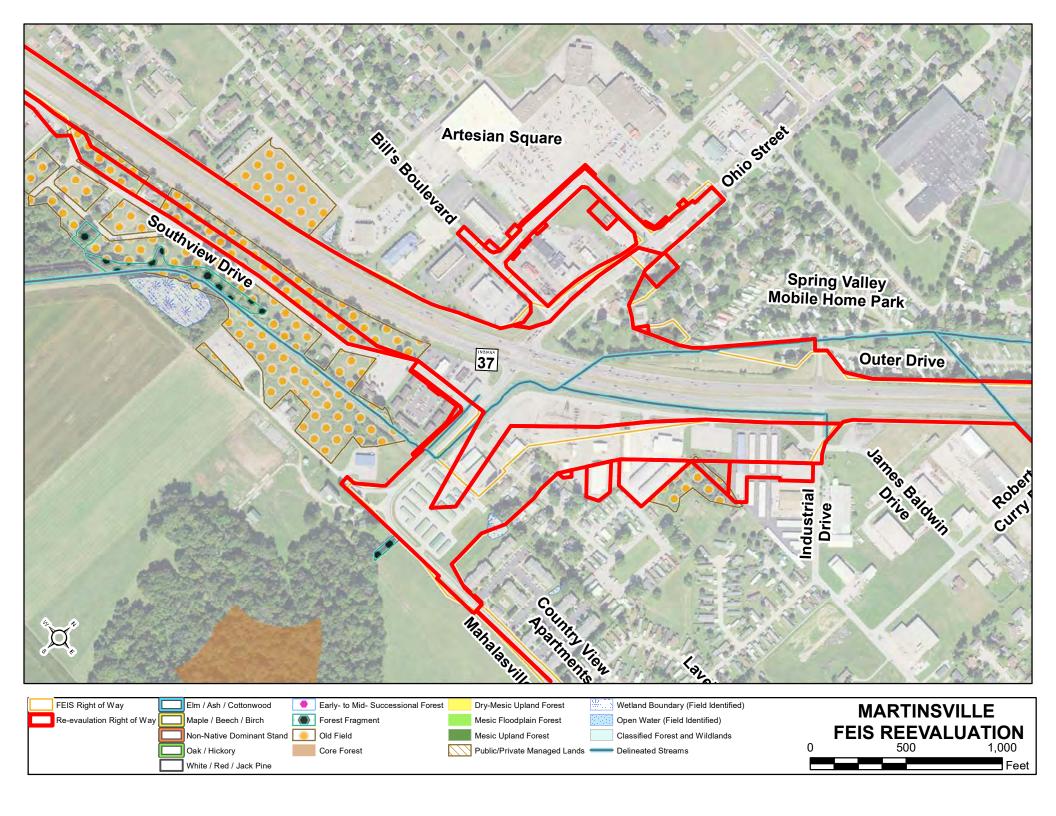
Appendix A2: Natural Resources and Habitat

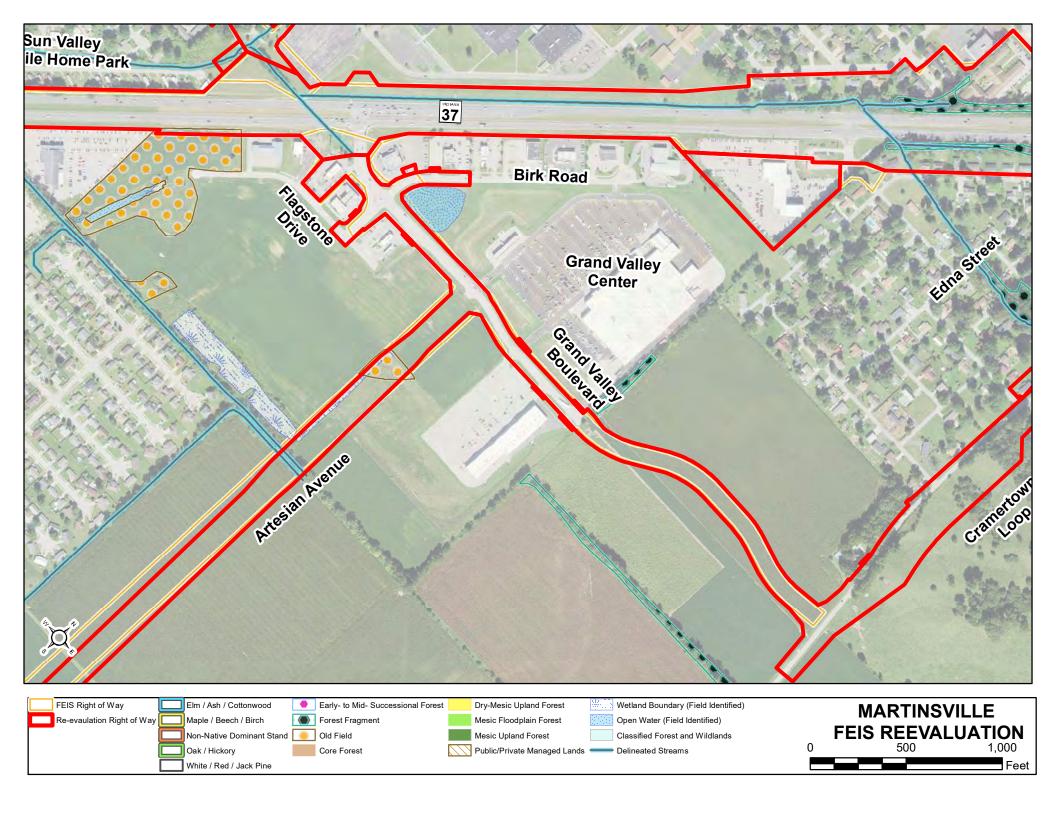
Reevaluation Statement #1 C

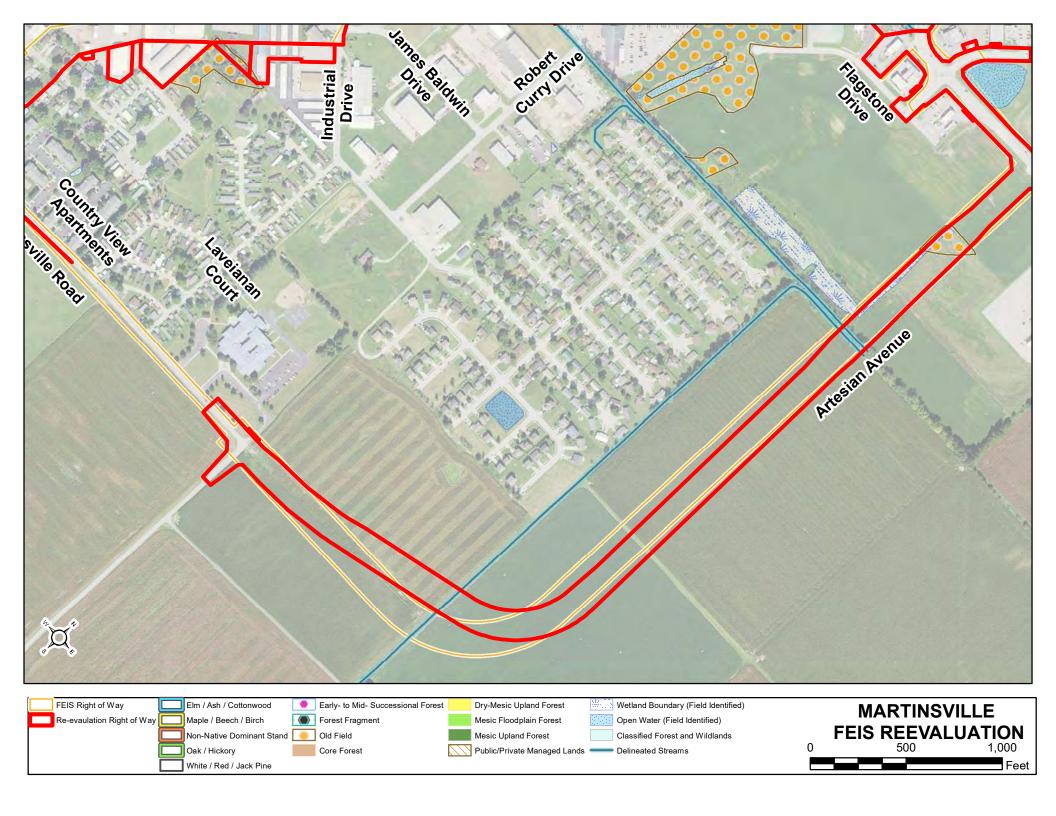


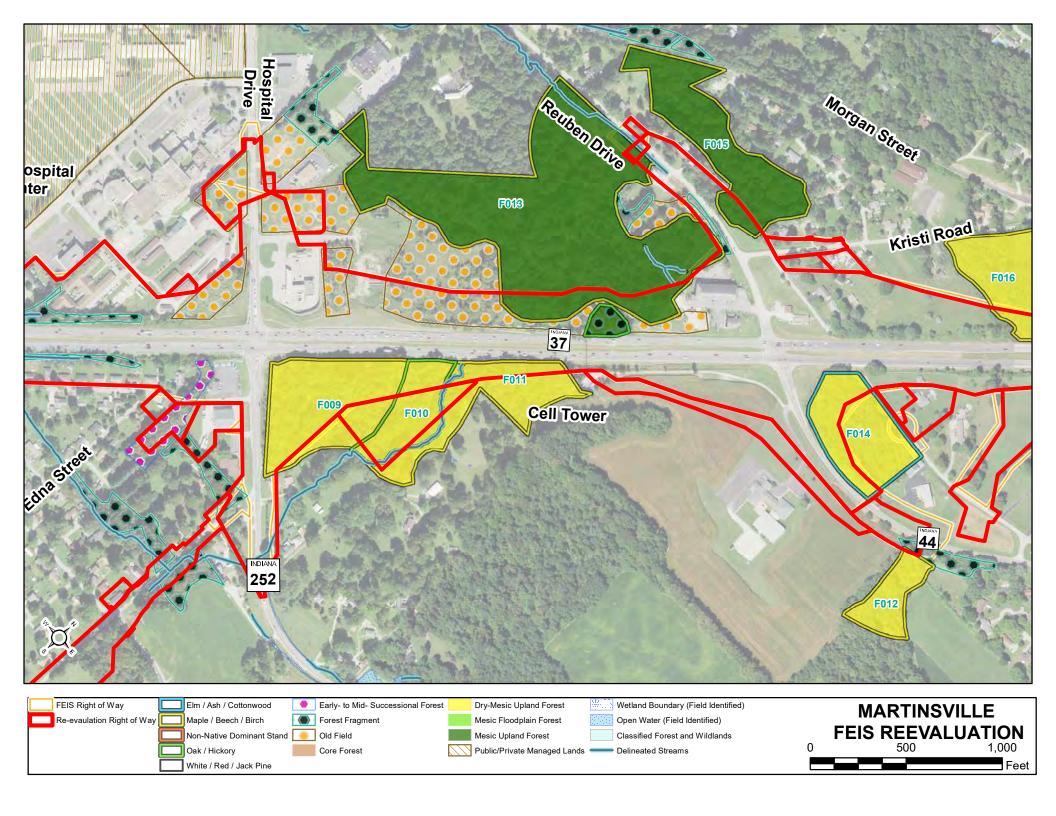


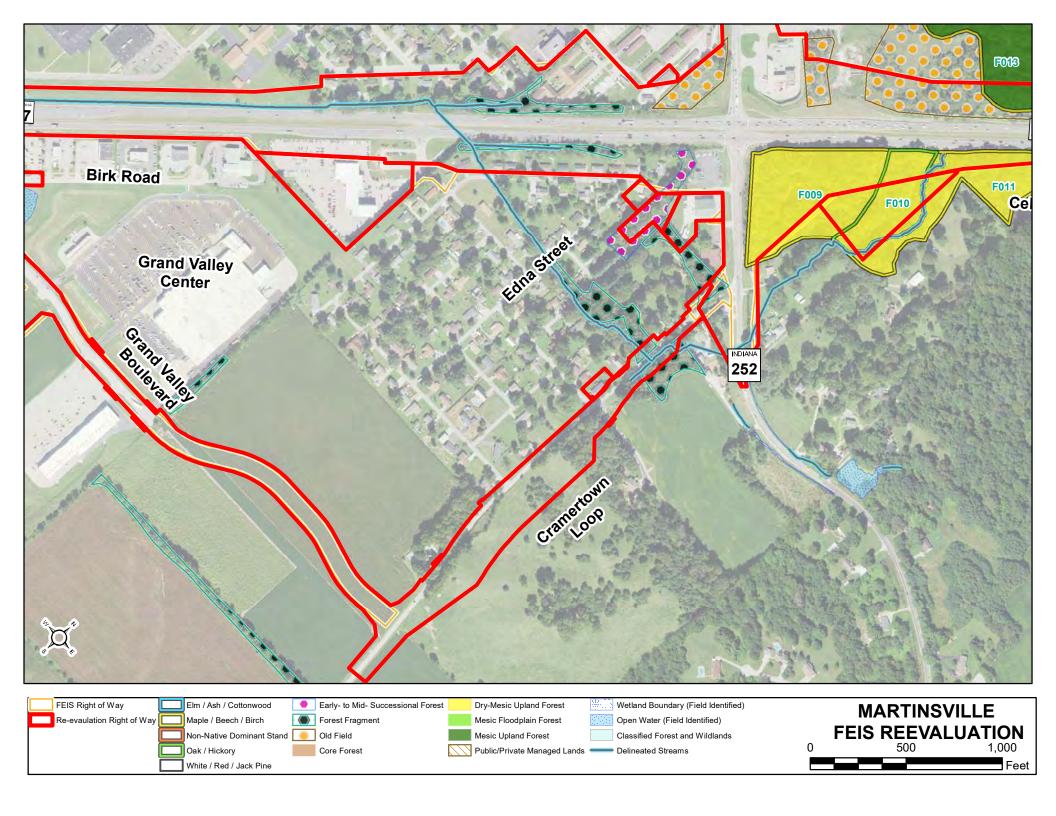


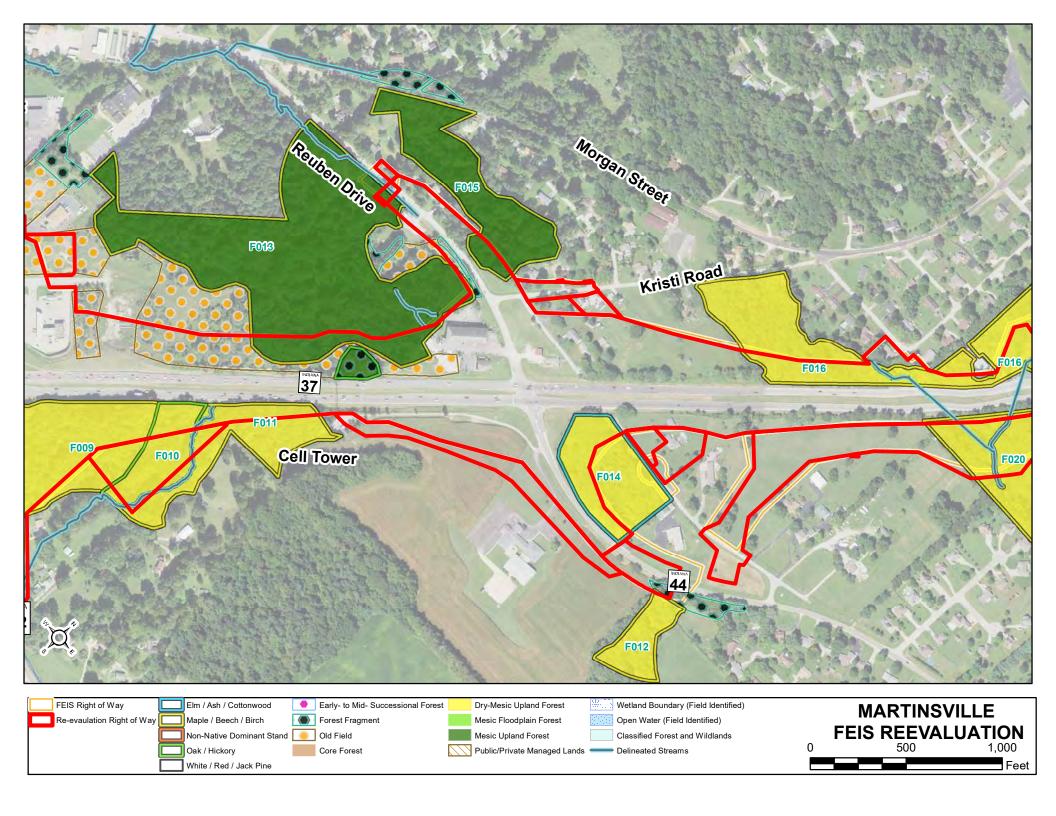


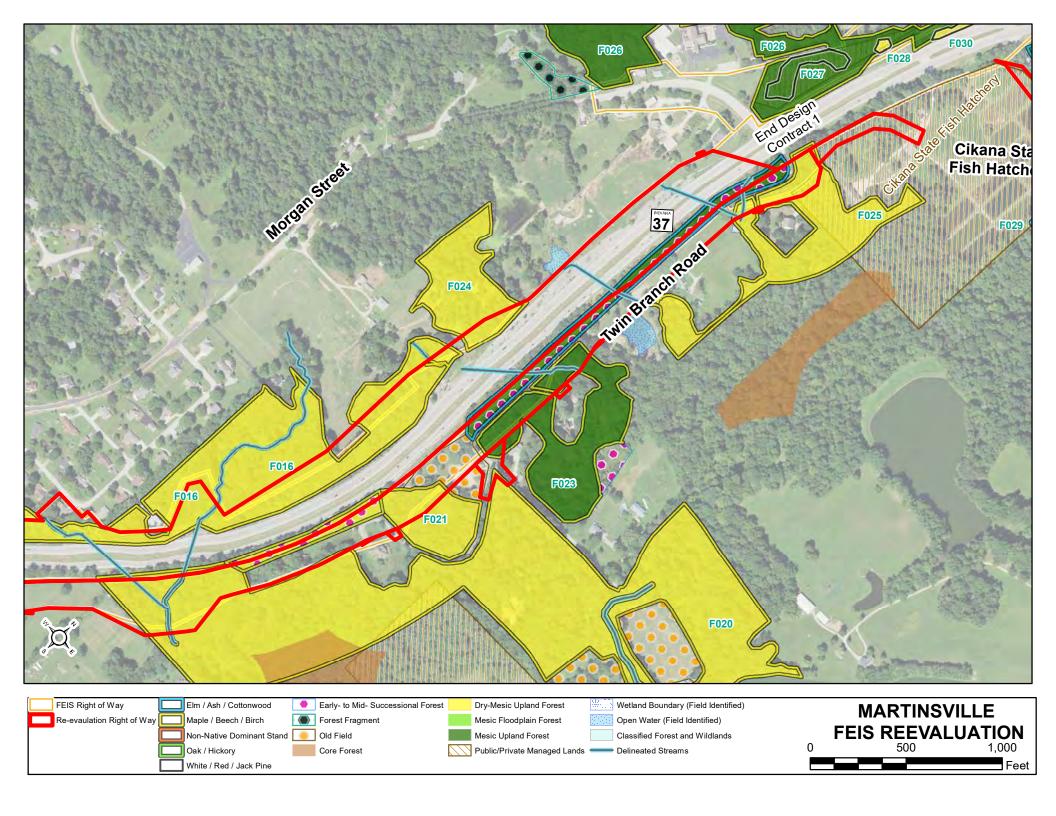
















Appendix B – Table of Reevaluation Area Impacts

Impact Criteria	RPA	Segment 6.1 Reevaluation	Difference	
Right of Way (acres)				
Existing Right of Way	235.1	251.9	16.8	
New Right of Way	161.6	159.4	-2.2	
Total Right of Way	396.7	411.3	14.6	
Relocations				
Residential - Single Family Home	55	52	-3	
Residential - Duplex Unit	3	3	0	
Residential - Mobile Home	2	3	1	
Residential - Apartment Unit	1	1	0	
Business	24	24	0	
Non-Profit	1	2	1	
Total Relocations	86	85	-1	
Section 4(f)				
Park (acres)	0	0	0	
Historic or NRHP Eligible (acres)	0	0	0	
Total Wetland (acres)				
Emergent Wetland	0.243	0.195	-0.048	
Forested Wetland	0.260	0.284	0.024	
Scrub/Shrub Wetland	0.101	0.455	0.354	
Open Water	0.090	0.107	0.017	
Total Wetland Impacts	0.695	1.041	0.346	
Total Stream (linear feet) ¹				
Ephemeral	9,725	9,653	-72	
Intermittent	3,639	3,208	-431	
Perennial	2,202	2,347	145	
Total Stream Impacts	15,566	15,208	-358	
Floodplain (acres) ²	52.3	57.7	5.4	
Floodway (acres) ³	46.9	43.5	-3.4	
Wellhead Protection Areas (acres)	0	0	0	
Agricultural Land (acres)	40.2	35.9	-4.3	
Managed Lands (acres)	2.0	1.2	-0.8	

¹ Includes only permanent impacts.

 $^{^2}$ Includes areas within regulated Sartor Ditch floodway which are mapped as floodplain.

³ Does not include regulated floodway of Sartor Ditch which is not mapped as floodway.

Impact Criteria	RPA	Segment 6.1 Reevaluation	Difference
Publicly Owned	2.0	1.2	-0.8
Privately Owned	0	0	0
Upland Forest (acres)	32.0	35.1	3.1
Core Forest (acres)	0	0	0

Appendix C – Wetland and Stream Reports

Reevaluation Statement #1





Appendix C1: Wetland Delineation

Wetland Delineation Report

For I-69 Section 6 Design Contract 1 In Morgan County, Indiana

DES# 0500430 & 1800324

September 06, 2018

Prepared for:



Government Center North, Room N642 100 North Senate Avenue Indianapolis, Indiana 46204-2249

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I. Project Description

In general, the project consists of upgrading existing SR 37 to Interstate standards in Morgan County, Indiana starting just south of the SR 39 interchange in Martinsville, Indiana and ending just south of the existing SR 37 and Morgan Street intersection. The total length of Section 6 Design Contract 1 of the I-69 Section 6 project is approximately 5.5 miles.

The project is located in Morgan County (see Exhibit 1 for general location map). The majority of this project is along the existing SR 37 roadway (see Exhibit 2 and 3 respectively for USGS Topographic and Aerial Photograph maps showing the project location). There are 10 jurisdictional wetlands and 1 open water area that have been identified within the proposed I-69 Section 6 Design Contract 1 Permit Limits. Appendix A contains impact site forms for each of the 10 jurisdictional wetlands and 1 open water impact associated with this project. USACE Routine Wetland Determination Data Forms for each of the wetland impact sites are located in Appendix A. Also included in Appendix A are wetland assessment data summary sheets completed using the Indiana Wrapped Assessment Protocol (InWRAP) developed by Taylor University.

II. Section 404 "Waters of the United States," "Waters of the State," and Wetlands

In 1972 Congress amended the Federal Water Pollution Control Act of 1948 (Clean Water Act) to include Section 404 which regulates the discharge of fill or dredged material into all "waters of the United States." Guidelines for implementation of the Section 404 program were jointly developed by the United States Environmental Protection Agency (USEPA) and the United States Army Corps of Engineers (USACE). Administration of the program, including issuance of discharge permits, is the responsibility of the USACE. The EPA is however "authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site" as well as "deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site..." Section 6 Design Contract 1 of the I-69 Project is within the jurisdiction of the USACE Louisville District office.

"Waters of the United States" is an all encompassing term used to include a wide range of both deep water aquatic habitats and special aquatic sites. Special aquatic sites are defined as "geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values" [40 CFR 230.3(q-1)]. Six special aquatic site categories have been identified by the EPA [40 CFR 230.40 - 230.45]:

- (1) sanctuaries and refuges
- (4) vegetated shallows

(2) wetlands

(5) coral reefs

(3) mudflats

(6) riffle and pool complexes

Wetlands as defined by the EPA [40 CFR 230.3(t)] and the USACE [33 CFR 328.3(b)] include "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The Indiana Department of Environmental Management (IDEM) regulates "Waters of the State." IDEM is responsible for issuing Water Quality Certifications (WQC) in Indiana. IDEM is charged with maintaining the chemical, physical and biological integrity of Indiana waters through its WQC

program. Section 401 of the Clean Water Act requires any applicant for a federal permit through the USACE to conduct any activity that may result in a discharge of pollutants to water (including wetlands) to first obtain a WQC. If the USACE determines that a federal permit is not needed under Section 404 of the Clean Water Act, authorization by IDEM is still likely needed. This is likely to be the case of "isolated wetlands" where the USACE has determined that it has no basis for federal jurisdiction. IDEM regulates impacts to isolated wetlands under its Isolated Wetlands Regulatory Program (327 IAC 2).

III. Wetland Determination Methodology

Wetland determinations and delineations were performed in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* and all subsequent USACE guidance releases. Non-wetland "waters of the United States" were determined and described in accordance with the definitions in 33 CFR 328.3 and the wetland delineation manual. Classifications assigned to those wetlands identified and described in this study follow the classification system developed for the Fish and Wildlife Service, U. S. Department of the Interior, by Cowardin *et al.* (1979).

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) was developed to establish a universal methodology for determining and delineating jurisdictional wetlands in the Midwest. In keeping with the intent of the wetland definition, this methodology was based on a three parameter approach which requires that any one given site exhibit hydrophytic vegetation, hydric soils <u>and</u> wetland hydrology to qualify as a jurisdictional wetland. While normally all three criteria are required in order for such a designation, atypical or problem areas may exist where circumstances are such that only two criteria are necessary. Atypical situations include unauthorized discharges within wetland, or clearing of vegetation within a wetland, episodic acts of nature (beaver dams, fires, avalanches, etc.) and/or man-induced wetlands (impoundments).

Hydrophytic Vegetation

The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region defines hydrophytic vegetation as the "sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present." The USACE places emphasis on the assemblage of plant species rather than on indicator species to assess a sites hydrophytic status. The "prevalence of vegetation" for a specific area is based on the dominant plant species, which characterize the community. The task of determining whether the dominant plant species represent that of a wetland community was simplified through the development of the National List of Plant Species That Occur in Wetlands by the U.S. Fish and Wildlife Service (USFWS) in cooperation with the USACE, EPA, and the Soil Conservation Service. The five primary indicator categories used to classify a species' probability of occurring in a wetland are:

Obligate Wetland (OBL) - Occur almost always (estimated probability >99%) under natural conditions in wetlands

Facultative Wetland (FACW) - Usually occur in wetlands (estimated probability 67% - 99%), but occasionally found in non-wetlands.

Facultative (FAC) - Equally likely to occur in wetlands or non-wetlands (estimated probability 34% - 66%).

Facultative Upland (FACU) - Usually occur in non-wetlands (estimated probability 67% - 99%), but occasionally found in wetlands (estimated probability 1% - 33%).

Obligate Upland (UPL) - Occur in wetland in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.

The hydrophytic vegetation criteria is said to be satisfied if more than 50% of the dominant species for each of the vegetative strata are OBL, FACW or FAC (except FAC-).

Hydric Soils

The National Technical Committee for Hydric Soils defines hydric soils as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The anaerobic conditions hydric soils are subjected to during periodic or permanent inundation or saturation results in the chemical reduction of certain soil components, which are exhibited in the physical attributes of the soil.

Soils are typically described in terms of characteristics such as color, mottling, texture and structure. Soil color documentation is based on the Munsell notation system, which uses a combination of *hue*, *value* and *chroma* variables as descriptors. *Hue* expresses a color's relation to red, yellow, green, blue, and purple, and is designated by a number from 0 to 10 followed by a letter abbreviation (R = red, YR = yellow-red, Y = yellow). Within each letter range, the hue becomes more yellow and less red as the number increases. The range of hues for gleyed soils includes yellow (5Y), green-yellow (5GY), green (5G), blue-green (5BG) and blue (5B). *Value* indicates a color's lightness and is designated by a number from 0 (absolute black) to 10 (absolute white). *Chroma* indicates a colors strength or departure from a neutral of the same lightness. Within the Munsell Soil Color Chart chroma ranges from 0 for neutral to 8. Soil color is typically determined using a moist soil sample. Neutral colored soils with no hue and a chroma of zero are designated with the letter N on the gley page.

Mottling, the presence of brightly contrasting spots of color within the soil matrix, is often indicative of a fluctuating water table. Mottles are also color graded using the Munsell system. A soil's texture (e.g., sand, loamy sand, sandy loam, loam, silt loam, clay loam, clay) and structure (e.g. platy, prismatic, blocky, granular, etc.) are features which influence its porosity and permeability. These in turn determine the frequency and duration of saturation and inundation for a soil.

The USACE manual stipulates that unmottled mineral soils with a matrix chroma of 1 or less, and mottled mineral soils with a matrix chroma of 2 or less immediately below the A-horizon or at a depth of 10 inches (whichever is shallower) are indicative of hydric conditions. Gleyed (gray) soils resulting from the reduction of iron under waterlogged conditions are also an indicator of hydric soils when observed within the upper 10 inches. Other hydric soil indicators include the detection of hydrogen sulfide from permanently saturated soils, the presence of iron and manganese concretions, and a positive α - α -dipyridil test for reducing conditions. Organic peat or muck soils (Histosols) are exclusively hydric.

Wetland Hydrology

The USACE defines wetland hydrology as the sum total of wetness characteristic in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation. The

climate (temperature, precipitation, and evaporation), local geology (parent material and soil properties), topography, surface drainage patterns, water table, and vegetative cover (evapotranspiration) are all factors which influence the hydrology and potential wetness of an area. Because inundation or soil surface saturation may only occur seasonally, indirect indicators of past hydrologic conditions must be sought to satisfy the criteria. Primary indicators of wetland hydrology include drainage patterns, drift lines, sediment deposition, watermarks on trees or other features, visual observation of saturated soils, and inundation. In addition to on-site evidence, recorded information such as stream gauge data, flood maps, historical records or previous hydraulic reports may also be of assistance in determining the frequency and duration of inundation. Oxidized root channels in the upper 12 inches, the presence of water stained leaves, local soil survey data, the FAC-neutral vegetation test and morphologic plant adaptations are secondary indicators of wetland hydrology. The Regional Supplemental Manual determination methodology requires that one primary indicator or two secondary indicators be identified as evidence of hydrology.

IV. Preliminary Review

Prior to the on-site investigation, standard sources of information were reviewed to assess the potential for encountering "Waters of the United States" and "Waters of the State," including wetlands, within the proposed Section 6 Design Contract 1 project area.

USGS Topographic Maps

Section 6 Design Contract 1 of the I-69 Project area is located in Morgan County, Indiana. The project area is located on the Martinsville Indiana USGS Quadrangle Maps (See Exhibit 2).

Soil Survey Data

The United States Department of Agriculture Soil Survey of Monroe and Morgan counties, Indiana were consulted to identify the mapped soil series that occur in each of the 11 jurisdictional wetland impact areas identified. The following is a list of the soil series that were identified in the wetland impact areas within the Section 6 Design Contract 1 Permit Limits.

I-69 Section 6 Design Contract 1 Permit Limits Wetland and Open Water Impact Sites Soils

Genesee silt loam Shoals silt loam

Whitaker loam Princeton fine sandy loam Martinsville loam Rensselaer clay loam

Elkinsville silt loam

National Wetland Inventory Maps

Digital USFWS National Wetland Inventory (NWI) maps identified 6 wetlands within the I-69 Section 6 Design Contract 1 Permit Limits. The 6 NWI wetlands within the Section 6 Design Contract 1 Permit Limits consisted of the following wetland types:

- 3 Palustrine Forested Wetlands (PFO)
- 1 Emergent Wetlands (PEM)
- 2 Palustrine Unconsolidated Bottom Wetlands (PUB)

FEMA Flood Maps

Indiana Department of Natural Resources (IDNR) Division of Water Digital Flood Insurance Rate Maps (FIRM) for Morgan County was reviewed for this project. The FIRM map identified the floodplain areas of 2 streams within the I-69 Section 6 Design Contract 1 Permit Limits (Figure 1).

The Indian Creek and Sartor Ditch 100-year floodplains are crossed by the Section 6 Design Contract 1 Permit Limits.

V. Field Investigation

On-site field reviews were conducted in 2015, 2017, and 2018. During the field reviews, the entire I-69 Section 6 Design Contract 1 area was reviewed to identify possible wetland impacts. Eleven jurisdictional wetland complexes were identified during the field reviews that will be impacted by the Section 6 Design Contract 1 Permit Limits. These wetlands and ponds are located in the Upper White 8-digit watersheds.

VI. Investigation Findings

Wetlands

A total of 10 jurisdictional wetland complexes will be impacted by the proposed I-69 Section 6 Design Contract 1 Permit Limits. These 11 wetland complexes consist of 3 palustrine forested, 3 palustrine scrub shrub, 4 palustrine emergent, and 1 palustrine unconsolidated bottom wetland areas. The total area of wetland impacts associated with Section 6 Design Contract 1 of the I-69 project will be 0.9 acres. Table 1 below identifies the wetland impacts within the Permit Limits.

	Table 1. Summary of Wetland and Pond Impacts within the I-69 Section 6 Design Contract 1 Permit Limits					
ID#	Wetlands	Permanent Impact Area	Temporary Impact Area	Jurisdiction	Classification (Cowardin)	
S6W001A	Forested	0.034 ac.	0.000 ac.	Yes	PFO	
S6W002A	Forested	0.031 ac.	0.047 ac.	Yes	PFO	
S6W003A	Emergent	0.000 ac.	0.009 ac.	Yes	PEM	
S6W004A	Emergent	0.010 ac.	0.056 ac.	Yes	PEM	
S6W005A	Emergent	0.055 ac.	0.035 ac.	Yes	PEM	
S6W007A	Forested	0.065 ac.	0.107 ac.	Yes	PFO	
S6W008A	Open Water Pond	0.107 ac.	0.000 ac.	Yes	PUB	
S6W009A	Emergent	0.030 ac.	0.000 ac.	Yes	PEM	
S6W021A	Scrub/Shrub	0.042 ac.	0.063 ac.	Yes	PSS	
S6W037A	Scrub/Shrub	0.060 ac.	0.000 ac.	Yes	PSS	
S6W137A	Scrub/Shrub	0.290 ac.	0.000 ac.	Yes	PSS	
	TOTAL IMPACTS	0.724 ac.	0.884 ac.			

Wetland Impacts

The wetlands being permanently impacted have a total area of 0.617 acre and the open water being permanently impacted has a total area of 0.107 acre. The wetlands being temporarily impacted have a total area of 0.0884 ac. and there will be no temporary impacts to open water areas. The wetlands and open water are located throughout the Section 6 Design Contract 1 Permit Limits (see Exhibits 2 and 3). Appendix A contains detailed impact site information on each of the wetland and pond impact areas. InWRAP was performed on all of the wetlands being impacted by the Section 6 Design Contract 1 Permit Limits (Appendix A contains the InWRAP Summary table for each wetland impact). Below is a brief description of each of the wetland and pond impact areas.

Wetland Impact S6W001

This wetland is classified as a PFO wetland, and has a total size of 0.31 acre. This wetland showed 95% herbaceous cover and 50% woody plant cover. Dominant herbaceous species for this wetland include *Symphyotrichum lanceolatum* and *Sanicula canadensis*. Dominant woody species included *Acer negundo, Acer saccharinum,* and *Juglans nigra*. Hydrology is likely due to frequent flooding from Indian Creek, local runoff and poorly drained soils. Animal habitat, botanical diversity and hydrologic function are rated as fair based on InWRAP summaries for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Indian Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.034 acre of this wetland and no temporary impacts will occur to this wetland.

Wetland Impact S6W002

This wetland complex consists of two wetland polygons totaling 0.210 acre. Polygon S6W002A is classified as a PFO wetland, 0.17 acre in size. Polygon S6002B is classified as a PEM wetland, 0.04 acre in size. Polygon SW6002A showed 85% herbaceous cover with dominant species including *Carex cristatella, Toxicodendron radicans, Carex squarrosa,* and, *Elymus virginicus*. Polygon S6W002A showed 20% Sapling/Shrub cover with dominant species including *Cornus racemose*. Polygon S6W002A showed 95% woody plant cover with dominant species including *Acer saccharinum* and *Fraxinus pennsylvanica*. Polygon S6W002B showed 100% herbaceous cover with dominant species including *Symphyotrichum lanceolatum*. Hydrology is likely due to backwater flooding of Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity and hydrologic function are all ranked as fair for the PFO polygon (S6W002A) and poor, poor, and fair respectively for the PEM wetland polygon (S6W002B) within this complex based on InWRAP summaries. This wetland falls under the jurisdiction of both the USACE and IDEM due to its hydrologic connectivity to a tributary of Indian Creek. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.031 acre of the PFO portion (S6W002A) of this wetland complex and temporarily impact 0.047 acre of the PFO portion of (S6W002A) of this wetland complex.

Wetland Impact S6W003

This wetland is classified as a PEM wetland, and has a total size of 0.14 acre. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include *Symphyotrichum lanceolatum* and *Carex spp*. Hydrology is likely due to backwater flooding of Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity and hydrologic function are rated as poor, poor, and fair respectively based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to a tributary of Indian Creek. The Section 6 Design Contract 1 Permit Limits will have no permanent impacts to this wetland; however, 0.009 acre of this wetland will be temporarily impacted.

Wetland Impact S6W004

This wetland is classified as a PEM wetland, and has a total size of 0.35 acre. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include *Juncus effusus* and *Carex spp*. Hydrology is likely due to backwater flooding of Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity and hydrologic function are rated as poor, poor, and fair respectively based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to a tributary of Indian Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.010 acre of this wetland and temporarily impact 0.056 acre of this wetland.

Wetland Impact S6W005

This wetland is classified as a PEM wetland, and has a total size of 0.11 acre. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include *Phalaris arundinacea, lemna minor,* and *Typha latifolia*. Hydrology is likely due to backwater flooding of Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity and hydrologic function are all rated as poor based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Indian Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.055 acre of this wetland and temporarily impact 0.035 acre of this wetland.

Wetland Impact S6W007

This wetland is classified as a PFO wetland, and has a total size of 0.172 acre. This wetland showed 0% herbaceous cover, 20% sapling/shrub cover, and 50% woody tree cover. Dominant sapling/shrub species for this wetland include *Morus alba, Plantanus occidentalis,* and *Salix nigra*. Dominant tree species for this wetland include *Plantanus occidentalis,* and *Acer saccharinum*. Hydrology is likely due to roadside runoff from the SR 37. Animal habitat, botanical diversity and hydrologic function are all rated as fair based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Indian Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.065 acre of this wetland and temporarily impact 0.107 acre of this wetland.

Wetland Impact S6W008

This wetland complex consists of three wetland polygons totaling 8.138 acres in size. Polygon S6W008A is a PFO wetland totaling 0.178 acre in size. Polygon S6W008B is a PUB wetland totaling 7.651 acres in size. Polygon S6W008C is a PFO wetland totaling 0.309 acres is size. Polygon S6W008A showed 30% tree cover with dominant species of Acer sccharinum, Platanus occidentalis, and Salix nigra. Polygon S6W008A showed 5% sapling/shrub cover with dominant species of Acer negundo. Polygon S6W008A showed 6% herbaceous cover with dominant species of Xanthium strumarium. Polygon S6W008B is an open deep water pit that appears to be an old sand and gravel pit with no vegetation growing within the open water. Polygon S6W008C showed 50% tree cover with dominant species of Salix nigra and Acer saccharium. Polygon S6W008C showed 5% sapling/shrub cover with dominant species of Salix nigra. Polygon S6W008C showed 10% herbaceous cover with dominant species of Justicia americana. Hydrology of this wetland complex is likely due to backwater flooding of Indian Creek. Animal habitat, botanical diversity and hydrologic function are all ranked as fair, fair and good respectively for the PFO S6W008A; fair, poor, and poor respectively for S6W008B; and fair, poor, and good respectively for S6W008C based on InWRAP summaries. This wetland falls under the jurisdiction of both the USACE and IDEM due to its hydrologic connectivity to Indian Creek. The Section 6 Design Contract 1 Permit Limits would only impact the open water portion (S6W008B) of this wetland complex. The Section 6 Design Contract 1 would permanently impact 0.107 acre of the PUB portion (S6W008B) of this wetland complex and no temporary impacts would occur to this wetland complex.

Wetland Impact S6W009

This wetland is classified as a PEM wetland, and has a total size of 0.030 acre. This wetland showed 35% herbaceous cover. Dominant herbaceous species for this wetland include *Phalaris arundinacea* and *Juncus torreyi*. Hydrology is likely due to backwater flooding of Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity and hydrologic function are rated as poor, poor, and good respectively based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Indian

Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.030 acre of this wetland and no temporary impacts will occur to this wetland.

Wetland Impact S6W021

This wetland is classified as a PSS wetland, and has a total size of 0.210 acre. This wetland showed 65% herbaceous cover and 55% sapling/shrub cover. Dominant herbaceous species for this wetland include *Carex spp.* and *Scirpus cyperinus*. Dominant sapling/shrub species for this wetland includes *Salix interior*. Hydrology is likely due to runoff from local roads and parking lots. Animal habitat, botanical diversity and hydrologic function are rated as poor, fair, and fair respectively based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Sartor Ditch. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.042 acre of this wetland and temporarily impact 0.063 acre of this wetland.

Wetland Impact S6W037

This wetland is classified as a PSS wetland, and has a total size of 0.060 acre. This wetland showed 100% herbaceous cover and 30% sapling/shrub cover. Dominant herbaceous species for this wetland includes *Equisetum hyemale*. Dominant sapling/shrub species for this wetland includes *Salix interior*. Hydrology is likely due to runoff from local roads and SR 37. Animal habitat, botanical diversity and hydrologic function are rated as poor, poor, and fair respectively based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Clear Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact 0.060 acre of this wetland and not temporary impacts will occur to this wetland.

Wetland Impact S6W137

This wetland is classified as a PSS wetland, and has a total size of 0.290 acre. This wetland showed 22% herbaceous cover and 5% sapling/shrub cover. Dominant herbaceous species for this wetland includes *Symphyotrichum lanceolatum*, *Carex spp.*, and *unknown spp*. Dominant sapling/shrub species for this wetland includes *Salix interior*. Hydrology is likely due to runoff from local roads and SR 37. Animal habitat, botanical diversity and hydrologic function all rated as poor based on InWRAP summaries completed for this wetland. This wetland falls under the jurisdiction of the USACE and IDEM due to hydrologic connectivity to Clear Creek. The Section 6 Design Contract 1 Permit Limits will permanently impact the entire 0.290 acre of this wetland.

VII. Regulatory Involvement

A Waters of the U.S. Jurisdictional Determination Report was submitted to the USACE in September 2018

The Corps of Engineers exercises regulatory authority over activities involving the discharge of fill or dredged material into "Waters of the United States" and is responsible for enforcing compliance with the Environmental Protection Agency 404(b)(1) guidelines as a prerequisite to issuance of a Section 404 permit. Any and all parties proposing construction activities involving deposition of fill or dredged material, disruption or destruction through land clearing, and/or alteration of hydrology are required by law to submit for and obtain a permit through the Corps of Engineers before such activities can proceed. In general, Section 404 permits issued by the Louisville District Corps of Engineers office fall into three categories for Indiana: Individual permits, nationwide permits, and the regional general permit.

Regulatory authority for Section 401 of the Clean Water Act is the responsibility of the Indiana Department of Environmental Management (IDEM). IDEM is charged with maintaining the chemical, physical and biological integrity of Indiana waters through its Water Quality Certification (WQC) program. Section 401, in concert with the Corps Section 404 program, insures that project activities impacting "Waters of the United States" and/or "Waters of the State", including wetlands, are conducted in compliance with the states water quality policies.

Section 404 individual permits (IP) are required for projects where the scope of work would result in significant and/or unique environmental impacts to "Waters of the United States" not covered in any of the pre-authorized nationwide permits. Briefly, the individual permit process involves: (1) submitting the appropriate application, (2) issuance of a public notice, (3) a 30 day comment period, (4) a review by federal, state and local agencies, as well as, special interest groups and the public, (5) a review of comments received, (6) possible request for additional information (7) a possible public hearing, and (8) the decision to issue or deny the permit. This process can take up to six or more months.

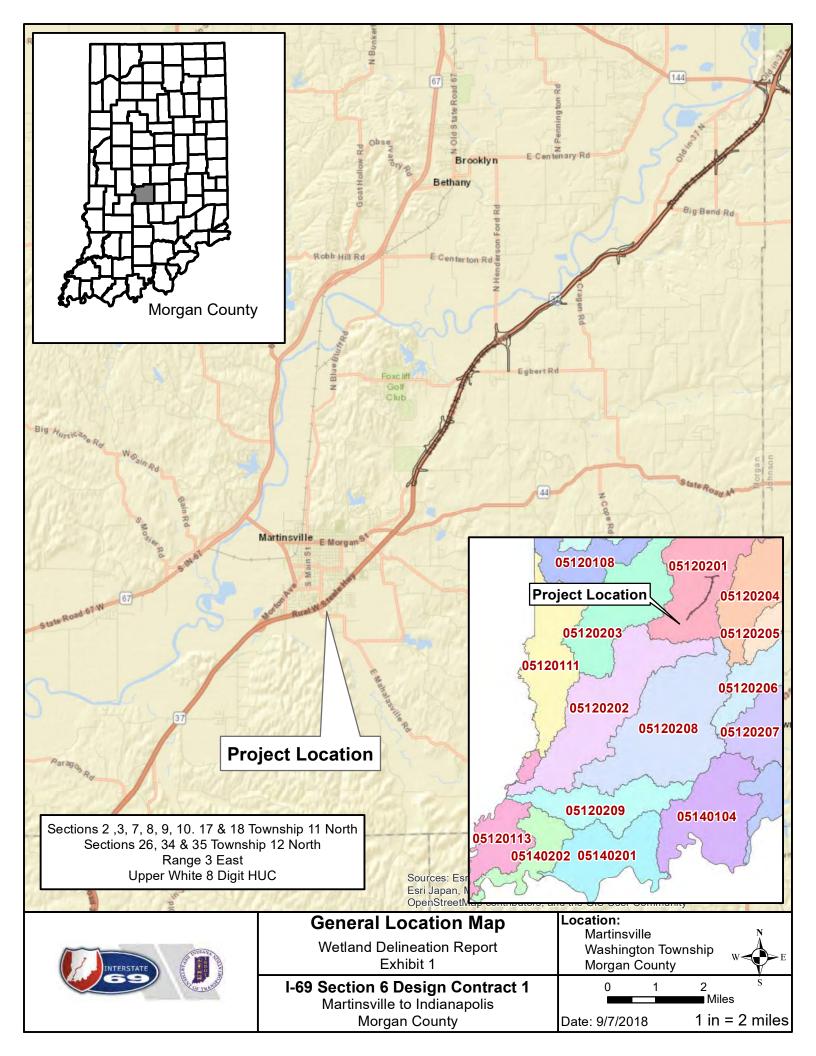
Section 404 nationwide permits have been established to streamline the permitting process by preauthorizing a variety of common activity, which by their very nature result in only minor impacts to "Waters of the United States". Nationwide permits are advantageous because unlike the individual permit they forgo the need to issue a public notice, do not require a 30 day comment period, and are not subject to a public hearing. Projects meeting the qualifications for a specific nationwide permit must however still comply with the Section 404 general and specific conditions required, including notification of the District Engineer when applicable. Issuance of several of the nationwide permits also requires Section 401 Water Quality Certification (WQC) through the IDEM.

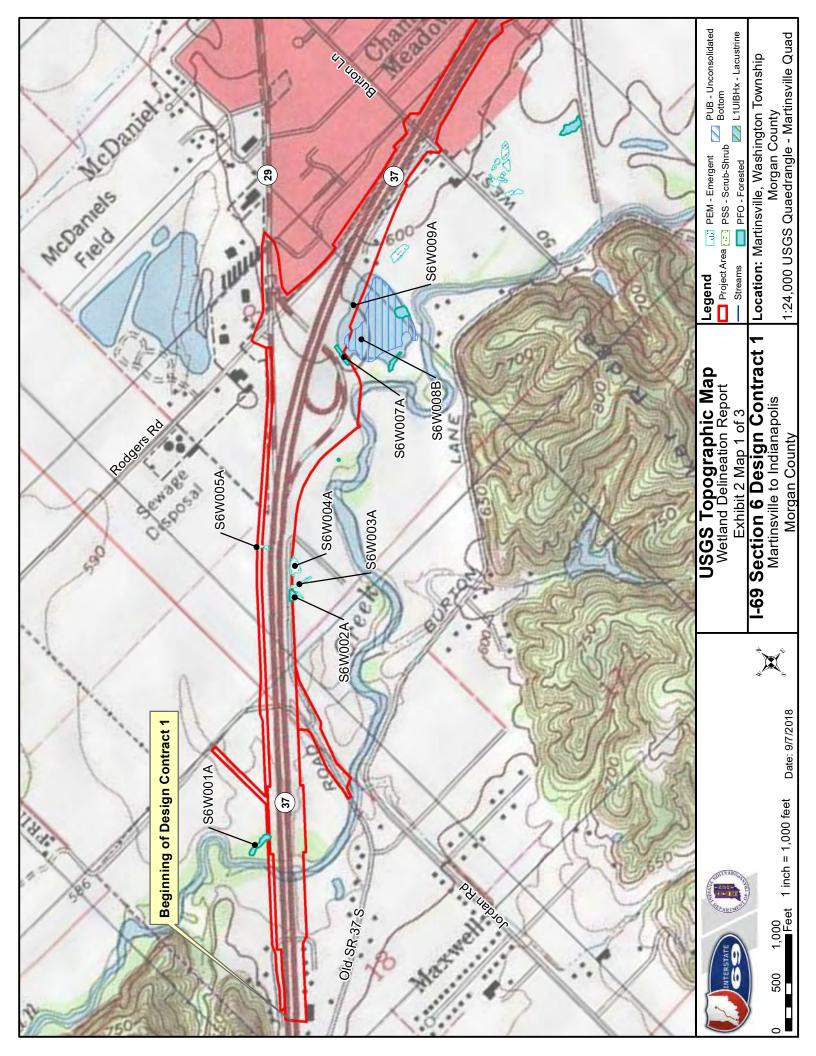
The Section 404 regional general permit (RGP) for Indiana was re-issued on December 12, 2014. It authorizes activities related to construction of new facilities or structures, which have minimal individual and cumulative impacts. This permit is applicable to activities involving (1) loss of waters of the US in special aquatic sites, including wetlands, is limited to 1.0 acre or less, (2) loss of waters of the US is limited to 1,500 linear feet of stream channel, not to exceed 1.0 acre, (3) dredging in navigable waters is limited to 10,000 cubic yards, and (4) structures and fill for docking and mooring are limited to similar permitted structures and fills in the vicinity. Under this regional general permit, discharges impacting less than 0.10 acre do not require USACE notification, but still necessitate that an application be submitted to the IDEM for WQC and the IDNR Division of Water for a Construction in a Floodway Permit, if applicable. Typical response time for the IDEM public notice period (21 days) and review process is 120 days from date of application. Upon receiving the IDEM's Section 401 approval, the Corps begins its formal review of the project. Response from the Corps is typically within 45 days.

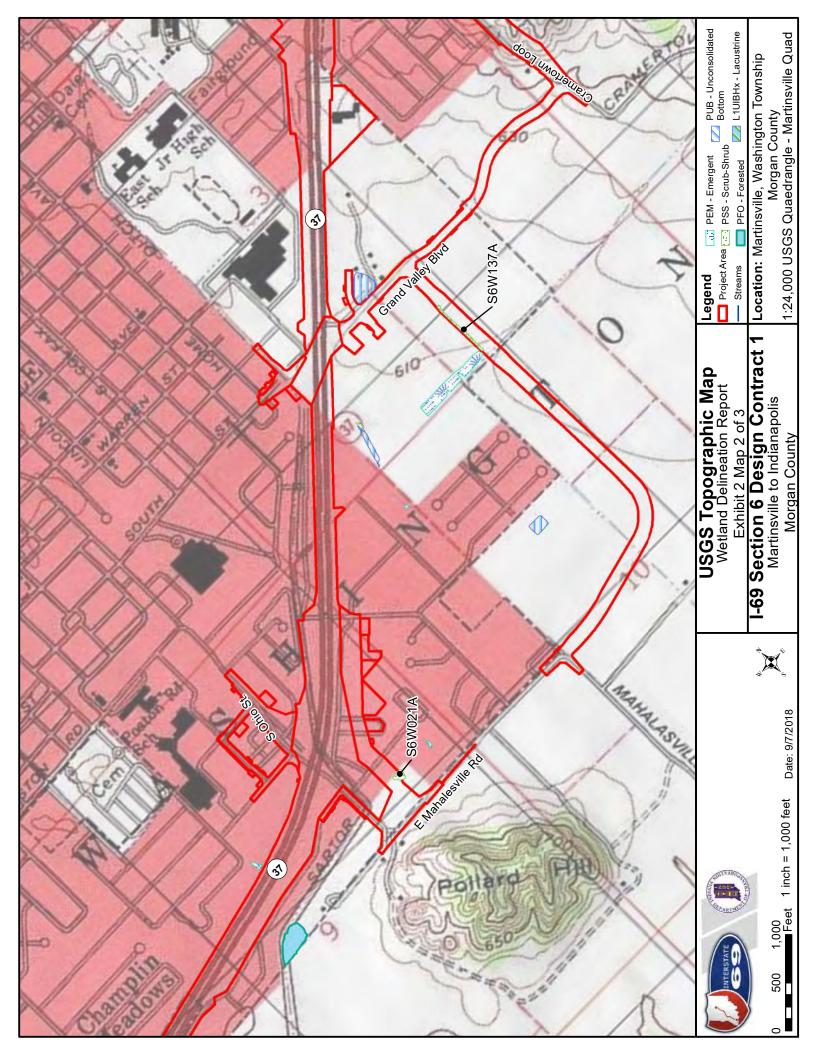
VIII. Summary

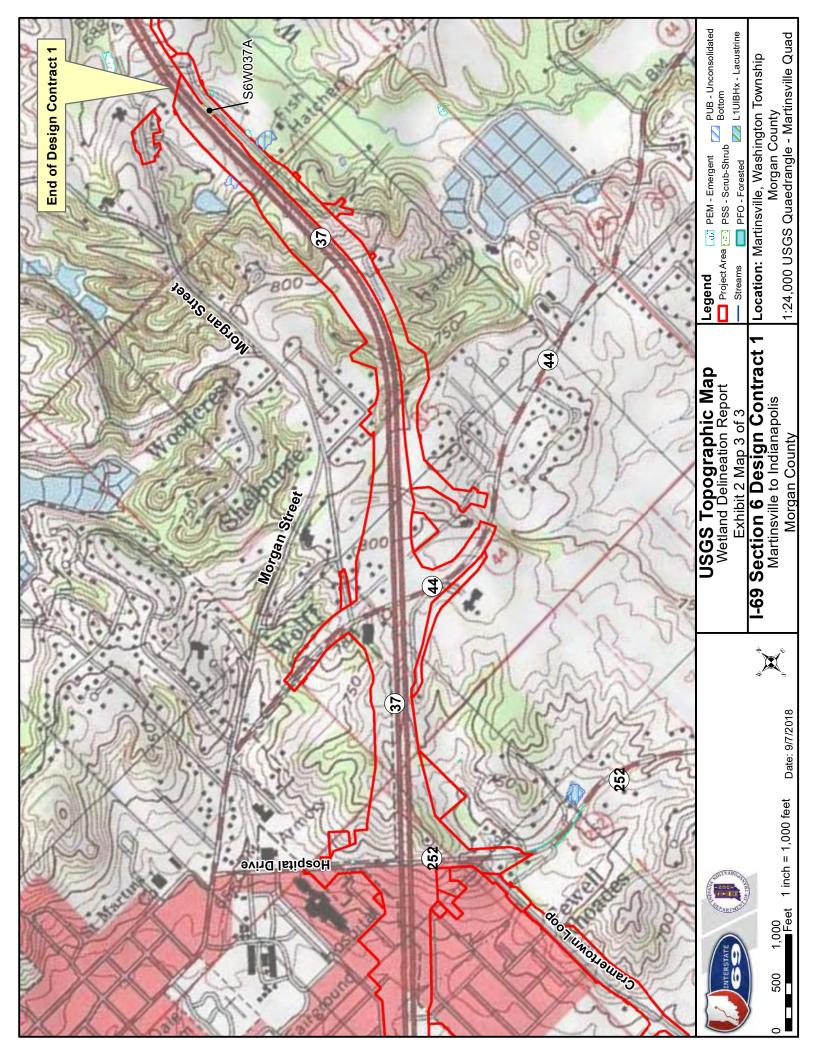
The wetland field reviews in 2015, 2017, and 2018 for the proposed I-69 Section 6 Design Contract 1 project in Morgan County, Indiana resulted in the identification of 10 jurisdictional wetlands and 1 open water wetland that will be impacted within the Permit Limits. Approximately 0.130 acre of forested wetlands, 0.392 acre of scrub shrub wetlands, 0.095 acre of emergent wetlands, and 0.109 acre of open water wetlands will be permanently impacted by the I-69 Section 6 Design Contract 1 Permit Limits. Approximately 0.154 acre of forested wetlands, 0.630 acre of scrub shrub wetlands, and 0.100 acre of emergent wetlands will be temporarily impacted by the I-69 Section 6 Design Contract 1 Permit Limits. Normal circumstances were considered to exist at the wetland impact sites and no atypical situations or potential problems were identified on-site. Coordination with the

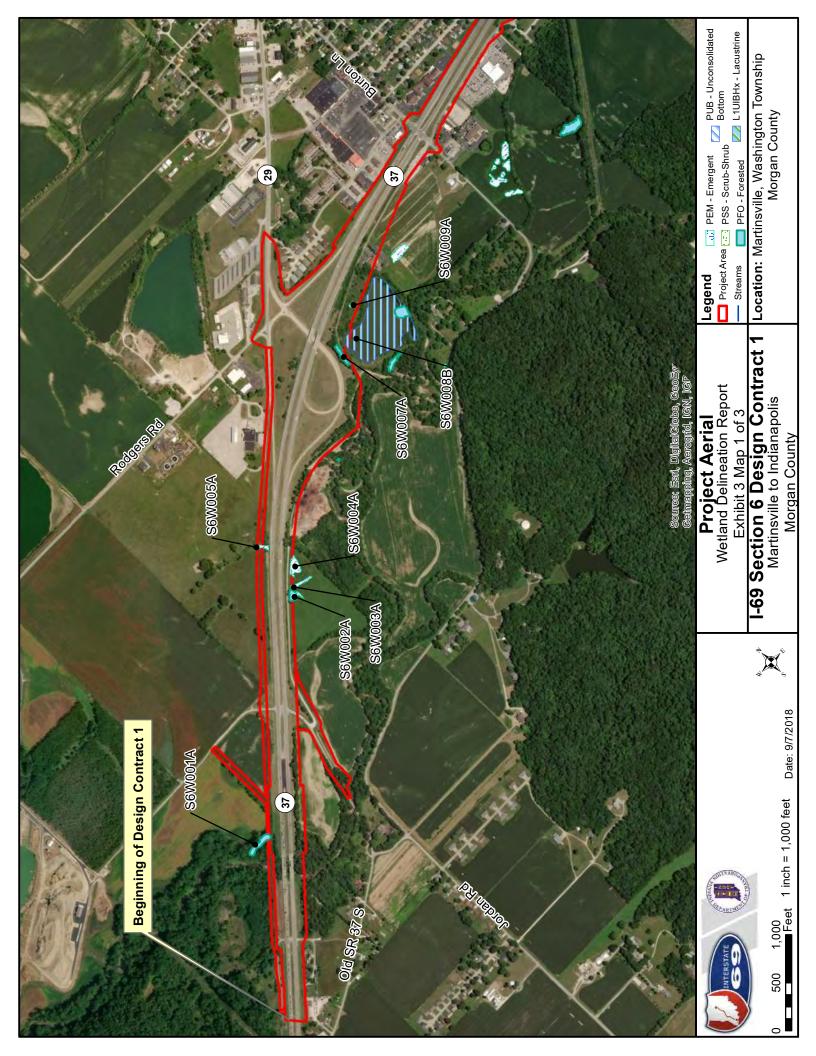
USACE and the IDEM on this project is ongoing. Mitigation for the permanent impacts to the 0.282 acre of forested will be completed at a 3:1 ratio, mitigation for the 0.433 acre of scrub shrub wetlands and 0.186 acre of emergent wetlands will be completed at a 2:1 mitigation ratio, and mitigation for the 0.001 acre of open water pond will be completed at a 1:1 ratio.

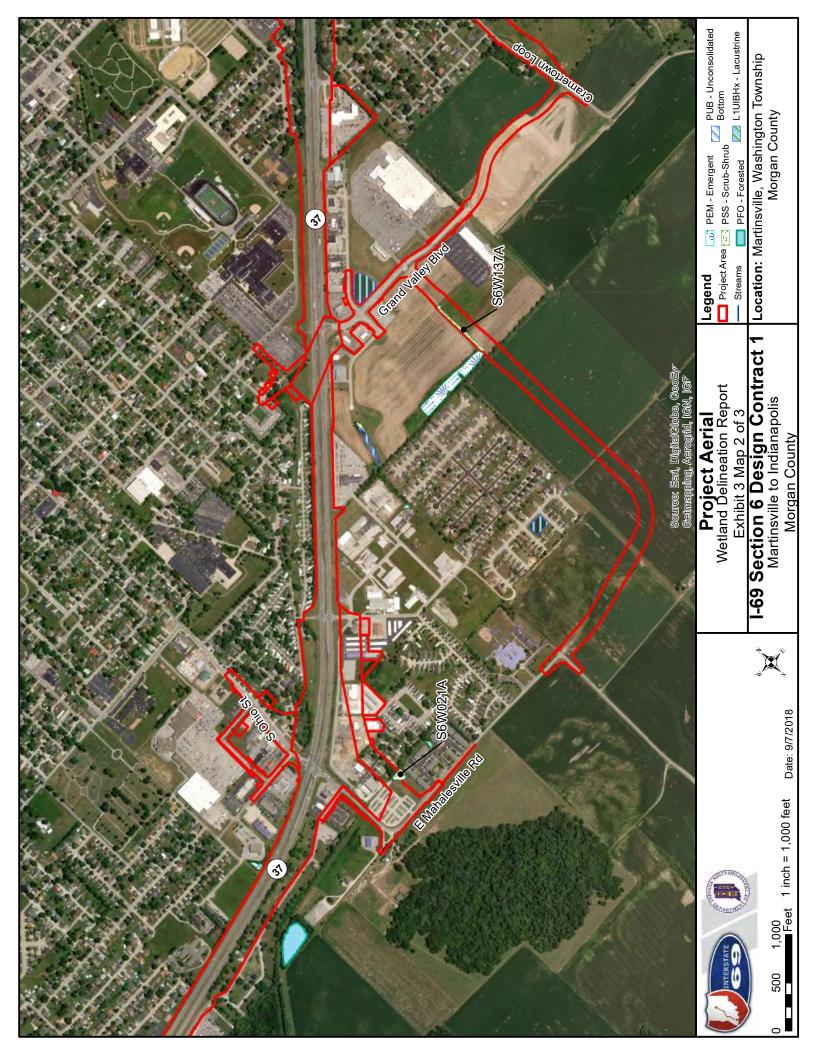


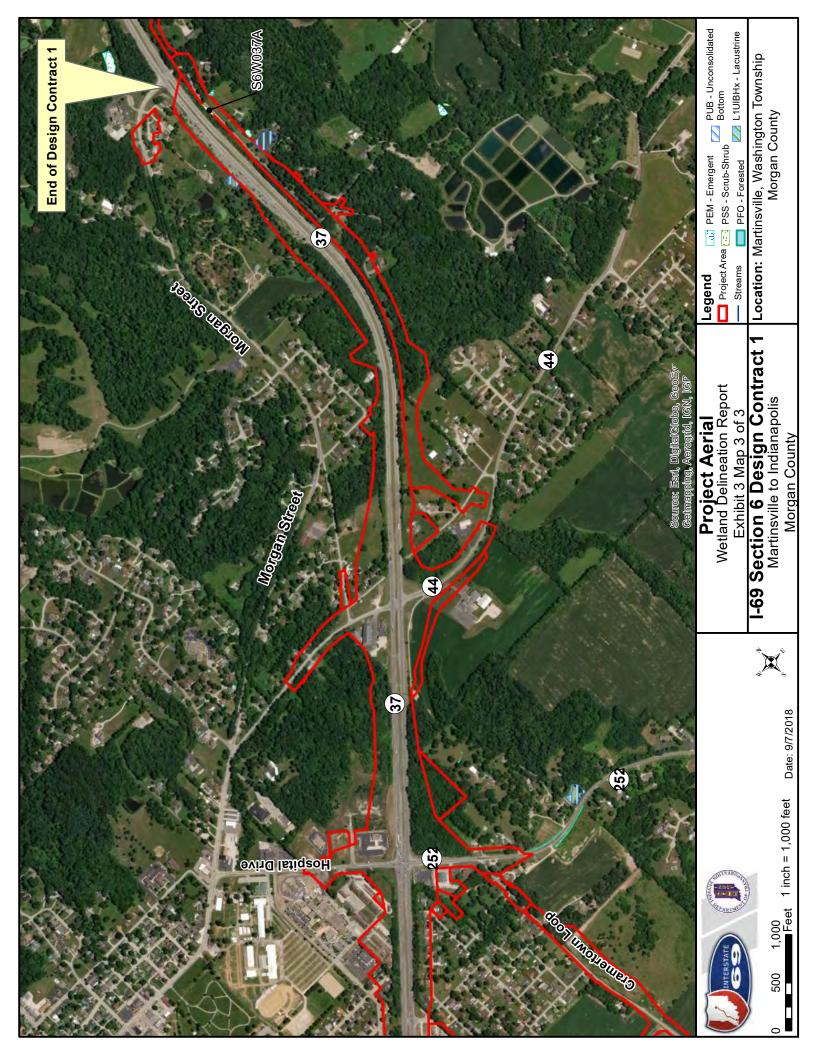


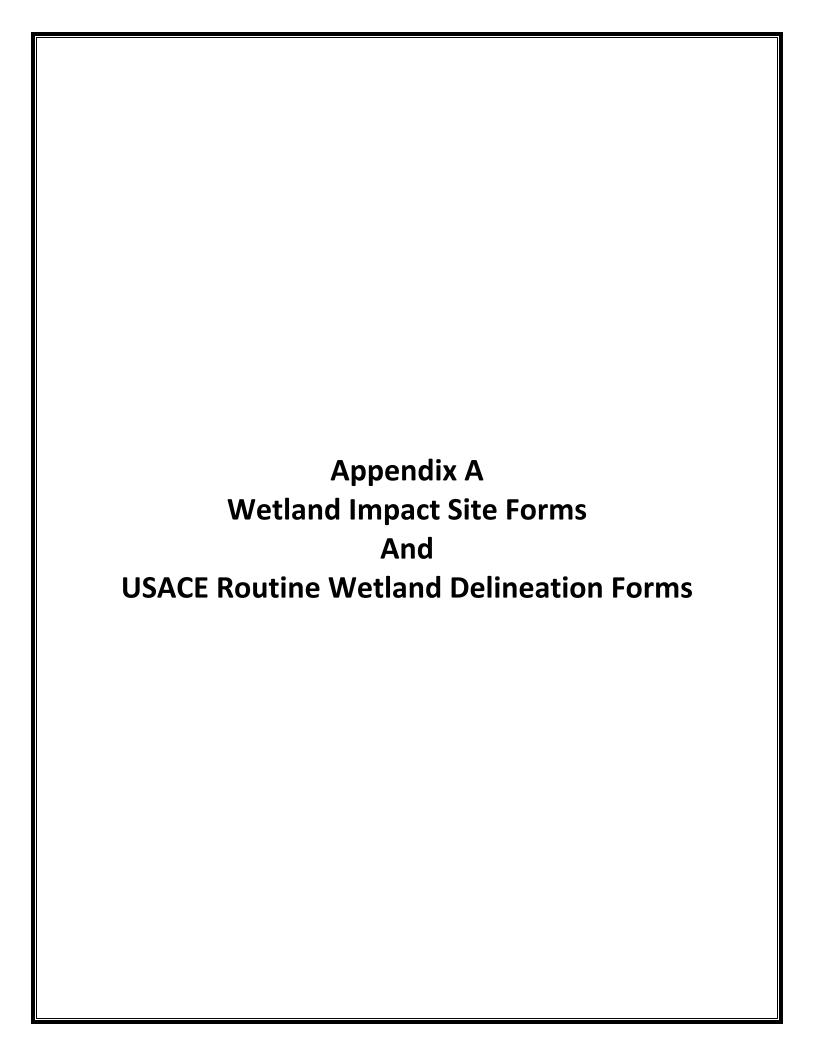




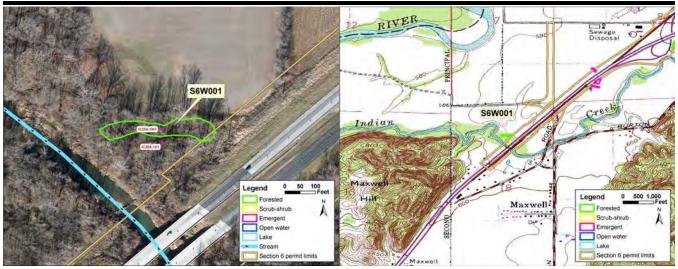








Wetland S6W001



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 Morgan County: Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R1E **Ecoregion:** Range: Natural Region: Highland Rim 18 Section: Size of wetland complex (acres): 0.3087 Quarter: Ν

USACE JurisdictionYesLatitude:39.394297IDEM Jurisdiction:YesLongitude:-86.459918

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W001A	Floodplain Forest	PFO	0.31	fair	fair	fair	RPA	0.03	11.0%

This site is classified as a PFO wetland, 0.31 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.0 acre and temporarily impact 0.034 acre of this wetland. This wetland showed 95% herbaceous cover and 50% woody plant cover. Dominant herbaceous species for this wetland include Symphyotrichum lanceolatum and Sanicula canadensis. Dominant woody species included Acer negundo, Acer saccharinum, and Juglans nigra. Hydrology is likely due to frequent flooding from Indian Creek. Animal habitat, botanical diversity, and hydrology function are all rated as fair based on InWRAP summaries for the site.



Polygon S6W001A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain Remarks.) Are Vegetation Soil or Hydrology naturally problematic? If needed, explain answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No X Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X Within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Within a Wetland? Yes No X Wetland Hydrology Present? Yes No X No:	Project/Site: I-69 Section 6 Wetland S6W001A		City/County	y: <u>Morgan</u>	Sampling	Date: 10/21/2015
Local relief (concave, convex, none): concave concave concave convex, none): concave concave convex, none): concave concave convex, none): convex, no	Applicant/Owner: INDOT/Lochumueller				State: Indiana Sampling	Point IC25A-1D1
Sign	Investigator(s): Rusty Yeager, Kate Lucier		Section, To	ownship, Ra	nge: Sec 18-T11N-R1E	·
Sign	Landform (hillslope, terrace, etc.): oxbow hillslope top			Local reli	ef (concave, convex, none): concav	/e
Note Name Content Name		L	_ona: -86.4	_	· ·	
tre climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain Remarks.) tree Vegetation						
Soil	· ————————————————————————————————————	imo of voor	-2 Voc	Y No		2171
SumMark OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.						o V No:
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X within a Wotland? Yes No X x within						S _ X _ NO
Hydricophytic Vegetation Present?	Are vegetation, Soil or Hydrology natul	rally proble	ematic?	if nee	ded, explain answers in Remarks.)	
Substitution Subs	SUMMARY OF FINDINGS - Attach site map showing	ıg sampli	ng point	locations,	transects, important features,	etc.
Wetland Hydrology Present? Yes	Hydrophytic Vegetation Present? Yes X No					
Remarks: Although predominant hydrophytic vegetation is present, this data point lacks positive hydrology and hydric soil indicators. ### Absolute Dominant Indicator % Cover Species? Status 30 Yes FAC 2. Acer saccharinum 10 Yes FACU 3 (A) Total Number of Dominant Species Across All Stratus 6. FAC 3 (A) Total Number of Dominant Species Across All Stratus 6. FAC 3 (A) Total Number of Dominant Species Across All Stratus 6. FAC 3 (A) Total Number of Dominant Species Across All Stratus 6. FAC 4. Septimental Species Across All Stratus 6. FAC 4. Septimental Face Across All Stratus 6. FAC 5. Septimental Face Across All Stratus 6. FAC 6. Septimental Face Across All Stratus 6. FAC 8. Septimental Face Across All Stratus 6. FAC 9. Septimental Face Across All Stratus 6. FAC 9. FAC	Hydric Soils Present? Yes No	Х				
Absolute Dominant Indicator Species Status Species Spec	Wetland Hydrology Present? Yes No	X	wit	hin a Wetla	nd? Yes No _	<u> </u>
Absolute Cover C	Remarks: Although predominant hydrophytic vegetation is	present, th	nis data poi	nt lacks pos	itive hydrology and hydric soil indica	tors.
Absolute Cover						
Absolute Cover						
Tree Stratum (Plot Size: 30' radius 1	VEGETATION - Use scientific names of plants					
1.	Tree Stratum (Plot Size: 30' radius				Dominance Test worksheet:	
2. Acer saccharinum 3. Juglans nigra 10 Yes FACW 4.						2 (4)
3. Juglans nigra 10 Yes FACU Species Across All Strata: 5 (B) 4 FACU Species Across All Strata: 5 (B) Percent of Dominant Species That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FACW, or FAC: 60 (A/B) Multiply by: Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: Multiply by: Multiply by: Multiply by: That are OBL, FACW, or FAC: 60 (A/B) Multiply by: Multiply by: Multiply by: Multiply by: Multiply by: Multiply by:		10	Yes			(A)
A	3. Juglans nigra	10	Yes	FACU		5 (B)
Sapling/Shrub Stratum (Plot Size: 15' radius)	4.				· —	(-/
Prevalence Index worksheet: Total % Cover of:	5.					60 (A/B)
Total % Cover of:		50	= Total Cov	ver		
2.	Sapling/Shrub Stratum (Plot Size: 15' radius)				Prevalence Index worksheet:	
2. 3. 4. 5.	1					
FAC species 80 x 3 = 240	2				· —	
Facus Facu	3					
Herb Stratum (Plot Size: 5' radius)					· · · · · · · · · · · · · · · · · · ·	
Herb Stratum (Plot Size: 5' radius) 1. Symphyotrichum lanceolatum 30 Yes FAC 2. Sanicula canadensis 25 Yes FACU 3. Ambrosia trifida 10 No FAC 4. Rudbeckia laciniata 10 No FACW 5. Laportea canadensis 5 No FACW 6. Pilea pumila 5 No FACW 7. Smilax hispida 5 No FAC 8. Viola sororia 5 No FAC 9. Smilax hispida 6 Total Cover 9. Smilax hispida 6 To	5		- Total Cox		UPL species 0 x 5	= 0
1. Symphyotrichum lanceolatum 30 Yes FAC 2. Sanicula canadensis 25 Yes FACU 3. Ambrosia trifida 10 No FAC 4. Rudbeckia laciniata 10 No FACW 5. Laportea canadensis 5 No FACW 6. Pilea pumila 5 No FACW 7. Smilax hispida 5 No FAC 8. Viola sororia 5 No FAC 9. Union Stratum (Plot Size: 30' radius) 95 = Total Cover 10 Total C	Herb Stratum (Plot Size: 5' radius		- Total Cov	vei	Column Totals: 145 (A)	440 (B)
2. Sanicula canadensis 2. Sanicula canadensis 3. Ambrosia trifida 4. Rudbeckia laciniata 5. Laportea canadensis 6. Pilea pumila 7. Smilax hispida 8. Viola sororia 9. 10.	·	30	Yes	FAC	Prevalence Index = B/A =	3.03
3. Ambrosia tritida 4. Rudbeckia laciniata 5. Laportea canadensis 6. Pilea pumila 7. Smilax hispida 8. Viola sororia 9.						
5. Laportea canadensis 5. No FACW 6. Pilea pumila 7. Smilax hispida 5. No FACW 8. Viola sororia 5. No FAC 9.	3. Ambrosia trifida	10	No	FAC	, , , ,	
6. Pilea pumila 7. Smilax hispida 8. Viola sororia 9.	4. Rudbeckia laciniata	10	No	FACW		egetation:
6. Pilea pumila 7. Smilax hispida 8. Viola sororia 9.	5. Laportea canadensis	5	No	FACW		
Smilax nispida S No FAC	6. Pilea pumila		No	FACW	_	Provide supporting
9			No		data in Remarks or on a separa	ite sheet)
10	<u> </u>		No	FAC	Problematic Hydrophytic Vegeta	ation ¹ (Explain)
Stratum						
Vine Stratum (Plot Size: 30' radius) Hydrophytic Vegetation Present? Ves _ X	10				be present, unless disturbed or pro	blematic
1	Vino Stratum (Plot Size: 30' radius	95	= Total Cov	ver		
2						
0 = Total Cover					Vegetation Present? Yes X	No
	<u> </u>	0	= Total Cov	ver	11636Ht	
Remarks. (include photo numbers here or on a separate sheet.)	Demonstrat (Include the state of the state o			-		
	Remarks. (include photo numbers here or on a separate sh	ieet.)				

SOIL Sampling Point IC25A-1D1

Profile Desc	ription: (Describe to	the depth r	needed to d	ocumnet	the indi	cator or co	onfirm the	e abse	ence of indic	cators.)		
Depth	Matrix			Redo	x Featur	es		_				
(Inches)	Color (moist)	%	Color (m	oist)	%	Type ¹	Loc ²		Texture		Remarks	
0-5	10YR3/2	100						silty	/ clay loam			
5-20	10YR4/3	100						silty	/ clay loam			
¹ Type: C=C	Concentration, D= D	epletion, RM	=Reduced	Matrix, C	S=Cove	red or Co	ated Sar	nd Gra	ins. ² Lo	cation: PL=	Pore Lining, M	=Matrix
Hydric Soi	I Indiactors:								Indiac	tors for Pro	blematic Hyd	ric Soils ³
Histosol	(A1)			Sandv	Gleved I	Matrix (S4)		Coa	ast Prairie Re	edox (A16)	
_	pipedon (A2)		_	_	Redox (,			k Surface (S		
Black H	istic (A3)			Strippe	d Matrix	(S6)					Masses (F12	
	en Sulfide (A4)		_	_	-	Mineral (F	•			-	ark Surface (T	•
_	d Layers (A5)		_	_	-	Matrix (F2	2)		Oth	er Soil (Expl	ain in Remark	s)
	uck (A10)	oo (A44)	_	-	ed Matrix							
_	d Below Dark Surfa ark Surface (A12)	ce (ATT)	_	_		rface (F6) Surface (F			3 India	natore of hud	rophytic veget	ation and
_	Mucky Mineral (S1)		_			sions (F8)	-7)				must be pres	
	uck Peat or Peat (S	3)	_	_ NCGOX	Бергоза	510113 (1 0)					l or problemat	
	Layer (If observed											
Type:	• `	,.										
Depth (in	nches):								Hydric Soi	il present?	Yes	No X
Remarks:												
Redoximorp	hic indicators were	not noted.										
HYDROLO	GY											
W. d	dealer leders	_										
1	ydrology Indicator		اممط ماممان	all that a	\				•			
	licators (minimum o	i one is requ			· · · · ·							of two required)
	Water (A1)			/ater Stai						rface Soil Cr		
	ater Table (A2)			quatic Fa						ainage Patte		\
Saturati	on (A3) larks (B1)		_	rue Aqua		S (D14) Odor (C1)				y-Season wa ayfish Burrov	ater Table (C2)
	nt Deposits (B2)		_			eres on Li	ivina Ro	ots (C:		-	vs (Co) pile on Aerial I	magery (C9)
_	posits (B3)					ced Iron (0	_	0.0 (0.	_		ssed Plants ([, ,
	at or Crust (B4)					tion in Till	-	(C6)		omorphic Po	•	,
_	posits (B5)		<u> </u>	hin Muck	Surface	e (C7)		` ,	_	.C-Neutral Te	, ,	
Inundati	on Visible on Aerial	Imagery (B	7) <u> </u>	auge or \	Nell Dat	a (D9)			<u> </u>			
Sparsel	y Vegetated Conca	ve Surface (l	38) <u> </u>	ther (Exp	lain in R	Remarks)						
Field Obse	rvations:											
Surface Wa	ater Present?	'es	No X	Depth (i	nches):							
Water Tabl	e Present?	es	No X	Depth (i	′ •							
Saturation	Present?	'es	No X	Depth (i			<u> </u>	Wetla	nd Hydrolo	gy Present?	Yes	No X
(includes ca	apillary fringe)				•			····		ay		
Describe Re	corded Data (strea	m gauge, mo	nitoring we	ll, aerial p	ohotos, ¡	previous ir	nspectio	ns), if	available:			
Remarks:												
	Indian Creek flood											portions of this
floodplain re	gion represented by	y this data po	oint. Data p	oint is 5+	feet ab	ove the bo	ottom of	the ad	ljacent oxbo	ow wetland fe	eature	

Project/Site: I-69 Section 6 Wetland S6W001A	City/County: Morgan Sampling Date: 10/21/2015					
Applicant/Owner: INDOT/Lochumueller	State: Indiana Sampling Point IC25A-1W1					
Investigator(s): Rusty Yeager, Kate Lucier	Section, Township, Range: Sec 18-T11N-R1E					
Landform (hillslope, terrace, etc.): floodplain oxbow	Local relief (concave, convex, none): concave					
Slope (%): 0-2 Lat: 39.394294	Long: -86.459924 Datum: NAD83					
Soil Map Unit Name Genesee silt loam	NWI classification: PF01A					
Are climatic/hydrologic conditions on the site typical for this time of ye						
Are Vegetation , Soil or Hydrology significantly d						
Are Vegetation, Soil or Hydrology naturally prof	ematic? If needed, explain answers in Remarks.)					
SUMMARY OF FINDINGS - Attach site map showing samp	ing point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No						
Hydric Soils Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	within a Wetland? Yes X No No					
indicators of hydrology and hydric soils. The wetland fea	re which generally lacks shrub and herbaceous vegetation, but exhibits primary ire represented by this data point has been designated as					
VEGETATION - Use scientific names of plants	Dominant Indicator Dominance Test worksheet:					
	Species? Status					
1. Acer saccharinum 50	Yes FACW Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)					
2. Acer negundo 25	Yes FAC Total Number of Dominant					
3. Platanus occidentalis 25	Yes FACW Species Across All Strata: 3 (B)					
4. Ulmus americana 10	No FACW Percent of Dominant Species					
5	That are OBL, FACW, or FAC:100 (A/B)					
110	= Total Cover Prevalence Index worksheet:					
Sapling/Shrub Stratum (Plot Size: 15' radius)						
1	OBL proving					
2	FACIN appaign 95 2 - 170					
3. 4.						
5	FACU species					
Herb Stratum (Plot Size: 5' radius)	Column Totals:110 (A)245(B)					
1	Prevalence Index = B/A =2.23					
2	Hydrophytic Vegetation Indicators:					
3	1-Rapid Test for Hydrophytic Vegetation:					
4	X 2-Dominance Test is >50%					
5	X 3-Prevalence Index is <=31					
6						
7 8.	5 11 2 11 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1					
9.						
10.	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic					
0	= Total Cover					
Vine Stratum (Plot Size: 30' radius)	Hydrophytic					
1	——— Vegetation					
2	Present? Yes X No					
0	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.) Trees were located around the periphery of this oxbow feature. The herbaceous vegetation due to extended period of deep inundation.	entral portion of the wetland represented by the data point is devoid of					

SOIL Sampling Point IC25A-1W1

Depth	Matrix			lox Feature				<u>.</u> .
Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR4/2	90	5YR4/6	10	C	M	silty clay loam	<u> </u>
vne: C=C	Concentration D=	Depletion F	RM=Reduced Matrix,	CS=Cover	ed or Coa	ted Sand	I Grains 2 I	ocation: PL=Pore Lining, M=Matrix
	I Indiactors:	Dopiction, i	Troddod Matrix,	00 00101		ilou ourie		ctors for Problematic Hydric Soils ³
Histoso	I (A1)		Sand	y Gleyed M	latrix (S4)		Co	oast Prairie Redox (A16)
	pipedon (A2)			y Redox (S				ark Surface (S7)
	istic (A3)			ed Matrix				on-Manganese Masses (F12)
	en Sulfide (A4)			y Mucky M	•	•	_	ery Shallow Dark Surface (TF12)
	d Layers (A5)			y Gleyed N)	_ Ot	her Soil (Explain in Remarks)
	uck (A10) d Below Dark Sur	face (Δ11)		eted Matrix x Dark Sur				
	ark Surface (A12)	ace (ATT)		ted Dark Sur	. ,	7)	3 Ind	licators of hydrophytic vegetation and
	Mucky Mineral (S1)		x Depressi	-	• /		and hydrology must be present, unless
-	uck Peat or Peat (_ ::546	- - - - - - - - - - - -	(. 0)			disturbed or problematic.
	Layer (If observe							
Type:								
-								
Depth (ir marks: lepleted r	,	nfirmed bas	sed on the presence of	of reddish r	redoximor _l	phic feat	-	oil present? Yes X No the soil pedon.
marks: epleted i	natrix (F3) was co	nfirmed bas	sed on the presence of	of reddish r	redoximor	phic feat	-	
marks: epleted r	matrix (F3) was co		sed on the presence of	of reddish r	redoximor	phic feat	-	
DROLO	matrix (F3) was co	ors:	sed on the presence of		redoximor	phic feat	ures throughout	t the soil pedon.
DROLO etland H mary Inc.	matrix (F3) was co	ors:	quired; check all that			phic featu	ures throughout	t the soil pedon.
DROLO etland H mary Inc	matrix (F3) was co	ors:	quired; check all that	apply)	ves (B9)	phic featu	ures throughout	t the soil pedon. ondary Indicators (minimum of two requ
DROLO etland H mary Inc	GY ydrology Indicate dicators (minimum Water (A1) ater Table (A2)	ors:	quired; check all that Water St Aquatic F	apply) ained Leav	ves (B9)	phic feat	ures throughout	ondary Indicators (minimum of two requurface Soil Cracks (B6)
DROLO Surface High W: Saturati	GY ydrology Indicate dicators (minimum Water (A1) ater Table (A2)	ors:	quired; check all that Water St Aquatic F True Aqu	apply) ained Leav Fauna (B13	ves (B9) B) S (B14)	phic feat	ures throughout	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10)
DROLO Surface High Water M Sedime	GY ydrology Indicate dicators (minimum Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)	ors:	quired; check all that Water St Aquatic F True Aqu Hydroget Oxidized	apply) ained Leav Fauna (B13 atic Plants n Sulfide O Rhizosphe	ves (B9) B) s (B14) dor (C1) eres on Liv	ving Roo	Secondary Second	endary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C8)
DROLO etland H mary Inc Surface High W Saturati Water M Sedime Drift De	GY ydrology Indicate dicators (minimum Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)	ors:	quired; check all that Water St Aquatic F True Aqu Hydroger Oxidized Presence	apply) ained Leav Fauna (B13 latic Plants n Sulfide O Rhizosphe e of Reduce	ves (B9) B) s (B14) dor (C1) eres on Lived Iron (C	ving Roo	Secondary Second	endary Indicators (minimum of two requestrates Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C8) tunted or Stressed Plants (D1)
DROLO Surface High Water M Sedime Drift De Algal M	matrix (F3) was co	ors:	quired; check all that Water St Aquatic F True Aqu Hydroger Oxidized Presence	apply) ained Leav Fauna (B13 latic Plants n Sulfide O Rhizosphe e of Reduct	ves (B9) 3) 5 (B14) 5 dor (C1) eres on Liv ed Iron (C ion in Tille	ving Roo	Sect	ondary Indicators (minimum of two requirers Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO Petland H mary Inc Surface High Water M Sedime Drift De Algal M Iron De	matrix (F3) was co	ors: of one is re	quired; check all that Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir	apply) ained Leav Fauna (B13 uatic Plants n Sulfide O Rhizosphe e of Reduct on Reduct	ves (B9) B) C (B14) C (C1) C (C1) C (C1) C (C1) C (C7)	ving Roo	Sect	endary Indicators (minimum of two requestrates Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C3) tunted or Stressed Plants (D1)
DROLO Petland H mary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat	matrix (F3) was co	ors: of one is re	quired; check all that Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc	apply) ained Leaver Fauna (B13 attic Plants an Sulfide O Rhizosphe e of Reduct con Reduct ck Surface r Well Data	ves (B9) B) B (B14) Cor (C1) Cores on Lived Iron (C) Corion in Tille Cor) Coryona (D9)	ving Roo	Sect	ondary Indicators (minimum of two requirers Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO etland H mary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	matrix (F3) was co	ors: of one is re	quired; check all that Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc	apply) ained Leav Fauna (B13 uatic Plants n Sulfide O Rhizosphe e of Reduct on Reduct	ves (B9) B) B (B14) Cor (C1) Cores on Lived Iron (C) Corion in Tille Cor) Coryona (D9)	ving Roo	Sect	ondary Indicators (minimum of two requirers Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO Detland H mary Inc Surface High W: Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	matrix (F3) was co	ors: of one is re	quired; check all that Water St Aquatic F True Aqu Hydroge; Oxidized Presence; Recent li Thin Muc (B7) Gauge o e (B8) Other (E:	apply) ained Leaver Fauna (B13 attic Plants an Sulfide O Rhizosphe e of Reduct con Reduct ck Surface r Well Data	ves (B9) B) B (B14) Cor (C1) Cores on Lived Iron (C) Corion in Tille Cor) Coryona (D9)	ving Roo	Sect	ondary Indicators (minimum of two requirers Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	matrix (F3) was co	ors: of one is re al Imagery ave Surface	quired; check all that Water St Aquatic F True Aqu Hydrogei Oxidized Presencei Recent In Thin Muc (B7) Gauge o (B8) Other (E:	apply) ained Leav Fauna (B13 atic Plants n Sulfide O Rhizosphe e of Reduct con Reduct ck Surface r Well Data	ves (B9) B) B (B14) B (C1) B (C1) B (C1) B (C1) B (C7) B (C9) B (C9)	ving Roo	Sect	ondary Indicators (minimum of two requirers continued of two requirers cont
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse arface Wa ater Tabl sturation	GY ydrology Indicate dicators (minimum Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeri y Vegetated Concervations: ater Present?	ors: of one is re al Imagery ave Surface	quired; check all that Water St Aquatic F True Aqu Hydrogei Oxidized Presencei Recent Ii Thin Muc (B7) Gauge o e (B8) Other (E:	apply) ained Leaver (B13 attic Plants on Sulfide Of Reduction Redu	ves (B9) B) B (B14) B (C1) B (C1) B (C1) B (C1) B (C7) B (C9) B (C9)	ving Root 4) ed Soils (Sect	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C8) tunted or Stressed Plants (D1) eomorphic Postion (D2) AC-Neutral Test (D5)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse rface W ater Tabl turation cludes c	matrix (F3) was construction of the present? present? matrix (F3) was constructed by the property of the present of the pres	al Imagery ave Surface Yes Yes Yes	quired; check all that Water St Aquatic F True Aqu Hydrogei Oxidized Presencei Recent Ii Thin Muc (B7) Gauge o e (B8) Other (E:	apply) ained Leav Fauna (B13 latic Plants in Sulfide O Rhizosphe e of Reduct on Reduct ck Surface ir Well Data xplain in Re (inches): (inches): (inches):	ves (B9) B) G (B14) Dedor (C1) Deres on Lived Iron (C Dion in Tille (C7) Deres (C7) Deres (D9) Demarks)	ving Rood 4) ed Soils (Second Se	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C8) tunted or Stressed Plants (D1) eomorphic Postion (D2) AC-Neutral Test (D5)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse rface W ater Tabl turation cludes c	matrix (F3) was construction of the present? present? matrix (F3) was constructed by the property of the present of the pres	al Imagery ave Surface Yes Yes Yes	quired; check all that Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent In Thin Muc (B7) Gauge o (B8) Other (E: No X Depth No X Depth	apply) ained Leav Fauna (B13 latic Plants in Sulfide O Rhizosphe e of Reduct on Reduct ck Surface ir Well Data xplain in Re (inches): (inches): (inches):	ves (B9) B) G (B14) Dedor (C1) Deres on Lived Iron (C Dion in Tille (C7) Deres (C7) Deres (D9) Demarks)	ving Rood 4) ed Soils (Second Se	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C8) tunted or Stressed Plants (D1) eomorphic Postion (D2) AC-Neutral Test (D5)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse rface Water Tabl ituration cludes c scribe Re	matrix (F3) was co	ors: of one is re al Imagery ave Surface Yes Yes Yes Am gauge,	quired; check all that Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent In Thin Muc (B7) Gauge o (B8) Other (E: No X Depth No X Depth	apply) ained Leaver and (B13 attic Plants on Sulfide Of Reduct on Reduct of	ves (B9) B) G (B14) Poor (C1) Peres on Lived Iron (C Cion in Tille (C7) A (D9) Pemarks)	ving Rood 4) ed Soils (Second Se	endary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) leomorphic Postion (D2) AC-Neutral Test (D5)

I-69 Wetland Quality Assessment Profile

Date Report Generated: Data reference # Wetland Site	9/6/2018 S6W001 S6W001
Date of site visit:	10/21/15
Total wetland area:	0.3087 acres

Polygon ID	S6W001A	
Polygon Size (acres)	0.31	
Wetland Community Type	FF	
Red Flag (Special) Indicators		
drologic Conditions	z	
ommunity Type	z	
Rare-Threatened-Endangered Species	Z	
Animal Habitat Measures		
ize and connectivity	က	
ng land use	8	
vater	_	
Dead woody material	2	
Zonation and interspersion	-	
Stratification	_	
Free canopy	က	
Mature trees	3	
Animal Habitat Measure Score (min = 8, max = 24)	17	
Animal Habitat Measure Rating	fair	
Botanical Measures (all except exotics dependent upon community type)	(bd)	
dominant plant taxa observed	2	
Conservatism rating	2	
ophytic taxa observed	က	
f indicator taxa	_	
cies rating	2	
Botanical Measure Score (min = 5 , max = 15)	10	
Measure Rating	fair	
Hydrology Measures		
Water quality protection (= no. of yes answers)	2	
Flood and storm water storage (= no. of yes answers)	4	
ology Score (min = 11, max = 33)	23	
Site/Hydrology Rating	fair	

In-WRAP Summary Sheet

Date Report Generated: Thursday, September 6, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W001			
Date of Site Visit: Wednesday, October 21, 2015			
Tier 1 Summary:			
a. Total Wetland Area (acres): 0.3087			
b. Wetland size and connectivity - contribution to anin	nal habitat:		
Valua	ble More Fav	orable Favora	able Neutral
c. Surrounding land use - numerical rank (max. = 1):	0.76		
d. Value surrounding area adds to animal habitat:	Valu	uable Favora	able Low
Tier 2 SUMMARY:	1	Polygon ID	S6W001A
a. Indiana Wetland community type: Floodplain Fore	st		
b. Standing water - contribution to animal habitat:	Valu	uable Favora	able Neutral
c. Disturbances to site:			
d. Exotic species rating:	G	ood Mediu	um Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species: None			
h. Polygon Quality Descriptor:	G	ood Mediu	um Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	: Valı	uable Favora	able Neutral
b. Water quality protection - numerical rank (6 max.):		ood Mediu	um Poor
c. Flood and storm water storage - numerical rank (5 n	nax 4 Go	ood Mediu	um Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal ha	abitat: Val	uable Favora	able Neutral
b. Stratification as indicator of animal habitat:		uable	Neutral
c. Number of dominant plant taxa observed: 5	G	ood Mediu	um Poor
d. Average coefficient of conservatism: 3.8	Ge	ood Mediu	um Poor
e. Tree canopy as indicator of animal habitat:	Val	uable	Neutral
f. Mature trees as indicator of animal habitat:	Val	uable Favora	able Neutral
g. Total hydrophytic taxa observed: 27_	G	ood Mediu	um Poor
h. Number of indicator taxa: 0	G	ood Mediu	um Poor

70	Native Vegetation - woodland	0	Road / highway / railroad bed / parking lot
0	Native Vegetation - old field / scrub	0	Industrial
30	Agricultural - tilled	0	Residential - single family

0 Agricultural - pasture ____0 Commercial or multifamily residential

____0 ___ Recreation - green space, mowed

NWI Polygon # S6W001A	Data Reference# S6W001
see table on page one)	
ier 2: Individual Polygon: Preliminary As to be completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Wate	r Flow (check one):
DepressionalSlope✓ Floo Riverine (within the river/stream banks)	odplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	er than 2 meters n depth? No
standing water normally present in an adjacent po	olygon? No
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	·
Saturated (surface water seldom present	t)Artificailly Drained
.4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon loodplain Forest .6 Disturbances of Hydrology (check all that apply)	
Ditching Tiles	Culvert Other Human Distrubances to the
	Hydrology (explain):
Dams Road or Railroad Embankment	Hydrology (explain).
.7 Presence of Invasive Exotics (Score as: S = Scatte	ered E - Frequent or C - Common)
Garlic Mustard	Glossy Buckthorn
	·
Phragmities	S Reed Canary Grass S Other (list):
Purple Loosestrife	SOther (list):
.8 Presence of Special Hydrologic Conditions (i.e. s	eeps, wet slopes, floating mat):
one	
.9 Presence of Special Community Types:	
Bog Fen	Wet Sand / Muck Flats or Marl Seeps
.10 Presence of Known Federal or Indiana Rar, Thr	eatened or Endangered Species:
✓ None observed or known to be presen	
RTES Present (list):	
44.14	Land Carlotte Barrell Carlotte
.11 Wetland Polygon Quality Descriptor (see: Wetl	, ,
Good✓ _Medium	Poor

Data Reference S6W0

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

3a	ı. 1	Nota	ble Features that influence water quality and hydrology:
Es	stima	ated	herbaceouis plant cover (percentage) in the polygon100-7575-5050-25 _ᢦ <25
Es	stima	ated ^v	woody plant foliar coverage in the polygon
Ar	nou	nt of	dead woody material on the soil surfacenilscatteredfrequen
3a	ı.2 '	Wate	r Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.
	Y	N	3a. Does the wetland have a shape or flow that allows for the settling out of suspended
	Y) N	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Ŷ) N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 0 approximate slope (percen 0
3a	ı.3 I	Floo	d and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	Y	N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland?
	Ŷ) N	1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Ŷ) N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y) N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5.	Y) N	Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description 3b.1 Zonation and Interspersion: 1. How may vegetation zones are evident in this wetland polygon? ______1 1b. If only one vegetation zone is evident, which best describes the site? ______Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon. ______Polygon composed of a single vegetation type with more or less uniform texture across the polygon. 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone? Type One Interspersion Type Two Interspersion

3b.2 Dominant Plant Species: Vegetation Zone A

wetland site).

What % of the polygon does this vegetative z	one occupy?		
☐ 10 - 25% ☐ 25 - 50%	<u> </u>	<u> </u>	>90%
Is there notable layering/stratification in this v	regetation zone? No		
Dominant Herbaceous Species (i.e., covering abundance. (Mark with an * any species that			elative
a. Symphyotrichum lanceolatum	d		
b. Bidens frondosa	e		
c. Persicaria punctata	f		
Dominant Shrub Species listed in order of rel	ative abundance.		
a	C		
b	d		
Dominant Tree Species listed in order of rela			
a. Acer saccharinum	C		
b. <i>Platanus occidentalis</i>	d		
Tree and shrub canopy nil separate	, seldom touching 🔲 of	ten touching 🔲 more o	or less close
Mature trees (>12" dbh): yes no			

Other remarks (include personal comments about what adds to or detracts from the quality of this

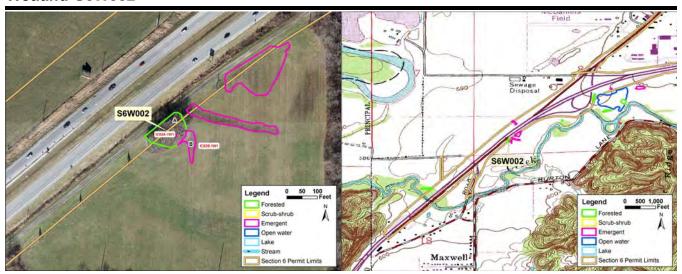
NWI Polygon # S6W001A	Data Reference S6W001
3b.2 Dominant Plant Species: Vegetation Zone B	
What % of the polygon does this vegetative zone occur	upy?
☐ 10 - 25% ☐ 25 - 50% ☐ 50 -	- 75%
Is there notable layering/stratification in this vegetation	n zone?
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms ex	
a	d
b	e
C	f
Dominant Shrub Species listed in order of relative abu	
a	c
b	d
Dominant Tree Species listed in order of relative abun	
a	c
b	d
Tree and shrub canopy nil separate, seldom	
Mature trees (>12" dbh): ☐ yes no	
Other remarks (include personal comments about what wetland site).	at adds to or detracts from the quality of this
3b.2 Dominant Plant Species: Vegetation Zone C	
What % of the polygon does this vegetative zone occur	upy?
☐ 10 - 25% ☐ 25 - 50% ☐ 50 -	- 75%
Is there notable layering/stratification in this vegetation	n zone?
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms ex	
a	d
b	e
C	f
Dominant Shrub Species listed in order of relative abu	
a	c
b	d
Dominant Tree Species listed in order of relative abun	ndance.
a	c
b	d
Tree and shrub canopy nil separate, seldom	
Mature trees (>12" dbh): yes no	
Other remarks (include personal comments about what wetland site).	at adds to or detracts from the quality of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents *:	= species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leafed	monocots
horsetail, scou	ring rush spp. (Equisetum) 2	*arrow arum (Pelt	andra virginica) 6
	shiled fern spp. (Dryopteris) 7	arrow-head spp. (
	n (Osmunda cinnamomea) 9	• • •	risaema dracontium) 6
`	munda regalils) 8		(Arisaema triphyllum) 4
	Onoclea sensibilis) 4		ontederia cordata) 5
*other: species	•		Symplocarpus foetidus) 8
	oss (Selaginella apoda) 4	*water arum (Call	•
Spnagnum mo	ss spp. (Sphagnum) 10	water plantain (Ai	isma plantago-aquatica) 2
Herbs: Ivs. floatii		Herbs: dicots - lvs.	opposite/whorled
*bladderwort s	pp. (Utricularia) 10	*bedstraw spp. (G	Gallium) 6
	ophyllum demersum) 1	beggar's tick spp.	
	. (Lemnaceae) 3	blue vervain (Berl	
	p. (Potamogeton) 8		ium perfoliatum) 4
	weed (Potamogeton crispus)	• • • • • • • • • • • • • • • • • •	
	nphaea tuberosa) 6	✓ clearweed spp. (F	•
	Brasenia schreberi) 4	cup plant (Silphiu	
*yellow spatter	dock spp. (Nuphar) 6	✓ false nettle (Boeh	· · · · · · · · · · · · · · · · · · ·
			cularis lanceolata) 6
	ng or submergent		ntiana Gentianopsis) 8
	Sarracenia purpurea (10)	giant ragweed (Aı	•
*sundew spp. ((Drosera) 10		ocynum cannabinum) 2
Harbar linear lya	or +/- leafless monocots	Joe-pye weed sp _l *loosestrife spp. (
	(Rhynchospora) 10		Rhexia virginica) 5
blueflag iris (Iri			lge nettle, mtn. mint, skullcap
	Scirpus / Schoenoplectus) 5		nachia nummularia) 0
	(Sparganium) 9	monkey flower sp	
cat-tail spp. (T		nettle (Urtica prod	
	spp. (Eriophorum) 10		(Lythrum salicaria) 0
	ramineae) - indicate types and		sonia canadensis) 8
number of species			p. (Hypericum/Triandeum) 8
a. *wild rice (Z	Zizania aquatica) 10	sunflower sp. (He	
	e perennial grass spp. 4:	*swamp loosestrit	fe (Decodon verticillatus) 8
cut-grass, man	nna-grass, Canada bluepoint,	swamp milkweed	(Asclepias incarnata) 4
foxtail (Alopeci	rus); other	toothcup spp. (An	nmania Rotala) 2
	grass spp. 0:reed canary	*turtlehead spp. (
	s, reed (Phragmites),		ematis virginiana) 3
	s such as annual foxtail		udwigia palustris) 3
	parnyard grass (Echinochloa)	winged loosestrife	e (Lythrum alatum) 5
	spp. (Eleocharis) 1 sp. =2		
*additional			s - Ivs. alternate or basal and
nutsedge spp.			rer (Campanula americana) 4
); species (if know		ter (Aser puniceus) 7
rush spp. (June sedge spp. (Ca	•		Aster umbellatus) 8
	, ·		e.g. New England, panicled ast
	nenocallis occidentalis) 9 orus calamus) 0		n (Rudbeckia fulgida) 8 obelia cardinalis) 4
	(Dulichium arundinaceum) 10	cress spp. (Carda	· ·
	dium mariscoides) 10		o, water, pale (Rumex) 4
`	ge (Fuirena squarrosa) 10	garlic mustard (Al	
	Camassia scilloides) 5	golden ragwort (S	
	rass (Xyris torta) 9		

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
✓ smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	(
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
✓ stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniola) o	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
•	poison sumac (Kinus Vernix) 10
aven spp.: round, white (Geum) 2	Torre traversionals and somethic
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	The state of the s
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
✓ poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W002



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 Morgan County: Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R₁E **Ecoregion:** Range: **Natural Region:** Highland Rim 8 Section: SW Size of wetland complex (acres): 0.2079 Quarter:

USACE JurisdictionYesLatitude:39.398579IDEM Jurisdiction:YesLongitude:-86.452489

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W002A	Floodplain Forest	PFO	0.17	fair	fair	fair	RPA	0.08	46.3%
S6W002B	Seasonally Flooded Basin	PEM	0.04	poor	poor	fair	RPA	0.00	0.0%

This site is classified as a PFO wetland, 0.17 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.031 acre and temporarily impact 0.047 acre of this wetland. This wetland showed 85% herbaceous cover, 20% sapling/shrub cover, and 95% woody plant cover. Dominant herbaceous species for this wetland include Carex cristatella, Toxicodendron radicans, Carex squarrosa, and, Elymus virginicus. Dominant sapling/shrub species included Cornus racemose. Dominant woody species included Acer saccharinum and Fraxinus pennsylvanica. Hydrology is likely due to backwater flooding from Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are all rated as fair based on InWRAP summaries for the site.



Polygon S6W002A



Polygon S6W002B

Project/Site: I-69 Section 6 Wetland S6W002A		City/Count	y: <u>Morgan</u>		Sampling	Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling	Point IC02A-1D1
Investigator(s): Danika Fleck, Matt Brendel		Section, To	ownship, Ra	nge: Sec 8-T11N-R1E		
Landform (hillslope, terrace, etc.): valley plain			Local reli	ef (concave, convex, no	ne): conca	/e
Slope (%): 0-1 Lat: 39.398679	L	_ong: -86.4	452281		Datum: GC	S NAD83
Soil Map Unit Name Genesee silt loam				NWI class	ification: upla	and
Are climatic/hydrologic conditions on the site typical for this	time of year	r? Yes	X No	(If no, explain Re	emarks.)	
Are Vegetation , Soil or Hydrology signi	-	-		Normal Circumstances"	•	es X No:
Are Vegetation, Soil or Hydrology natu				ded, explain answers in		
SUMMARY OF FINDINGS - Attach site map showing						etc.
Hydrophytic Vegetation Present? Yes No			<u> </u>	<u> </u>		
Hydric Soils Present? Yes No		ls t	he Sample	d Area		
Wetland Hydrology Present? Yes No	X	wit	hin a Wetla	ind? Yes	No _	X
Remarks: None of the wetland criteria are meet at this po VEGETATION - Use scientific names of plants	int. This po	oint represe	nts the non-	wetland conditions betw	een two wetl	ands.
VEGETATION - Use scientific flames of plants	Absolute	Dominant	Indicator	Dominance Test wo	rkehoot:	
Tree Stratum (Plot Size: 30' radius)		Species?				
1				Number of Dominant That Are OBL, FACW		0 (A)
2				Total Number of Dom	inant	
3				Species Across All St	rata:	1 (B)
4		· 		Percent of Dominant		0 (A/B)
5		- Total Car		That are OBL, FACW	, or FAC:	0 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius)	0	= Total Co	ver	Prevalence Index wo	orksheet:	
				Total % Cover of	of·	Multiply by:
1. 2.	<u> </u>			OBL species	0 x 1	
3.	_ -	· 		FACW species	0 x 2	= 0
4.				FAC species	0 x 3	= 0
5.				FACU species	95 x 4	
	0	= Total Co	ver	UPL species Column Totals:	5 x 5 :	= <u>25</u> 405 (B)
Herb Stratum (Plot Size: 5' radius)				Column Totals.	100 (A)	(D)
Schedonorus arundinaceus	85	Yes	FACU	Prevalence Inc	lex = B/A = _	4.05
2. Trifolium pratense		No	FACU	Hydrophytic Vegetat	ion Indicato	rs:
3. Viola sp.	5	No	UPL	1-Rapid Test for H		
4				2-Dominance Test		3
5				3-Prevalence Inde	x is <=3 1	
6				4-Morphological A		
7. 8.				data in Remarks o Problematic Hydro	•	•
9.				-		
10.				¹ Indicators of hydric so be present, unless dis		
	100	= Total Co	ver	-	<u> </u>	
Vine Stratum (Plot Size: 30' radius)				Hydrophytic		
1				Vegetation		
2	_	-			Yes	No X
	0	= Total Co	ver			
Remarks: (Include photo numbers here or on a separate s	heet.)					

SOIL Sampling Point IC02A-1D1

Type: C=Concentration, D= Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Location: PL=Pore Lining, M=Matrix	rofile Desci	Matrix			Redo	x Feature	es.								
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix Hydric Soil Indiactors: Indiactors for Problematic Hydric Soils 3				Color (m				Loc ²	Textu	ıre		Rem	narks		
Hydric Soil Indiactors: Histoso (A1) Sandy Gleyed Matrix (S4) Black Histic (A3) Black Histic (A3) Stripped Matrix (S6) Loamy Muchy Mineral (F1) Depleted Below Dark Surface (F12) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Redox (A10) Depleted Matrix (F3) Redox Dark Surface (F6) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) Some Muck Peat or Peat (S3) Restrictive Layer (If observed): Type: Depleted Dark Surface (F7) Sestrictive Layer (If observed): Type: Depth (inches): Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Algal Mat or Crust (B4) Iron Deposits (B3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B3) Thin Muck Surface (C7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X															
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Histic Epipedon (A2) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Yery Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Depleted Below Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Trick Dark Surface (A12) Depleted Dark Surface (F7) Redox Depressions (F8) Setrictive Layer (If observed): Type: Depth (inches): Permany Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required: Phylorida (B13) Saturation (A3) Sturface Water (A1) High Water Table (A2) Saturation (A3) True Aquatic Fauna (B13) Saturation (A3) True Aquatic Fauna (B13) Sadiment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visibile on Aerial Imagery (C9) Dirth Deposits (B3) Presence of Reduced Iron (C4) Algal Mator Crust (B4) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other Soil Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches):	Hydric Soil	Indiactors:								Indiactors fo	r Probl	ematic	Hydric	Soils	3
Black Histic (A3)	Histosol	(A1)		_	Sandy (Gleyed M	atrix (S4)			Coast Prai	rie Red	ox (A16	6)		
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Project/Site: I-69 Section 6 Wetland S6W002A		City/Coun	ty: <u>Morgan</u>	Sa	ampling Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana Sa	ampling Point IC02A-1W1
Investigator(s): Danika Fleck, Matt Brendel		Section, T	ownship, Ra	nge: Sec 8-T11N-R1E	
Landform (hillslope, terrace, etc.): shallow depression in v	alley plain		Local reli	ef (concave, convex, none):	concave
Slope (%): 0 Lat: 39.398577	L	ong: -86.	 .452499	Dat	um: NAD83
Soil Map Unit Name Genesee silt loam		<u> </u>		NWI classificati	
Are climatic/hydrologic conditions on the site typical for this	time of year	·2 Voc	Y No		
Are Vegetation , Soil or Hydrology sign	-			Normal Circumstances" prese	•
Are Vegetation, Soil or Hydrologynat	urally proble	matic?	It nee	ded, explain answers in Rem	narks.)
SUMMARY OF FINDINGS - Attach site map showi	ng sampli	ng point	locations,	transects, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X No)				
Hydric Soils Present? Yes X No			the Sampled		
Wetland Hydrology Present? Yes X No		Wi	ithin a Wetla	nd? Yes X	No
Remarks: Data point represents small wooded depressio by this data point has been designated as PFC					wetland feature represented
VEGETATION - Use scientific names of plants					
Tree Stratum (Plot Size: 20' radius)			t Indicator	Dominance Test worksho	eet:
1 Acer saccharinum	% Cover 40	Yes	? Status FACW	Number of Dominant Spec	
2 Fraxinus pennsylvanica	35	Yes	FACW	That Are OBL, FACW, or F	FAC: 6 (A)
3 Ulmus americana	10	No	FACW	Total Number of Dominant Species Across All Strata:	6 (B)
4 Celtis occidentalis	5	No	FAC	·	` ' /
5. Cornus racemosa	5	No	FAC	Percent of Dominant Spec That are OBL, FACW, or F	
	95	= Total Co	over		`` ′
Sapling/Shrub Stratum (Plot Size: 20' radius)				Prevalence Index worksh	neet:
1. Cornus racemosa	20	No	FAC	Total % Cover of:	Multiply by:
2.				OBL species 15	x 1 =15
3				FACW species 135	x 2 = 270
4				FAC species 50 FACU species 0	x 3 =150 x 4 =0
5		-		UPL species 0	x 5 = 0
(5) (6)	20	= Total Co	over	Column Totals: 200	(A) 435 (B)
Herb Stratum (Plot Size: 5' radius)	20	V	EA C) A /	Drevelence Index =	D/A = 0.40
Carex cristatella Toxicodendron radicans	20 20	Yes Yes	FACW FAC	Prevalence Index =	B/A = 2.18
Carex squarrosa	15	Yes	OBL	Hydrophytic Vegetation I	ndicators:
4. Elymus virginicus	15	Yes	FACW	1-Rapid Test for Hydro	ohytic Vegetation:
5. Carex vulpinoidea	10	No	FACW	X 2-Dominance Test is >	
6. Carex grayi	5	No	FACW	X 3-Prevalence Index is <	
7.				4-Morphological Adapta data in Remarks or on	ations 1(Provide supporting
8.					c Vegetation ¹ (Explain)
9.				1 Indicators of hydric soil an	
10				be present, unless disturbe	
	85	= Total Co	over		
Vine Stratum (Plot Size: 20' radius)				Hydrophytic	
1.				Vegetation	V N
2				Present? Yes	No
	0	= Total Co	over		
Remarks: (Include photo numbers here or on a separate s	sheet.)				

SOIL Sampling Point IC02A-1W1

Depth	Matrix		· — -	Redox F							_		
Inches)	Color (moist)	%	Color (m	ioist)	% _	Type ¹	Loc ²	Text	ure		Rem	narks	
0-3	10YR6/2	85	10YR5/6		15	С	М	silt lo	am				
3-20	10YR6/2	70	10YR5/4		30	С	M	silt lo	am				
/pe: C=0	Concentration, D= [Depletion,	RM=Reduced	Matrix, CS=	Covered	d or Coa	ated Sand	Grains.	² Loc	eation: PL=	Pore Linir	ng, M=M	latrix
dric Soi	I Indiactors:								Indiact	ors for Pro	blematic	Hydric	Soils 3
Histoso	I (A1)		_	Sandy Gle	eyed Mat	trix (S4)	1		Coas	st Prairie Re	edox (A16	5)	
	pipedon (A2)		_	Sandy Re	dox (S5))			Dark	Surface (S	7)		
Black H	istic (A3)		_	Stripped N	∕latrix (S	66)				Manganese			
Hydrog	en Sulfide (A4)		_	_ Loamy Mu	-					Shallow Da			2)
Stratifie	d Layers (A5)		_	Loamy Gle	eyed Ma	atrix (F2))		Othe	r Soil (Expl	ain in Rer	marks)	
2 cm M	uck (A10)		X	Depleted I	Matrix (F	=3)							
Deplete	d Below Dark Surf	ace (A11)	_	Redox Da	rk Surfac	ce (F6)							
	ark Surface (A12)	,	_	Depleted I			7)			ators of hyd			
	Mucky Mineral (S1)			Redox De		•			wetlan	d hydrology			, unless
-	uck Peat or Peat (S			_		. ,				disturbe	d or proble	ematic.	
trictive	Layer (If observe	d):											
Type:													
. ,													
Depth (ir	nches):							Hyd	Iric Soil	present?	Yes _	<u> </u>	No _
Depth (in	<u> </u>							Hyd	lric Soil	present?	Yes _	X	No _
Depth (in marks:	GY ydrology Indicato							Hyd					
Depth (in marks:	GY		equired; check	all that appl	l <u>y)</u>			Hyd	Secon	dary Indicat	ors (minir	num of t	-
Depth (in marks: DROLO etland Himary Inc. Surface	GY ydrology Indicato licators (minimum of Water (A1)		_ v	Vater Stained	d Leaves	` '		Hyd	Secono	dary Indicat	ors (minir	num of f	-
Depth (in narks: DROLO etland H mary Inc. Surface	GY ydrology Indicato licators (minimum		_ v		d Leaves	` '		Hyd	Second Sur X Dra	dary Indicat face Soil Ci inage Patte	ors (minir racks (B6) rns (B10)	num of 1	_
Depth (in narks: DROLO etland H mary Inc. Surface	GY ydrology Indicato licators (minimum of Water (A1) ater Table (A2)		_ v	Vater Stained	d Leaves a (B13)	, ,		Hyd	Second Sur X Dra	dary Indicat	ors (minir racks (B6) rns (B10)	num of 1	_
Depth (in narks: DROLO Ptland H mary Inc Surface High W Saturati	GY ydrology Indicato licators (minimum of Water (A1) ater Table (A2)		_ v _ A _ T	Vater Stained	d Leaves a (B13) Plants (E	B14)		Hyd	Seconi Sur X Dra Dry	dary Indicat face Soil Ci inage Patte	ors (minir racks (B6) rns (B10) ater Table	num of 1	_
Depth (in marks: DROLO etland Himary Inc Surface High W. Saturati Water M.	GY ydrology Indicato licators (minimum Water (A1) ater Table (A2) on (A3)		V A T H	Vater Stained quatic Faundrue Aquatic	d Leaves a (B13) Plants (E	B14) or (C1)	ving Roots		Seconomy Sur X Dra Dry X Cra	dary Indicat face Soil Ci inage Patte Season Wi	ors (minir racks (B6) rns (B10) ater Table vs (C8)	num of f	two requ
DROLO etland H imary Inc Surface High W Saturati Water M Sedime	gy ydrology Indicato dicators (minimum Water (A1) ater Table (A2) on (A3) Marks (B1)		W A T H	Vater Stained quatic Faund rue Aquatic lydrogen Sul	d Leaves a (B13) Plants (E Ifide Odo zosphere	B14) or (C1) es on Liv	-		Seconomy Sur X Dra Dry X Cra Sati	dary Indicat face Soil Ci inage Patte -Season Wi yfish Burrov	ors (minir racks (B6) rns (B10) ater Table ws (C8) bile on Ae	num of f	two requ
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Depth (in marks: DROLO etland H mary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse rface W ater Tabl turation cludes c	gy ydrology Indicato licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aeria y Vegetated Conca ervations: ater Present? e Present? Present? apillary fringe)	al Imagery live Surfac Yes Yes Yes	— W — A — T — H — C — P — R — T — G — R — C — S — C — S — C — S — C — No — X — X — No — X — X — X — X — X — X — X — X — X —	Vater Stained quatic Faunaric Faunaric Faunaric Evidence of Faunaric Faunar	d Leaves a (B13) Plants (E lfide Odo zosphere Reduced Reductior urface (C III Data (I n in Rem nes):	B14) or (C1) es on Liv d Iron (C n in Tille C7) D9) narks)	4) ed Soils (C	6 (C3) 66)	Second Sur X Dra Dry X Cra Satu Stur Geo X FAC	dary Indicat face Soil Ci inage Patte Season Wayfish Burrov uration Visil nted or Stre omorphic Po C-Neutral To	ors (minir racks (B6) rns (B10) ater Table ws (C8) bile on Ae ssed Plar ostion (D2 est (D5)	mum of t	gery (CS

Project/Site: I-69 Section 6 Wetland S6W002B		City/Co	unty: <u>Morgan</u>		Samplin	g Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Samplin	g Point IC02B-1W1
Investigator(s): Danika Fleck, Matt Brendel		Section	, Township, Ra	nge: Sec 8-T11N-R1E		
Landform (hillslope, terrace, etc.): shallow depression in val	ley plain		Local reli	ef (concave, convex, no	ne): conc	ave
Slope (%): 0 Lat: 39.398490	L	_ong: -{	86.452368		Datum: N	AD83
Soil Map Unit Name Genesee silt loam				NWI classi	fication: u	pland
Are climatic/hydrologic conditions on the site typical for this ti	me of year	r? Ye	es No	 (If no, explain Re	— emarks.)	
Are Vegetation X , Soil or Hydrology signif				Normal Circumstances"		Yes X No:
Are Vegetation, Soil or Hydrology natur				ded, explain answers in		
SUMMARY OF FINDINGS - Attach site map showin				transects, importar	it feature	s, etc.
Hydrophytic Vegetation Present? Yes X No						
Hydric Soils Present? Yes X No			Is the Sample	d Area		
Wetland Hydrology Present? Yes X No			within a Wetla	ind? Yes	X No	
Remarks: Data point represents extension of wooded wetlands data point has been designated as PEM1 based					and feature	e represented by this
VEGETATION - Use scientific names of plants	A1 1 1	<u> </u>	() P (
Tree Stratum (Plot Size: 10' radius)	% Cover		ant Indicator es? Status	Dominance Test wor		
1		•		Number of Dominant S That Are OBL, FACW		1 (A)
2				Total Number of Domi		
3				Species Across All St		1 (B)
4				Percent of Dominant S		
5				That are OBL, FACW,	or FAC:	100 (A/B)
Sapling/Shrub Stratum (Plot Size: 10' radius)	0	= Total	Cover	Prevalence Index wo	orksheet:	
				Total % Cover o	of:	Multiply by:
1. 2.				OBL species		1 = 15
3.				FACW species	10 x	2 = 20
4.				FAC species		3 = 225
5.				FACU species UPL species		4 = 0
	0	= Total	Cover		0 x : 100 (A	5 = 0 A) 260 (B)
Herb Stratum (Plot Size: 5' radius)						
1. Symphyotrichum lanceolatum	70	Yes		Prevalence Ind	ex = B/A =	2.60
2. Carex vulpinoidea	10	No		Hydrophytic Vegetat	ion Indica	tors:
Juncus effusus Rumex crispus		No		1-Rapid Test for H	ydrophytic	Vegetation:
5. Scirpus atrovirens	5	No No		X 2-Dominance Test		J
		110		X 3-Prevalence Inde		
6				4-Morphological Addata in Remarks of		(Provide supporting
8.				Problematic Hydro		•
9.				¹ Indicators of hydric so		
10.				be present, unless dis		
	100	= Total	Cover			
Vine Stratum (Plot Size: 10' radius)				Hydrophytic		
1.				Vegetation	,	N
2.				Present? Y	es X	No
	0	= Total	Cover			
Remarks: (Include photo numbers here or on a separate sh Field mowed for hay.	eet.)					

SOIL Sampling Point IC02B-1W1

Depth	Matrix		-		x Featur								
Inches)	Color (moist)	<u>%</u>	Color (ı	moist)	%	Type ¹	Loc ²	Text	ture		Rem	arks	
0-5	10YR6/2	80	10YR5/6		20	С	М	silt lo	oam				
5-18	10YR6/2	60	10YR5/4		20	С	М	silt lo	oam				
5-18	10YR6/2	60	10YR5/6		20	С	М	silt lo	oam				
				_									
	<u></u>									<u></u>			
ype: C=0	Concentration, D= D	epletion, F	RM=Reduce	d Matrix, C	S=Cove	red or Coa	ated Sand	l Grains.	² Lo	cation: PL=	Pore Linin	g, M=M	atrix
dric So	I Indiactors:								Indiac	ors for Pro	blematic l	Hydric \$	Soils 3
Histoso	I (A1)		-	Sandy 0	Gleyed I	Matrix (S4))		Coa	st Prairie Re	edox (A16))	
	pipedon (A2)			Sandy F	Redox (S5)			Dar	k Surface (S	7)		
	listic (A3)			Stripped						-Manganese			
	en Sulfide (A4)		-		-	/lineral (F1				/ Shallow Da		•)
	d Layers (A5)				-	Matrix (F2))		Oth	er Soil (Expl	aın in Rem	narks)	
	uck (A10) od Rolow Dark Surfa	00 (411)	-	X Deplete									
	ed Below Dark Surfa ark Surface (A12)	ce (ATT)	•			rface (F6) Surface (F	7)		3 India	ators of hyd	rophytic v	enetatio	n and
	Mucky Mineral (S1)		-			surface (F ions (F8)	')			nd hydrology			
-	uck Peat or Peat (S	3)	•		- opi cas	(1 0)					d or proble		
	Layer (If observed												
Туре:	.,	,											
												V	
Depth (ii	nches):							Нус	dric Soi	present?	Yes _	<u>x</u>	No _
• •								Hye	dric Soi	present?	Yes _		No _
narks:		s:						Hye	dric Soi	present?	Yes _		No _
DROLO	GY		quired; chec	k all that ap	pply)			Нус		dary Indical			
DROLO etland H	GY ydrology Indicator			k all that ap Water Stair		ves (B9)		Нус	Secon		ors (minim		
DROLO etland H mary Inc	GY ydrology Indicator licators (minimum o				ned Lea	` '		Нус	SeconSui	dary Indicat	ors (minimacks (B6)		
DROLO DROLO Stland H mary Inc Surface High W Saturat	GY ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3)			Water Stair Aquatic Fai True Aquat	ned Lea una (B1 tic Plant	3) s (B14)		Нус	Secor Sul Dra	dary Indicat face Soil Cr iinage Patte -Season W	ors (minim racks (B6) rns (B10) ater Table	num of t	
DROLO etland H mary Inc Surface High W Saturat Water N	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)			Water Stair Aquatic Fai True Aquat Hydrogen S	ned Lea una (B1 tic Plant Sulfide (3) s (B14) Odor (C1)			Secor Sui Dra Dry X Cra	dary Indicat face Soil Ci inage Patte r-Season Wi ryfish Burrov	ors (minim racks (B6) rns (B10) ater Table ws (C8)	num of to	wo requ
DROLO etland H imary Inc Surface High W Saturat Water M Sedime	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)			Water Stair Aquatic Fai True Aquat Hydrogen S Oxidized R	ned Lea una (B1 tic Plant Sulfide (thizosph	3) s (B14) Odor (C1) eres on Li	•		Secor Sul Dra Dry X Cra X Sat	dary Indicat face Soil Ci ninage Patte -Season Wayfish Burrov uration Visil	ors (minim racks (B6) rns (B10) ater Table ws (C8) bile on Aer	num of to	wo requ
DROLO etland H mary Inc Surface High W Saturat Water N Sedime Drift De	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)			Water Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c	ned Lea una (B1 tic Plant Sulfide (thizosph	3) s (B14) Odor (C1) eres on Li ced Iron (C	(4)	s (C3)	Secor Sul Dra Dry X Cra X Sal	dary Indicat face Soil Ci iinage Patte -Season W iyfish Burrov uration Visil nted or Stre	ors (minimacks (B6)) rns (B10) ater Table vs (C8) bile on Aer	(C2) ial Imagits (D1)	wo requ
DROLO etland H imary Inc Surface High W Saturat Water M Sedime Drift De Algal M	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) don (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		- - - - -	Water Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c Recent Iror	ned Lea una (B1 tic Plant Sulfide (thizosph of Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C tion in Tille	(4)	s (C3)	Secor Sul Dra X Cra X Sal Stu	dary Indicat face Soil Cr inage Patte -Season Wayfish Burrov uration Visil nted or Stre omorphic Po	ors (minimax (B6)) rns (B10) ater Table vs (C8) bile on Aer ssed Plan bostion (D2)	(C2) ial Imagits (D1)	wo requ
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DROLO Petland H mary Inc Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Sparsel	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concar	f one is re	(B7)	Water Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck Gauge or V Other (Expl	ned Lea una (B1 tic Plant Sulfide (thizosph of Reduc n Reduc Surface Well Dat lain in R	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	s (C3)	Secor Sul Dra X Cra X Sal Stu	dary Indicat face Soil Cr inage Patte -Season Wayfish Burrov uration Visil nted or Stre omorphic Po	ors (minimax (B6)) rns (B10) ater Table vs (C8) bile on Aer ssed Plan bostion (D2)	(C2) ial Imagits (D1)	wo requ
DROLO etland H imary Inc Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Sparsel	ydrology Indicator dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concar ervations:	f one is re Imagery ve Surface	(B7)	Water Stair Aquatic Far True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck Gauge or V Other (Exp	ned Lea una (B1 tic Plant Sulfide (thizosph of Reduc n Reduc Surface Well Dat lain in R	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	(4)	s (C3)	Secor Sul Dra X Cra X Sal Stu	dary Indicat face Soil Cr inage Patte -Season Wayfish Burrov uration Visil nted or Stre omorphic Po	ors (minimax (B6)) rns (B10) ater Table vs (C8) bile on Aer ssed Plan bostion (D2)	(C2) ial Imagits (D1)	wo requ
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I-69 Wetland Quality Assessment Profile

Date Report Generated: Data reference # Wetland Site	5/22/2018 S6W002 S6W002
Date of site visit:	05/12/15
Total wetland area:	0.2079 acres

Polygon Information			
	S6W002A S6W002B	W002B	
Polygon Size (acres)	0.17	0.04	
Wetland Community Type	ᄔ	SFB	
Red Flag (Special) Indicators			
Special Hydrologic Conditions	z	Z	
Special Community Type	z	Z	
Rare-Threatened-Endangered Species	z	Z	
Animal Habitat Measures			
Wetland size and connectivity	-	_	
Surrounding land use	က	က	
Standing water	-	_	
Dead woody material	7	2	
Zonation and interspersion	-	_	
Stratification	_	_	
Tree canopy	7	_	
Mature trees	က	_	
Animal Habitat Measure Score (min = 8, max = 24)	14	11	
Animal Habitat Measure Rating	fair	poor	
Botanical Measures (all except exotics dependent upon community type)			
Number of dominant plant taxa observed	က	_	
Conservatism rating	-	2	
Total hydrophytic taxa observed	က	_	
Number of indicator taxa	-	_	
Exotic species rating	က	ဇာ	
Botanical Measure Score (min = 5, max = 15)	11	8	
Botanical Measure Rating	fair	poor	
Hydrology Measures			
Water quality protection (= no. of yes answers)	4	4	
Flood and storm water storage (= no. of yes answers)	က	3	
Site/Hydrology Score (min = 11, max = 33)	25	25	
Site/Hydrology Rating	fair	fair	

In-WRAP Summary Sheet

Date Report Generated: Monday, July 30, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W002			
Date of Site Visit: Tuesday, May 12, 2015			
Tier 1 Summary:			
a. Total Wetland Area (acres): 0.2079			
b. Wetland size and connectivity - contribution to animal had	bitat:		
Valuable I	More Favorable	Favorable	Neutral
c. Surrounding land use - numerical rank (max. = 1): 0.80	<u>) </u>		
d. Value surrounding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:	Polyg	on ID	66W002A
a. Indiana Wetland community type: Floodplain Forest			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site: road/railroad			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species:			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.): 4	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max	3 Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed: 11	Good	Medium	Poor
d. Average coefficient of conservatism: 2.3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed: 23	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

Tier 2 SUMMARY:	Polygon ID		S6W002B
a. Indiana Wetland community type: Seasonally Flooded Basin			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site:			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species:			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.):4	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max3	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed:1	Good	Medium	Poor
d. Average coefficient of conservatism: 3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed:5	Good	Medium	Poor
h. Number of indicator taxa:0	Good	Medium	Poor

0 Agricultural - pasture

0 Recreation - green space, mowed

0 Commercial or multifamily residential

Tier 1: Assessment O	verview		
Wetland Site Name: N/A			
Ownership (if known): N/A			
USGS Topographic Quadrang	gle: Martinsville		
USGS Watershed map 14-Dig	git HUC: Indian Cree	k - San	d Creek
Identify each NWI Polygon w	vithin the Wetland Sit	te (Poly	gon specific data)
NWI Polygon ID Number	Cowardin Classifica	ation	Polygon Size (acres)
S6W002A	PFO1		0.1683
S6W002B	PEM1		0.0396
1.2 Site Visit			
Team Members: Rusty Yea	ger & Neal Goffinet		
Agency: Lochmueller Group)		
Date assessed: <u>5/12/2015</u>		Гime as	sessed: <u>2:30:00 PM</u>
Weather conditions: Sunn	у		
·	•		ced the current conditions withih this wetland an especially early spring etc.)
1.3 Wetland Size			
Size of site under assessmen	nt: <u>0.2079</u>		
Size of wetland complex:	0.2079		
1.4 Site Setting Degree of isolation from oth			
	•		ream with other wetlands
<u> </u>	nnected upstrrem w		
<u> </u>	nnected downstrea		
	• •	25 mile	e) but not connected
The wetland site is	sisolated		
General assessment of adjacthe wetland site (indicate th			the area within 50 meters of the perimeter of):
0 Native Vegetation	ı - woodland	0	Road / highway / railroad bed / parking lot
	n - old field / scrub	0	Industrial
0 Agricultural - tilled	d	0	Residential - single family

IWI Polygon # S6W002A	Data Reference# S6W002
see table on page one)	
ier 2: Individual Polygon: Preliminary A to be completted on-site for each NWI polygon prese	
.1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Floo Riverine (within the river/stream banks)	dplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	r than 2 meters n depth? No
standing water normally present in an adjacent pol	ygon? <u>No</u>
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	<i>,</i>
Saturated (surface water seldom present)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon (oodplain Forest .6 Disturbances of Hydrology (check all that apply):	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
✓ Road or Railroad Embankment	riyarology (explairi).
.7 Presence of Invasive Exotics (Score as: S = Scatte	red, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
 Phragmities	Reed Canary Grass
Purple Loosestrife	S Other (list):
8 Presence of Special Hydrologic Conditions (i.e. se	eeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mot Cond / Muck Flots or Maril Cooks
BogFen	_Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thre	eatened or Endangered Species:
None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wetla	and Quality Descriptions and check one):
Good ✓ Medium	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

20	4 1	lotak	ale Feetures that influence water quality and hydrology.
			ole Features that influence water quality and hydrology: nerbaceouis plant cover (percentage) in the polygon ✓ 100-75
			voody plant foliar coverage in the polygon
An	noui	nt of (dead woody material on the soil surfacenilscatteredfrequer
3a	.2 ۱	Nate	r Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.
	Y	N	3a. Does the wetland have a shape or flow that allows for the settling out of suspended
	Υ	(N)	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before
	•	W	entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 25 approximate slope (percen 2
3a	.3 F	Flood	I and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	(Y)	N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub)
	Υ	N	that will slow overland flow into the wetland? 1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?

Is the wetland located in a local watershed which has highly modified runoff conditions due

to existing development?

3b.2 Dominant Plant Species: Vegetation Zone A

wetland site).

What % of the polygon does this vegetative zone occupy?							
☐ 10 - 25% ☐ 25 - 50%	<u> </u>	75 - 90%	>90%				
Is there notable layering/stratification in this v	vegetation zone? No	o					
Dominant Herbaceous Species (i.e., covering abundance. (Mark with an * any species that			of relative				
a. Carex sp.	d. <i>Parti</i>	nenocissus quinquefolia					
b. <u>Cinna arundinacea</u>	e. <i>Geui</i>	m canadense					
c. Lysimachia nummularia							
Dominant Shrub Species listed in order of rel	lative abundance.						
a. Cornus sp.	C						
b. Crataegus sp.	d						
Dominant Tree Species listed in order of rela	tive abundance.						
a. Acer saccharinum	c. Celti	s occidentalis					
b. Fraxinus pennsylvanica	d. <i>Ulmu</i>	ıs americana					
Tree and shrub canopy: nil separate, seldom touching for often touching more or less close							
Mature trees (>12" dbh): yes no							

Other remarks (include personal comments about what adds to or detracts from the quality of this

NWI Polygon # S6W002A	Data Reference	ce S6W002	
3b.2 Dominant Plant Species: Vegetation Zone I	3		
What % of the polygon does this vegetative zone occ	cupy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	on zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
C	f.		
Dominant Shrub Species listed in order of relative at			
a	C		
b	d.		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldor	n touching oft	en touching more	e or less close
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about with wetland site).	nat adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone	;		
What % of the polygon does this vegetative zone occ	cupy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	on zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative at			
a	C		
b	d.		
Dominant Tree Species listed in order of relative abu			
a	C		
b			
	a.		
			e or less close
Tree and shrub canopy nil separate, seldor Mature trees (>12" dbh): yes no			

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

Herbs: non-seed plantshorsetail, scouring rush spp. (Equisetum) 2 _*ferns: marsh shiled fern spp. (Dryopteris) 7 _*cinnamon fern (Osmunda cinnamomea) 9 _*royal fern (Osmunda regalils) 8 _sensitive fern (Onoclea sensibilis) 4 _*other: species (if know _marsh club moss (Selaginella apoda) 4 _Sphagnum moss spp. (Sphagnum) 10 Herbs: Ivs. floating or submergent _*bladderwort spp. (Utricularia) 10 Herbs: wide-leafed monocots _*arrow arum (Peltandra virginica) 6 _arrow-head spp. (Sagittaria) 4 _*green dragon (Arisaema dracontium) 6 _Jack-in-the-pulpit (Arisaema triphyllum) 4 _pickerel weed (Pontederia cordata) 5 _*skunk cabbage (Symplocarpus foetidus) 8 _*water arum (Calla palustris) 10 _water plantain (Alisma plantago-aquatica) 2 Herbs: livs. floating or submergent _*bladderwort spp. (Utricularia) 10
*ferns: marsh shiled fern spp. (Dryopteris) 7 *cinnamon fern (Osmunda cinnamomea) 9 *royal fern (Osmunda regalils) 8 sensitive fern (Onoclea sensibilis) 4 *other: species (if know marsh club moss (Selaginella apoda) 4 Sphagnum moss spp. (Sphagnum) 10 *royal fern (Osmunda regalils) 8 Jack-in-the-pulpit (Arisaema triphyllum) 4 pickerel weed (Pontederia cordata) 5 *skunk cabbage (Symplocarpus foetidus) 8 *water arum (Calla palustris) 10 water plantain (Alisma plantago-aquatica) 2 *Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
*cinnamon fern (Osmunda cinnamomea) 9 *royal fern (Osmunda regalils) 8 sensitive fern (Onoclea sensibilis) 4 *other: species (if know marsh club moss (Selaginella apoda) 4 Sphagnum moss spp. (Sphagnum) 10 *green dragon (Arisaema dracontium) 6 Jack-in-the-pulpit (Arisaema triphyllum) 4 pickerel weed (Pontederia cordata) 5 *skunk cabbage (Symplocarpus foetidus) 8 *water arum (Calla palustris) 10 water plantain (Alisma plantago-aquatica) 2 Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
 *royal fern (Osmunda regalils) 8 sensitive fern (Onoclea sensibilis) 4 *other: species (if know marsh club moss (Selaginella apoda) 4 Sphagnum moss spp. (Sphagnum) 10 Herbs: Ivs. floating or submergent Jack-in-the-pulpit (Arisaema triphyllum) 4 pickerel weed (Pontederia cordata) 5 *skunk cabbage (Symplocarpus foetidus) 8 *water arum (Calla palustris) 10 water plantain (Alisma plantago-aquatica) 2 Herbs: dicots - Ivs. opposite/whorled
sensitive fern (Onoclea sensibilis) 4 *other: species (if know marsh club moss (Selaginella apoda) 4 Sphagnum moss spp. (Sphagnum) 10 Herbs: Ivs. floating or submergent pickerel weed (Pontederia cordata) 5 *skunk cabbage (Symplocarpus foetidus) 8 *water arum (Calla palustris) 10 water plantain (Alisma plantago-aquatica) 2 Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
*other: species (if know*skunk cabbage (Symplocarpus foetidus) 8marsh club moss (Selaginella apoda) 4Sphagnum moss spp. (Sphagnum) 10water plantain (Alisma plantago-aquatica) 2 Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
marsh club moss (Selaginella apoda) 4 *water arum (Calla palustris) 10 Sphagnum moss spp. (Sphagnum) 10 water plantain (Alisma plantago-aquatica) 2 Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
Sphagnum moss spp. (Sphagnum) 10water plantain (Alisma plantago-aquatica) 2 Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
Herbs: Ivs. floating or submergent Herbs: dicots - Ivs. opposite/whorled
*bladderwort spp. (Utricularia) 10*bedstraw spp. (Gallium) 6
coontail (Ceratophyllum demersum) 1beggar's tick spp. (Bidens) 3
duckweed spp. (Lemnaceae) 3blue vervain (Berbena hastata) 3
*pondweed spp. (Potamogeton) 8boneset (Eupatorium perfoliatum) 4
curlyleaf pondweed (Potamogeton crispus) 0bugleweed spp. (Lycopus) 5
*water lily (Nymphaea tuberosa) 6clearweed spp. (Pilea) 3
water shield (Brasenia schreberi) 4cup plant (Silphium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6false nettle (Boehmeria cylindrica) 3
*fen betony (Pedicularis lanceolata) 6
Herbs: Ivs. floating or submergent*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea (10)giant ragweed (Ambrosia trifida) 0 *sundew spp. (Drosera) 10 Indian hamp (Apocynum cannabinum) 2
*sundew spp. (Drosera) 10Indian hamp (Apocynum cannabinum) 2Joe-pye weed spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless monocots*loosestrife spp. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10meadow beauty (Rhexia virginica) 5
blueflag iris (Iris virginica) 5mint spp. e.g. hedge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenoplectus) 5 ——mint spp. e.g. neage neate, man, mint, skalledp ——moneywort (Lysimachia nummularia) 0
*bur reed spp. (Sparganium) 9monkey flower spp. (Mimulus) 4
cat-tail spp. (Typha) 1 nettle (Urtica procera) 1
*cotton grass spp. (Eriophorum) 10purple loosestrife (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate types and*richweed (Collinsonia canadensis) 8
number of species St. John's wort spp. (Hypericum/Triandeum) 8
a. *wild rice (Zizania aquatica) 10 sunflower sp. (Helianthus) 4
b. most natuve perennial grass spp. 4: *swamp loosestrife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada bluepoint,swamp milkweed (Asclepias incarnata) 4
foxtail (Alopecrus); other toothcup spp. (Ammania Rotala) 2
✓ c. introduced grass spp. 0:reed canary*turtlehead spp. (Chelone) 8
grass (Phalaris, reed (Phragmites),virgin's bower (Clematis virginiana) 3
annual grasses such as annual foxtailwater purslane (Ludwigia palustris) 3
(Setaria) and barnyard grass (Echinochloa)winged loosestrife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 sp. =2
*additional = 8 Herbs (vines): dicots - lvs. alternate or basal and
nutsedge spp. (Cyperus) 2American bellflower (Campanula americana) 4
*orchid spp. 10; species (if know*asters: bristly aster (Aser puniceus) 7
✓ rush spp. (Juncus) 4flat-topped aster (Aster umbellatus) 8
sedge spp. (Carex) 1 sp. = 3additional = 7other aster spp. (e.g. New England, panicled as
*spiderlily (Hymenocallis occidentalis) 9*black-eyed Susan (Rudbeckia fulgida) 8
sweet flag (Acorus calamus) 0cardinal flower (Lobelia cardinalis) 4*3-way sedge (Dulichium arundinaceum) 10cress spp. (Cardamine) 4
*twig rush (Cladium mariscoides) 10 *umbrella sedge (Fuirena squarrosa) 10
wild hyacinth (Camassia scilloides) 5 golden ragwort (Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
✓ smartweed spp.: jumpseed, pinkweed,	owamp rood (reductio) o
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	tamaraok (Lanx lanoina) 10
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	✓ ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniona) 5	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
✓ aven spp.: round, white (Geum) 2	poison sumac (Khus Vernix) 10
	Trace leaves simple and appeals
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	✓ silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	Trees leaves simple and alternate
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
✓ poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

IWI Polygon # S6W002B	Data Reference# S6W002
see table on page one)	2
ier 2: Individual Polygon: Preliminary A to be completted on-site for each NWI polygon prese	
1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Floor Riverine (within the river/stream banks)	dplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greater	than 2 meters n depth? No
standing water normally present in an adjacent poly	ygon? <u>No</u>
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	·
Saturated (surface water seldom present)	Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
easonally Flooded Basin 6 Disturbances of Hydrology (check all that apply):	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	,
.7 Presence of Invasive Exotics (Score as: S = Scatter	red, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e. se one	eps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mot Cond / Music Flate on Maril Conse
BogFen	Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thre	atened or Endangered Species:
None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wetla	and Quality Descriptions and check one):
Good Medium ✓	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

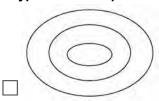
38	a.1	N	otal	ble Features that influence water quality and hydrology:	:			
Es	stim	nat	ted l	herbaceouis plant cover (percentage) in the polygon <a> 100)-75	75-50 _	50-25	<25
Es	stim	nat	ted \	woody plant foliar coverage in the polygon100)-75	75-50 _	50-25	✓ <25
Ar	noı	un	t of	dead woody material on the soil surface nil	scatt	ered	-	frequen
3a	a.2	W	/ate	er Quality Protection Questions:				
1.	Υ	1	N	Does the wetland have a significant amount of vegetative (woody plant) density to potentially uptake dissolved nutien		ılly herba	iceous a	nd
2.	(0	N	Managed water (e.g. municipal or road stromwater drainaged industrial or municipal wastewater) is not discharged into the				utlet,
3.	(Y		N N	materials before teh water reaches the center of the water	the settli etland?	ng out of	suspend	
4.	Y	′	N	Does the wetland lack steep slopes, large impervious area cropping, or areas with severe overgrazing within 100 n				OW
5.	(0	N	Are there recreational lakes, fishable or navigable waterco down gradient in the local watershed?	urses, or	water su	upply sou	ırces
6.	(D	N	Is a vegetative buffer area or another wetland polygon (are be filtered) located upland and adjacent to the wetland poly area width and slope.				
				width of buffer area (in meters0 approximate slop	e (perce	n 0		
38	a.3	F	lood	d and Stormwater Storage / Attenuation Questions:				
1.				If wetland in question is a depressional wetland answer 1a	ı, in not, a	answer 1	b	
	(0	N	1a. Around the wetland is there a buffer strip of natural veg that will slow overland flow into the wetland?	getation ((forested	, old field	d, scrub)
	Υ	1	N		getative o	density w	vithin the	wetland
2.	(D	N	Does the wetland lack man-made structure that would spewetland (tiles, culverts, ditches)?	ed the flo	ow of wat	ter from t	the
3.	Y	′	N	Is the flood potential high in the local watershed in which the flood damages)?	ne wetlar	nd is loca	ted (hist	ory of
4.	Υ	′	N	Is the wetland located in a watershed where the majority find impermeable, or is bedrock within two feet of the top of the			re claye	and
5.	(D	N	Is the wetland located in a local watershed which has highly to existing development?	ly modifie	ed runoff	conditio	ns due

Tier 3b Individual Polygon: Rapid Vegetation Description

3b.1 Zonation and Interspersion:

- 1. How may vegetation zones are evident in this wetland polygon?
 - 1b. If only one vegetation zone is evident, which best describes the site?
 - Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon.
 - Polygon composed of a single vegettation type with more or less uniform texture across the polygon.
- 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?

Type One Interspersion



Type Two Interspersion



3b.2 Dominant Plant Species: Vegetation Zone A

What % of the polygon does this vegetative zone occupy?

- 10 25%
- 25 50%
- 50 75%
- 75 90%

f.

>90%

Is there notable layering/stratification in this vegetation zone? No

Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Symphyotrichum lanceolatum

e.

Dominant Shrub Species listed in order of relative abundance.

Dominant Tree Species listed in order of relative abundance.

d. ____

Tree and shrub canopy in il separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

NWI Polygon # S6W002B	Data Referen	ce S6W002	
3b.2 Dominant Plant Species: Vegetation Zone I	3		
What % of the polygon does this vegetative zone occ	cupy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	on zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu	ndance.		
a	C		
b	d		
Tree and shrub canopy: nil separate, seldon	n touching 🔲 of	ten touching 🔲 more	e or less close
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about wl wetland site).	nat adds to or de	tracts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone (
What % of the polygon does this vegetative zone occ	cupy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	on zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative at			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldon			
Mature trees (>12" dbh): yes no	~	• —	
Other remarks (include personal comments about w	nat adds to or de	tracts from the quality	of this

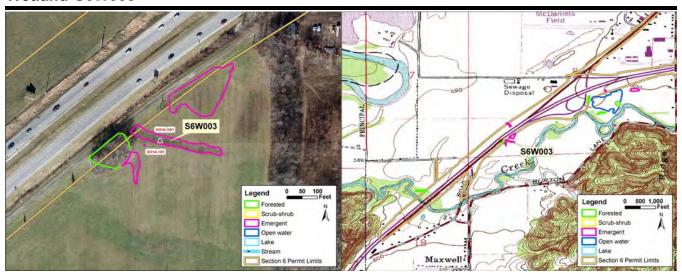
Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leafe	ed monocots
horsetail, scour	ing rush spp. (Equisetum) 2	*arrow arum (F	Peltandra virginica) 6
*ferns: marsh s	hiled fern spp. (Dryopteris) 7	arrow-head sp	p. (Sagittaria) 4
	(Osmunda cinnamomea) 9		(Arisaema dracontium) 6
	munda regalils) 8		lpit (Arisaema triphyllum) 4
	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species			ge (Symplocarpus foetidus) 8
	ss (Selaginella apoda) 4		Calla palustris) 10
Sphagnum mos	ss spp. (Sphagnum) 10	water plantain	(Alisma plantago-aquatica) 2
Herbs: Ivs. floatin	g or submergent	Herbs: dicots - Iv	vs. opposite/whorled
	pp. (Utricularia) 10	*bedstraw spp	
coontail (Cerato	ophyllum demersum) 1	beggar's tick s	pp. (Bidens) 3
duckweed spp.	(Lemnaceae) 3	blue vervain (E	Berbena hastata) 3
*pondweed spp	o. (Potamogeton) 8	boneset (Eupa	torium perfoliatum) 4
curlyleaf pondw	veed (Potamogeton crispus)	Dbugleweed sp	o. (Lycopus) 5
*water lily (Nym	nphaea tuberosa) 6	clearweed spp	. (Pilea) 3
water shield (Br	rasenia schreberi) 4	cup plant (Silp	hium perfoliatum) 4
*yellow spattero	dock spp. (Nuphar) 6		oehmeria cylindrica) 3
			edicularis lanceolata) 6
Herbs: Ivs. floatin			Gentiana Gentianopsis) 8
	Sarracenia purpurea (10)		(Ambrosia trifida) 0
*sundew spp. (I	Drosera) 10		Apocynum cannabinum) 2
			spp. (Eupatorium) 5
	or +/- leafless monocots		p. (Lysimachia) 6
	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		vsimachia nummularia) 0
*bur reed spp. (spp. (Mimulus) 4
cat-tail spp. (Ty		nettle (Urtica p	
	pp. (Eriophorum) 10		rife (Lythrum salicaria) 0
	amineae) - indicate types and		llinsonia canadensis) 8
number of species	::		t spp. (Hypericum/Triandeum) 8
	izania aquatica) 10	sunflower sp. (
	perennial grass spp. 4: na-grass, Canada bluepoint,		strife (Decodon verticillatus) 8
foxtail (Alopecri			ed (Asclepias incarnata) 4 (Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead spr	
	, reed (Phragmites),		(Clematis virginiana) 3
	such as annual foxtail		(Cludwigia palustris) 3
	arnyard grass (Echinochloa)		trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2	₩iiigou ioocco	ano (Lyanam diatam) o
*additional	, .	Herbs (vines): did	cots - lvs. alternate or basal and
nutsedge spp. (lower (Campanula americana) 4
	; species (if know	· · · · · · · · · · · · · · · · · · ·	aster (Aser puniceus) 7
✓ rush spp. (Junc			er (Aster umbellatus) 8
✓ sedge spp. (Ca			o. (e.g. New England, panicled ast
• • • • •	nenocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco	•		(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10		·
	dium mariscoides) 10		amp, water, pale (Rumex) 4
`	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Camassia scilloides) Ś		(Senecio aureus) 4
	ass (Xyris torta) 9 [´]		·

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniolia) 5	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
	poison sumac (Kinus Vernix) 10
aven spp.: round, white (Geum) 2	Trees leaves simple and appeals
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	The second secon
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W003



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 County: Morgan Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R1E **Ecoregion:** Range: Natural Region: Highland Rim Section: 8 SW Size of wetland complex (acres): 0.1408 Quarter:

USACE Jurisdiction Yes Latitude: 39.398711

IDEM Jurisdiction: Yes Longitude: -86.452018

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W003A	Seasonally Flooded Basin	PEM	0.14	poor	poor	fair	RPA	0.09	63.9%

This site is classified as a PEM wetland, 0.14 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.0 acre and temporarily impact 0.009 acre of this wetland. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include Symphyotrichum lanceolatum and Carex spp. Hydrology is likely due to backwater flooding from Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are rated as poor, poor, and fair respectively based on InWRAP summaries for the site.



Polygon S6W003A



Polygon S6W003A

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W003A		City/Count	y: <u>Morgan</u>		Sampling I	Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling !	Point IC01A-1D1
Investigator(s): Danika Fleck, Matt Brendel		Section, To	ownship, Ra	nge: Sec 8-T11N-R1E		
Landform (hillslope, terrace, etc.): valley plain			Local reli	ef (concave, convex, no	ne): concav	re
Slope (%): 0-1 Lat: 39.398679	L	_ong: -86.4	452281		Datum: NAI	D83
Soil Map Unit Name Genesee silt loam				NWI classi	ification: upla	and
Are climatic/hydrologic conditions on the site typical for this	time of year	r? Yes	X No	(If no, explain Re	emarks.)	
Are Vegetation , Soil or Hydrology sign	-	-		Normal Circumstances"	-	s X No:
Are Vegetation, Soil or Hydrology natu				ded, explain answers in		
SUMMARY OF FINDINGS - Attach site map showing					•	etc.
Hydrophytic Vegetation Present? Yes No						
Hydric Soils Present? Yes No		ls t	the Sample	d Area		
Wetland Hydrology Present? Yes No		wit	thin a Wetla	nd? Yes	No _	X
Remarks: None of the wetland criteria are meet at this po VEGETATION - Use scientific names of plants	int. This po	oint represe	nts the non-	wetland conditions betw	een two wetla	ands.
VEGETATION - Use scientific flames of plants	Absolute	Dominant	Indicator	Dominance Test wor	rkehoot:	
Tree Stratum (Plot Size: 30' radius)		Species?		Number of Dominant		
1				That Are OBL, FACW		0 (A)
2				Total Number of Dom		
3.				Species Across All St	rata:	1 (B)
4	_			Percent of Dominant S That are OBL, FACW		0 (A/B)
5	0	= Total Co		That are OBL, FACW	, or FAC	(A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius)		- Total Co	VCI	Prevalence Index wo	orksheet:	
				Total % Cover o	of: N	Multiply by:
1. 2.	_ -	· 		OBL species	0 x 1 =	= 0
3.				FACW species	0 x 2 =	= 0
4.				FAC species	0 x 3 =	
5		· <u> </u>		FACU species	95 x 4 =	
	0	= Total Co	ver	UPL species Column Totals:	5 x 5 = 100 (A)	= <u>25</u> 405 (B)
Herb Stratum (Plot Size: 5 'radius)						(D)
1. Schedonorus arundinaceus	85	Yes	FACU	Prevalence Inc	lex = B/A =	4.05
2. Trifolium pratense		No	FACU	Hydrophytic Vegetat	ion Indicator	rs:
3. Viola sp.	5	No	UPL	1-Rapid Test for H	lydrophytic Ve	egetation:
4 5.				2-Dominance Test		
				3-Prevalence Inde		
6				4-Morphological A		
7. 8.				data in Remarks o Problematic Hydro		•
9.				1 Indicators of hydric so		
10.				be present, unless dis		
	100	= Total Co	ver			
Vine Stratum (Plot Size: 30' radius)				Hydrophytic		
1				Vegetation		
2				Present?	/es	No X
	0	= Total Co	ver			
Remarks: (Include photo numbers here or on a separate s Field mowed for hay.	heet.)					

SOIL Sampling Point IC01A-1D1

Profile Desc	cription: (Describe to	the depth r	needed to documne	t the indi	cator or co	nfirm the	e absence	e of indicato	ors.)			
Depth	Matrix		Red	ox Featu	res		-					
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Tex	ture		Remarks		
0-18	10YR5/3	100		· · ·			silt l	loam				
	·			· · ·			<u> </u>					
	·			<u></u>			<u> </u>					
	·											
1 T C-C	\tt		L-D-doord Matrice	00-0		.4		214	: DI -D) 1 :: NA	\	
	Concentration, D= D	epietion, Riv	i=Reduced Matrix,	CS=Cove	ered or Coa	ited San	id Grains			ore Lining, M=		2
Hydric Soi	I Indiactors:									lematic Hydric	Soils	3
— Histoso	. ,				Matrix (S4)				Prairie Red			
_	pipedon (A2) istic (A3)			/ Redox (ed Matrix					urface (S7	Masses (F12)		
_	en Sulfide (A4)				Mineral (F1)				rk Surface (TF1	2)	
	d Layers (A5)				Matrix (F2)					in in Remarks)	,	
_	uck (A10)			ted Matri						,		
	d Below Dark Surfa	ce (A11)			ırface (F6)							
_	ark Surface (A12)				Surface (F	7)		3 Indicate	ors of hydro	ophytic vegetat must be preser	ion and	_
	Mucky Mineral (S1)	2)	Redox	k Depress	sions (F8)			welland		or problematic.		5
_	uck Peat or Peat (S											
Type:	Layer (If observed)):										
Depth (ir	nches):						Ну	dric Soil p	resent?	Yes	No	Χ
Remarks:	,						U					
HYDROLO	GY											
Watland U												
	ydrology Indicator licators (minimum o		ired: check all that	annly)				Socondo	nı Indicato	ors (minimum of	two roa	uirod)
	·	Tono io roqu									two req	uireu)
	Water (A1) ater Table (A2)		Water Sta Aquatic F		` ,			_	ce Soil Cra age Patterr	` ,		
Saturati			True Aqu	,	,				U	ter Table (C2)		
_	/larks (B1)				Odor (C1)				sh Burrow			
Sedime	nt Deposits (B2)		Oxidized	Rhizosph	neres on Liv	ving Roo	ots (C3)	Satura	ation Visibi	ile on Aerial Ima	agery (C	9)
Drift De	posits (B3)				ced Iron (C			Stunte	ed or Stres	sed Plants (D1)	
	at or Crust (B4)		_		ction in Tille	ed Soils ((C6)		orphic Pos			
	posits (B5)	. (D:	Thin Muc		. ,			FAC-N	Neutral Tes	st (D5)		
_	ion Visible on Aerial y Vegetated Conca\											
_ Sparser	y vegetated Concat	re Suriace (I	Other (Ex	кріант ін г	(emarks)	1						
Field Obse	ervations:											
Surface Wa	ater Present? Y	'es	No X Depth	(inches):								
Water Tabl		'es		(inches):								
Saturation (includes or		'es	No X Depth	(inches):		v	Wetland	Hydrology	Present?	Yes	No	X
-	apillary fringe)	m gallao ma	nitoring well gerie	Inhotos	provious in	cnection	ne) if ove	ilabla:				
Describe Re	ecorded Data (strear	n gauge, mo	onitoring well, aeria	i priotos,	previous in	spection	ns), ii ava	iliable.				
Remarks:												

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W003A		City/Coun	ty: <u>Morgan</u>		Sampling	Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling	Point IC01A-1W1
Investigator(s): Danika Fleck, Matt Brendel		Section, T	ownship, Ra	inge: Sec 8-T11N-R1E		
Landform (hillslope, terrace, etc.): shallow depression in val	lley plain		Local reli	ief (concave, convex, no	ne): concav	/e
Slope (%): 0 Lat: 39.398731	L	ong: -86.	.452133		Datum: NAI	D83
Soil Map Unit Name Shoals silt loam				NWI classi	fication: upla	and
Are climatic/hydrologic conditions on the site typical for this ti	ime of year	? Yes	X No	(If no, explain Re	emarks.)	
Are Vegetation X , Soil or Hydrology signif	-			 Normal Circumstances"	•	s X No:
Are Vegetation, Soil or Hydrology natu				ded, explain answers in		
SUMMARY OF FINDINGS - Attach site map showin				•	,	etc.
Hydrophytic Vegetation Present? Yes X No	<u> </u>			· ·		
Hydric Soils Present? Yes X No		Is	the Sample	d Area		
Wetland Hydrology Present? Yes X No		wi	thin a Wetla	ind? Yes	X No	
Remarks: Data point represents linear depression feature wetland feature represented by this data point h						
VEGETATION - Use scientific names of plants	A la = = la .4 =	D	4 1		 	
Tree Stratum (Plot Size: 10' radius)		Species?	t Indicator Status	Dominance Test wor		
1		·		Number of Dominant S That Are OBL, FACW		2 (A)
2.				Total Number of Domi		、 /
3				Species Across All St		2 (B)
4				Percent of Dominant S		
5				That are OBL, FACW,	, or FAC: _	100 (A/B)
Carling/Obert Charter /Plot Size: 10' radius	0	= Total Co	over	Prevalence Index wo	orksheet:	
Sapling/Shrub Stratum (Plot Size: 10' radius)				Total % Cover o		Multiply by:
1				OBL species	20 x 1 :	
2				FACW species	20 x 2	
3. 4.		-		FAC species	60 x 3	
5.		-		FACU species	0 x 4 =	
	0	= Total Co	over	UPL species	0 x 5 =	
Herb Stratum (Plot Size: 5' radius)				Column Totals:1	100 (A)	(B)
1. Symphyotrichum lanceolatum	60	Yes	FAC	Prevalence Ind	lex = B/A =	2.40
2. Carex sp.	20	Yes	FACW	Hydrophytic Vegetat	ion Indicato	re·
3. Juncus effusus	15	No	OBL	1-Rapid Test for H		
4. Echinochloa muricata	5	No	OBL	X 2-Dominance Test		ogotation.
5.				X 3-Prevalence Inde		
6				4-Morphological A		
7 8.				data in Remarks of Problematic Hydro	•	•
9.				—	-	
10.				¹ Indicators of hydric so be present, unless dis		
	100	= Total Co	over	. ,		
Vine Stratum (Plot Size: 10' radius)				Hydrophytic		
1	- 			Vegetation		
2					es X	No
	0	= Total Co	over			
Remarks: (Include photo numbers here or on a separate shifted mowed for hay.	neet.)					

SOIL Sampling Point IC01A-1W1

	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure		Rem	ıarks	
0-2	10YR6/2	70	10YR5/6	30			silt lo	oam				
		-				 -						
vne: C=C	Concentration D= De	nletion R	M=Reduced Matrix,	CS=Cover	ed or Coa	ted Sand	Graine	2100	ation: PL=	Pore Linir	na M=M	latriy
	I Indiactors:	piction, re	in-reduced matrix,			ica Garia	Oranis.		ors for Pro			
Histosol	(A1)		Sandy	y Gleyed M	latrix (S4)				t Prairie Re			
	pipedon (A2)			y Redox (S					Surface (S			
	istic (A3)			ed Matrix					Manganese			
	en Sulfide (A4)			y Mucky M					Shallow Da			2)
	d Layers (A5)			y Gleyed N				Othe	r Soil (Expl	aın ın Rer	narks)	
	uck (A10) d Below Dark Surfac	·		ted Matrix x Dark Sur								
	ark Surface (A12)	<i>(</i> A11)		ted Dark S		7)		3 Indica	itors of hyd	Irophytic v	egetatio	on and
	Mucky Mineral (S1)			x Depressi		• /			d hydrology	/ must be	present	
-	uck Peat or Peat (S3	3)	_	•	(- /				disturbe	d or proble	ematic.	
strictive	Layer (If observed)	:										
Туре:	ochee).						Hvd	tric Soil	nresent?	Yes	X	Nο
Type: Depth (in	nches):						Нус	dric Soil	present?	Yes _	X	No _
Type: Depth (in marks:							Нус	dric Soil	present?	Yes _	X	No _
Type:	GY	:					Hyd	dric Soil	present?	Yes _	X	No _
Type:	GY ydrology Indicators		quired; check all that	apply)_			Нус		present?			
Type:	GY ydrology Indicators			apply)_ ained Leav	/es (B9)		Нус	Second		ors (minir	num of t	
Type:	GY ydrology Indicators licators (minimum of		Water Sta		` '		Нус	Second Surf	lary Indicat	ors (minir	num of t	
Type:	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2)		Water Sta Aquatic F	ained Leav	3)		Нус	Second Surf X Drai	lary Indicat ace Soil Ci nage Patte Season Wi	ors (minir racks (B6) rns (B10) ater Table	num of t	
Type:	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		Water Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide O	3) s (B14) odor (C1)			Second Surf X Drai Dry- X Cray	lary Indicat ace Soil Ci nage Patte Season Wi	cors (minir racks (B6) rms (B10) ater Table ws (C8)	num of t	wo requ
DROLO etland Hy imary Ind Surface High Wa Saturati Water M Sedimel	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)		Water State	ained Leav Fauna (B13 atic Plants n Sulfide O Rhizosphe	3) s (B14) odor (C1) eres on Liv	-		Second Surf X Drai Dry- X Cray X Satu	lary Indicat ace Soil Ci nage Patte Season Wi fish Burrov iration Visil	cors (minir racks (B6) rms (B10) ater Table ws (C8) bile on Ae	num of t	wo requ
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DROLOGETIAND WATER MARKS: DROLOGETIAND HIGH WATER MARKS SATURATION SECTION AND ALICH MARKS SATURATION ALICH MARKS SATURATION ALICH MARKS SATURATION DEPT ALICH MARKS SATU	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is rec	Water State	ained Leaverauna (B13) atic Plants a Sulfide O Rhizosphe of Reduct on Reduct k Surface	B) (B14) (dor (C1) eres on Lived Iron (C) (ition in Tille (C7)	4)	(C3)	Second Surf X Drai Dry- X Cray X Satu Stur Geo	lary Indicat ace Soil Ci nage Patte Season Wa fish Burrov iration Visil ited or Stre	cors (minir racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2	num of t (C2) rial Imag	wo requ
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Type:	ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one is red	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leaver auna (B13 atic Plants on Sulfide O Rhizosphere of Reduct on Reduct or Well Data	B) s (B14) cdor (C1) eres on Lived Iron (C cion in Tille (C7) a (D9)	4)	(C3)	Second Surf X Drai Dry- X Cray X Satu Stur Geo	lary Indicat ace Soil Cr nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po	cors (minir racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2	num of t (C2) rial Imag	wo requ
Type:	ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations:	one is red	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leaver auna (B13 atic Plants on Sulfide O Rhizosphere of Reduct on Reduct or Well Data	B) s (B14) cdor (C1) eres on Lived Iron (C cion in Tille (C7) a (D9)	4)	(C3)	Second Surf X Drai Dry- X Cray X Satu Stur Geo	lary Indicat ace Soil Cr nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po	cors (minir racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2	num of t (C2) rial Imag	wo requ
DROLO etland H imary Ind Surface High Wa Saturati Water M Sedimen Drift De Algal Ma Iron Dep Inundati Sparsely	gydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations:	Imagery (le Surface	Water Standard Frue Aquatic Foundation Frue Foundation	ained Leav Fauna (B13 atic Plants n Sulfide O Rhizosphe e of Reduct on Reduct ck Surface Well Data cplain in Ro	B) s (B14) cdor (C1) eres on Lived Iron (C cion in Tille (C7) a (D9)	4)	(C3)	Second Surf X Drai Dry- X Cray X Satu Stur Geo	lary Indicat ace Soil Cr nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po	cors (minir racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2	num of t (C2) rial Imag	wo requ
DROLO etland H imary Ind Surface High Wa Saturati Water M Sedimen Drift De Algal Ma Iron Dep Inundati Sparsely eld Obse ater Table aturation I	ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations: ater Present? Present? Y Present? Y	Imagery (le Surface	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leaver (B13 atic Plants of Sulfide Of Reduction Re	B) s (B14) cdor (C1) eres on Lived Iron (C cion in Tille (C7) a (D9)	4) od Soils (C	(C3) 6)	Second Surf X Drai Dry- X Cray X Satu Stur Geo X FAC	lary Indicat ace Soil Cr nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po	cors (mining racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2 est (D5)	num of t (C2) rial Imag	wo requ
Type:	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aerial y Vegetated Concavervations: ater Present? Present? Y Present? Y Present? Y apillary fringe)	Imagery (I e Surface es es	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leaverauma (B13) atic Plants a Sulfide O Rhizosphe of Reduct on Reduct on Reduct ck Surface Well Data xplain in Re (inches): (inches): (inches):	B) s (B14) cloor (C1) eres on Liv ed Iron (C cion in Tille (C7) a (D9) emarks)	4) ed Soils (C	(C3) 6)	Second Surf X Drai Dry- X Cray X Satu Stur Geo X FAC	lary Indicat ace Soil Ci nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po -Neutral To	cors (mining racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2 est (D5)	num of t	wo requ
Type:	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aerial y Vegetated Concavervations: ater Present? Present? Y Present? Y Present? Y apillary fringe)	Imagery (I e Surface es es	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Leaverauma (B13) atic Plants a Sulfide O Rhizosphe of Reduct on Reduct on Reduct ck Surface Well Data xplain in Re (inches): (inches): (inches):	B) s (B14) cloor (C1) eres on Liv ed Iron (C cion in Tille (C7) a (D9) emarks)	4) ed Soils (C	(C3) 6)	Second Surf X Drai Dry- X Cray X Satu Stur Geo X FAC	lary Indicat ace Soil Ci nage Patte Season Wa fish Burrov iration Visil ited or Stre morphic Po -Neutral To	cors (mining racks (B6) rms (B10) ater Table ws (C8) bile on Ae essed Plar ostion (D2 est (D5)	num of t	wo requ

I-69 Wetland Quality Assessment Profile

Date Report Generated: Data reference # Wetland Site Date of site visit:	5/22/2018 S6W003 S6W003 05/12/15
Total wetland area:	0.1408 acres

	S6W003A	0.14	SFB		z	z	z		2	က	_	_	_	_	-	_	11	poor	(әс	_	-	_	-	က	7	poor		4	3	25	fair
Polygon information	Polygon ID	Polygon Size (acres)	Wetland Community Type	Red Flag (Special) Indicators	Special Hydrologic Conditions	Special Community Type	Rare-Threatened-Endangered Species	Animal Habitat Measures	Wetland size and connectivity	Surrounding land use	Standing water	Dead woody material	Zonation and interspersion	Stratification	Tree canopy	Mature trees	Animal Habitat Measure Score (min = 8, max = 24)	Animal Habitat Measure Rating	Botanical Measures (all except exotics dependent upon community type)	Number of dominant plant taxa observed	Conservatism rating	Total hydrophytic taxa observed	Number of indicator taxa	Exotic species rating	Botanical Measure Score (min = 5 , max = 15)	Botanical Measure Rating	Hydrology Measures	Water quality protection (= no. of yes answers)	Flood and storm water storage (= no. of yes answers)	Site/Hydrology Score ($min = 11$, $max = 33$)	Site/Hydrology Rating

In-WRAP Summary Sheet

Date Report Genera	nted: Monday, July 30, 2018			
Wetland Site Name	: <u>N/A</u>			
Data Reference #:	S6W003			
Date of Site Visit:	Tuesday, May 12, 2015			
Tier 1 Summary	<i>y</i> :			
a. Total Wetlan	d Area (acres): 0.1408			
b. Wetland size	and connectivity - contribution to animal habita	t:		
	Valuable Mor	re Favorable	Favorable	Neutral
c. Surrounding	land use - numerical rank (max. = 1):0.80			
d. Value surrou	inding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMAI	RY:	Polyg	on ID	56W003A
a. Indiana Wet	and community type: Seasonally Flooded Basin	<u> </u>		
b. Standing wa	ter - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances	to site: road/railroad			
d. Exotic specie	es rating:	Good	Medium	Poor
e. Special Hydr	ologic Conditions Observed: None			
f. Special Comr	nunity Type: None			
g. Rare-Threate	ened-Endangered Species: None			
h. Polygon Qua	lity Descriptor:	Good	Medium	Poor
Tier 3A SUMM	ARY:			
a: Dead woody	material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water qualit	y protection - numerical rank (6 max.):4	Good	Medium	Poor
c. Flood and sto	orm water storage - numerical rank (5 max3	Good	Medium	Poor
Tier 3B SUMMA	ARY:			
a. Zonation and	d interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
	as indicator of animal habitat:	Valuable	•	Neutral
c. Number of d	ominant plant taxa observed: 4	Good	Medium	Poor
	fficient of conservatism: 2.5	Good	Medium	Poor
	as indicator of animal habitat:	Valuable		Neutral
• •	as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrop	hytic taxa observed: 6	Good	Medium	Poor
h. Number of in	ndicator taxa: 0	Good	Medium	Poor

Recreation - green space, mowed

NWI Polygon # S6W003A	Data Reference# S6W003
see table on page one)	
ier 2: Individual Polygon: Preliminar o be completted on-site for each NWI polygon p	
.1 Wetland Geomorphic Setting and Surface Wa	ater Flow (check one):
✓ Depressional Slope Fixerine (within the river/stream bank	FloodplainLacustrine ks)
2 Presence of Standing Water:	
standing water normally present in the polygor	n? No
Is standing water is present, is the water gre	eater than 2 meters n depth? No
standing water normally present in an adjacent	t polygon? No
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	
Saturated (surface water seldom pres	sent)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mine	eralBoth Mineral and Organic Present
easonally Flooded Basin 6 Disturbances of Hydrology (check all that app	gon (see Key to Wetland Communities of Indiana): ply):
Ditching	Culvert
Tiles	Other Human Distrubances to the
nes Dams	Hydrology (explain):
✓ Road or Railroad Embankment	Tryarology (explain).
7 Presence of Invasive Exotics (Score as: S = Sc	attered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
 Phragmities	S Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e	e. seeps, wet slopes, floating mat):
OIIC	
9 Presence of Special Community Types:	
Bog Fen	Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar,	Threatened or Endangered Species:
✓ None observed or known to be preser	n
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: W	Vetland Quality Descriptions and check one):
Good Medium	√ Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

38	a.1	N	otal	able Features that influence water quality and hydrology:		
Es	stim	nat	ted l	herbaceouis plant cover (percentage) in the polygon_	50-25	<25
Es	stim	nat	ted \	woody plant foliar coverage in the polygon100-7575-50	50-25	✓ <25
Aı	noı	un	t of	f dead woody material on the soil surfacenilscattered		frequen
3a	a.2	W	/ate	ter Quality Protection Questions:		
1.	Υ	1	N	Does the wetland have a significant amount of vegetative (specifically herba woody plant) density to potentially uptake dissolved nutients?	ceous a	nd
2.	(0	N	Managed water (e.g. municipal or road stromwater drainage, agricultural dra industrial or municipal wastewater) is not discharged into the wetland polygonal		utlet,
3.	(Y		N N	 If wetland in question is a depressional wetland answer 3a, in not, answer 3l 3a. Does the wetland have a shape or flow that allows for the settling out of materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held o entering a surface body of water down gradient? 	suspend	
4.	Y	′	N	Does the wetland lack steep slopes, large impervious areas, moderate slope cropping, or areas with severe overgrazing within 100 meters of its borde		wc
5.	(0	N	Are there recreational lakes, fishable or navigable watercourses, or water su down gradient in the local watershed?	pply sou	ırces
6.	Q	D	N	Is a vegetative buffer area or another wetland polygon (areas where overland be filtered) located upland and adjacent to the wetland polygon? If yes, descrete width and slope.		
				width of buffer area (in meters 25 approximate slope (percen 2	_	
38	a.3	F	lood	od and Stormwater Storage / Attenuation Questions:		
1.				If wetland in question is a depressional wetland answer 1a, in not, answer 1	o	
	(0	N	1 1a. Around the wetland is there a buffer strip of natural vegetation (forested, that will slow overland flow into the wetland?	old field	l, scrub)
	Υ	1	N		ithin the	wetland
2.	(D	N	Does the wetland lack man-made structure that would speed the flow of wat wetland (tiles, culverts, ditches)?	er from t	the
3.	Y	′	N	Is the flood potential high in the local watershed in which the wetland is local flood damages)?	ted (histo	ory of
4.	Υ	′	N	Is the wetland located in a watershed where the majority f the upland soils a impermeable, or is bedrock within two feet of the top of the soil profile?	re claye	and
5.	(D	N	Is the wetland located in a local watershed which has highly modified runoff to existing development?	conditio	ns due

Tier 3b Individual Polygon: Rapid Vegetation Description 3b.1 Zonation and Interspersion: 1. How may vegetation zones are evident in this wetland polygon? 1b. If only one vegetation zone is evident, which best describes the site? Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon. Polygon composed of a single vegettation type with more or less uniform texture across the polygon. 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone? Type Two Interspersion **Type One Interspersion** 3b.2 Dominant Plant Species: Vegetation Zone A What % of the polygon does this vegetative zone occupy? 10 - 25% 25 - 50% 50 - 75% 75 - 90% >90% Is there notable layering/stratification in this vegetation zone? No Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Symphyotrichum lanceolatum	d. <i>Juncus effusus</i>
b. Carex sp.	e
c Lvsimachia nummularia	f

Dominant Shrub Species listed in order of relative abundance.

a.	c.	
-		

b. _____ d.

Dominant Tree Species listed in order of relative abundance.

a.	C.
_	

Tree and shrub canopy: nil separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

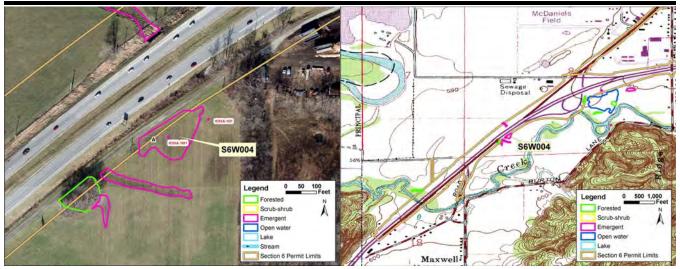
NWI Polygon # S6W003A	Data Reference	S6W003	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more that abundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): ☐ yes no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d.		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): ☐ yes ■ no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern Indiana	numbers = C-coefficents * = species with high conservatism)
Herbs: non-seed plants	Herbs: wide-leafed monocots
horsetail, scouring rush spp. (Equisetum) 2	*arrow arum (Peltandra virginica) 6
*ferns: marsh shiled fern spp. (Dryopteris) 7	arrow-head spp. (Sagittaria) 4
*cinnamon fern (Osmunda cinnamomea) 9	*green dragon (Arisaema dracontium) 6
*royal fern (Osmunda regalils) 8	Jack-in-the-pulpit (Arisaema triphyllum) 4
sensitive fern (Onoclea sensibilis) 4	pickerel weed (Pontederia cordata) 5
*other: species (if know	*skunk cabbage (Symplocarpus foetidus) 8
marsh club moss (Selaginella apoda) 4	*water arum (Calla palustris) 10
Sphagnum moss spp. (Sphagnum) 10	water plantain (Alisma plantago-aquatica) 2
Herbs: Ivs. floating or submergent	Herbs: dicots - Ivs. opposite/whorled
*bladderwort spp. (Utricularia) 10	*bedstraw spp. (Gallium) 6
coontail (Ceratophyllum demersum) 1	beggar's tick spp. (Bidens) 3
duckweed spp. (Lemnaceae) 3	blue vervain (Berbena hastata) 3
*pondweed spp. (Potamogeton) 8	boneset (Eupatorium perfoliatum) 4
curlyleaf pondweed (Potamogeton crispus) 0	
*water lily (Nymphaea tuberosa) 6	clearweed spp. (Pilea) 3
water shield (Brasenia schreberi) 4	cup plant (Silphium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6	false nettle (Boehmeria cylindrica) 3
Harlanda Baratan Baratan	*fen betony (Pedicularis lanceolata) 6
Herbs: Ivs. floating or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea (10) *sundew spp. (Drosera) 10	giant ragweed (Ambrosia trifida) 0 Indian hamp (Apocynum cannabinum) 2
sundew spp. (Drosera) 10	Joe-pye weed spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless monocots	*loosestrife spp. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10	noosestile spp. (Eysiliacilia) o meadow beauty (Rhexia virginica) 5
blueflag iris (Iris virginica) 5	mint spp. e.g. hedge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenoplectus) 5	— mint spp. e.g. nedge nettle, mint, skulleap ✓ moneywort (Lysimachia nummularia) 0
*bur reed spp. (Sparganium) 9	monkey flower spp. (Mimulus) 4
cat-tail spp. (Typha) 1	nettle (Urtica procera) 1
*cotton grass spp. (Eriophorum) 10	purple loosestrife (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate types and	
number of species	St. John's wort spp. (Hypericum/Triandeum) 8
a. *wild rice (Zizania aquatica) 10	sunflower sp. (Helianthus) 4
b. most natuve perennial grass spp. 4:	*swamp loosestrife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada bluepoint,	swamp milkweed (Asclepias incarnata) 4
foxtail (Alopecrus); other	toothcup spp. (Ammania Rotala) 2
✓ c. introduced grass spp. 0:reed canary	*turtlehead spp. (Chelone) 8
grass (Phalaris, reed (Phragmites),	virgin's bower (Clematis virginiana) 3
annual grasses such as annual foxtail	water purslane (Ludwigia palustris) 3
(Setaria) and barnyard grass (Echinochloa)	winged loosestrife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 sp. =2	
*additional = 8	Herbs (vines): dicots - Ivs. alternate or basal and
nutsedge spp. (Cyperus) 2	American bellflower (Campanula americana) 4
*orchid spp. 10; species (if know	*asters: bristly aster (Aser puniceus) 7
✓ rush spp. (Juncus) 4	flat-topped aster (Aster umbellatus) 8 = 7 ✓ other aster spp. (e.g. New England, panicled ast
*spiderlily (Hymenocallis occidentalis) 9	*black-eyed Susan (Rudbeckia fulgida) 8
sweet flag (Acorus calamus) 0	cardinal flower (Lobelia cardinalis) 4
*3-way sedge (Dulichium arundinaceum) 10	cress spp. (Cardamine) 4
*twig rush (Cladium mariscoides) 10	cress spp. (Gardannie) 4 dock spp.: swamp, water, pale (Rumex) 4
*umbrella sedge (Fuirena squarrosa) 10	garlic mustard (Alliaria petiolata) 0
wild hyacinth (Camassia scilloides) 5	golden ragwort (Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9	

Herbs (vines): dicots - ivs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (Ilex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	polocii sainas (raias reinix) re
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	onvoi mapio (vioci caccinamiam) i
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
water parsilips (Sluff suave) 3	
Charles leaves appealts on wheeled	sweet gum (Liquidambar styraciflua) 4 sycamore, American (Platanus occidentalis) 3
Shrubs - leaves opposite or whorled	
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwood, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W004



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: **14-digit HUC:** 05120201170070 County: Morgan Physiographic Region: Martinsville Hills Township: **T11N** R1E Interior Plateau **Ecoregion:** Range: Natural Region: Highland Rim Section: 8 SW Size of wetland complex (acres): 0.3455 Quarter:

USACE JurisdictionYesLatitude:39.399157IDEM Jurisdiction:YesLongitude:-86.451757

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W004A	Seasonally Flooded Basin	PEM	0.35	poor	poor	fair	RPA	0.07	19.1%

This site is classified as a PEM wetland, 0.35 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.010 acre and temporarily impact 0.056 acre of this wetland. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include Juncus effusus and Carex spp. Hydrology is likely due to backwater flooding from Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are rated as poor, poor, and fair respectively based on InWRAP summaries for the site.



Polygon S6W004A

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W004A		City/County	y: Morgan		Sampling Date: <u>10/16/2015</u>
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling Point IC03A-1D1
Investigator(s): Danika Fleck, Matt Brendel		Section, To	wnship, Ra	inge: Sec 8-T11N-R1E	
Landform (hillslope, terrace, etc.): broad valley			Local reli	ief (concave, convex, non	ne): flat
Slope (%): 0-1 Lat: 39.399300	L	_ong: -86.4	151438		Datum: NAD83
Soil Map Unit Name Shoals silt loam				NWI classifi	ication: upland
Are climatic/hydrologic conditions on the site typical for this ti	me of year	r? Yes	X No	(If no, explain Rer	marks.)
Are Vegetation , Soil or Hydrology signif	-	_			resent? Yes X No:
Are Vegetation, Soil or Hydrology natur				eded, explain answers in F	
SUMMARY OF FINDINGS - Attach site map showin			locations,	transects, important	t features, etc.
Hydrophytic Vegetation Present? Yes X No					
Hydric Soils Present? Yes No	Χ		he Sampled		N. V
Wetland Hydrology Present? Yes No	<u> </u>	Wit	hin a Wetla	ind? Yes	NoX
Remarks:					
VEGETATION - Use scientific names of plants					
VEGETATION - Use scientific names of plants	A l l t -	Danninant	la di a atau	<u> </u>	
Tree Stratum (Plot Size: 30' radius)		Dominant Species?		Dominance Test work	
1.				Number of Dominant S That Are OBL, FACW,	
2				Total Number of Domir	 -
3				Species Across All Stra	
4				Percent of Dominant S	
5				That are OBL, FACW,	or FAC:100(A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius)	0	= Total Cov	/er	Prevalence Index wo	rksheet:
				Total % Cover of	f: Multiply by:
1. 2.				OBL species	0 x 1 = 0
3.				FACW species	0 x 2 = 0
4.					80 x 3 = 240
5				FACU species2 UPL species	$\frac{20}{0}$ x 4 = $\frac{80}{0}$
	0	= Total Cov	ver		$\frac{0}{00}$ x 5 = $\frac{0}{320}$ (B)
Herb Stratum (Plot Size: 5' radius)					 ::-
1. Poa pratensis	75	Yes	FAC	Prevalence Inde	ex = B/A = 3.20
Trifolium pratense Plantago lanceolata	<u>15</u> 5	No No	FACU FACU	Hydrophytic Vegetation	on Indicators:
4. Viola sororia	5	No	FAC	1-Rapid Test for Hy	drophytic Vegetation:
5.				X 2-Dominance Test i	
6.				- 3-Prevalence Index	
7.				data in Remarks or	laptations ¹(Provide supporting on a separate sheet)
8					ohytic Vegetation ¹ (Explain)
9				1Indicators of hydric so	il and wetland hydrology must
10				be present, unless dist	urbed or problematic
VI OL I (Dist Cine 45) and in a	100	= Total Cov	/er		
Vine Stratum (Plot Size: 15' radius)				Hydrophytic	
1				Vegetation Present?	es X No
2	0	= Total Cov	ver		
Pomorko: (Includo photo numboro bere er en e conserte el				l	
Remarks: (Include photo numbers here or on a separate sh Periodically mowed	ieet.)				
. S. Salsany morrou					

SOIL Sampling Point IC03A-1D1

rofile Desc	Matrix		Pa	dox Featur	es					
Depth (Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	10YR4/3	100	Color (moist)		Турс		silt loam		rtemanto	
0-0	101114/3	100					Silt iOaiii			
		· ——— –								
		. _								
	-	- — —								
7.	Concentration, D= De	pletion, RM	=Reduced Matrix,	CS=Cove	red or Coa	ated Sand		Location: PL=Po	<u> </u>	
lydric Soi	I Indiactors:						Indi	actors for Probl	lematic Hydric	Soils 3
_ Histosol	(A1)		Sand	ly Gleyed N	Matrix (S4))	c	Coast Prairie Red	lox (A16)	
Histic E	pipedon (A2)		Sand	ly Redox (S	S5)			Oark Surface (S7))	
Black H	istic (A3)		Strip	ped Matrix	(S6)		_{Ir}	ron-Manganese I	Masses (F12)	
Hydroge	en Sulfide (A4)		Loan	ny Mucky N	/lineral (F1	1)	<u> </u>	ery Shallow Darl	k Surface (TF12	2)
-	d Layers (A5)			ny Gleyed I		•	<u> </u>	Other Soil (Explai	n in Remarks)	
	uck (A10)			eted Matrix		•	_ `	, , ,	,	
	d Below Dark Surfac	e (A11)		x Dark Su						
	ark Surface (A12)	, ,		eted Dark		7)	³ In	dicators of hydro	phytic vegetation	on and
_	Mucky Mineral (S1)			x Depress		.,		tland hydrology r	nust be present	
_	uck Peat or Peat (S3	3)		ж Воргоос	10110 (1 0)			disturbed	or problematic.	
	Layer (If observed)									
Type:	Layer (II Observed)	•								
iypo.									V	NI-
	nches):						Hydric S	Soil present?	Yes	No
Depth (ir emarks:	nches):						Hydric S	Soil present?		NO
Depth (ir emarks:							Hydric S	Soil present?	res	NO _
Depth (ir emarks:	GY						Hydric S	Soil present?	res	NO
Depth (in emarks: /DROLO	GY ydrology Indicators						Hydric S	Soil present?	res	NO
Depth (ir emarks: /DROLO	GY		ired; check all tha	t apply)				condary Indicator		
Depth (ir emarks: 'DROLO Vetland H	GY ydrology Indicators			t apply)_ tained Lea	ves (B9)		Sec	condary Indicator	rs (minimum of	
Depth (ir emarks: 'DROLO' Vetland Hy Primary Indo	GY ydrology Indicators licators (minimum of Water (A1)		Water S	tained Lea	` ,		Sec	condary Indicator Surface Soil Cra	rs (minimum of cks (B6)	
Depth (ir emarks: 'DROLO' Vetland Horimary Indo Surface High Wa	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2)		Water S Aquatic	tained Lea Fauna (B1	3) ` ´		<u>Sec</u>	condary Indicatol Surface Soil Cra Drainage Pattern	rs (minimum of cks (B6) ns (B10)	
Depth (ir emarks: 'DROLO' Vetland Horimary Ind Surface High Wa Saturati	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3)		Water S Aquatic True Aq	tained Lea Fauna (B1 uatic Plant	3) s (B14)		<u>Sec</u>	condary Indicator Surface Soil Cra Drainage Pattern Dry-Season Wat	rs (minimum of cks (B6) ns (B10) er Table (C2)	
Depth (in emarks: DROLO Vetland Herimary Index Surface High Water Mater Ma	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1)		Water S Aquatic True Aq Hydroge	tained Lea Fauna (B1 uatic Plant n Sulfide (3) s (B14) Odor (C1)	vina Root	Sec	condary Indicator Surface Soil Cra Drainage Pattern Dry-Season Wate Crayfish Burrows	rs (minimum of oks (B6) os (B10) er Table (C2) os (C8)	two requi
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Depth (ir emarks: /DROLO Vetland Hy Primary Ind Surface High Wa Saturati Water M Sedime Drift De	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) posits (B3)		Water S Aquatic True Aq Hydroge Oxidized Presence	tained Lea Fauna (B1 uatic Plants n Sulfide (I Rhizosph e of Reduc	3) s (B14) Odor (C1) eres on Li ced Iron (C	(4)	Sec 	condary Indicator Surface Soil Crad Drainage Pattern Dry-Season Wate Crayfish Burrows Saturation Visibil Stunted or Stress	rs (minimum of cks (B6) ns (B10) er Table (C2) s (C8) le on Aerial Ima sed Plants (D1)	two requi
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WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W004A		City/County	/: Morgan		Sampling	g Date: <u>10/16/2015</u>
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling	g Point IC03A-1W1
Investigator(s): Danika Fleck, Matt Brendel		Section, To	wnship, Ra	nge: Sec 8-T11N-R1E		
Landform (hillslope, terrace, etc.): broad valley			Local reli	ef (concave, convex, no	ne): flat	
Slope (%): 0-1 Lat: 39.399140	L	ong: -86.4	- 151797		Datum: N	AD83
Soil Map Unit Name Shoals silt loam		<u> </u>		NWI class	ification: up	pland
Are climatic/hydrologic conditions on the site typical for this	s time of year	? Yes	X No	(If no, explain Re	emarks.)	
Are Vegetation , Soil or Hydrology sig	nificantly dist	urbed?	Are "N	Normal Circumstances"	present? Y	res X No:
Are Vegetation , Soil or Hydrology na			If nee	ded, explain answers in	Remarks.)	
SUMMARY OF FINDINGS - Attach site map show			locations,	transects, importar	nt features	s, etc.
Hydrophytic Vegetation Present? Yes X N	lo					
Hydric Soils Present? Yes X N	lo		he Sample			
Wetland Hydrology Present? Yes X	lo	wit	hin a Wetla	ind? Yes	X No	
Remarks: The wetland feature represented by this data	point has bee	en designat	ed as PEM1	based on the Cowardi	n et al. class	sification system.
VEGETATION - Use scientific names of plants						
Tree Stratum (Plot Size: 30' radius)		Dominant Species?	Indicator Status	Dominance Test wo	rksheet:	
	% Cover	Species?	Status	Number of Dominant		2 (4)
1. 2.	 ,			That Are OBL, FACW	·	(A)
3.				Total Number of Dom Species Across All St		2 (B)
4				Percent of Dominant		
5				That are OBL, FACW	, or FAC:	100 (A/B)
(Dist Circ. 45) and inc.	0	= Total Cov	/er	Prevalence Index wo	orksheet:	
Sapling/Shrub Stratum (Plot Size: 15' radius)				Total % Cover of		Multiply by:
1				OBL species		1 = 45
2. 3.				FACW species	45 x 2	
4.				FAC species		3 = 30
5.				FACU species	_	1 = 0
	0	= Total Cov	/er	UPL species Column Totals:	0 x 5 100 (A	5 = <u>0</u>) 165 (B)
Herb Stratum (Plot Size: 5' radius)					,	
1. Carex sp.	30	Yes	FACW	Prevalence Inc	lex = B/A =	1.65
Juncus effusus Lysimachia nummularia	<u>30</u> 15	Yes No	OBL FACW	Hydrophytic Vegetat	ion Indicat	ors:
4. Scirpus atrovirens	15	No	OBL	1-Rapid Test for H	lydrophytic \	Vegetation:
5. Symphyotrichum lanceolatum	10	No	FAC	X 2-Dominance Test		
6.				X 3-Prevalence Inde		1(Provide supporting
7				data in Remarks o		
8				Problematic Hydro	phytic Vege	etation ¹ (Explain)
9				¹ Indicators of hydric s	oil and wetla	and hydrology must
10	100	= Total Cov		be present, unless dis	sturbed or p	roblematic
Vine Stratum (Plot Size: 15' radius)	100	- 10tal C0\	/CI			
1				Hydrophytic		
2.				Vegetation Present?	Yes X	No
	0	= Total Cov	/er			
Remarks: (Include photo numbers here or on a separate	sheet.)			<u> </u>		

SOIL Sampling Point IC03A-1W1

Profile Desc Depth	Matrix		Red	lox Feature	es							
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure		Remai	rks	
0-5	10YR6/2	80	10YR5/6	20	C	M	silt lo					
5-18	10YR5/2	60	10YR5/4 & 10YR5/6	20 & 20	С	M	silt lo	am				
			-	_								
	-											
	. —											
1 Type: C=C	Concentration, D= De	pletion, F	RM=Reduced Matrix,	CS=Cover	ed or Coa	ted Sand	Grains.	² Loc	ation: PL=f	Pore Lining	, M=Matrix	
	I Indiactors:	<u> </u>									ydric Soils	3
Histoso			Sand	y Gleyed M	latriv (SA)				st Prairie Re		,	
_	pipedon (A2)			y Redox (S					Surface (S			
	istic (A3)			ped Matrix (Manganese	•	=12)	
_	en Sulfide (A4)			y Mucky M)	•		Shallow Da	,	,	
	d Layers (A5)			y Gleyed M			·		r Soil (Expla			
_	uck (A10)			eted Matrix		,	•		(,	
	d Below Dark Surfac	e (A11)		x Dark Surf	. ,							
_	ark Surface (A12)	,		eted Dark S		7)		3 Indic	ators of hyd	rophytic ve	getation and	
Sandy I	Mucky Mineral (S1)			x Depressi		,		wetlan			esent, unless	3
5 cm M	uck Peat or Peat (S3)	_						disturbed	or problem	natic.	
Restrictive	Layer (If observed):											
Type:												
Type: _ Depth (ir Remarks:	nches):						Hyd	Iric Soil	present?	Yes <u>></u>	<u>(</u> No _	
Depth (ir	nches):						Hyd	Iric Soil	present?	Yes <u>></u>	<u>(</u> No _	
Depth (ir							Hyd	Iric Soil	present?	Yes>	<u>(</u> No _	
Depth (ir Remarks:		:					Hyd	Iric Soil	present?	Yes _>	<u>(</u> No _	
Depth (ir Remarks: HYDROLO Wetland H	GY ydrology Indicators		quired; check all that	apply)			Hyd				Mo No moreque	uired
Depth (ir Remarks: HYDROLO Wetland H Primary Inc	GY ydrology Indicators licators (minimum of				res (B9)		Hyd	Second	dary Indicate	ors (minimu		<u>uired</u>)
Depth (ir Remarks: HYDROLO Wetland H Primary Inc. Surface	GY ydrology Indicators licators (minimum of Water (A1)		Water St	ained Leav	` ,		Hyd	Secono	dary Indicato	ors (minimu acks (B6)		uired)
Depth (ir Remarks: HYDROLO Wetland H Primary Inc. Surface	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2)		Water St Aquatic F		3)		Hyd	Second Sur	dary Indicate	ors (minimu acks (B6) ns (B10)	ım of two requ	uired)
Depth (ir Remarks: HYDROLO Wetland H Primary Inc Surface High W. Saturati	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2)		Water St Aquatic F True Aqu	ained Leav auna (B13	B) (B14)		Hyd	Seconi Sur Dra Dry	dary Indicate face Soil Cra nage Patter	ors (minimu acks (B6) ns (B10) tter Table ((ım of two requ	uired
Depth (ir Remarks: HYDROLO Wetland H Primary Inc Surface High Water M	GY ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3)		Water St Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants	B) (B14) dor (C1)	ving Roots		Seconor Sur Dra Dry X Cra	dary Indicate face Soil Cra nage Patter Season Wa yfish Burrow	ors (minimu acks (B6) rns (B10) iter Table (Vs (C8)	ım of two requ	
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Depth (ir Remarks: HYDROLO Wetland H Primary Inc Surface High W. Saturati Water M Sedime Drift De Algal M	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water St Aquatic F True Aqu Hydroget Oxidized Presencet Recent Is	ained Leav Fauna (B13 uatic Plants n Sulfide O Rhizosphe e of Reduce	B) (B14) dor (C1) eres on Lived Iron (C	4)	s (C3)	Secondon Sur Dra Dry X Cra X Satu Stul	dary Indicate face Soil Cra nage Patter Season Wa yfish Burrow uration Visib nted or Stres omorphic Po	ors (minimu acks (B6) rns (B10) tter Table (0 rs (C8) iile on Aeria ssed Plants stion (D2)	om of two requ C2)	
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I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/2018

Data reference # S6W004

Wetland Site Site of Site visit: 05/12/15

Total wetland area: 0.3455 acres

:		
formation		
	S6W004A	
Polygon Size (acres)	0.35	
Wetland Community Type	SFB	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	Z	
Special Community Type	Z	
Rare-Threatened-Endangered Species	Z	
Animal Habitat Measures		
Wetland size and connectivity	_	
Surrounding land use	က	
Standing water	_	
Dead woody material	_	
Zonation and interspersion	_	
Stratification	က	
Tree canopy	_	
Mature trees	_	
Animal Habitat Measure Score (min = 8, max = 24)	12	
Animal Habitat Measure Rating	poor	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed	_	
Conservatism rating	2	
Total hydrophytic taxa observed	_	
Number of indicator taxa	_	
Exotic species rating	က	
Botanical Measure Score (min = 5 , max = 15)	8	
Botanical Measure Rating	poor	
Hydrology Measures		
Water quality protection (= no. of yes answers)	4	
Flood and storm water storage (= no. of yes answers)	က	
Site/Hydrology Score ($min = 11$, $max = 33$)	25	
Site/Hydrology Rating	fair	

In-WRAP Summary Sheet

Date Report Generated: Monday, July 30, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W004			
Date of Site Visit: Tuesday, May 12, 2015			
Tier 1 Summary:			
a. Total Wetland Area (acres): 0.3455			
b. Wetland size and connectivity - contribution to animal habit	tat:		
Valuable Mo	ore Favorable	Favorable	Neutral
c. Surrounding land use - numerical rank (max. = 1):0.80			
d. Value surrounding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:	Polyg	on ID	6W004A
a. Indiana Wetland community type: Seasonally Flooded Basi	in		
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site:			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species:			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.):4	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max3	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed: 4	Good	Medium	Poor
d. Average coefficient of conservatism: 3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed: 7	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

The wetland site is isolated

General assessment of adjacent land use / land cover in the area within 50 meters of the perimeter of the wetland site (indicate the % abundance of each type):

0	Native Vegetation - woodland	0	Road / highway / railroad bed / parking lot
100	Native Vegetation - old field / scrub	0	Industrial
0	Agricultural - tilled	0	Residential - single family
0	Agricultural - pasture	0	Commercial or multifamily residential

Recreation - green space, mowed

IWI Polygon # S6W004A	Data Reference# S6W004
ee table on page one)	
ier 2: Individual Polygon: Preliminary A o be completted on-site for each NWI polygon prese	
1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Floo Riverine (within the river/stream banks)	dplainLacustrine
2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greater	r than 2 meters n depth? No
standing water normally present in an adjacent pol-	ygon? No
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	·
Saturated (surface water seldom present)	Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
easonally Flooded Basin 6 Disturbances of Hydrology (check all that apply):	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	, 3, (1 ,
7 Presence of Invasive Exotics (Score as: S = Scatte	red, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
 Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e. se	eeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mat Cond / March Flate - Ac. 10
BogFen	_Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thre	eatened or Endangered Species:
None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wetla	and Quality Descriptions and check one):
Good Medium ✓	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

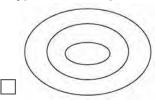
3a	a.1 I	Notal	ble Features that influence water quality and hydrology:
Es	stima	ated l	nerbaceouis plant cover (percentage) in the polygon_🗸 100-7575-5050-25<25
Es	stima	ated v	woody plant foliar coverage in the polygon100-7575-5050-25 <u>√</u> <25
Ar	nou	nt of	dead woody material on the soil surfacenilscatteredfrequen
38	a.2 \	Wate	r Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y) N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.	Ŷ Y	N N	If wetland in question is a depressional wetland answer 3a, in not, answer 3b.3a. Does the wetland have a shape or flow that allows for the settling out of suspended materials before teh water reaches the center of the wetland?3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y) N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Ŷ) N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 0 approximate slope (percen 0
38	a.3 I	Flood	d and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	Y) N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland?
	Y	N	Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Ŷ) N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5.	Ŷ) N	Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description

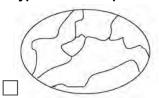
3b.1 Zonation and Interspersion:

- 1. How may vegetation zones are evident in this wetland polygon?
 - 1b. If only one vegetation zone is evident, which best describes the site?
 - Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon.
 - Polygon composed of a single vegettation type with more or less uniform texture across the polygon.
- 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?

Type One Interspersion



Type Two Interspersion



3b.2 Dominant Plant Species: Vegetation Zone A

What % of the polygon does this vegetative zone occupy?

- 10 25%
- 25 50%
- 50 75%
- **75 90%**
- >90%

Is there notable layering/stratification in this vegetation zone? Yes

Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Scirpus atrovirens

d. Juncus effusus

b. Carex vulpinoidea

.

c. Lysimachia nummularia

f.

Dominant Shrub Species listed in order of relative abundance.

- a. _____
- C. _____
- h
- .

Dominant Tree Species listed in order of relative abundance.

- a. _____
- с. _____
- b. _____
- d.____

Tree and shrub canopy in il separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

NWI Polygon # S6W004A	Data Referen	ce S6W004	
3b.2 Dominant Plant Species: Vegetation Zone I	3		
What % of the polygon does this vegetative zone occ	upy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
c	f		
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu	ndance.		
a	C		
b	d		
Tree and shrub canopy: nil separate, seldon	touching 🗌 of	ten touching 🔲 more	e or less close
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about wl wetland site).	at adds to or de	tracts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone (;		
What % of the polygon does this vegetative zone occ	upy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
c			
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d		
Tree and shrub canopy nil separate, seldon			
	i touching or	ten touching more	e or less close
Mature trees (>12" dbh): yes no	r touching or		e or less close

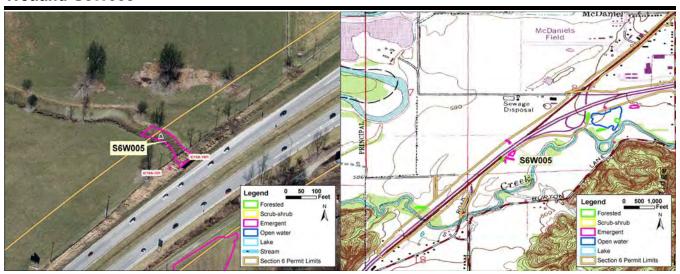
Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana nu	ımbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leaf	ed monocots
horsetail, scour	ing rush spp. (Equisetum) 2		Peltandra virginica) 6
	hiled fern spp. (Dryopteris) 7		p. (Sagittaria) 4
	(Osmunda cinnamomea) 9		(Arisaema dracontium) 6
	nunda regalils) 8		lpit (Arisaema triphyllum) 4
	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species			ge (Symplocarpus foetidus) 8
	ss (Selaginella apoda) 4	`	Calla palustris) 10
Sphagnum mos	ss spp. (Sphagnum) 10	water plantain	(Alisma plantago-aquatica) 2
Herbs: lvs. floatin	g or submergent	Herbs: dicots - Iv	/s. opposite/whorled
	pp. (Utricularia) 10	*bedstraw spp	
	ophyllum demersum) 1	beggar's tick s	
duckweed spp.			Berbena hastata) 3
*pondweed spp	o. (Potamogeton) 8	boneset (Eupa	atorium perfoliatum) 4
curlyleaf pondw	veed (Potamogeton crispus) 0	bugleweed sp	p. (Lycopus) 5
	phaea tuberosa) 6	clearweed spp	
water shield (Br	rasenia schreberi) 4	cup plant (Silp	hium perfoliatum) 4
*yellow spattero	dock spp. (Nuphar) 6	false nettle (Bo	oehmeria cylindrica) 3
		*fen betony (P	edicularis lanceolata) 6
Herbs: Ivs. floatin	g or submergent	*gentian spp. ((Gentiana Gentianopsis) 8
*pitcher plant (S	Sarracenia purpurea (10)	giant ragweed	(Ambrosia trifida) 0
*sundew spp. ([Drosera) 10	Indian hamp (/	Apocynum cannabinum) 2
		Joe-pye weed	spp. (Eupatorium) 5
Herbs: linear-lvs.	or +/- leafless monocots	*loosestrife sp	p. (Lysimachia) 6
	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		/simachia nummularia) 0
*bur reed spp. (r spp. (Mimulus) 4
cat-tail spp. (Ty	• •	nettle (Urtica p	
	op. (Eriophorum) 10		rife (Lythrum salicaria) 0
	amineae) - indicate types and		Ilinsonia canadensis) 8
number of species			t spp. (Hypericum/Triandeum) 8
	zania aquatica) 10	sunflower sp.	
	perennial grass spp. 4:		strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,		eed (Asclepias incarnata) 4
foxtail (Alopecru			(Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead sp	
	, reed (Phragmites), such as annual foxtail		(Clematis virginiana) 3 e (Ludwigia palustris) 3
	arnyard grass (Echinochloa)		trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2	willged looses	tille (Lytillulli alatulli) 5
*additional		Harbs (vinas): di	cots - lvs. alternate or basal and
nutsedge spp. (lower (Campanula americana) 4
	; species (if know		aster (Aser puniceus) 7
✓ rush spp. (Junc			er (Aster umbellatus) 8
	rex) 1 sp. = 3 _ <u>√</u> additional =		p. (e.g. New England, panicled ast
	nenocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco	•		(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10	cress spp. (Ca	
	dium mariscoides) 10		amp, water, pale (Rumex) 4
•	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Camassia scilloides) 5		t (Senecio aureus) 4
	ass (Xyris torta) 9		- (, -

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W005



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 05120201170070 14-digit HUC: Morgan County: Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R₁E **Ecoregion:** Range: Natural Region: Highland Rim 8 Section: SW Size of wetland complex (acres): 0.1109 Quarter:

USACE JurisdictionYesLatitude:39.400224IDEM Jurisdiction:YesLongitude:-86.452072

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W005A	Deep Marsh	PEM	0.11	poor	poor	poor	RPA	0.09	81.2%

This site is classified as a PEM wetland, 0.11 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.055 acre and temporarily impact 0.035 acre of this wetland. This wetland showed 100% herbaceous cover. Dominant herbaceous species for this wetland include Phalaris arundinacea, lemna minor, and Typha latifolia. Hydrology is likely due to backwater flooding from Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are all rated as poor based on InWRAP summaries for the site.

Wetland S6W005



Polygon S6W005A

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W005A		City/County	/: Morgan		Samplino	g Date: <u>10/20</u>	/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling	g Point IC10A	۱-1D1
Investigator(s): K. Lucier	8	Section, To	wnship, Ra	nge: Sec 8-T1N-R11E			
Landform (hillslope, terrace, etc.): broad valley			Local reli	ef (concave, convex, no	ne): conc	ave	
Slope (%): 0-1 Lat: 39.400002	Lo	ong: -86.4	- 152091		Datum: G	CS NAD83	
Soil Map Unit Name Shoals silt loam				NWI class	ification: up	land	
Are climatic/hydrologic conditions on the site typical for the	nis time of year?	Yes	X No	(If no, explain Re	emarks.)		
Are Vegetation , Soil or Hydrology si	-	_		Normal Circumstances"	•	∕es X No	0:
Are Vegetation , Soil or Hydrology r				ded, explain answers in			
SUMMARY OF FINDINGS - Attach site map sho			locations,	transects, importar	nt features	s, etc.	
Hydrophytic Vegetation Present? Yes X	No						
	No X		he Sample				
Wetland Hydrology Present? Yes	No X	wit	hin a Wetla	ind? Yes	No	<u> </u>	
Remarks:		-					
VEGETATION - Use scientific names of plants							
VEGETATION - Use scientific flames of plants	Absolute	Dominant	Indicator	B	1 -1 1		
Tree Stratum (Plot Size: 30' radius)	% Cover		Status	Dominance Test wo			
1				Number of Dominant That Are OBL, FACW		2	(A)
2				Total Number of Dom	•		, ` ,
3				Species Across All St	rata:	2	(B)
4				Percent of Dominant		400	(A /D)
5		Total Cov		That are OBL, FACW	, or FAC:	100	(A/B)
 Sapling/Shrub Stratum (Plot Size: 15' radius)		· Total Cov	/ei	Prevalence Index wo	orksheet:		
1				Total % Cover of	of:	Multiply by:	
2.				OBL species	0 x 1	1 =0	_
3.				FACW species	60 x 2		_
4				FAC species FACU species	25 x 3		_
5				UPL species	0 x 5		_
(Diet Circu El radius	0 =	Total Cov	/er	l ' 	105 (A)		(B)
Herb Stratum (Plot Size: 5' radius) 1. Phalaris arundinacea	60	Yes	FACW	Prevalence Inc	 dex = B/A =	2.62	
2 Rubus argutus	25	Yes	FAC	T TOVAIGHOO IIIC	iox birt	2.02	_
3. Chamaecrista nictitans	10	No	FACU	Hydrophytic Vegetat			
4. Asclepias syriaca	5	No	FACU	1-Rapid Test for H		√egetation:	
5. Cirsium arvense	5	No	FACU	X 2-Dominance Test X 3-Prevalence Inde			
6				4-Morphological A		(Provide supp	oorting
7			-	data in Remarks o	or on a sepai	rate sheet)	
8				— Problematic Hydro	-		•
9				¹ Indicators of hydric so be present, unless dis			must
1 1 2 1		Total Cov	/er	Do prosont, unices un	pi	Spicificatio	
Vine Stratum (Plot Size: 15' radius)				Ukadaa (F. C)			
1				Hydrophytic Vegetation			
2					Yes X	No	_
	0 =	Total Cov	/er				
Remarks: (Include photo numbers here or on a separate	e sheet.)				· 		

SOIL Sampling Point IC10A-1D1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ıre		Remarks	i
0-20	10YR5/4	95	10YR4/6	5	С	М	silty clay	/ loam			
	-										
· .		epletion, R	M=Reduced Matrix,	CS=Cover	red or Coa	ited Sand				Pore Lining, M	
	I Indiactors:		Sand	, Gloved N	Notriy (SA)					blematic Hyd	ric Solis
Histoso Histic E	pipedon (A2)			/ Gleyed M / Redox (S					Surface (S	edox (A16) 87)	
	listic (A3)			ed Matrix				_		e Masses (F1:	2)
-	en Sulfide (A4)			y Mucky M)		Very	Shallow D	ark Surface (T	F12)
•	d Layers (A5)			y Gleyed N)		Othe	r Soil (Exp	lain in Remark	s)
	uck (A10)			ted Matrix							
	d Below Dark Surface	ce (A11)		k Dark Sur		7\		3 India	store of by	drophytic veget	ation and
	ark Surface (A12) Mucky Mineral (S1)			ted Dark S x Depressi		")				y must be pres	
	uck Peat or Peat (S	3)		к Бергеззі	10113 (1 0)				disturbe	d or problemat	ic.
strictive	Layer (If observed)	:									
Туре:	\						Hvd	ric Sail	nrocont?	Voc	No
Type: Depth (in	nches):						Hyd	ric Soil	present?	Yes	No
Type: Depth (ir marks:							Hyd	ric Soil	present?	Yes	No _
Type:	GY						Hyd	ric Soil	present?	Yes	No
Type: Depth (in marks: DROLO etland H	GY ydrology Indicators		quired; check all that	apply)			Hyd			Yes	
Type: Depth (ii marks:	GY ydrology Indicators dicators (minimum of			apply)_	ves (B9)		Hyd	Second	lary Indica	tors (minimum	
Type: Depth (in marks:	GY ydrology Indicators		Water Sta		` ,		Hyd	Second		tors (minimum racks (B6)	
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of		Water Sta Aquatic F	ained Leav	3)		Hyd	Second Surf Drai	dary Indica ace Soil C nage Patte Season W	tors (minimum racks (B6) erns (B10) ater Table (C2	of two requ
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide C	3) s (B14) Odor (C1)			Second Surf Drai Dry- Cray	dary Indica ace Soil C nage Patte Season W rfish Burro	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8)	of two requ
DROLO etland H imary Inc Surface High W Saturati Water M Sedime	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)		Water State	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe	3) s (B14) Odor (C1) eres on Liv	-		Second Surf Drai Dry- Cray	dary Indica ace Soil C nage Patte Season W rfish Burro ıration Visi	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8) bile on Aerial I	of two requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water State	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C	4)	ts (C3)	Second Surf Drai Dry- Cra Satu	dary Indica ace Soil C nage Patte Season W rfish Burro uration Visi inted or Stre	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8) bile on Aerial I	of two requ
DROLO Tetland H Timary Inc Surface High W Saturati Water M Sedime Drift De Algal M	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water State	ained Leav fauna (B13 atic Plants a Sulfide C Rhizosphe of Reduct	3) s (B14) Odor (C1) eres on Lived Iron (C	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
DROLO Tetland H Timary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)	one is rec	Water State	ained Leav auna (B13 atic Plants Sulfide C Rhizosphe of Reduc	3) s (B14) cloor (C1) eres on Lived Iron (C tion in Tille (C7)	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indica ace Soil C nage Patte Season W rfish Burro uration Visi inted or Stre	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
Type:Depth (ir marks:	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is red	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leav fauna (B13 atic Plants Sulfide C Rhizosphe of Reduct on Reduct k Surface	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one is red	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leavained Leavained (B13 atic Plants of Sulfide Carlotte of Reduction Reduction Reduction Retails (Surface)	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
Type:Depth (in marks:	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations:	one is red	Water Standard Frue Aquatic Foundation Frue Foundation Frue Aquatic Foundation Frue Fo	ained Leaver (B13 atic Plants of Sulfide Con Reduct on Reduct k Surface of Well Data (plain in Reduct)	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
DROLO Petland Hrimary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavery ervations: ater Present? Y	Imagery (le Surface	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Leaver and the second se	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	ts (C3)	Second Surfa Drai Dry Cray Satu Stur	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) ems (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2)	of two requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavery ervations: ater Present? Y	Imagery (le Surface	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Leaver (B13 atic Plants of Sulfide Con Reduct on Reduct k Surface of Well Data (plain in Reduct)	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4) ed Soils (ts (C3)	Second Surf Drai Dry- Cra: Satu Stur Geo	dary Indicat ace Soil Conage Patte Season W rfish Burron rration Visi ated or Stre morphic Po	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2) est (D5)	of two requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? y Present? apillary fringe)	Imagery (I e Surface es es es	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Leaver auna (B13 atic Plants on Sulfide C Rhizosphe of Reduction Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9) emarks)	4) ed Soils (ts (C3) C6)	Second Surf Drai Dry- Cra: Satu Stur FAC	dary Indicar ace Soil Conage Patte Season Worfish Burroo Iration Visi Inted or Stre Morphic Po	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2) est (D5)	of two requi
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? y Present? apillary fringe)	Imagery (I e Surface es es es	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Leaver auna (B13 atic Plants on Sulfide C Rhizosphe of Reduction Reduc	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9) emarks)	4) ed Soils (ts (C3) C6)	Second Surf Drai Dry- Cra: Satu Stur FAC	dary Indicar ace Soil Conage Patte Season Worfish Burroo Iration Visi Inted or Stre Morphic Po	tors (minimum racks (B6) erns (B10) ater Table (C2 ws (C8) bile on Aerial I essed Plants (I ostion (D2) est (D5)	of two requi

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W005A	(City/County	: Morgan	Sampling Date: 10/20/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana Sampling Point IC10A-1W1
Investigator(s): K. Lucier		Section, To	wnship, Ra	inge: Sec 8-T1N-R11E
Landform (hillslope, terrace, etc.): broad valley			Local reli	ief (concave, convex, none): concave
Slope (%): 0-1 Lat: 39.400048	L	ong: <u>-86.4</u>	51969	Datum: GCS NAD83
Soil Map Unit Name Shoals silt loam				NWI classification: upland
Are climatic/hydrologic conditions on the site typical for this	time of year	? Yes	X No	(If no, explain Remarks.)
Are Vegetation, Soil or Hydrologysign	nificantly distu	urbed?	Are "N	Normal Circumstances" present? Yes X No:
Are Vegetation , Soil or Hydrology nat	turally proble	matic?	If nee	eded, explain answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map show	ing samplii	ng point l	ocations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	0			
Hydric Soils Present? Yes X No	o <u> </u>		ne Sampleo nin a Wetla	
Wetland Hydrology Present? Yes X No	° <u> </u>	Witi	iiii a vveiia	nd? Yes X No
Remarks: The wetland feature represented by this data p	point has bee	n designate	ed as PEM1	I based on the Cowardin et al. classification system.
VEGETATION - Use scientific names of plants				
T Ot to (Diet Size) 201 redice		Dominant		Dominance Test worksheet:
Tree Stratum (Plot Size: 30' radius) 1.	% Cover	·	Status	Number of Dominant Species
1. 2.				That Are OBL, FACW, or FAC: 4 (A)
3.		-		Total Number of Dominant Species Across All Strata: 4 (B)
4.				Percent of Dominant Species
5				That are OBL, FACW, or FAC:100 (A/B)
(D) (O) (AE) (I)	0 =	= Total Cov	er	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot Size: 15' radius) 1 Salix interior	25	Yes	FACW	Total % Cover of: Multiply by:
			TACW	OBL species 50 x 1 = 50
2. 3.				FACW species 75 x 2 = 150
4.				FAC species 0 x 3 = 0
5.				FACU species 0 x 4 = 0 UPL species 0 x 5 = 0
	25	= Total Cov	er	UPL species 0 x 5 = 0 Column Totals: 125 (A) 200 (B)
Herb Stratum (Plot Size: 5' radius)	50	V	E4014/	
Phalaris arundinacea Lemna minor	<u>50</u> 25	Yes Yes	FACW OBL	Prevalence Index = B/A = 1.60
3. Typha latifolia	25	Yes	OBL	Hydrophytic Vegetation Indicators:
4.				1-Rapid Test for Hydrophytic Vegetation:
5.				X 2-Dominance Test is >50% X 3-Prevalence Index is <=3 1
6				4-Morphological Adaptations 1(Provide supporting
7				data in Remarks or on a separate sheet)
8				— Problematic Hydrophytic Vegetation ¹ (Explain)
9. 10.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
10.	100 =	Total Cov	er	be present, unless distribed of problematic
Vine Stratum (Plot Size: 15' radius)				Hydrophytic
1				Vegetation
2				Present? Yes X No
	0 =	= Total Cov	er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

SOIL Sampling Point IC10A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	5GY5/3	95	10YR4/6	5	С	М	silty clay loar	n
	-							_
								_
-	Concentration, D= De	pletion, RI	M=Reduced Matrix,	CS=Cove	red or Coa	ited Sand		Location: PL=Pore Lining, M=Matrix
	I Indiactors:		Cand	. Clayed N	Actric (C4)			actors for Problematic Hydric Soils 3
Histoso	pipedon (A2)			y Gieyed it y Redox (S	//atrix (S4) S5)			oast Prairie Redox (A16) ark Surface (S7)
	listic (A3)			ed Matrix				on-Manganese Masses (F12)
	en Sulfide (A4)				ineral (F1)		ery Shallow Dark Surface (TF12)
Stratifie	d Layers (A5)		X Loam	y Gleyed I	Matrix (F2))	_ 0	ther Soil (Explain in Remarks)
	uck (A10)			ted Matrix				
	d Below Dark Surfac	e (A11)		x Dark Sur		7 \	3 100	dicators of hydrophytic vegetation and
	ark Surface (A12) Mucky Mineral (S1)			ted Dark s x Depress	Surface (F	7)		and hydrology must be present, unless
-	uck Peat or Peat (S3)	Nedo.	x Depless	ions (Fo)			disturbed or problematic.
strictive	Layer (If observed):	,						
,,,,,,,,	,							
Туре: _	<u> </u>						Undria C	ail present? Vos V No
Type: Depth (ir	<u> </u>						Hydric S	oil present? Yes X No
Type: Depth (ir marks:	nches):						Hydric S	oil present? Yes <u>X</u> No <u></u>
Type:	GY	:					Hydric S	oil present? Yes X No
Type:	nches):		uired; check all that	apply)				
Type:	GY ydrology Indicators			apply) ained Leav	ves (B9)		Sec	
Type:	GY ydrology Indicators dicators (minimum of		Water St		` '		SecS	ondary Indicators (minimum of two requ
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3)		Water Standard Mater Standard For Mater Standard For Material Mate	ained Leav auna (B10 atic Plants	3) s (B14)		Sec S X [ondary Indicators (minimum of two requ Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water Sta Aquatic F X True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide C	3) s (B14) Odor (C1)		Sec S C	ondary Indicators (minimum of two requ Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2)		Water St. Aquatic F X True Aqu Hydroger Oxidized	ained Leav Fauna (B13 atic Plants n Sulfide C Rhizospho	3) s (B14) Odor (C1) eres on Liv	_	Sec X C C ts (C3) X S	ondary Indicators (minimum of two requ Surface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water Str Aquatic F True Aqu Hydroger Oxidized Presence	ained Leaverauna (B13) Patic Plants Sulfide C Rhizospher	3) s (B14) Odor (C1) eres on Lived Iron (C	4)	Sec X C C C S ts (C3) X S	ondary Indicators (minimum of two requisorface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water St: Aquatic F X True Aqu Hydroger Oxidized Presence Recent Ir	ained Leaver (B1) atic Plants on Sulfide Central Rhizosphore of Reduction	3) s (B14) Odor (C1) eres on Lived Iron (C	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requisorface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile (D1) Otaturation Visibile (D2)
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)	one is req	Water Standard Water	ained Leaverauna (B13) Patic Plants Sulfide C Rhizospher	3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is req	Water St: Aquatic F X True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaver (B13) atic Plants on Sulfide Control (B13) at the control (3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C8) Otaturation (D2)
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one is req	Water St: Aquatic F X True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Leaver (B13) atic Plants on Sulfide Control (B13) at the control (3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C8) Otaturation (D2)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave	one is req magery (E e Surface (Water Standard Water	ained Leaver (B13) atic Plants on Sulfide Control (B13) at the control (3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requisorface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile (D1) Otaturation Visibile (D2)
DROLO PROLO Etland H Imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concave	magery (Ee Surface	Water Standard Water	ained Leaver (B1) atic Plants on Sulfide Con Reduction R	3) s (B14) odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9) emarks)	4)	Sec S C C ts (C3)S	ondary Indicators (minimum of two requisorface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile (D1) Otaturation Costion (D2)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations: ater Present? Present? Ye Present?	magery (Ee Surface	Water Standard Water	ained Leaver (B1) atic Plants on Sulfide Con Reduction R	3) s (B14) odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9) emarks)	ed Soils (Sec X D C D C C S TS (C3) X S C6) X F	ondary Indicators (minimum of two requisorface Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile on Aerial Imagery (C9) Otaturation Visibile (D1) Otaturation Visibile (D2)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations: ater Present? Ye e Present?	magery (Ee Surface (XX) es X	Water St. Aquatic F X True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of (B8) Other (Ex	ained Leaver (B1) atic Plants of Sulfide Con Reduction R	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9) emarks) 16 0	ed Soils (Sec S S S S S S S S S	ondary Indicators (minimum of two requirence Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Drayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2) FAC-Neutral Test (D5)
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations: ater Present? Present? Ye apillary fringe)	magery (Ee Surface (XX) es X	Water St. Aquatic F X True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of (B8) Other (Ex	ained Leaver (B1) atic Plants of Sulfide Con Reduction R	3) s (B14) Odor (C1) eres on Liv ed Iron (C tion in Tille (C7) a (D9) emarks) 16 0	ed Soils (Sec S S S S S S S S S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2) FAC-Neutral Test (D5)

I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/	Data reference # S6W005	S6W005	Date of site visit: 05/14/15	Total wetland area:
5/22/2018	900	900	4/15	0 1109 acres

Polygon Information		
Polygon ID	S6W005A	
Polygon Size (acres)	0.11	
Wetland Community Type	DM	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	z	
Special Community Type	z	
Rare-Threatened-Endangered Species	Z	
Animal Habitat Measures		
Wetland size and connectivity	_	
Surrounding land use	2	
Standing water	2	
Dead woody material	-	
Zonation and interspersion	_	
Stratification	_	
Tree canopy	-	
Mature trees	_	
Animal Habitat Measure Score (min = 8, max = 24)	10	
Animal Habitat Measure Rating	poor	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed	_	
Conservatism rating	_	
Total hydrophytic taxa observed	က	
Number of indicator taxa	_	
Exotic species rating	2	
Botanical Measure Score (min = 5 , max = 15)	8	
Botanical Measure Rating	poor	
Hydrology Measures		
Water quality protection (= no. of yes answers)	2	
Flood and storm water storage (= no. of yes answers)	1	
Site/Hydrology Score (min = 11, max = 33)	17	
Site/Hydrology Rating	poor	

In-WRAP Summary Sheet

Date Report Gener	rated: Monday, July 30, 2018			
Wetland Site Name	e: N/A			
Data Reference #:	S6W005			
Date of Site Visit:	Thursday, May 14, 2015			
Tier 1 Summar	y:			
a. Total Wetlar	nd Area (acres): 0.1109			
b. Wetland siz	e and connectivity - contribution to animal habita	at:		
	Valuable Mo	re Favorable	Favorable	Neutral
c. Surrounding	g land use - numerical rank (max. = 1):0.38			
d. Value surro	unding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMA	RY:	Polyg	gon ID S	6W005A
a. Indiana We	tland community type: Deep Marsh/Shallow Op	en Water		
b. Standing wa	ater - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbance	es to site: road/railroad culvert			
d. Exotic speci	es rating:	Good	Medium	Poor
e. Special Hyd	rologic Conditions Observed: None			
f. Special Com	munity Type: None			
g. Rare-Threat	ened-Endangered Species: None			
h. Polygon Qu	ality Descriptor:	Good	Medium	Poor
Tier 3A SUMM	ARY:			
a: Dead wood	y material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quali	ity protection - numerical rank (6 max.):2_	Good	Medium	Poor
c. Flood and st	torm water storage - numerical rank (5 max <u>1</u>	Good	Medium	Poor
Tier 3B SUMM	ARY:			
a. Zonation an	nd interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
	n as indicator of animal habitat:	Valuable	•	Neutral
c. Number of o	dominant plant taxa observed: 2	Good	Medium	Poor
d. Average coe	efficient of conservatism: 0.5	Good	Medium	Poor
e. Tree canopy	y as indicator of animal habitat:	Valuable		Neutral
f. Mature tree	s as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydro	phytic taxa observed:1	Good	Medium	Poor
h. Number of	indicator taxa: 0	Good	Medium	Poor

General assessment of adjacent land use / land cover in the area within 50 meters of the perimeter of the wetland site (indicate the % abundance of each type):

- Native Vegetation woodland
 Road / highway / railroad bed / parking lot
 Native Vegetation old field / scrub
 Industrial
- 0 Agricultural tilled 0 Residential single family
- 95 Agricultural pasture 0 Commercial or multifamily residential
- 0 Recreation green space, mowed

NWI Polygon # S6W005A	Data Reference# S6W005
see table on page one)	
ier 2: Individual Polygon: Preliminal o be completted on-site for each NWI polygon p	
1 Wetland Geomorphic Setting and Surface W	ater Flow (check one):
✓ Depressional Slope Riverine (within the river/stream ban	FloodplainLacustrine ks)
2 Presence of Standing Water:	
standing water normally present in the polygon	n? Yes
Is standing water is present, is the water gre	eater than 2 meters n depth? No
standing water normally present in an adjacent	t polygon? Yes
3 Apparent Hydroperiod (check one):	
✓ Permanently Flooded	Artificially Flooded
Seasonally Flooded	
Saturated (surface water seldom pres	sent)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mine	eralBoth Mineral and Organic Present
eep Marsh/Shallow Open Water 6 Disturbances of Hydrology (check all that ap	ply):
Ditching	✓_ Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	
7 Presence of Invasive Exotics (Score as: S = Sc	attered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	C Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.	e. seeps, wet slopes, floating mat):
one	
9 Presence of Special Community Types:	
Bog Fen	Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar,	Threatened or Endangered Species:
✓ None observed or known to be prese	n
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: V	Netland Quality Descriptions and check one):
Good Medium	√ Poor
	<u>- </u>

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

			ble Features that influence water quality and hydro		75 50	50.25 / <25
						50-25 <u>√</u> <25
			voody plant foliar coverage in the polygon			
An	noui	nt of (dead woody material on the soil surface nil	sc	attered	frequen
3a	.2 ۱	Nate	r Quality Protection Questions:			
1.	Y	N	Does the wetland have a significant amount of vegeta woody plant) density to potentially uptake dissolved n		fically herba	aceous and
2.	Y	N	Managed water (e.g. municipal or road stromwater dr industrial or municipal wastewater) is not discharged			
3.			If wetland in question is a depressional wetland answ	er 3a, in no	t, answer 3	Bb.
	Y	N	3a. Does the wetland have a shape or flow that allow			f suspended
	Y	N	materials before teh water reaches the center of t 3b. Is the position of the wetland in the landscape suc entering a surface body of water down gradient?			or filtered before
4.	Y	N	Does the wetland lack steep slopes, large impervious cropping, or areas with severe overgrazing within			
5.	Y	N	Are there recreational lakes, fishable or navigable wa down gradient in the local watershed?	tercourses,	or water s	upply sources
6.	Y	N	Is a vegetative buffer area or another wetland polygon be filtered) located upland and adjacent to the wetland area width and slope.			
			width of buffer area (in meters 100 approximate	e slope (per	cen 1	_
3a	.3 F	Flood	I and Stormwater Storage / Attenuation Questions:			
1.			If wetland in question is a depressional wetland answ	er 1a, in no	ot, answer 1	lb
1.	Υ	N	1a. Around the wetland is there a buffer strip of natur			
	Y	N	that will slow overland flow into the wetland? 1b. Is there a significant amount of microtopography to reduce the veolocity of the water leaving the wetland?	or vegetativ etland?	ve density v	vithin the wetland
2.	Y	N	Does the wetland lack man-made structure that would wetland (tiles, culverts, ditches)?	d speed the	flow of wa	ter from the
3.	Y	N	Is the flood potential high in the local watershed in wh flood damages)?	nich the wet	land is loca	ated (history of
4.	Y	N	Is the wetland located in a watershed where the majo impermeable, or is bedrock within two feet of the top			are claye and

Is the wetland located in a local watershed which has highly modified runoff conditions due

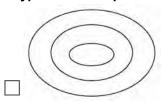
to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description

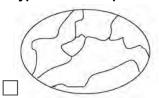
3b.1 Zonation and Interspersion:

- How may vegetation zones are evident in this wetland polygon? ______
 - 1b. If only one vegetation zone is evident, which best describes the site?
 - Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon.
 - Polygon composed of a single vegettation type with more or less uniform texture across the polygon.
- 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?

Type One Interspersion



Type Two Interspersion



3b.2 Dominant Plant Species: Vegetation Zone A

What % of the polygon does this vegetative zone occupy?

- 10 25%
- 25 50%
- 50 75%
- 75 90%
- >90%

Is there notable layering/stratification in this vegetation zone? No

Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Phalaris arundinacea

d.

b. Typha angustifolia

- e.
- C.
- f.

Dominant Shrub Species listed in order of relative abundance.

- a. _____
- c. _____
- b. _____
- .

Dominant Tree Species listed in order of relative abundance.

- a. _____
- с. _____
- b. _____
- d._____

Tree and shrub canopy in il separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

NWI Polygon # S6W005A	Data Referen	ce S6W005	
3b.2 Dominant Plant Species: Vegetation Zone I	3		
What % of the polygon does this vegetative zone occ	cupy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
c	f.		
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d.		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d		
Tree and shrub canopy: nil separate, seldon	touching 🗌 of	ten touching	e or less close
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about what wetland site).	nat adds to or de	tracts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone	;		
What % of the polygon does this vegetative zone occ	:upy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	on zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms			relative
a	d		
b	e		
c			
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldon			
Tree and shrub canopy nil separate, seldon Mature trees (>12" dbh): yes no			

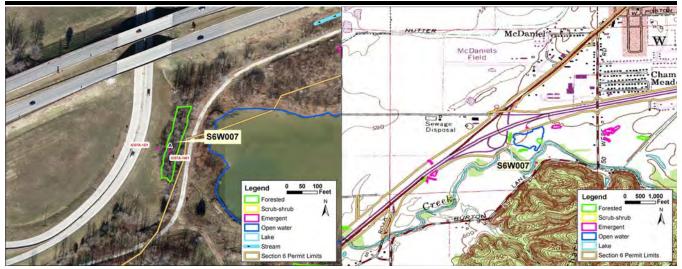
Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern In	diana numbers = C-c	coefficents	* = species with high conservatism)
Herbs: non-seed plants	Herbs:	wide-leafe	d monocots
horsetail, scouring rush spp. (Equis	etum) 2*arr	row arum (Pe	eltandra virginica) 6
*ferns: marsh shiled fern spp. (Dryc			o. (Sagittaria) 4
*cinnamon fern (Osmunda cinnamo	, •		(Arisaema dracontium) 6
*royal fern (Osmunda regalils) 8	· · · · · · · · · · · · · · · · · · ·		pit (Arisaema triphyllum) 4
sensitive fern (Onoclea sensibilis) 4		•	Pontederia cordata) 5
*other: species (if know		-	e (Symplocarpus foetidus) 8
marsh club moss (Selaginella apod	-	•	alla palustris) 10
Sphagnum moss spp. (Sphagnum)	10wat	ter piantain (Alisma plantago-aquatica) 2
Herbs: Ivs. floating or submergent	Herbs:	dicots - lvs	s. opposite/whorled
*bladderwort spp. (Utricularia) 10		edstraw spp.	(Gallium) 6
coontail (Ceratophyllum demersum	•		pp. (Bidens) 3
✓ duckweed spp. (Lemnaceae) 3			erbena hastata) 3
*pondweed spp. (Potamogeton) 8	· · · · · · · · · · · · · · · · · · ·		orium perfoliatum) 4
curlyleaf pondweed (Potamogeton	. ,		. (Lycopus) 5
*water lily (Nymphaea tuberosa) 6	· · · · · · · · · · · · · · · · · · ·	arweed spp.	•
water shield (Brasenia schreberi) 4			ium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6	· · · · · · · · · · · · · · · · · · ·		ehmeria cylindrica) 3
Hartan I. a. Caracteria and I. a. a. a. a.	· · · · · · · · · · · · · · · · · · ·	• •	edicularis lanceolata) 6
Herbs: Ivs. floating or submergent			Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea *sundew spp. (Drosera) 10			(Ambrosia trifida) 0 pocynum cannabinum) 2
suridew spp. (Drosera) To			spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless mon			. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10			/ (Rhexia virginica) 5
blueflag iris (Iris virginica) 5			edge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenople			simachia nummularia) 0
*bur reed spp. (Sparganium) 9			spp. (Mimulus) 4
✓ cat-tail spp. (Typha) 1		tle (Urtica pr	
*cotton grass spp. (Eriophorum) 10	· · · · · · · · · · · · · · · · · · ·		fe (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate t			insonia canadensis) 8
number of species		,	spp. (Hypericum/Triandeum) 8
a. *wild rice (Zizania aquatica) 10	· · · · · · · · · · · · · · · · · · ·		Helianthus) 4
b. most natuve perennial grass spr	. 4:*sw	vamp loosest	trife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada b	uepoint,swa	amp milkwee	ed (Asclepias incarnata) 4
foxtail (Alopecrus); other			Ammania Rotala) 2
✓ c. introduced grass spp. 0:reed car			. (Chelone) 8
grass (Phalaris, reed (Phragmites),		•	Clematis virginiana) 3
annual grasses such as annual fox		•	(Ludwigia palustris) 3
(Setaria) and barnyard grass (Echir		iged loosestr	rife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 s			
*additional = 8			ots - Ivs. alternate or basal and
nutsedge spp. (Cyperus) 2	· · · · · · · · · · · · · · · · · · ·		ower (Campanula americana) 4
*orchid spp. 10; species (if know _		•	aster (Aser puniceus) 7
rush spp. (Juncus) 4 sedge spp. (Carex) 1 sp. = 3			er (Aster umbellatus) 8 . (e.g. New England, panicled as
*spiderlily (Hymenocallis occidental sweet flag (Acorus calamus) 0	· —		san (Rudbeckia fulgida) 8 (Lobelia cardinalis) 4
*3-way sedge (Dulichium arundinad		ess spp. (Car	•
*twig rush (Cladium mariscoides) 1			mp, water, pale (Rumex) 4
*umbrella sedge (Fuirena squarros			(Alliaria petiolata) 0
wild hyacinth (Camassia scilloides)		,	(Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9	90%		· · · · · · · · · · · · · · · · · · ·

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	(
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniona) o	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - Ivs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	poison sumac (titlus vernix) to
*buttercup spp.: cursed b., hooked b., swamp	Trace leaves simple and apposite
b.(Ranunculus) 6	Trees - leaves simple and opposite red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	· · · · · · · · · · · · · · · · · · ·
*cowbane (Oxypolis rigidior) 7	✓ silver maple (Acer saccharinum) 1
	Trace leaves simple and alternate
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and Apios) 5	*alder, speckled (Alnus rugosa) 9
	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
01 - 1 - 1 - 1 - 1 - 1 - 1 - 1	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwood, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W007



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 Morgan County: Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R₁E **Ecoregion:** Range: 8 **Natural Region:** Highland Rim Section: SE Size of wetland complex (acres): 0.1721 Quarter:

USACE Jurisdiction Yes Latitude: 39.402443

IDEM Jurisdiction: Yes Longitude: -86.444983

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W007A	Floodplain Forest	PFO	0.17	fair	fair	fair	RPA	0.01	4.1%

This site is classified as a PFO wetland, 0.172 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.065 acre and temporarily impact 0.107 acre of this wetland. This wetland showed 0% herbaceous cover, 20% sapling/shrub cover, and 50% woody plant cover. Dominant sapling/shrub species included Morus alba, Plantanus occidentalis, and Salix nigra. Dominant woody species included Plantanus occidentalis and Acer saccharinum. Hydrology is likely due to roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are all rated as fair based on InWRAP summaries for the site.



Polygon S6W007A

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W007A	City	/County: Morgan		Sampling Date: 10/20/2015
Applicant/Owner: INDOT/Lochumueller			State: Indiana	Sampling Point IC07A-1D1
Investigator(s): K. Lucier, M. Brendel	Sec	tion, Township, Ra	ange: Sec 8-T11N-R1E	
Landform (hillslope, terrace, etc.): broad valley		Local rel	ief (concave, convex, no	ne): concave
Slope (%): 2-6 Lat: 39.402384	Long	: -83.445141		Datum: GCS NAD83
Soil Map Unit Name Whitaker loam			NWI classi	fication: upland
Are climatic/hydrologic conditions on the site typical for th	is time of year?	Yes X No	(If no, explain Re	emarks.)
Are Vegetation , Soil or Hydrology sig	-			present? Yes X No:
Are Vegetation , Soil or Hydrology n			ded, explain answers in	
SUMMARY OF FINDINGS - Attach site map show			•	,
Hydrophytic Vegetation Present? Yes X	No		<u> </u>	
	No X	Is the Sample	d Area	
Wetland Hydrology Present? Yes	No X	within a Wetla	and? Yes	NoX
Remarks:		1		
VEGETATION - Use scientific names of plants				
T Ot ((Diet Size) 20! radius		minant Indicator	Dominance Test wor	ksheet:
Tree Stratum (Plot Size: 30' radius) 1. Ulmus americana	% Cover Spo	ecies? Status Yes FACW	Number of Dominant S	
2		Tes TACW	That Are OBL, FACW,	, or FAC: <u>3</u> (A)
3.			Total Number of Domi Species Across All Str	
4.			Percent of Dominant S	
5.			That are OBL, FACW,	
	30 = To	otal Cover		
Sapling/Shrub Stratum (Plot Size: 15' radius)			Prevalence Index wo	orksheet:
1. Morus alba	10	Yes FAC	Total % Cover o	
2			OBL species FACW species	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
3.			· -	$ \frac{30}{90} $ $ x 2 = \frac{60}{270} $ $ x 3 = \frac{270}{270} $
4			·	25 x 4 = 100
5		otal Cover	UPL species	0 x 5 = 0
Herb Stratum (Plot Size: 5' radius)		otal Covel	Column Totals: 1	145 (A) <u>430</u> (B)
1. Poa pratensis	80	Yes FAC	Prevalence Ind	lex = B/A = 2.97
2 Schedonorus pratensis	25	Yes FACU		
3.			Hydrophytic Vegetati	
4				ydrophytic Vegetation:
5			X 2-Dominance Test X 3-Prevalence Index	
6			l 	daptations (Provide supporting
7.			data in Remarks or	r on a separate sheet)
8			_	phytic Vegetation ¹ (Explain)
9			¹ Indicators of hydric so be present, unless dis	oil and wetland hydrology must
	105 = To	otal Cover	be present, unless dis	turbed or problematic
Vine Stratum (Plot Size: 15' radius)			Uniday S. C.	
1			Hydrophytic Vegetation	
2				'es X No
	0 = To	otal Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)		•	
·				

SOIL Sampling Point IC07A-1D1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	ıre		Remarks	3
0-5	10YR4/3	100					silt lo	am		loose mate	rial
5-16	10YR4/3	100					silt loa	am —		gravelly	
										<u> </u>	
•	Concentration, D= De	epletion, RM	<u> </u>		red or Coa			Indiactors	for Prob	Pore Lining, Note that the blematic Hydrox (A16)	
Histic E Black H Hydrogo Stratifie 2 cm M	ipipedon (A2) listic (A3) en Sulfide (A4) id Layers (A5) uck (A10) ed Below Dark Surfac	·ο (Δ11)	Sand Stripp Loam Loam Deple	y Redox (Seed Matrix y Mucky M y Gleyed I eted Matrix	S5) (S6) ⁄lineral (F1 Matrix (F2))	- - - -	Dark So Iron-Ma Very Sh	urface (S7 anganese nallow Da		F12)
Thick D Sandy I 5 cm M	ark Surface (A12) Mucky Mineral (S1) uck Peat or Peat (S3)	Deple		Surface (F	7)	;	wetland h	ydrology	ophytic vege must be pres or problemat	ent, unless
ctrictivo	1 //f - \										
	Layer (If observed)	•									
Type: <u>rc</u> Depth (ir	bad fill with gravel nches): 16 inches	•					Hyd	ric Soil pr	esent?	Yes	_ No _
Type: rc Depth (in	pad fill with gravel nches): 16 inches						Hyd	ric Soil pr	resent?	Yes	No
Type: rc Depth (in marks:	pad fill with gravel niches): 16 inches GY ydrology Indicators	:	ired: check all that	apply)			Hydi				
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat	pad fill with gravel nches): 16 inches	one is requ	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc	ained Lea Fauna (B1 natic Plants n Sulfide (Rhizosph	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	s (C3)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte	y Indicato e Soil Cra ge Patter eason Wa sh Burrow ition Visib d or Stres	ors (minimum acks (B6) ns (B10) ter Table (C2 s (C8) ile on Aerial I ssed Plants (I stion (D2)	of two requ
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	pad fill with gravel maches): 16 inches GY Vydrology Indicators dicators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) Proposits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations:	:: one is requ Imagery (Br e Surface (B	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or Other (Ex	ained Lea Fauna (B1 latic Planten Sulfide (Rhizosph e of Reduction Reduction For Reduction Redu	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	s (C3)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte	y Indicato e Soil Cra ge Patter eason Wa sh Burrow tion Visib d or Stres orphic Po	ors (minimum acks (B6) ns (B10) ter Table (C2 s (C8) ile on Aerial I ssed Plants (I stion (D2)	of two requ
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel	pad fill with gravel mehas): 16 inches GY ydrology Indicators dicators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) and Deposits (B2) at or Crust (B4) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations: ater Present?	one is required in the second	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or Other (Ex	ained Lea Fauna (B1 latic Plants n Sulfide (Rhizosph e of Reduc on Reduc con Reduc k Surface r Well Data cplain in R	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	s (C3)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte	y Indicato e Soil Cra ge Patter eason Wa sh Burrow tion Visib d or Stres orphic Po	ors (minimum acks (B6) ns (B10) ter Table (C2 s (C8) ile on Aerial I ssed Plants (I stion (D2)	of two requ
DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse aurface Water Table aturation	pad fill with gravel mehas): 16 inches GY ydrology Indicators dicators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) at or Crust (B4) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations: ater Present? Present? Yersent?	one is required in the second is second in the second in t	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc 7) Gauge or 38) Other (Ex	ained Lea Fauna (B1 latic Planten Sulfide (Rhizosph e of Reduction Reduction For Reduction Redu	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4) ed Soils (C	s (C3)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte Geome	y Indicato e Soil Cra ge Patter eason Wa sh Burrow ition Visib d or Stres orphic Pos leutral Te	ors (minimum acks (B6) ns (B10) ter Table (C2 rs (C8) ile on Aerial I ssed Plants (I stion (D2) st (D5)	of two requ
DROLO Petland H mary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Peld Obse rface W ater Tabl turation cludes c	pad fill with gravel mehas): 16 inches GY ydrology Indicators dicators (minimum of water (A1) ater Table (A2) ion (A3) Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int posits (B5) Int or Visible on Aerial (Interpretations) Interpretations: Interpretations: Interpretation of the present of the pres	Imagery (B) e Surface (B) es	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of 38) Other (Ex No X Depth No X Depth No X Depth	ained Lea Fauna (B1 latic Plants of Sulfide (Rhizosph e of Reduct on Reduct on Reduct ck Surface r Well Data kplain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) demarks)	4) ed Soils (C	6 (C3) 66)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte Geome	y Indicato e Soil Cra ge Patter eason Wa sh Burrow ition Visib d or Stres orphic Pos leutral Te	ors (minimum acks (B6) ns (B10) ter Table (C2 rs (C8) ile on Aerial I ssed Plants (I stion (D2) st (D5)	of two required of two require
DROLO Petland H mary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Peld Obse rface W ater Tabl turation cludes c	pad fill with gravel mehas): 16 inches GY Vydrology Indicators dicators (minimum of the Water (A1) ater Table (A2) ion (A3) Marks (B1) at or Crust (B4) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concavervations: ater Present? Yellogeners (Present? Yellogeners) apillary fringe)	Imagery (B) e Surface (B) es	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of 38) Other (Ex No X Depth No X Depth No X Depth	ained Lea Fauna (B1 latic Plants of Sulfide (Rhizosph e of Reduct on Reduct on Reduct ck Surface r Well Data kplain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) demarks)	4) ed Soils (C	6 (C3) 66)	Secondar Surface Draina Dry-Se Crayfis Satura Stunte Geome	y Indicato e Soil Cra ge Patter eason Wa sh Burrow ition Visib d or Stres orphic Pos leutral Te	ors (minimum acks (B6) ns (B10) ter Table (C2 rs (C8) ile on Aerial I ssed Plants (I stion (D2) st (D5)	of two required of two require

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W007A	City/County: M	lorgan	Sampling Date: <u>10/20/2015</u>
Applicant/Owner: INDOT/Lochumueller		State: Indiana	Sampling Point IC07A-1W1
Investigator(s): K. Lucier, M. Brendel	Section, Towns	ship, Range: Sec 8-T11N-R1E	
Landform (hillslope, terrace, etc.): broad valley		ocal relief (concave, convex, no	one): concave
Slope (%): 0-2 Lat: 39.402367	Long: -86.4450)31	Datum: GCS NAD83
Soil Map Unit Name Whitaker loam			ification: upland
Are climatic/hydrologic conditions on the site typical for	this time of year? Yes X	•	
Are Vegetation , Soil or Hydrology		Are "Normal Circumstances"	·
Are Vegetation, Soil or Hydrology		If needed, explain answers in	
	_		
SUMMARY OF FINDINGS - Attach site map sh		ations, transects, importar	it reatures, etc.
Hydrophytic Vegetation Present? Yes X	No Is the S	Sampled Area	
Hydric Soils Present? Yes X Wetland Hydrology Present? Yes X	110		X No
Remarks: The wetland feature represented by this d	ata point has been designated a	s PFO1 based on the Cowardir	ı et al. classification system.
VEGETATION - Use scientific names of plants	S		
	Absolute Dominant Ind	dicator Dominance Test wor	 rksheet:
Tree Stratum (Plot Size: 30' radius)	•	Status Number of Dominant	Species
1. Platanus occidentalis		That Are OBL, FACW	
2. Acer saccharinum		Total Number of Dom	
3. Acer negundo 4. Fraxinus pennsylvanica		Species Across All St	rata: <u>5</u> (B)
5. Ulmus americana		Percent of Dominant S FACW That are OBL, FACW	
5. Omias americana	50 = Total Cover	That are ODL, PACW	, or FAC: 100 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius		Prevalence Index wo	orksheet:
1. Morus alba	_/ 10 Yes	FAC Total % Cover of	of: Multiply by:
2 Platanus occidentalis		OBL species	0 x 1 = 0
3. Salix interior		FACW species	55 x 2 = 110
4.		FAC species	15 x 3 = 45
5.		FACU species	0 x 4 = 0
	20 = Total Cover	UPL species Column Totals:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Herb Stratum (Plot Size: 5' radius)			
1		Prevalence Inc	dex = B/A = 2.21
2		Hydrophytic Vegetat	tion Indicators:
3			lydrophytic Vegetation:
4 5.		X 2-Dominance Test	• • •
		X 3-Prevalence Inde	
· ·			daptations (Provide supporting
7 8.			or on a separate sheet) ophytic Vegetation ¹ (Explain)
9.		-	oil and wetland hydrology must
10.		be present, unless dis	
	0 = Total Cover		
Vine Stratum (Plot Size: 15' radius)		Hydrophytic	
1		Vegetation	
2		Present?	Yes X No
	0 = Total Cover		
Remarks: (Include photo numbers here or on a separ	rate sheet.)		

SOIL Sampling Point IC07A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12	10YR4/1	95	10YR4/6	5	С	М	silty clay lo	pam	very dry	
		epletion, R	M=Reduced Matrix,	CS=Cover	ed or Coa	ited San			=Pore Lining, M=Ma	
	I Indiactors:								oblematic Hydric S	oils ³
Histoso	` '			Gleyed M				Coast Prairie F		
1	pipedon (A2) listic (A3)			/ Redox (S ed Matrix (Dark Surface (se Masses (F12)	
	en Sulfide (A4)			ed Matrix (y Mucky M		`		•	Dark Surface (TF12)	
	d Layers (A5)			y Gleyed M					plain in Remarks)	
•	uck (A10)			ted Matrix		•	_	Outor Com (Exp	piani in resinance)	
-	ed Below Dark Surfac	e (A11)		c Dark Surf						
	ark Surface (A12)	, ,		ted Dark S		7)			drophytic vegetation	
Sandy I	Mucky Mineral (S1)		Redox	c Depression	ons (F8)		W		gy must be present, ι ed or problematic.	unless
5 cm M	uck Peat or Peat (S3	5)						disturbi	ed of problematic.	
-4-1-41	Layer (If observed)	:								
	• •									
Туре:	uches).						Hvdric	Soil present?	Yes X	No
Type: Depth (ir	nches):						Hydric	Soil present?	Yes X	No _
Type: Depth (ir marks:							Hydric	Soil present?	Yes X	No _
Type: Depth (in marks: DROLO etland H	GY ydrology Indicators						Hydric	Soil present?	Yes X	No _
Type: Depth (in marks: DROLO	GY ydrology Indicators		quired; check all that	apply)					Yes X	
Type: Depth (in marks:	GY ydrology Indicators dicators (minimum of		Water Sta	ained Leav	` '		<u>S</u>	econdary Indica	ators (minimum of tw	
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)		Water Sta Aquatic F	ained Leav auna (B13	3)		<u>S</u>	econdary Indica Surface Soil (Drainage Patt	ators (minimum of tw Cracks (B6) terns (B10)	
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3)		Water Sta Aquatic F True Aqu	ained Leav auna (B13 atic Plants	(B14)		<u>S</u>	econdary Indica Surface Soil (Drainage Patt Dry-Season V	ators (minimum of tw Cracks (B6) terns (B10) Vater Table (C2)	
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants Sulfide O	(B14) dor (C1)	ving Roo	<u>S</u> X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro	ators (minimum of tw Cracks (B6) terns (B10) Vater Table (C2) ows (C8)	vo requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)		Water State	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Liv	-	<u>S</u> X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image	vo requ
Type:Depth (in marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water State	ained Leav auna (B13 atic Plants a Sulfide O Rhizosphe	(B14) dor (C1) eres on Lived ed Iron (C	4)	<u>S</u> X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1)	vo requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water State	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	(B14) dor (C1) eres on Lived Iron (C ion in Tille	4)	Si X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Sti	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2)	vo requ
Type:Depth (in marks:	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one is rec	Water State	ained Leav auna (B13 atic Plants a Sulfide O Rhizosphe of Reduce	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7)	4)	Si X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str Geomorphic F	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2)	/o requ
Type:Depth (ir marks:	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is rec	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leav fauna (B13 atic Plants Sulfide On Rhizosphe of Reduce on Reducti k Surface ((B14) (B14) dor (C1) eres on Lived Iron (C don in Tille (C7) (D9)	4)	Si X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str Geomorphic F	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2)	/o requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one is rec	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leav fauna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reducti k Surface ((B14) (B14) dor (C1) eres on Lived Iron (C don in Tille (C7) (D9)	4)	Si X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str Geomorphic F	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2)	vo requ
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DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel etd Obse aurface Water Table aturation	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Y Present? Y	Imagery (I e Surface	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduce on Reducti k Surface (Well Data cplain in Re	(B14) (B14) dor (C1) eres on Lived Iron (C don in Tille (C7) (D9)	4) ed Soils (so X X 	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Str Geomorphic F	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2) Test (D5)	vo requ
Type:Depth (in marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? Present? y Applilary fringe)	Imagery (I e Surface es es	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leav fauna (B13 atic Plants n Sulfide Or Rhizosphe of Reduce on Reducti k Surface (Well Data cplain in Re (inches): (inches): (inches):	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9) emarks)	4) ed Soils (Sc X	econdary Indica Surface Soil (Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Sto Geomorphic F FAC-Neutral	ators (minimum of two Cracks (B6) terns (B10) Vater Table (C2) ows (C8) sibile on Aerial Image ressed Plants (D1) Postion (D2) Test (D5)	o requ
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I-69 Wetland Quality Assessment Profile

	Date Report Generated: 5/22/2018	Data reference # S6W007	Wetland Site S6W007	Date of site visit: 05/12/15	Total wetland area: 0.1721 acres
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Polygon Intormation	A 1000 M 100	
olygon ID	S6W007A	
olygon Size (acres)	0.17	
Wetland Community Type	FF	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	Z	
Special Community Type	Z	
Rare-Threatened-Endangered Species	Z	
Animal Habitat Measures		
Wetland size and connectivity	2	
Surrounding land use	2	
standing water	2	
Dead woody material	က	
onation and interspersion	_	
stratification	_	
Free canopy	က	
Mature trees		
Animal Habitat Measure Score (min = 8, max = 24)	17	
Animal Habitat Measure Rating	fair	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed	2	
Sonservatism rating	_	
Total hydrophytic taxa observed	2	
Number of indicator taxa	_	
Exotic species rating	က	
Sotanical Measure Score (min = 5 , max = 15)	6	
Botanical Measure Rating	fair	
Hydrology Measures		
Water quality protection (= no. of yes answers)	3	
·lood and storm water storage (= no. of yes answers)	4	
Site/Hydrology Score (min = 11, max = 33)	25	
Site/Hydrology Rating	fair	

In-WRAP Summary Sheet

Data Reference #: 56W007 Date of Site Visit: Tuesday, May 12, 2015 Tier 1 Summary: a. Total Wetland Area (acres): 0.1721 b. Wetland size and connectivity - contribution to animal habitat: Valuable More Favorable Favorable Low C. Surrounding land use - numerical rank (max. = 1): 0.40 d. Value surrounding area adds to animal habitat: Valuable Favorable Low Tier 2 SUMMARY: a. Indiana Wetland community type: Floodplain Forest b. Standing water - contribution to animal habitat: C. Disturbances to site: d. Exotic species rating: e. Special Hydrologic Conditions Observed: None f. Special Community Type: None g. Rare-Threatened-Endangered Species: h. Polygon Quality Descriptor: Tier 3A SUMMARY: a: Dead woody material as indicator of animal habitat: b. Water quality protection - numerical rank (6 max.): 3 Good Medium Poor Tier 3B SUMMARY: a. Zonation and interspersion as indicator of animal habitat: Valuable Favorable Neutral b. Stratification as indicator of animal habitat: Valuable Favorable Neutral c. Number of dominant plant taxa observed: 7 Good Medium Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral f. Mature trees as indicator of animal habitat: Valuable Favorable Neutral c. Number of dominant plant taxa observed: 7 Good Medium Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral f. Mature trees as indicator of animal habitat: Valuable Favorable Neutral f. Mature trees as indicator of animal habitat: Valuable Favorable Neutral g. Total hydrophytic taxa observed: 20 Good Medium Poor	Date Report Generated: Monday, July 30, 2018			
Date of Site Visit: Tuesday, May 12, 2015 Tier 1 Summary: a. Total Wetland Area (acres): 0.1721 b. Wetland size and connectivity - contribution to animal habitat:	Wetland Site Name: N/A			
Tier 1 Summary: a. Total Wetland Area (acres): 0.1721 b. Wetland size and connectivity - contribution to animal habitat: Valuable More Favorable Favorable C. Surrounding land use - numerical rank (max. = 1): 0.40 d. Value surrounding area adds to animal habitat: Valuable Favorable Low Tier 2 SUMMARY: a. Indiana Wetland community type: Floodplain Forest b. Standing water - contribution to animal habitat: C. Disturbances to site: d. Exotic species rating: e. Special Hydrologic Conditions Observed: None f. Special Community Type: None g. Rare-Threatened-Endangered Species: h. Polygon Quality Descriptor: Tier 3A SUMMARY: a: Dead woody material as indicator of animal habitat: b. Water quality protection - numerical rank (6 max.): 3 Good Medium Poor C. Flood and storm water storage - numerical rank (5 max 4 Good Medium Poor Tier 3B SUMMARY: a. Zonation and interspersion as indicator of animal habitat: b. Stratification as indicator of animal habitat: c. Number of dominant plant taxa observed: 7 Good Medium Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral Neutral Neutral Neutral Neutral Neutral Odo Medium Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral Neutral Neutral Neutral	Data Reference #: S6W007			
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b. Wetland size and connectivity - contribution to animal habitat: Valuable More Favorable Favorable Neutral c. Surrounding land use - numerical rank (max. = 1):	Tier 1 Summary:			
Valuable More Favorable Favorable Control Neutral Control Neut	a. Total Wetland Area (acres): 0.1721			
c. Surrounding land use - numerical rank (max. = 1):	b. Wetland size and connectivity - contribution to animal hab	itat:		
d. Value surrounding area adds to animal habitat: **Tier 2 SUMMARY:** a. Indiana Wetland community type: Floodplain Forest b. Standing water - contribution to animal habitat: c. Disturbances to site: d. Exotic species rating: e. Special Hydrologic Conditions Observed: None f. Special Community Type: None g. Rare-Threatened-Endangered Species: h. Polygon Quality Descriptor: a: Dead woody material as indicator of animal habitat: b. Water quality protection - numerical rank (6 max.): b. Water quality protection - numerical rank (5 max 4 Good Medium Poor **Tier 3B SUMMARY:** a. Zonation and interspersion as indicator of animal habitat: b. Stratification as indicator of animal habitat: c. Number of dominant plant taxa observed: 7 Good Medium Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral Neutral Neutral Neutral Neutral Neutral Neutral Poor d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Favorable Neutral	Valuable N	Nore Favorable	Favorable	Neutral
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d. Average coefficient of conservatism: 1.8 Good Medium Poor e. Tree canopy as indicator of animal habitat: Valuable Neutral f. Mature trees as indicator of animal habitat: Valuable Favorable Neutral g. Total hydrophytic taxa observed: 20 Good Medium Poor			Medium	
e. Tree canopy as indicator of animal habitat: f. Mature trees as indicator of animal habitat: g. Total hydrophytic taxa observed:	·			
f. Mature trees as indicator of animal habitat: g. Total hydrophytic taxa observed: 20 Good Medium Poor			ivicululii	
g. Total hydrophytic taxa observed: 20 Good Medium Poor	·		Favorable	
h Number of indicator taxa: 0 Good Medium Door	h. Number of indicator taxa: 0	Good	Medium	Poor

Wetland Site Name: N/A Ownership (if known): N/A USGS Topographic Quadrangle: Martinsville USGS Watershed map 14-Digit HUC: Indian Creek - Sand Creek

Identify each NWI Polygon within the Wetland Site (Polygon specific data)

NWI Polygon ID Number	Cowardin Classification	Polygon Size (acres)
S6W007A	PFO1	0.1721

1	7	Cita	Vicit.

1.2 Site Visit
Feam Members: Rusty Yeager & Neal Goffinet
Agency: Lochmueller Group
Date assessed: 5/12/2015 Time assessed: 7:13:00 PM
Weather conditions: Sunny
Note any unusual weahter events that may have influenced the current conditions within this wetland system (e.g. recent heay rains, an unusually dry season, an especially early spring etc.)
1.3 Wetland Size
Size of site under assessment: 0.1721
Size of wetland complex: 0.1721
1.4 Site Setting Degree of isolation from other wetlands or wetland complexes:
The site is connected upstream and downstream with other wetlands
✓ The site is only connected upstrrem with other wetlands
The site is only connected downstream with other wetlands

The wetland site is isolated

General assessment of adjacent land use / land cover in the area within 50 meters of the perimeter of

the wetland site (indicate the % abundance of each type): 0 Native Vegetation - woodland Road / highway / railroad bed / parking lot 50 Native Vegetation - old field / scrub 0 Industrial

0 Agricultural - tilled 0 Residential - single family

Other wetlands are nearby (within 0.25 mile) but not connected

0 Agricultural - pasture Commercial or multifamily residential

O Recreation - green space, mowed

IWI Polygon # S6W007A	Data Reference# S6W007
see table on page one)	
Tier 2: Individual Polygon: Preliminary A to be completted on-site for each NWI polygon prese	
.1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Flood Riverine (within the river/stream banks)	dplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	Yes
Is standing water is present, is the water greater	than 2 meters n depth? No
standing water normally present in an adjacent poly	ygon? <u>Yes</u>
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
Seasonally Flooded	·
Saturated (surface water seldom present)	Artificailly Drained
.4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon (a loodplain Forest .6 Disturbances of Hydrology (check all that apply):	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	Tryanology (explain).
.7 Presence of Invasive Exotics (Score as: S = Scatter	red, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
.8 Presence of Special Hydrologic Conditions (i.e. se	eps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mot Cond / Music Flate as Maril Cons
BogFen	Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thre	atened or Endangered Species:
None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wetla	and Quality Descriptions and check one):
Good Medium ✓	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

to existing development?

3а	.1 N	Notak	le Features that influence water quality and hydrology:
			erbaceouis plant cover (percentage) in the polygon 100-75 75-50 50-25 \checkmark <25
Es	tima	ated v	voody plant foliar coverage in the polygon
Ar	nour	nt of o	ead woody material on the soil surfacenilscatteredfrequen
3а	.2 V	Nate	Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.	Y	(N) (N)	 If wetland in question is a depressional wetland answer 3a, in not, answer 3b. 3a. Does the wetland have a shape or flow that allows for the settling out of suspended materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope. width of buffer area (in meters 10 approximate slope (percen 12
3a	.3 F	Flood	and Stormwater Storage / Attenuation Questions:
1.	(Ŷ) Y	N N	If wetland in question is a depressional wetland answer 1a, in not, answer 1b 1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland? 1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5	Ø	N	Is the wetland located in a local watershed which has highly modified runoff conditions due

3b.1 Zonation and Interspersion:	
1. How may vegetation zones are evid	ent in this wetland polygon?1
1b. If only one vegetation zone is e	vident, which best describes the site?
Polygon compoosed o	of amosaic of small vegetation patches, hummocks, or tussocks, es across the polygon.
Polygon composed of the polygon.	a single vegettation type with more or less uniform texture across
2. If more than one vegetation zone is closely represents the distribuion of	present in the polygon, which intersperision diagram most these zone?
Type One Interspersion	n Type Two Interspersion
3b.2 Dominant Plant Species: Vege	etation Zone A
What % of the polygon does this veget	ative zone occupy?
☐ 10 - 25% ☐ 25 - 50%	☐ 50 - 75%
Is there notable layering/stratification in	n this vegetation zone? No
	overing more than 10% of the area) listed in order of relative es that forms extensive monocultural patches).
a	d
b	e
	f

a.	Acer negunao	

c. Morus alba

b. Cornus sp.

Dominant Tree Species listed in order of relative abundance.

a. Acer saccharinum

c. Platanus occidentalis

b. Fraxinus pennsylvanica

d. Celtis occidentalis Tree and shrub canopy: nil separate, seldom touching forten touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

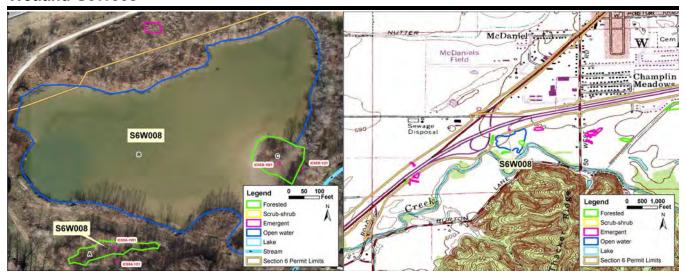
NWI Polygon # S6W007A	Data Reference	S6W007	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative about			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): yes no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern Indiana	numbers = C-coefficents * = species with high conservatism)
Herbs: non-seed plants	Herbs: wide-leafed monocots
horsetail, scouring rush spp. (Equisetum) 2	*arrow arum (Peltandra virginica) 6
*ferns: marsh shiled fern spp. (Dryopteris) 7	arrow-head spp. (Sagittaria) 4
*cinnamon fern (Osmunda cinnamomea) 9	*green dragon (Arisaema dracontium) 6
*royal fern (Osmunda regalils) 8	Jack-in-the-pulpit (Arisaema triphyllum) 4
sensitive fern (Onoclea sensibilis) 4	pickerel weed (Pontederia cordata) 5
*other: species (if know	*skunk cabbage (Symplocarpus foetidus) 8
marsh club moss (Selaginella apoda) 4	*water arum (Calla palustris) 10
Sphagnum moss spp. (Sphagnum) 10	water plantain (Alisma plantago-aquatica) 2
Herbs: Ivs. floating or submergent	Herbs: dicots - lvs. opposite/whorled
*bladderwort spp. (Utricularia) 10	*bedstraw spp. (Gallium) 6
coontail (Ceratophyllum demersum) 1	beggar's tick spp. (Bidens) 3
duckweed spp. (Lemnaceae) 3	blue vervain (Berbena hastata) 3
*pondweed spp. (Potamogeton) 8	boneset (Eupatorium perfoliatum) 4
curlyleaf pondweed (Potamogeton crispus) (
*water lily (Nymphaea tuberosa) 6	clearweed spp. (Pilea) 3
water shield (Brasenia schreberi) 4	cup plant (Silphium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6	false nettle (Boehmeria cylindrica) 3
Harter I a florida a la constant	*fen betony (Pedicularis lanceolata) 6
Herbs: Ivs. floating or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea (10)	giant ragweed (Ambrosia trifida) 0
*sundew spp. (Drosera) 10	✓ Indian hamp (Apocynum cannabinum) 2 Joe-pye weed spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless monocots	sloosestrife spp. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10	noosestifie spp. (Eysimachia) 0 meadow beauty (Rhexia virginica) 5
blueflag iris (Iris virginica) 5	mint spp. e.g. hedge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenoplectus) 5	✓ moneywort (Lysimachia nummularia) 0
*bur reed spp. (Sparganium) 9	monkey flower spp. (Mimulus) 4
cat-tail spp. (Typha) 1	nettle (Urtica procera) 1
*cotton grass spp. (Eriophorum) 10	purple loosestrife (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate types and	
number of species	St. John's wort spp. (Hypericum/Triandeum) 8
a. *wild rice (Zizania aquatica) 10	sunflower sp. (Helianthus) 4
b. most natuve perennial grass spp. 4:	*swamp loosestrife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada bluepoint,	swamp milkweed (Asclepias incarnata) 4
foxtail (Alopecrus); other	toothcup spp. (Ammania Rotala) 2
c. introduced grass spp. 0:reed canary	*turtlehead spp. (Chelone) 8
grass (Phalaris, reed (Phragmites),	virgin's bower (Clematis virginiana) 3
annual grasses such as annual foxtail	water purslane (Ludwigia palustris) 3
(Setaria) and barnyard grass (Echinochloa)	winged loosestrife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 sp. =2	
*additional = 8	Herbs (vines): dicots - lvs. alternate or basal and
nutsedge spp. (Cyperus) 2	American bellflower (Campanula americana) 4
*orchid spp. 10; species (if know	*asters: bristly aster (Aser puniceus) 7
rush spp. (Juncus) 4	flat-topped aster (Aster umbellatus) 8
	= 7 _√ other aster spp. (e.g. New England, panicled ast
*spiderlily (Hymenocallis occidentalis) 9 sweet flag (Acorus calamus) 0	*black-eyed Susan (Rudbeckia fulgida) 8 cardinal flower (Lobelia cardinalis) 4
*3-way sedge (Dulichium arundinaceum) 10	cardinal llower (Lobella cardinalis) 4 cress spp. (Cardamine) 4
*twig rush (Cladium mariscoides) 10	cress spp. (Cardamine) 4 √ dock spp.: swamp, water, pale (Rumex) 4
*umbrella sedge (Fuirena squarrosa) 10	garlic mustard (Alliaria petiolata) 0
wild hyacinth (Camassia scilloides) 5	golden ragwort (Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9	

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	owamp rood (recoa paraders) o
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	tamaraok (Lanx lanoina) 10
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	✓ ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	✓ boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniona) 5	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	✓ honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
	poison sumac (Knus vernix) 10
aven spp.: round, white (Geum) 2	Trees leaves simula and annesite
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	√ silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	Tours leaves simulated and alternate
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	✓ cottonwood, eastern (Populus deltoides) 1
✓ poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	✓ elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	✓ hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
<u> </u>	
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
Shrubs - leaves opposite or whorledbladdernut (Staphylea trifolia) 5	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3
Shrubs - leaves opposite or whorledbladdernut (Staphylea trifolia) 5buckthorn spp. (Rhamnus cathartica, R.	sycamore, American (Platanus occidentalis) 3
Shrubs - leaves opposite or whorled bladdernut (Staphylea trifolia) 5 buckthorn spp. (Rhamnus cathartica, R. frangula) 0	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3
Shrubs - leaves opposite or whorled bladdernut (Staphylea trifolia) 5 buckthorn spp. (Rhamnus cathartica, R. frangula) 0 buttonbush (Cephalanthus occidentalis) 5	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3
Shrubs - leaves opposite or whorledbladdernut (Staphylea trifolia) 5buckthorn spp. (Rhamnus cathartica, R. frangula) 0buttonbush (Cephalanthus occidentalis) 5dogwwod, red-osier (Cornus stolonifera) 4	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3 additional sp. = 7
Shrubs - leaves opposite or whorled bladdernut (Staphylea trifolia) 5 buckthorn spp. (Rhamnus cathartica, R. frangula) 0 buttonbush (Cephalanthus occidentalis) 5 dogwwod, red-osier (Cornus stolonifera) 4 *dogwood, blue-fruited or silky (Cornus obliqua)	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3 additional sp. = 7
Shrubs - leaves opposite or whorledbladdernut (Staphylea trifolia) 5buckthorn spp. (Rhamnus cathartica, R. frangula) 0buttonbush (Cephalanthus occidentalis) 5dogwwod, red-osier (Cornus stolonifera) 4	sycamore, American (Platanus occidentalis) 3 willow spp. (Salix) 1 sp. = 3 additional sp. = 7

Wetland S6W008



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 Morgan County: **T11N** Physiographic Region: Martinsville Hills Township: Interior Plateau R1E **Ecoregion:** Range: Natural Region: Highland Rim Section: 8

Size of wetland complex (acres): 8.1381 Quarter: SE

USACE JurisdictionYesLatitude:39.402288IDEM Jurisdiction:YesLongitude:-86.443205

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W008A	Floodplain Forest	PFO	0.18	fair	fair	good	RPA	0.00	0.0%
S6W008B	Shallow Open Water	PUB	7.65	fair	poor	good	RPA	0.11	1.4%
S6W008C	Floodplain Forest	PFO	0.31	fair	poor	good	RPA	0.00	0.0%



Polygon S6W008B



Polygon S6W008A



Polygon S6W008C

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W008A		City/County: Morg	jan	Sampling Date: <u>10/16/2015</u>
Applicant/Owner: INDOT/Lochumueller			State: Indiana	Sampling Point IC05A-1D1
Investigator(s): Rusty Yeager, Lincoln Oliver	s	Section, Township	o, Range: Sec 8-T11N-R1E	
Landform (hillslope, terrace, etc.): floodplain		Loca	al relief (concave, convex, no	one): undulating
Slope (%): 0-2 Lat: 39.401163	Lo	ong: -86.443755		Datum: NAD83
Soil Map Unit Name Water			NWI classi	ification: PUBGx
Are climatic/hydrologic conditions on the site typical for the	nis time of year?	Yes X	———No (If no, explain R∈	emarks.)
Are Vegetation , Soil or Hydrology si			Are "Normal Circumstances"	
Are Vegetation, Soil or Hydrology r			f needed, explain answers in	
SUMMARY OF FINDINGS - Attach site map sho				,
	No .	1	<u> </u>	,
	No X	Is the San	npled Area	
	No X	within a V	Vetland? Yes	No X
Remarks: Although hydrophytic vegetation is present, shydric soil indicators.	sufficient hydrol	ogy indicators do	not appear evident to meet	the hydrology criteria or develop
VEGETATION - Use scientific names of plants				
Tree Stratum (Plot Size: 30' radius)	Absolute % Cover	Dominant Indica Species? Statı		rksheet:
1. Salix nigra	40	Yes OB	Number of Dominant	
2. Acer saccharinum	15	Yes FAC		 '''
3. Platanus occidentalis	10	No FAC	Species Across All St	
4			Percent of Dominant S	
5			That are OBL, FACW	, or FAC: 100 (A/B)
(5) 45	65 =	Total Cover	Prevalence Index wo	orkshoot:
Sapling/Shrub Stratum (Plot Size: 15' radius)	EO	V		
1. Acer saccharinum	50	Yes FAC	OBL species	$\frac{\text{of:}}{41} \frac{\text{Multiply by:}}{\text{x 1} = 41}$
2			FACW species	85 x 2 = 170
34			FAC species	0 x 3 = 0
5.			FACU species	0 x 4 = 0
	50 =	Total Cover	UPL species	$\frac{0}{100}$ x 5 = $\frac{0}{000}$
Herb Stratum (Plot Size: 5' radius)			Column Totals:	126 (A) 211 (B)
1. Pilea pumila	10	Yes FAC	Prevalence Inc	dex = B/A = 1.67
2. Boehmeria cylindrica	1	No OB	Hydrophytic Vegetat	tion Indicators:
3			, , , ,	lydrophytic Vegetation:
4			X 2-Dominance Test	• • •
5			X 3-Prevalence Inde	
6 7				daptations 1(Provide supporting
7. 8.				or on a separate sheet) Ophytic Vegetation ¹ (Explain)
9.			-	oil and wetland hydrology must
10.			be present, unless dis	
		Total Cover		
Vine Stratum (Plot Size: 30' radius)			Hydrophytic	
1			Vegetation	
2			Present?	/es <u>X</u> No
	0 =	Total Cover		
Remarks: (Include photo numbers here or on a separat	e sheet.)			

SOIL Sampling Point IC05A-1D1

	ription: (Describe to Matrix	пе аерт	n needed to documr Re	et the indic		min th	e absence of indic	aiuis.)
Depth (Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
0-20	10YR4/3	99	5YR5/6	_ <u></u>	C	М	sandy loam	dry non-cohesive sand
0-20	10YR4/3	99	5YR5/6	1	С	М	sandy loam	dry non-cohesive sand
		· ———					- <u> </u>	
					 -			
		-						
		-						
· · · · · · · · · · · · · · · · · · ·	Concentration, D= De	epletion, F	RM=Reduced Matrix	, CS=Cove	ered or Coa	ated Sar		cation: PL=Pore Lining, M=Matrix
•	I Indiactors:							tors for Problematic Hydric Soils ³
Histosol					Matrix (S4))		ast Prairie Redox (A16)
	pipedon (A2)			dy Redox (k Surface (S7)
_	istic (A3) en Sulfide (A4)			ped Matrix	: (ວຣ) Mineral (F1	1		-Manganese Masses (F12) y Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)			er Soil (Explain in Remarks)
	uck (A10)			eted Matrix		,		or con (Explain in Normano)
	d Below Dark Surfac	ce (A11)		ox Dark Su				
	ark Surface (A12)	,			Surface (F	7)	³ Indic	cators of hydrophytic vegetation and
	Mucky Mineral (S1)		Rede	ox Depress	sions (F8)	,	wetlar	nd hydrology must be present, unless
5 cm Mi	uck Peat or Peat (S3	3)	_					disturbed or problematic.
Restrictive	Layer (If observed)	:						
Type:								
Depth (ir	iches):						Hydric Soi	I present? Yes No
HYDROLO								
	ydrology Indicators		auirod: abook all tha	t apply)				
	icators (minimum of	one is re						ndary Indicators (minimum of two requi
	Water (A1)			tained Lea	` ,			rface Soil Cracks (B6)
	ater Table (A2)			Fauna (B1	•			ainage Patterns (B10) y-Season Water Table (C2)
Saturati Water M	larks (B1)			uatic Plant en Sulfide (ayfish Burrows (C8)
	nt Deposits (B2)				neres on Liv	vina Ro		turation Visibile on Aerial Imagery (C9)
	posits (B3)				ced Iron (C	_		inted or Stressed Plants (D1)
	at or Crust (B4)				tion in Tille	-		omorphic Postion (D2)
	oosits (B5)			ck Surface	e (C7)		FA	C-Neutral Test (D5)
	on Visible on Aerial			or Well Dat				
Sparsel	y Vegetated Concav	e Surface	(B8) Other (E	Explain in R	Remarks)			
Field Obse	rvations:							
		es		n (inches):				
Water Tabl		es		n (inches):				
Saturation l (includes ca	Present? Y apillary fringe)	es	No X Depth	n (inches):			Wetland Hydrolog	gy Present? Yes No _>
Describe Re	corded Data (strear	n gauge, i	monitoring well, aeri	al photos, _l	previous in	spectio	ns), if available:	
Remarks:								
	flooding, but with n acent stream. No pr							le, but to proximity of large lake and de

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W008A	City/Cou	ınty: <u>Morgan</u>	Sampling Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller			State: Indiana Sampling Point IC05A-1W1
Investigator(s): Rusty Yeager, Lincoln Oliver	Section,	Township, Ra	nge: Sec 8-T11N-R1E
Landform (hillslope, terrace, etc.): old oxbow channel		Local reli	ef (concave, convex, none): floodplain depression
Slope (%): 0-6 Lat: 39.401279	Long: -8	6.443774	Datum: NAD83
Soil Map Unit Name Water			NWI classification: PUBGx
Are climatic/hydrologic conditions on the site typical for this time or	f vear? Yes	s X No	(If no. explain Remarks.)
Are Vegetation , Soil or Hydrology significantl			Normal Circumstances" present? Yes X No:
Are Vegetation, Soil or Hydrology naturally p			ded, explain answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sa			,
			,,,,
Hydrophytic Vegetation Present? Yes X No Hydric Soils Present? Yes X No	- ,	s the Sample	d Area
Wetland Hydrology Present? Yes X No	- ,	within a Wetla	nd? Yes X No
Remarks: Old oxbow feature meets all three wetland criteria. The based on the Cowardin et al. classification system.	ne wetland fea	ture represent	ed by this data point has been designated as PFO1
VEGETATION - Use scientific names of plants			
	olute Domina over Species		Dominance Test worksheet:
	10 Yes		Number of Dominant Species
	10 Yes		That Are OBL, FACW, or FAC:5 (A)
3. Salix nigra	10 Yes	OBL	Total Number of Dominant Species Across All Strata: 5 (B)
4.			Percent of Dominant Species
5.			That are OBL, FACW, or FAC: 100 (A/B)
3	30 = Total (Cover	
Sapling/Shrub Stratum (Plot Size: 15' radius			Prevalence Index worksheet:
1. Acer negundo	5 Yes	FAC	Total % Cover of: Multiply by:
2			OBL species 11 x 1 = 11 FACW species 20 x 2 = 40
3			FACW species 20 x 2 = 40 FAC species 10 x 3 = 30
4			FACU species 0 x 4 = 0
5	5 = Total (UPL species 0 x 5 = 0
Herb Stratum (Plot Size: 5' radius)		Sovei	Column Totals:41 (A)81(B)
1. Xanthium strumarium	5 Yes	FAC	Prevalence Index = B/A = 1.98
2. Bidens tripartita	1 No	OBL	
3.			Hydrophytic Vegetation Indicators:
4			1-Rapid Test for Hydrophytic Vegetation:
5			X 2-Dominance Test is >50% X 3-Prevalence Index is <=3 1
6			4-Morphological Adaptations (Provide supporting
7			data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation ¹ (Explain)
9			¹ Indicators of hydric soil and wetland hydrology must
10	6 = Total (Cover	be present, unless disturbed or problematic
Vine Stratum (Plot Size: 30' radius)			Hydrophytic
1			Vegetation
2			Present? Yes X No
	0 = Total 0	Cover	
Remarks: (Include photo numbers here or on a separate sheet.) Central portion of this old oxbow features is completely devoid of boundary.		erbaceous veg	etation. Vegetation is confirned for periphery of wetland

SOIL Sampling Point IC05A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc 2	Texture	Remarks
0-20	10YR4/1	90	2.5YR4/8	10	C	M	silt loam	
0-20	10YR4/1	90	2.5YR4/8	10		M	silt loam	
								-
			_					
ype: C=C	Concentration, D= De	pletion, F	RM=Reduced Matrix,	CS=Cove	red or Coa	ited Sand (cation: PL=Pore Lining, M=Matrix
dric Soi	l Indiactors:						Indiac	tors for Problematic Hydric Soils ³
Histoso	l (A1)		Sandy	Gleyed N	Matrix (S4))		ast Prairie Redox (A16)
	pipedon (A2)			Redox (k Surface (S7)
•	istic (A3)			ed Matrix				-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1	,		y Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2))	Oth	er Soil (Explain in Remarks)
	uck (A10)	(3.44)		ted Matrix				
	d Below Dark Surface	e (A11)			rface (F6)	_,	3 India	tf bud white vegetation and
•	ark Surface (A12)				Surface (F	7)		cators of hydrophytic vegetation and nd hydrology must be present, unless
-	Mucky Mineral (S1) uck Peat or Peat (S3)	`	_ Kedox	c Depress	sions (F8)		WOUG	disturbed or problematic.
	, ,	,						_
	Layer (If observed):							
Depth (ir	nches):						Hydric Soi	il present? Yes <u>X</u> No <u> </u>
	· <u></u>						Hydric Soi	il present? Yes X No
Depth (ir marks:	· <u></u>						Hydric Soi	il present? Yes X No _
Depth (ir marks:	GY ydrology Indicators		quired; check all that	apply)				
Depth (ir marks: DROLO Vetland Herimary Inc.	GY ydrology Indicators		quired; check all that Water Sta	11 37	ves (B9)		Secon	
Depth (ir marks: DROLO etland Helimary Incomes	GY ydrology Indicators licators (minimum of			ained Lea	` '		Secor	ndary Indicators (minimum of two requi
Depth (ir marks: DROLO Vetland H rimary Inc	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)		Water Sta	ained Lea auna (B1	3) ` ´		Secor Su Dra	ndary Indicators (minimum of two requi rface Soil Cracks (B6)
Depth (ir emarks: DROLO Vetland H rimary Inc Surface High Wa Saturati	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)		Water Sta Aquatic F True Aqu	ained Lea auna (B1) atic Plant	3) ` ´		<u>Secor</u> Su Dra Dry	ndary Indicators (minimum of two requi rface Soil Cracks (B6) ainage Patterns (B10)
Depth (in permarks: DROLO Vetland H rimary Inc Surface High Wa Saturati Water N Sedime	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water Sta Aquatic F True Aqu Hydroger	ained Lea auna (B1 atic Plant Sulfide C	3) s (B14) Odor (C1)	ving Roots	Secor Su Drs Dry Crs	ndary Indicators (minimum of two requi rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2)
Depth (in permarks: Depth (in permarks: Depth (in permarks: Depth (in permarks) Depth (in	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water Sta Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea auna (B1) atic Plants Sulfide O Rhizosph	3) s (B14) Odor (C1) eres on Liv ced Iron (C	(4)	Secor Su Dra Dry Cra (C3) Sa Stu	ndary Indicators (minimum of two requi rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visibile on Aerial Imagery (C9) unted or Stressed Plants (D1)
Depth (in permarks: DROLO Vetland Herimary Inc. Surface High Was Saturati Water Mater M	gy ydrology Indicators licators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In	ained Lear auna (B1: atic Plants Sulfide C Rhizosph of Reduct on Reduct	3) s (B14) Odor (C1) eres on Lived Iron (C	-	Secor Su Dra Dry Cra (C3)	ndary Indicators (minimum of two requirface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visibile on Aerial Imagery (C9) unted or Stressed Plants (D1)
Depth (in property of the prop	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is re	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc	ained Lea auna (B1: atic Plants Sulfide C Rhizosph of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Lived Iron (C etion in Tille	(4)	Secor Su Dra Dry Cra (C3)	ndary Indicators (minimum of two requi rface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visibile on Aerial Imagery (C9) unted or Stressed Plants (D1)
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WETLAND DETERMINATION DATA FORM - Midwest Region

	City/County: Morgan	Sampling Date: 10/16/2015
Applicant/Owner: INDOT/Lochumueller		State: Indiana Sampling Point IC05C-1D1
Investigator(s): Rusty Yeager, Lincoln Oliver	Section, Township, Ra	ange: Sec 8-T11N-R1E
Landform (hillslope, terrace, etc.): excavated lake/pond hillslope	Local re	lief (concave, convex, none): concave
Slope (%): 12+ Lat: 39.401992	Long: -86.442095	Datum: NAD83
Soil Map Unit Name Water	<u>. </u>	NWI classification: PUBGx
Are climatic/hydrologic conditions on the site typical for this time of y	ear? Ves X No	
Are Vegetation , Soil X or Hydrology significantly of		Normal Circumstances" present? Yes X No:
Are Vegetation , Soil or Hydrology naturally pro		eded, explain answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sam		,
Hydrophytic Vegetation Present? Yes X No		· · · · · · · · · · · · · · · · · · ·
Hydric Soils Present? Yes No X	Is the Sample	ed Area
Wetland Hydrology Present? Yes No X	within a Wetla	and? Yes NoX
Remarks: The hillslope above the toe of slope represented by this to result in hydric soil features.	data point exhibits hydro	phytic vegetation, but does not have sufficient hydrology
VEGETATION - Use scientific names of plants		
Absolu Tree Stratum (Plot Size: 30' radius) % Cov	te Dominant Indicator er Species? Status	Dominance Test worksheet:
1. Fraxinus pennsylvanica 20	Yes FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
2. Salix nigra 15	Yes OBL	
3. Liriodendron tulipifera 10	No FACU	Total Number of Dominant Species Across All Strata: 6 (B)
4		Percent of Dominant Species
5		That are OBL, FACW, or FAC:(A/B)
45	= Total Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot Size: 15' radius)		
1. Acer negundo 20	Yes FAC	Total % Cover of: Multiply by: OBL species 30 x 1 = 30
2. Cephalanthus occidentalis 15 3. Acer saccharinum 10	Yes OBL FACW	FACW species 35 x 2 = 70
4. Ulmus americana 5	No FACW	FAC species 32 x 3 = 96
5.		FACU species 10 x 4 = 40
50	= Total Cover	UPL species 0 x 5 = 0
Herb Stratum (Plot Size: 5' radius)	_	Column Totals:(A)(B)
1. Toxicodendron radicans 10	Yes FAC	Prevalence Index = B/A = 2.21
2		Hydrophytic Vegetation Indicators:
3		1-Rapid Test for Hydrophytic Vegetation:
4		X 2-Dominance Test is >50%
5		X 3-Prevalence Index is <=3 1
6		4-Morphological Adaptations ¹(Provide supporting
7		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
8		-
10.	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
10	= Total Cover	
Vine Stratum (Plot Size: 30' radius)		Lh. duan h. dia
1. Toxicodendron radicans 2		Hydrophytic Vegetation
2		Present? Yes X No
	= Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.) Buttonbush was present on lower portion of hill slope with the plot ju	ust above toe of slope to	wetland.

SOIL Sampling Point IC05C-1D1

(Inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Textur	·e	Remarks		
0-3	10YR3/2	100	Color (molet)	70 1360		silt loa		Homano		
3-20	10YR4/6	100				sand				
		· —— –								_
		· —— –								_
-	Concentration, D= De	pletion, RM	=Reduced Matrix,	CS=Covered or Coa	ated Sand			L=Pore Lining, M		2
-	I Indiactors:					lr		roblematic Hydr	ic Soils	3
_ Histoso	` '			y Gleyed Matrix (S4))	_	Coast Prairie	, ,		
_	pipedon (A2)			y Redox (S5)		_	Dark Surface		`	
_	listic (A3) en Sulfide (A4)			ed Matrix (S6) y Mucky Mineral (F1)	_		ese Masses (F12 Dark Surface (TF		
	d Layers (A5)			y Gleyed Matrix (F2	-	_	_	ιρίαιν σαπάσο (11 πρίαιη in Remarks		
_	uck (A10)			eted Matrix (F3)	,	_	_ 01101 0011 (2)	tpiani in i tomanic	')	
_	ed Below Dark Surfac	e (A11)		x Dark Surface (F6)						
_	ark Surface (A12)	, ,	Deple	ted Dark Surface (F	7)			ydrophytic vegeta		
Sandy I	Mucky Mineral (S1)		Redo	x Depressions (F8)		'		gy must be prese ped or problemati		S
5 cm M	uck Peat or Peat (S3)					distur	bed of problemati	U.	
atriativa	Layer (If observed)	:								
	• ` '									
Type: _						Hydri	ic Soil present	? Yes	No	
Type:						ace soils o			No natural na	ati
Type: Depth (in emarks: ne hillslope aterial. Se	e that defines the we					ace soils o	on the hillslope			
Type:	e that defines the we bill on the hillslope do	not stay sa				ace soils o	on the hillslope			
Type: Depth (in marks: e hillslope sterial. So	e that defines the we	not stay sat	turated and therefo	ore do not exhibit red		ace soils c c features	on the hillslope o		natural na	
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Type: Depth (in termarks: e hillslope atterial. So DROLO detland Horimary Inc Surface High W	e that defines the we bill on the hillslope do GY ydrology Indicators dicators (minimum of	not stay sat	turated and thereform ired; check all that Mater Sta	ore do not exhibit red		ace soils c c features	on the hillslope os. Secondary Indic Surface Soil Drainage Pat	cators (minimum Cracks (B6)	natural na	
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Type:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? Yes	inot stay sat	ired; check all that Water St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or Gauge or Other (Ex	apply) ained Leaves (B9) Fauna (B13) latic Plants (B14) n Sulfide Odor (C1) Rhizospheres on Li e of Reduced Iron (C ron Reduction in Tille ck Surface (C7) r Well Data (D9) cplain in Remarks)	ving Roots (4) ed Soils (C	ace soils of the contract of t	Secondary Indic Surface Soil Drainage Pat Dry-Season V Crayfish Burn Saturation Vi Stunted or St Geomorphic	cators (minimum de Cracks (B6) etterns (B10) etterns (C8) esibile on Aerial Intressed Plants (DP ostion (D2) etters (D5)	natural natural natural natural	qu
Type:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concaverations: ater Present? Ye e Present?	Imagery (B7 e Surface (E	ired; check all that Water St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of S8) Other (Ex	apply) ained Leaves (B9) Fauna (B13) latic Plants (B14) n Sulfide Odor (C1) Rhizospheres on Li e of Reduced Iron (C ron Reduction in Tillo ck Surface (C7) r Well Data (D9) xplain in Remarks) (inches): (inches):	ving Roots (4) ed Soils (C	ace soils of the control of the cont	Secondary Indic Surface Soil Drainage Pat Dry-Season V Crayfish Burn Saturation Vi Stunted or St Geomorphic FAC-Neutral	cators (minimum de Cracks (B6) etterns (B10) etterns (C8) esibile on Aerial Intressed Plants (DP ostion (D2) etters (D5)	natural	
Type:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concav ervations: ater Present? Present? Present? You apillary fringe)	Imagery (B7 e Surface (E	ired; check all that Water St. Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge of S8) Other (Ex	apply) ained Leaves (B9) Fauna (B13) latic Plants (B14) n Sulfide Odor (C1) Rhizospheres on Li e of Reduced Iron (C ron Reduction in Tillo ck Surface (C7) r Well Data (D9) xplain in Remarks) (inches): (inches):	ving Roots (4) ed Soils (C	ace soils of the control of the cont	Secondary Indic Surface Soil Drainage Pat Dry-Season V Crayfish Burn Saturation Vi Stunted or St Geomorphic FAC-Neutral	cators (minimum de Cracks (B6) etterns (B10) etterns (C8) esibile on Aerial Intressed Plants (DP ostion (D2) etters (D5)	natural	

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W008C		City/County	/: Morgan		Sampling Date: <u>10/16/2015</u>		
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling Point IC05C-1W1		
Investigator(s): Rusty Yeager, Lincoln Oliver	:	Section, To	wnship, Ra	nge: Sec 8-T11N-R1E			
Landform (hillslope, terrace, etc.): excavated lake/pond			Local reli	ef (concave, convex, no	ne): concave		
Slope (%): 0-2 Lat: 39.402036	L	ong: -86.4	42310		Datum: NAD83		
Soil Map Unit Name Water		NWI classification: PUBGx					
Are climatic/hydrologic conditions on the site typical for this tin	me of year	? Yes	X No	 (If no, explain Re	emarks.)		
Are Vegetation , Soil or Hydrology signifi	-	_			present? Yes X No:		
Are Vegetation , Soil or Hydrology natur				ded, explain answers in	· — —		
SUMMARY OF FINDINGS - Attach site map showin				• •	,		
Hydrophytic Vegetation Present? Yes X No							
Hydric Soils Present? Yes X No			he Sample				
Wetland Hydrology Present? Yes X No		with	hin a Wetla	nd? Yes	X No		
Remarks: Vegetation diversity is limited on this seasonally the dry season, surface/near surface saturation of							
VEGETATION - Use scientific names of plants							
Tree Stratum (Plot Size: 30' radius)		Dominant Species?	Indicator Status	Dominance Test wor	ksheet:		
1. Salix nigra	40	Yes	OBL	Number of Dominant S That Are OBL, FACW			
2. Acer saccharinum	10	Yes	FACW	Total Number of Domi	 ''		
3				Species Across All Str			
4				Percent of Dominant S			
5				That are OBL, FACW,	, or FAC: 100 (A/B)		
O 15 (O) 1 O) 1 (D) 4 Ci-s 4 Ci-s 4 Ci-s 4 Ci-s 5	50	= Total Cov	/er	Prevalence Index wo	orksheet:		
Sapling/Shrub Stratum (Plot Size: 15' radius) 1 Salix nigra	5	Yes	OBL	Total % Cover o			
··-		163			55 x 1 = 55		
2. 3.					10 x 2 = 20		
4.			-	FAC species	0 x 3 = 0		
5.				FACU species	0 x 4 = 0		
	5	= Total Cov	/er	UPL species Column Totals:	$ \begin{array}{c cccc} $		
Herb Stratum (Plot Size: 5' radius)							
1. Justicia americana	10	Yes	OBL	Prevalence Ind	lex = B/A = 1.15		
2				Hydrophytic Vegetat	ion Indicators:		
3.					ydrophytic Vegetation:		
4 5.				X 2-Dominance Test			
•				X 3-Prevalence Inde			
6 7				4-Morphological Address in Remarks as	daptations ¹(Provide supporting r on a separate sheet)		
8.					phytic Vegetation ¹ (Explain)		
9.				_	oil and wetland hydrology must		
10				be present, unless dis			
(D) (O) (O) ()	10	= Total Cov	/er				
Vine Stratum (Plot Size: 30' radius)				Hydrophytic			
1				Vegetation	'es X No		
2	0	= Total Cov	/er	Present? Y	<u> </u>		
Remarks: (Include photo numbers here or on a separate sh							
Other areas on the small peninsular island have greater cov	,	r willow thar	n that repres	sented at this data point.			

SOIL Sampling Point IC05C-1W1

Profile Desc	ription: (Describe to	the depth	needed to documnet	the indi	cator or co	nfirm th	e absence of	indicators.)
Depth	Matrix		Redo	x Featu	res		_	
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	2 Texture	e Remarks
0-20	10YR4/1	95	7.5YR4/6	5	C	М	silty clay lo	oam
							_	
							_	
							_	
¹ Type: C=C	concentration, D= De	pletion, R	M=Reduced Matrix, 0	CS=Cove	ered or Coa	ated Sar	nd Grains.	² Location: PL=Pore Lining, M=Matrix
Hydric Soi	I Indiactors:						In	diactors for Problematic Hydric Soils ³
Histosol	(A1)		Sandv	Gleved	Matrix (S4))		Coast Prairie Redox (A16)
	pipedon (A2)			Redox (•	_	Dark Surface (S7)
	istic (A3)			ed Matrix				Iron-Manganese Masses (F12)
Hydroge	en Sulfide (A4)			-	Mineral (F1	•		Very Shallow Dark Surface (TF12)
_	d Layers (A5)				Matrix (F2)	_	Other Soil (Explain in Remarks)
	uck (A10)			ed Matri	. ,			
	d Below Dark Surfac	e (A11)			ırface (F6)	· - \	3	Indicators of budroubutio variation and
	ark Surface (A12)				Surface (F	7)		Indicators of hydrophytic vegetation and vetland hydrology must be present, unless
	/lucky Mineral (S1) uck Peat or Peat (S3	1	Redox	Depress	sions (F8)		•	disturbed or problematic.
_	Layer (If observed)							
Type:	,	•						
Depth (ir							Hydrid	c Soil present? Yes X No
Remarks:								
Strong indic	ators of a depleted n	natrix were	e evident throughout t	he entire	e upper 20	inches	of the soil peo	don due to extended periods of
saturation/in	undation.		-					
HYDROLO	GY							
Wetland H	ydrology Indicators):						
			uired; check all that a	apply)				Secondary Indicators (minimum of two required)
-	Water (A1)		Water Sta		wes (RQ)			Surface Soil Cracks (B6)
	ater Table (A2)		Aquatic Fa				_	Drainage Patterns (B10)
X Saturati			True Aqua				_	Dry-Season Water Table (C2)
	larks (B1)		Hydrogen				_	Crayfish Burrows (C8)
	nt Deposits (B2)				neres on Li	ving Ro	ots (C3)	Saturation Visibile on Aerial Imagery (C9)
	posits (B3)		Presence	of Redu	ced Iron (C	(4)	` ' _	Stunted or Stressed Plants (D1)
Algal Ma	at or Crust (B4)		Recent Iro	n Reduc	ction in Tille	ed Soils	(C6)	Geomorphic Postion (D2)
	oosits (B5)		Thin Muck	Surface	e (C7)		_	_ FAC-Neutral Test (D5)
_	on Visible on Aerial				, ,			
Sparsel	y Vegetated Concav	e Surface	(B8) Other (Ex	plain in F	Remarks)			
Field Obse	rvations:							
		es		inches):				
Water Tabl		es X		inches):	10			
Saturation l (includes ca	Present? Yeapillary fringe)	es X	No Depth (inches):	0		Wetland Hyd	Irology Present? Yes X No
Describe Re	corded Data (stream	n gauge, m	nonitoring well, aerial	photos,	previous in	spectio	ns), if availab	ole:
Remarks:								
	er present around th	e peripher	y of this vegetative is	land bas	ed on curr	ent wate	er conditions.	Under wet season conditions the island area
can be inun	deated for extened p	eriod of tir	ne.					

I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/2018

Data reference # S6W008

Wetland Site | S6W008

Date of site visit: 05/12/15

Total wetland area: 7.6507 acres

Polygon ID S6W008A Polygon Size (acres) 0.18 Wetland Community Type FF Red Flag (Special) Indicators FF Special Hydrologic Confitions N Special Community Type N Rare-Threatened-Endangered Species N	S6W008A S6W008B S6W008C 0.18 7.65 0.31 FF SOW FF N N N N N N N N N N N N N N N N N N	S6W008C 0.31	
	28A S6W008E	0.31	
		z _	
		z _	
Animal Habitat Measures			
Wetland size and connectivity 3	8	8	
Surrounding land use 3	8	8	
Standing water 2	2	2	
Dead woody material	2	2	
Zonation and interspersion	-	_	
Stratification	-	_	
Tree canopy 2	2	2	
Mature trees 2	2	_	
Animal Habitat Measure Score (min = 8, max = 24)	16 14	15	
Animal Habitat Measure Rating	fair fair	. fair	
Botanical Measures (all except exotics dependent upon community type)			
Number of dominant plant taxa observed	3	_	
Conservatism rating	-	2	
Total hydrophytic taxa observed	3	_	
Number of indicator taxa	-	_	
Exotic species rating 2	2	9	
Botanical Measure Score (min = 5, max = 15)	10 7	8	
Botanical Measure Rating fair	fair poor	. poor	
Hydrology Measures			
Water quality protection (= no. of yes answers)	5 5	2	
Flood and storm water storage (= no. of yes answers)	4 4		
Site/Hydrology Score (min = 11, max = 33)	29 29	72	
Site/Hydrology Rating good	pood poo	boog	

In-WRAP Summary Sheet

Date Report Generated: Monday, July 30, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W008			
Date of Site Visit: Tuesday, May 12, 2015			
Tier 1 Summary:			
a. Total Wetland Area (acres): 8.1381			
b. Wetland size and connectivity - contribution to animal habi	tat:		
Valuable M	ore Favorable	Favorable	Neutral
c. Surrounding land use - numerical rank (max. = 1): 1.00			
d. Value surrounding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:	Polyg	on ID	56W008A
a. Indiana Wetland community type: Floodplain Forest			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site:			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species:			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.): 5	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max 4	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable	1	Neutral
c. Number of dominant plant taxa observed: 14	Good	Medium	Poor
d. Average coefficient of conservatism: 1.8	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed: 33	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

Tier 2 SUMMARY:	Polyg	on ID	S6W008B
a. Indiana Wetland community type: Deep Marsh/Shallow Ope	en Water		
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site:			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species: None			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.):5	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max 4	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed:1	Good	Medium	Poor
d. Average coefficient of conservatism: 0	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed:0	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

Tier 2 SUMMARY: Polygon ID		S6W008C	
a. Indiana Wetland community type: Floodplain Forest			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site:			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed:			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species: None			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.):5_	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max 3	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed:3	Good	Medium	Poor
d. Average coefficient of conservatism: 3.3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed:3	Good	Medium	Poor
h. Number of indicator taxa:0	Good	Medium	Poor

Tier 1: Assessment Overview

Wetland Site Name: N/A

Ownership (if known): N/A

USGS Topographic Quadrangle: Martinsville

USGS Watershed map 14-Digit HUC: Indian Creek - Sand Creek

Identify each NWI Polygon within the Wetland Site (Polygon specific data)

NWI Polygon ID Number	Cowardin Classification	Polygon Size (acres)
S6W008A	PFO1	0.1785
S6W008B	PUBHx	7.6507
S6W008C	PFO1	0.3089

1.2 Site Visit

Team Members: Rusty Yeager & Neal Goffi	net	t
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Agency: Lochmueller Group

Date assessed: 5/12/2015 Time assessed: 5:00:00 PM

Weather conditions: Sunny

Note any unusual weahter events that may have influenced the current conditions within this wetland system (e.g. recent heay rains, an unusually dry season, an especially early spring etc.)

1.3 Wetland Size

Size of site under assessment: 8.1381

Size of wetland complex: 8.1381

1.4 Site Setting

Degree of isolation from other wetlands or wetland complexes:

✓	$_$ The site is connected upstream and downstream with other wetlands
	The site is only connected upstrrem with other wetlands
	The site is only connected downstream with other wetlands
	Other wetlands are nearby (within 0.25 mile) but not connected
	The wetland site is isolated

General assessment of adjacent land use / land cover in the area within 50 meters of the perimeter of the wetland site (indicate the % abundance of each type):

100	Native Vegetation - woodland	0	$_{ extstyle }$ Road / highway / railroad bed / parking lot
0	Native Vegetation - old field / scrub	0	_ Industrial
0	_ Agricultural - tilled	0	Residential - single family
0	Agricultural - pasture	0	Commercial or multifamily residential

O Recreation - green space, mowed

NWI Polygon # S6W008A	Data Reference# S6W008
see table on page one)	
ier 2: Individual Polygon: Preliminary A o be completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Water	r Flow (check one):
DepressionalSlopeFloo Riverine (within the river/stream banks)	odplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	er than 2 meters n depth? No
standing water normally present in an adjacent po	lygon? <u>No</u>
.3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	
Saturated (surface water seldom present	t)Artificailly Drained
.4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon loodplain Forest .6 Disturbances of Hydrology (check all that apply)	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Tiles Dams	Hydrology (explain):
Road or Railroad Embankment	rrydrology (explain).
.7 Presence of Invasive Exotics (Score as: S = Scatte	ered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	F Reed Canary Grass
Purple Loosestrife	Other (list):
.8 Presence of Special Hydrologic Conditions (i.e. so	eeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mark Cond / March Flore - No. 10
BogFen	_Wet Sand / Muck Flats or Marl Seeps
.10 Presence of Known Federal or Indiana Rar, Thro	eatened or Endangered Species:
None observed or known to be presen	
None observed or known to be presen RTES Present (list):	
	and Quality Descriptions and check one):

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

to existing development?

3а	.1 N	lotak	ole Features that influence water quality and hydrology:				
			nerbaceouis plant cover (percentage) in the polygon 100-75 75-50 √ 50-25 <25				
			voody plant foliar coverage in the polygon ✓ 100-75 75-50 50-25 <25				
			dead woody material on the soil surface nil ✓ scattered frequent				
,	ioui						
3a	3a.2 Water Quality Protection Questions:						
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?				
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?				
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.				
	Y	N	3a. Does the wetland have a shape or flow that allows for the settling out of suspended				
	Y	N	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?				
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?				
5.	Ŷ	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?				
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.				
			width of buffer area (in meters 100 approximate slope (percen 1				
2-	2 5	-laaa	Land Starmurator Starge / Attanuation Overtions				
Зa	.э г	1000	I and Stormwater Storage / Attenuation Questions:				
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b				
	Y	(N)	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland?				
	Y	N	1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?				
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?				
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?				
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?				
5	\bigcirc	N	Is the wetland located in a local watershed which has highly modified runoff conditions due				

Tier 3b Individual Polygon: Rapid Vegetation Description				
3b.1 Zonation and Interspersion:				
1. How may vegetation zones are evident in this wetland polyg	gon?1			
1b. If only one vegetation zone is evident, which best descri	ribes the site?			
Polygon compoosed of amosaic of small vege heterogeneous textures across the polygon.	tation patches, hummocks, or tussocks,			
Polygon composed of a single vegettation type the polygon.	e with more or less uniform texture across			
2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?				
Type One Interspersion	Type Two Interspersion			
	(55)			

3b.2 Dominant Plant Species: Vegetation Zone A

wetland site).

What % of the polygon does this vegetative zone occupy?					
☐ 10 - 25% ☐ 25 - 50%	<u> </u>	75 - 90%	>90%		
Is there notable layering/stratification in this v	egetation zone? No	o			
Dominant Herbaceous Species (i.e., covering abundance. (Mark with an * any species that			f relative		
a. Solidago gigantea	d. <i>Helia</i>	anthus sp.			
b. Laportea canadensis	e. <i>Impa</i>	itiens capensis			
c. Phalaris arundinacea f. Cinna arundinacea					
Dominant Shrub Species listed in order of rel	ative abundance.				
a. Acer saccharinum	c. <u>Sam</u>	bucus nigra			
b. Populus deltoides	d. <u>Acer</u>	negundo			
Dominant Tree Species listed in order of rela					
a. Acer saccharinum c. Salix nigra					
b. Populus deltoides	d. <i>Plata</i>	anus occidentalis			
Tree and shrub canopy: nil separate, seldom touching for often touching more or less close					
Mature trees (>12" dbh): yes no					

Other remarks (include personal comments about what adds to or detracts from the quality of this

NWI Polygon # S6W008A	Data Reference	S6W008	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more that abundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): ☐ yes no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): ☐ yes ■ no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leafe	ed monocots
horsetail, scouri	ing rush spp. (Equisetum) 2	*arrow arum (F	Peltandra virginica) 6
*ferns: marsh sl	hiled fern spp. (Dryopteris) 7	arrow-head sp	p. (Sagittaria) 4
*cinnamon fern	(Osmunda cinnamomea) 9	*green dragon	(Arisaema dracontium) 6
*royal fern (Osn	nunda regalils) 8	Jack-in-the-pu	lpit (Arisaema triphyllum) 4
sensitive fern (C	Onoclea sensibilis) 4	pickerel weed	(Pontederia cordata) 5
*other: species	(if know	*skunk cabbag	je (Symplocarpus foetidus) 8
marsh club mos	ss (Selaginella apoda) 4	*water arum (0	Calla palustris) 10
Sphagnum mos	ss spp. (Sphagnum) 10	water plantain	(Alisma plantago-aquatica) 2
Herbs: Ivs. floatin	g or submergent	Herbs: dicots - lv	s. opposite/whorled
*bladderwort sp	p. (Utricularia) 10	√ *bedstraw spp	. (Gallium) 6
	phyllum demersum) 1	✓ beggar's tick s	pp. (Bidens) 3
duckweed spp.	(Lemnaceae) 3	blue vervain (E	Berbena hastata) 3
*pondweed spp	. (Potamogeton) 8	boneset (Eupa	torium perfoliatum) 4
curlyleaf pondw	reed (Potamogeton crispus)	0 <u>√</u> bugleweed spr	o. (Lycopus) 5
*water lily (Nym	phaea tuberosa) 6	✓ clearweed spp	. (Pilea) 3
water shield (Br	rasenia schreberi) 4	cup plant (Silp	hium perfoliatum) 4
*yellow spatterd	lock spp. (Nuphar) 6	false nettle (Bo	oehmeria cylindrica) 3
		*fen betony (P	edicularis lanceolata) 6
Herbs: Ivs. floatin	g or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (S	Sarracenia purpurea (10)	✓ giant ragweed	(Ambrosia trifida) 0
*sundew spp. ([Orosera) 10	Indian hamp (A	Apocynum cannabinum) 2
		Joe-pye weed	spp. (Eupatorium) 5
Herbs: linear-lvs.	or +/- leafless monocots	*loosestrife sp	p. (Lysimachia) 6
*beak rush spp	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		rsimachia nummularia) 0
*bur reed spp. (spp. (Mimulus) 4
cat-tail spp. (Ty		nettle (Urtica p	•
	op. (Eriophorum) 10		rife (Lythrum salicaria) 0
	amineae) - indicate types and		llinsonia canadensis) 8
number of species			t spp. (Hypericum/Triandeum) 8
	zania aquatica) 10	sunflower sp. (
	perennial grass spp. 4:	-	strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,		ed (Asclepias incarnata) 4
foxtail (Alopecru	-		(Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead sp	
	reed (Phragmites),		(Clematis virginiana) 3
	such as annual foxtail		e (Ludwigia palustris) 3
	arnyard grass (Echinochloa)	winged looses	trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2		
*additional :			cots - lvs. alternate or basal and
nutsedge spp. (lower (Campanula americana) 4
	species (if know		aster (Aser puniceus) 7
rush spp. (Junc	•		er (Aster umbellatus) 8
sedge spp. (Cal	· · · —		o. (e.g. New England, panicled ast
	enocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco			(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10		•
`	lium mariscoides) 10		amp, water, pale (Rumex) 4
	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Camassia scilloides) 5	golden ragwor	t (Senecio aureus) 4
yellow-eyed gr	ass (Xyris torta) 9		

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
✓ jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
✓ smartweed spp.: jumpseed, pinkweed,	owamp rood (reductio) o
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	tarriarack (Larix faricina) 10
sneezeweed (Helenium autumnale) 3	Troos loaves compound
✓ stinging nettle (Laportea canadensis) 2	Trees - leaves compound *ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	✓ boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	✓ silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
✓ hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	✓ cottonwood, eastern (Populus deltoides) 1
✓ poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
√ tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
✓ elderberry (Sambucus) 2	
v clucinelly (Sallibucus) 2	

NWI Polygon # S6W008B	Data Reference# S6W008
see table on page one)	
ier 2: Individual Polygon: Preliminary as to be completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Wate	r Flow (check one):
Depressional Slope Floor Riverine (within the river/stream banks)	odplain Lacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	Yes
Is standing water is present, is the water greate	er than 2 meters n depth? Yes
standing water normally present in an adjacent po	olygon? Yes
3 Apparent Hydroperiod (check one):	
✓ Permanently Flooded	Artificially Flooded
Seasonally Flooded	
Saturated (surface water seldom present	t)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.)/ Mineral	Both Mineral and Organic Present
eep Marsh/Shallow Open Water 6 Disturbances of Hydrology (check all that apply)):
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	
.7 Presence of Invasive Exotics (Score as: S = Scatte	ered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e. s	eeps, wet slopes, floating mat):
OIIC	
.9 Presence of Special Community Types:	
BogFen	_Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thr	eatened or Endangered Species:
✓ None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wet	land Quality Descriptions and check one):
Good Medium ✓	Poor
	<u> </u>

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

3a	1 N	lotal	ole Features that influence water quality and hydrology:
			nerbaceouis plant cover (percentage) in the polygon 100-75 75-50 50-25 √ <25
			woody plant foliar coverage in the polygon 100-75 75-50 50-25 ✓ <25
An	nour	nt of o	dead woody material on the soil surface ✓ nil scattered frequent
			· —— —— ·
3a	.2 V	Vate	r Quality Protection Questions:
1.	Υ	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.
	Y	N	3a. Does the wetland have a shape or flow that allows for the settling out of suspended
	(Y)	N	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before
			entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Ŷ	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 100 approximate slope (percen 0
3a	.3 F	lood	and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	Y	N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland?
	Y	N	1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5.	Y	N	Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

iler 3b individual Polygon: Rapid Veg	Jetation Description
3b.1 Zonation and Interspersion:	
1. How may vegetation zones are evident in this v	vetland polygon?1
1b. If only one vegetation zone is evident, which	ch best describes the site?
heterogeneous textures across th	
√ Polygon composed of a single ve the polygon.	gettation type with more or less uniform texture across
2. If more than one vegetation zone is present in a closely represents the distribuion of these zone	
Type One Interspersion	Type Two Interspersion
3b.2 Dominant Plant Species: Vegetation Zon	e A
What $\%$ of the polygon does this vegetative zone	occupy?
10 - 25%	50 - 75%
Is there notable layering/stratification in this veget	ation zone? No
Dominant Herbaceous Species (i.e., covering morabundance. (Mark with an * any species that form	
a	d
b	e
c	f
Dominant Shrub Species listed in order of relative	abundance.
a	C
b	d
Dominant Tree Species listed in order of relative a	abundance.
a. Salix interior	c
h	d

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

Mature trees (>12" dbh): yes

Tree and shrub canopy:

nil separate, seldom touching often touching more or less close

NWI Polygon # S6W008B	Data Reference	S6W008	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more that abundance. (Mark with an * any species that forms expecies the forms expecies that the forms expecies that forms expecies that expecies the forms expecies that forms expecies that the forms expecies that the forms expecies that expecies the forms expecies that the forms expecies that expecies the forms expecies that expecies the forms expecies that expecies the forms expecies the forms expecies that expecies the forms expecies the expecies that expecies the forms expecies the expecies that expe			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative about			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): ☐ yes ■ no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative about			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): ☐ yes ■ no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leafe	ed monocots
horsetail, scour	ing rush spp. (Equisetum) 2	*arrow arum (F	Peltandra virginica) 6
*ferns: marsh s	hiled fern spp. (Dryopteris) 7	arrow-head sp	p. (Sagittaria) 4
*cinnamon fern	(Osmunda cinnamomea) 9	*green dragon	(Arisaema dracontium) 6
*royal fern (Osn	nunda regalils) 8	Jack-in-the-pu	lpit (Arisaema triphyllum) 4
sensitive fern (0	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species		*skunk cabbag	ge (Symplocarpus foetidus) 8
marsh club mos	ss (Selaginella apoda) 4	*water arum (C	Calla palustris) 10
Sphagnum mos	ss spp. (Sphagnum) 10	water plantain	(Alisma plantago-aquatica) 2
Herbs: Ivs. floatin	g or submergent	Herbs: dicots - lv	s. opposite/whorled
*bladderwort sp	pp. (Utricularia) 10	*bedstraw spp	. (Gallium) 6
coontail (Cerato	ophyllum demersum) 1	beggar's tick s	pp. (Bidens) 3
duckweed spp.	(Lemnaceae) 3	blue vervain (E	Berbena hastata) 3
*pondweed spp	. (Potamogeton) 8	boneset (Eupa	torium perfoliatum) 4
curlyleaf pondw	veed (Potamogeton crispus) ()bugleweed spr	o. (Lycopus) 5
*water lily (Nym	phaea tuberosa) 6	clearweed spp	. (Pilea) 3
water shield (Br	rasenia schreberi) 4	cup plant (Silp	hium perfoliatum) 4
*yellow spattero	dock spp. (Nuphar) 6	false nettle (Bo	oehmeria cylindrica) 3
		*fen betony (P	edicularis lanceolata) 6
Herbs: Ivs. floatin	g or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (S	Sarracenia purpurea (10)	giant ragweed	(Ambrosia trifida) 0
*sundew spp. (I	Drosera) 10	Indian hamp (A	Apocynum cannabinum) 2
		Joe-pye weed	spp. (Eupatorium) 5
Herbs: linear-lvs.	or +/- leafless monocots	*loosestrife sp	p. (Lysimachia) 6
*beak rush spp	(Rhynchospora) 10	meadow beaut	ty (Rhexia virginica) 5
blueflag iris (Iris		mint spp. e.g. l	hedge nettle, mtn. mint, skullcap
bulrush spp. (Se	cirpus / Schoenoplectus) 5	moneywort (Ly	rsimachia nummularia) 0
*bur reed spp. ((Sparganium) 9	monkey flower	spp. (Mimulus) 4
cat-tail spp. (Ty	pha) 1	nettle (Urtica p	rocera) 1
	pp. (Eriophorum) 10		rife (Lythrum salicaria) 0
	amineae) - indicate types and	*richweed (Col	llinsonia canadensis) 8
number of species			t spp. (Hypericum/Triandeum) 8
	zania aquatica) 10	sunflower sp. (
	perennial grass spp. 4:	*swamp looses	strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,		ed (Asclepias incarnata) 4
foxtail (Alopecru			(Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead sp	
•	, reed (Phragmites),		(Clematis virginiana) 3
	such as annual foxtail		e (Ludwigia palustris) 3
	arnyard grass (Echinochloa)	winged looses	trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2		
*additional			cots - lvs. alternate or basal and
nutsedge spp. (lower (Campanula americana) 4
	; species (if know		aster (Aser puniceus) 7
rush spp. (Junc			er (Aster umbellatus) 8
sedge spp. (Ca	, · —		o. (e.g. New England, panicled ast
	nenocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco	•		(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10	cress spp. (Ca	•
	dium mariscoides) 10		amp, water, pale (Rumex) 4
	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Camassia scilloides) 5	golden ragwor	t (Senecio aureus) 4
*yellow-eyed gr	ass (Xyris torta) 9		

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	(
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstom (/ totallorilorilo ditorrillorila) o	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - Ivs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	poison sumae (rinas vernix) to
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	silver maple (Acer sacchannum) i
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, eastern (Populus deitoides) 1 cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
queen-or-trie prairie (i iliperidula rubra) 9 senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
water parsitips (Sium suave) 5	sweet gum (Liquidambar styraciflua) 4
Churcha lacusa annocita an urbanlad	
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

NWI Polygon # S6W008C	Data Reference# S6W008
see table on page one)	
ier 2: Individual Polygon: Preliminary A o be completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Wate	r Flow (check one):
Depressional Slope ✓ Floor Riverine (within the river/stream banks)	•
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	er than 2 meters n depth? No
standing water normally present in an adjacent po	olygon? No
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
Seasonally Flooded	<u> </u>
Saturated (surface water seldom presen	t)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon loodplain Forest .6 Disturbances of Hydrology (check all that apply)	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	
7 Presence of Invasive Exotics (Score as: S = Scatte	ered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e. s	seeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
BogFen	Wet Sand / Muck Flats or Marl Seeps
.10 Presence of Known Federal or Indiana Rar, Thr	eatened or Endangered Species:
✓ None observed or known to be presen	
<u> </u>	
.11 Wetland Polygon Quality Descriptor (see: Wet	
Good √ Medium	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

3a	1 1	Nota	ble Features that influence water quality and hydrol	loav.			
			herbaceouis plant cover (percentage) in the polygon		5 75-50	√ 50-25	<25
			woody plant foliar coverage in the polygon				<25
			dead woody material on the soil surfacenil		scattered		equen
3a	ı.2 \	Wate	er Quality Protection Questions:				
1.	Y	N	Does the wetland have a significant amount of vegeta woody plant) density to potentially uptake dissolved no			aceous and	l
2.	Y) N	Managed water (e.g. municipal or road stromwater dra industrial or municipal wastewater) is not discharged i				et,
3.			If wetland in question is a depressional wetland answe	er 3a, ir	n not, answer	3b.	
	Y	N	3a. Does the wetland have a shape or flow that allows			of suspende	d
	Y) N	materials before teh water reaches the center of the 3b. Is the position of the wetland in the landscape such entering a surface body of water down gradient?			or filtered b	efore
4.	Y) N	Does the wetland lack steep slopes, large impervious cropping, or areas with severe overgrazing within 1				/
5.	Y) N	Are there recreational lakes, fishable or navigable wat down gradient in the local watershed?	tercours	ses, or water :	supply sourc	es
6.	Y) N	Is a vegetative buffer area or another wetland polygon be filtered) located upland and adjacent to the wetland area width and slope.				
			width of buffer area (in meters 25 approximate	slope ((percen 0		
3a	ı.3 l	Floo	d and Stormwater Storage / Attenuation Questions:				
1.			If wetland in question is a depressional wetland answe	er 1a, ir	n not, answer	1b	
	Y	N	1a. Around the wetland is there a buffer strip of natura that will slow overland flow into the wetland?	al veget	tation (foreste	d, old field,	scrub)
	Y	N		or veget	tative density	within the w	etland
2.	Y) N	Does the wetland lack man-made structure that would wetland (tiles, culverts, ditches)?	d speed	the flow of w	ater from the	•
3.	Y) N	Is the flood potential high in the local watershed in while flood damages)?	ich the	wetland is loc	ated (history	y of
4.	Y	N	Is the wetland located in a watershed where the major impermeable, or is bedrock within two feet of the top of			are claye ar	nd
5.	Y) N	Is the wetland located in a local watershed which has to existing development?	highly r	modified runo	ff conditions	due

Tier 3b Individual Polygon: Rapid Vegetation Description 3b.1 Zonation and Interspersion: 1. How may vegetation zones are evident in this wetland polygon? 1b. If only one vegetation zone is evident, which best describes the site? Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon. Polygon composed of a single vegettation type with more or less uniform texture across the polygon. 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone? **Type One Interspersion** Type Two Interspersion

3b.2 Dominant Plant Species: Vegetation Zone A

wetland site).

What % of the polygon does this vegetative zone occupy?				
10 - 25% 25 - 50%	<u> </u>	75 - 90%	>90%	
Is there notable layering/stratification in this vegetation zone? No				
Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).				
a. <i>Justicia americana</i>	d			
b				
C				
Dominant Shrub Species listed in order of relative abundance.				
a	C			
b	d			
Dominant Tree Species listed in order of relative abundance.				
a. <i>Salix nigra</i>	C			
b. Acer saccharinum	d			
Tree and shrub canopy \square nil \square separate, seldom touching \blacksquare often touching \square more or less close				
Mature trees (>12" dbh): ☐ yes ■ no				

Other remarks (include personal comments about what adds to or detracts from the quality of this

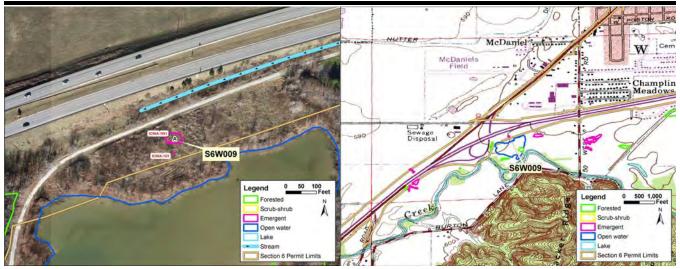
NWI Polygon # S6W008C	Data Reference	S6W008		
3b.2 Dominant Plant Species: Vegetation Zone B				
What % of the polygon does this vegetative zone occ	upy?			
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%	
Is there notable layering/stratification in this vegetation	n zone?			
Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).				
a	d			
b	e			
C	f			
Dominant Shrub Species listed in order of relative ab				
a	C			
b	d			
Dominant Tree Species listed in order of relative abundance.				
a	C			
b	d			
Tree and shrub canopy nil separate, seldom touching often touching more or less close				
Mature trees (>12" dbh): yes no				
Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).				
3b.2 Dominant Plant Species: Vegetation Zone C				
What % of the polygon does this vegetative zone occ	upy?			
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%	
Is there notable layering/stratification in this vegetation	n zone?			
Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).				
a	d			
b	e			
C				
Dominant Shrub Species listed in order of relative abundance.				
a	C			
b	d			
Dominant Tree Species listed in order of relative abundance.				
a	C			
b	d.			
Tree and shrub canopy nil separate, seldom				
Mature trees (>12" dbh): yes no				
Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).				

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern Indiana	numbers = C-coefficents * = species with high conservatism)	
Herbs: non-seed plants	Herbs: wide-leafed monocots	
horsetail, scouring rush spp. (Equisetum) 2	2*arrow arum (Peltandra virginica) 6	
*ferns: marsh shiled fern spp. (Dryopteris)		
*cinnamon fern (Osmunda cinnamomea) 9		
*royal fern (Osmunda regalils) 8	Jack-in-the-pulpit (Arisaema triphyllum) 4	
sensitive fern (Onoclea sensibilis) 4	pickerel weed (Pontederia cordata) 5	
*other: species (if know	*skunk cabbage (Symplocarpus foetidus) 8	
marsh club moss (Selaginella apoda) 4	*water arum (Calla palustris) 10	
Sphagnum moss spp. (Sphagnum) 10	water plantain (Alisma plantago-aquatica) 2	
Herbs: Ivs. floating or submergent	Herbs: dicots - lvs. opposite/whorled	
*bladderwort spp. (Utricularia) 10	*bedstraw spp. (Gallium) 6	
coontail (Ceratophyllum demersum) 1	beggar's tick spp. (Bidens) 3	
duckweed spp. (Lemnaceae) 3	blue vervain (Berbena hastata) 3	
*pondweed spp. (Potamogeton) 8	boneset (Eupatorium perfoliatum) 4	
curlyleaf pondweed (Potamogeton crispus	• , ,	
*water lily (Nymphaea tuberosa) 6	clearweed spp. (Pilea) 3	
water shield (Brasenia schreberi) 4	cup plant (Silphium perfoliatum) 4	
*yellow spatterdock spp. (Nuphar) 6	false nettle (Boehmeria cylindrica) 3	

Herbs: Ivs. floating or submergent	*gentian spp. (Gentiana Gentianopsis) 8	
*pitcher plant (Sarracenia purpurea (10)	giant ragweed (Ambrosia trifida) 0	
*sundew spp. (Drosera) 10	Indian hamp (Apocynum cannabinum) 2 Joe-pye weed spp. (Eupatorium) 5	
Herbs: linear-lvs. or +/- leafless monocots	sloosestrife spp. (Lupatorium) 5	
*beak rush spp (Rhynchospora) 10	meadow beauty (Rhexia virginica) 5	
blueflag iris (Iris virginica) 5	mint spp. e.g. hedge nettle, mtn. mint, skullcap	
bulrush spp. (Scirpus / Schoenoplectus) 5	moneywort (Lysimachia nummularia) 0	
*bur reed spp. (Sparganium) 9	monkey flower spp. (Mimulus) 4	
cat-tail spp. (Typha) 1	nettle (Urtica procera) 1	
*cotton grass spp. (Eriophorum) 10	purple loosestrife (Lythrum salicaria) 0	
Grasses (family Gramineae) - indicate types a		
number of species	St. John's wort spp. (Hypericum/Triandeum) 8	
a. *wild rice (Zizania aquatica) 10	sunflower sp. (Helianthus) 4	
b. most natuve perennial grass spp. 4:	*swamp loosestrife (Decodon verticillatus) 8	
cut-grass, manna-grass, Canada bluepoin	t,swamp milkweed (Asclepias incarnata) 4	
foxtail (Alopecrus); other	toothcup spp. (Ammania Rotala) 2	
c. introduced grass spp. 0:reed canary	*turtlehead spp. (Chelone) 8	
grass (Phalaris, reed (Phragmites),	virgin's bower (Clematis virginiana) 3	
annual grasses such as annual foxtail	water purslane (Ludwigia palustris) 3	
(Setaria) and barnyard grass (Echinochloa)winged loosestrife (Lythrum alatum) 5	
needle sedge spp. (Eleocharis) 1 sp. =2	Hele (Pers) Person Level (except and except and	
*additional = 8	Herbs (vines): dicots - Ivs. alternate or basal and	
nutsedge spp. (Cyperus) 2	American bellflower (Campanula americana) 4	
*orchid spp. 10; species (if know	*asters: bristly aster (Aser puniceus) 7	
rush spp. (Juncus) 4 sedge spp. (Carex) 1 sp. = 3 addition	flat-topped aster (Aster umbellatus) 8	
*spiderlily (Hymenocallis occidentalis) 9		
sweet flag (Acorus calamus) 0	*black-eyed Susan (Rudbeckia fulgida) 8 cardinal flower (Lobelia cardinalis) 4	
*3-way sedge (Dulichium arundinaceum) 1		
*twig rush (Cladium mariscoides) 10	dock spp.: swamp, water, pale (Rumex) 4	
*umbrella sedge (Fuirena squarrosa) 10		
wild hyacinth (Camassia scilloides) 5	golden ragwort (Senecio aureus) 4	
*yellow-eyed grass (Xyris torta) 9		

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix Iaricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	tamaraok (Eanx tanoma) To
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus riigra) 7 ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniona) 5	hickory, shellbark (Carya laciniosa) 8
Hawkey disease has been an alternate and	
Herbs: dicots - Ivs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	✓ silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	✓ willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 Morgan County: Physiographic Region: Martinsville Hills Township: **T11N** R₁E Interior Plateau **Ecoregion:** Range: 8 Natural Region: Highland Rim Section: SE Size of wetland complex (acres): 0.0301 Quarter:

USACE JurisdictionYesLatitude:39.403258IDEM Jurisdiction:YesLongitude:-86.443436

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W009A	Seasonally Flooded Basin	PEM	0.03	poor	poor	good	RPA	0.03	99.7%

This site is classified as a PEM wetland, 0.03 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.03 acre of this wetland. This wetland showed 35% herbaceous cover. Dominant herbaceous species for this wetland include Phalaris arundinacea and Juncus torreyi. Hydrology is likely due to backwater flooding from Indian Creek and roadside runoff from SR 37. Animal habitat, botanical diversity, and hydrology function are rated as poor, poor, and good respectively based on InWRAP summaries for the site.



Polygon S6W009A

Project/Site: I-69 Section 6 Wetland S6W009A		City/County	/. Morgan		Sampling	Date: 10/20/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling	Point IC06A-1D1
Investigator(s): K. Lucier		Section, To	wnship, Ra	nge: <u>Sec 8-T11N-R1E</u>		
Landform (hillslope, terrace, etc.): broad valley			Local reli	ef (concave, convex, no	ne): flat	
Slope (%): 0-1 Lat: 39.403123	L	ong: -86.4	43431		Datum: GC	CS NAD83
Soil Map Unit Name Princeton fine sandy loam				NWI classi	fication: PU	BGx
Are climatic/hydrologic conditions on the site typical for this	time of year	? Yes	X No	(If no, explain Re	emarks.)	
Are Vegetation , Soil or Hydrology sign		_		Normal Circumstances"		es No: X
Are Vegetation , Soil or Hydrology nat				ded, explain answers in		
SUMMARY OF FINDINGS - Attach site map showi			locations,	transects, importar	nt features	, etc.
Hydrophytic Vegetation Present? Yes X No		<u> </u>	<u> </u>	· ·		•
Hydric Soils Present? Yes No		ls t	he Sample	d Area		
Wetland Hydrology Present? Yes No	X	wit	hin a Wetla	nd? Yes	No	X
Remarks: Recently disturbed habitat lacks hydrology and	hydric soil i	ndicators.				
VEGETATION - Use scientific names of plants	A ba alusta	Daminant	Indicator			
Tree Stratum (Plot Size: 30' radius)		Dominant Species?	Status	Dominance Test wor		
1. Populus deltoides	15	Yes	FAC	Number of Dominant That Are OBL, FACW		5 (A)
2				Total Number of Dom	-	
3				Species Across All St	rata:	6 (B)
4				Percent of Dominant		(4/5)
5				That are OBL, FACW	, or FAC:	83 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius)	15	= Total Cov	/ei	Prevalence Index wo	orksheet:	
1. Fraxinus pennsylvanica	15	Yes	FACW	Total % Cover o	of:	Multiply by:
2. Populus deltoides	15	Yes	FAC	OBL species	0 x 1	= 0
3. Salix interior	10	Yes	FACW	FACW species	25 x 2	= 50
4.				FAC species	50 x 3	
5				FACU species UPL species	60 x 4 0 x 5	
	40	= Total Cov	/er		135 (A)	
Herb Stratum (Plot Size: 5' radius)	50		E4011			
Solidago altissima Symphyotrichum lanceolatum	50 20	Yes Yes	FACU FAC	Prevalence Inc	iex = B/A = _	3.26
3. Medicago sativa	10	No	FACU	Hydrophytic Vegetat	ion Indicato	ors:
4.			17.00	1-Rapid Test for H	ydrophytic V	egetation:
5.				X 2-Dominance Test		
6.				3-Prevalence Inde		Provide supporting
7				data in Remarks o		
8				Problematic Hydro	phytic Vege	tation ¹ (Explain)
9.				¹ Indicators of hydric se		
10	80	= Total Cov		be present, unless dis	sturbed or pr	oblematic
Vine Stratum (Plot Size: 15' radius)	- 00	- 10tal C0	/ C I			
1				Hydrophytic Vegetation		
2.					′es X	No
	0	= Total Cov	/er			
Remarks: (Include photo numbers here or on a separate s	sheet.)					

SOIL Sampling Point IC06A-1D1

Depth Manual New York (Indicators (Indicat		iption: (Describe Matri	x		Red	ox Feature	es								
Type: C=Concentration, D= Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 2 Location: PL=Pore Lining, M=Matrix Ptydric Soil Indiactors:	•			Color (Loc ²	Text	ure		Rem	narks		
Histoscol (A1) Sandy Gleyed Matrix (S4) Coast Problematic Hydric Soils 3 Histoscol (A1) Sandy Gleyed Matrix (S4) Coast Praine Redox (A16) Dark Surface (S7) Black Histic (A3) Stripped Matrix (S6) Ton-Manganese Masses (F12) Ton-Manganese Masses (F12) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (F12) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sond Mucky Mineral (S1) Redox Dark Surface (F7) Sond Mucky Mineral (S1) Redox Dark Surface (F7) Sond Mucky Mineral (S1) Redox Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Wetland Hydrology must be present, unless disturbed or problematic. Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Water Table (A2) Aquatic Fauna (B13) Driange Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Presence of Reduced Inn (C4) Sutrateo (Notal Stressed Plants (D1) Algal Mat or Crust (B4) Recent Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Direction Remarks Wetland Hydrology Present? Yes No X Depth (inches): Surface Water Present? Yes No X Depth (inches): Surface Water Present? Yes No X Depth (inches): Surface Water Present? Yes No X Depth (inches): Meter Table Present? Yes No X Depth (inches):	`														
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Project/Site: I-69 Section 6 Wetland S6W009A		City/County	y: <u>Morgan</u>	Sampling Date: 10/20/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana Sampling Point IC06A-1W
Investigator(s): K. Lucier		Section, To	ownship, Ra	nge: Sec 8-T11N-R1E
Landform (hillslope, terrace, etc.): broad valley	_		Local reli	ef (concave, convex, none): concave
Slope (%): 0-1 Lat: 39.403227	L	ong: -86.4	- 443461	Datum: GCS NAD83
Soil Map Unit Name Princeton fine sandy loam				NWI classification: PUBGx
Are climatic/hydrologic conditions on the site typical for this	time of year	? Yes	X No	(If no, explain Remarks.)
Are Vegetation , Soil or Hydrology signi	-	_		Normal Circumstances" present? Yes X No:
Are Vegetation , Soil or Hydrology natu				ded, explain answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing			locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No				
Hydric Soils Present? Yes X No		ls t	he Sample	d Area
Wetland Hydrology Present? Yes X No		wit	hin a Wetla	nd? Yes X No
Remarks: Data point represents vegetated shelf of linear has been designated as PEM1 based on the Co				
VEGETATION - Use scientific names of plants	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot Size: 30' radius)		Species?		
1				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5		= Total Co		That are OBL, FACW, or FAC:100 (A/B
Sapling/Shrub Stratum (Plot Size: 15' radius)		- Total Co	vei	Prevalence Index worksheet:
1 Salix interior	10	Yes	FACW	Total % Cover of: Multiply by:
2. Fraxinus pennsylvanica	5	Yes	FACW	OBL species0 x 1 =0
3.				FACW species 50 x 2 = 100
4.				FAC species 0 x 3 = 0
5				FACU species 0 x 4 = 0 UPL species 0 x 5 = 0
	15	= Total Co	ver	UPL species 0 x 5 = 0 Column Totals: 50 (A) 100 (B
Herb Stratum (Plot Size: 5' radius)				
1. Phalaris arundinacea	25	Yes	FACW	Prevalence Index = B/A = 2.00
2. Juncus torreyi	10	Yes	FACW	Hydrophytic Vegetation Indicators:
3				1-Rapid Test for Hydrophytic Vegetation:
				X 2-Dominance Test is >50%
5. 6.				X 3-Prevalence Index is <=3 1
7.				 4-Morphological Adaptations ¹(Provide supportin data in Remarks or on a separate sheet)
8.				Problematic Hydrophytic Vegetation ¹ (Explain)
9.				Indicators of hydric soil and wetland hydrology mus
10				be present, unless disturbed or problematic
(5) (6)	35	= Total Co	ver	
Vine Stratum (Plot Size: 15' radius)				Hydrophytic
1		-		Vegetation
2	0	= Total Co		Present? Yes X No
		- 10tai C0	v GI	
Remarks: (Include photo numbers here or on a separate s Also included Carex sp.	neet.)			

SOIL Sampling Point IC06A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-6	10YR4/1	95	10YR4/6	5	С	М	silty clay loa	am	very dry	
	-									
		-								
-	Concentration, D= De	epletion, R	M=Reduced Matrix,	CS=Cover	ed or Coa	ited Sand			=Pore Lining, M=Ma oblematic Hydric S	
Histoso			Sandy	/ Gleyed M	latrix (S4)			Coast Prairie R		
	pipedon (A2)			/ Redox (S				Dark Surface (
Black H	listic (A3)		Stripp	ed Matrix ((S6)				e Masses (F12)	
	en Sulfide (A4)			y Mucky M					ark Surface (TF12)	
	d Layers (A5)			y Gleyed M)	_'	Other Soil (Exp	olain in Remarks)	
	uck (A10)	(6.4.4)		ted Matrix						
	ed Below Dark Surface	ce (A11)		k Dark Sur ted Dark S		7\	3 1	ndicators of by	drophytic vegetatior	and
	ark Surface (A12) Mucky Mineral (S1)			ted Dark S k Depressi		7)			y must be present,	
-	uck Peat or Peat (S	3)	Redox	k Depressi	ons (Fo)				ed or problematic.	
	Layer (If observed)	<i>'</i>								
	• •									
Туре:							11 12	0 - 11	V V	
Type: Depth (ir							Hydric	Soil present?	Yes X	No _
Type: Depth (ir marks:	nches):						Hydric	Soil present?	Yes X	No _
Type: Depth (ir marks: DROLO	GY ydrology Indicators						Hydric	Soil present?	Yes X	No _
Type: Depth (ir marks: DROLO	GY ydrology Indicators		quired; check all that	apply)_					Yes <u>X</u>	
Type:	GY ydrology Indicators dicators (minimum of		Water Sta	ained Leav	` '		<u>Se</u>	econdary Indica Surface Soil C	ators (minimum of tw	
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)		Water Sta Aquatic F	ained Leav auna (B13	3)			econdary Indica Surface Soil C Drainage Patti	ators (minimum of two Cracks (B6) erns (B10)	
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3)		Water Sta Aquatic F True Aqu	ained Leav auna (B13 atic Plants	3) s (B14)			econdary Indica Surface Soil C Drainage Patto Dry-Season W	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2)	
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1)		Water Sta Aquatic F True Aqu Hydroger	ained Leav auna (B13 atic Plants n Sulfide O	B) s (B14) odor (C1)	ving Poo	<u>Se</u>	econdary Indica Surface Soil C Drainage Patt Dry-Season W Crayfish Burro	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) wws (C8)	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2)		Water State	ained Leav auna (B13 atic Plants Sulfide O Rhizosphe	3) s (B14) odor (C1) eres on Liv	•	Se — — — ts (C3)	econdary Indica Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water State	ained Leav fauna (B13 atic Plants n Sulfide O Rhizosphe e of Reduce	3) s (B14) dor (C1) eres on Liv ed Iron (C	4)	Se — — — ts (C3) — —	econdary Indica Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1)	vo requ
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DROLO etland H imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3)	one is rec	Water State	ained Leav fauna (B13 atic Plants n Sulfide O Rhizosphe e of Reduce	B) (B14) (dor (C1) (dor (C1) (eres on Lived Iron (C) (ion in Tille) (C7)	4)	Se ————————————————————————————————————	econdary Indica Surface Soil C Drainage Patt Dry-Season W Crayfish Burro Saturation Vis Stunted or Str	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2)	vo requ
DROLO Petland H Imary Inc Saturati Water M Sedime Drift De Algal M Iron De Inundat	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is red	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leav Fauna (B13 atic Plants Sulfide O Rhizosphe of Reduce on Reduct k Surface	B) s (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) a (D9)	4)	Se ————————————————————————————————————	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2)	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	one is red	— Water Str — Aquatic F — True Aqu — Hydroger — Oxidized — Presence — Recent Ir — Thin Muc B7) — Gauge or	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduce on Reduct k Surface	B) s (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) a (D9)	4)	Se ————————————————————————————————————	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2)	vo requ
Type:Depth (ir marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) int Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations:	one is red	Water Standard Frue Aquatic Foundation Frue Fo	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data xplain in Re	B) s (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) a (D9)	4)	Se ————————————————————————————————————	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2)	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavery ervations: ater Present? Y	Imagery (re Surface	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leaverauma (B13 atic Plants of Sulfide Of Reduction Red	B) s (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) a (D9)	4)	Se ————————————————————————————————————	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	ators (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2)	vo requ
DROLO Control Contr	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavery ervations: ater Present? Y	Imagery (Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data xplain in Re	B) s (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) a (D9)	4) ed Soils (Se — — — — — — — — — — — — — — — — — — —	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P	etors (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2) Fest (D5)	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? Present? y Present? apillary fringe)	Imagery (e Surface es es	Water Standard Mater Standard Mater Standard Mater Standard Mater Standard Material	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data xplain in Re (inches): (inches):	B) s (B14) dor (C1) eres on Liv ed Iron (C ion in Tille (C7) a (D9) emarks)	4) Ad Soils (Se	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P FAC-Neutral T	etors (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2) Fest (D5)	vo requ
Type:Depth (ir marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concavervations: ater Present? Present? Present? y Present? apillary fringe)	Imagery (e Surface es es	Water Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) (B8) Other (Ex No X Depth No X Depth No X Depth	ained Leav fauna (B13 atic Plants a Sulfide O Rhizosphe of Reduct on Reduct k Surface Well Data xplain in Re (inches): (inches):	B) s (B14) dor (C1) eres on Liv ed Iron (C ion in Tille (C7) a (D9) emarks)	4) Ad Soils (Se	econdary Indica Surface Soil C Drainage Patte Dry-Season W Crayfish Burro Saturation Vis Stunted or Str Geomorphic P FAC-Neutral T	etors (minimum of two Cracks (B6) erns (B10) /ater Table (C2) ows (C8) ibile on Aerial Image essed Plants (D1) Postion (D2) Fest (D5)	vo requ

I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/2018	ice# S6W009	600W9S	visit: 05/12/15	d area : 0.0301 acres
Report	Data reference #	Wetland Site	Date of site visit:	Total wetland area:

	S6W009A	
Polygon Size (acres)	0.03	
Wetland Community Type	SFB	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	z	
Special Community Type	z	
Rare-Threatened-Endangered Species	Z	
Animal Habitat Measures		
Wetland size and connectivity	_	
Surrounding land use	8	
Standing water	-	
Dead woody material	-	
Zonation and interspersion	_	
Stratification	_	
Tree canopy	2	
Mature trees	_	
Animal Habitat Measure Score (min = 8, max = 24)	11	
Animal Habitat Measure Rating	poor	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed	2	
Conservatism rating	_	
Total hydrophytic taxa observed	2	
Number of indicator taxa	-	
Exotic species rating	_	
Botanical Measure Score (min = 5 , max = 15)	7	
Botanical Measure Rating	poor	
Hydrology Measures		
Water quality protection (= no. of yes answers)	4	
Flood and storm water storage (= no. of yes answers)	4	
Site/Hydrology Score (min = 11, max = 33)	27	
Site/Hydrology Rating	poob	

In-WRAP Summary Sheet

Date Report Generated: Mond	ay, July 30, 2018			
Wetland Site Name: N/A				
Data Reference #: S6W009				
Date of Site Visit: Tuesday, Ma	ay 12, 2015			
Tier 1 Summary:				
a. Total Wetland Area (acres	s): <u>0.0301</u>			
b. Wetland size and connec	ctivity - contribution to animal habi	itat:		
	Valuable M	1ore Favorable	Favorable	Neutral
c. Surrounding land use - nu	umerical rank (max. = 1): 0.80	_		
d. Value surrounding area a	ndds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:		Polyg	on ID	6W009A
a. Indiana Wetland commu	nity type: Seasonally Flooded Bas	sin		
b. Standing water - contribu	ution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site: oth	ner			
d. Exotic species rating:		Good	Medium	Poor
e. Special Hydrologic Condi	tions Observed: None			
f. Special Community Type:	None			
g. Rare-Threatened-Endang	gered Species:			
h. Polygon Quality Descript	or:	Good	Medium	Poor
Tier 3A SUMMARY:				
a: Dead woody material as	indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection	- numerical rank (6 max.): 4	Good	Medium	Poor
c. Flood and storm water st	orage - numerical rank (5 max4	Good	Medium	Poor
Tier 3B SUMMARY:				
	on as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator		Valuable	ravorable	Neutral
c. Number of dominant pla		Good	Medium	Poor
d. Average coefficient of co		Good	Medium	Poor
e. Tree canopy as indicator		Valuable		Neutral
f. Mature trees as indicator		Valuable	Favorable	Neutral
g. Total hydrophytic taxa ol	oserved: 18	Good	Medium	Poor
h. Number of indicator taxa	a: 0	Good	Medium	Poor

General assessment of adjacent land use / land cover in the area within 50 meters of the perimeter of the wetland site (indicate the % abundance of each type):

0	Native Vegetation - woodland	0	Road / highway / railroad bed / parking lot
100	Native Vegetation - old field / scrub	0	Industrial
0	Agricultural - tilled	0	Residential - single family
0	Agricultural - pasture	0	Commercial or multifamily residential

____0 ___ Recreation - green space, mowed

IWI Polygon # S6W009A	Data Reference# S6W009
see table on page one)	
ier 2: Individual Polygon: Preliminary A to be completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Floor Riverine (within the river/stream banks)	odplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	r than 2 meters n depth? No
standing water normally present in an adjacent pol	lygon? <u>No</u>
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
✓ Seasonally Flooded	
Saturated (surface water seldom present	c)Artificailly Drained
.4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
easonally Flooded Basin 6 Disturbances of Hydrology (check all that apply):	:
Ditching	Culvert
Tiles	✓ Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	
.7 Presence of Invasive Exotics (Score as: S = Scatte	red, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
 Phragmities	S Reed Canary Grass
Purple Loosestrife	Other (list):
.8 Presence of Special Hydrologic Conditions (i.e. so	eeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
	Mot Cond / Much Flate on Maril Casas
BogFen	_Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Three	eatened or Endangered Species:
None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wetl	and Quality Descriptions and check one):
Good Medium ✓	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

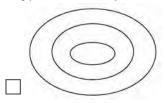
3a	a.1 I	Notal	ble Features that influence water quality and hydrology:
Es	stima	ated l	nerbaceouis plant cover (percentage) in the polygon ✓ 100-75 75-50 50-25 <25
Es	stima	ated v	woody plant foliar coverage in the polygon100-7575-5050-25 ✓ <25
			dead woody material on the soil surface nil scattered frequen
3a	ı.2 \	Wate	r Quality Protection Questions:
1.	Y) N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.	Ŷ Y	N N	If wetland in question is a depressional wetland answer 3a, in not, answer 3b.3a. Does the wetland have a shape or flow that allows for the settling out of suspended materials before teh water reaches the center of the wetland?3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y) N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y) N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 10 approximate slope (percen 2
3a	ı.3 I	Flood	d and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	Y) N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub) that will slow overland flow into the wetland?
	Y	N	Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y) N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y) N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5.	Y) N	Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description

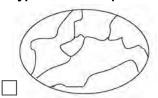
3b.1 Zonation and Interspersion:

- 1. How may vegetation zones are evident in this wetland polygon?
 - 1b. If only one vegetation zone is evident, which best describes the site?
 - Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon.
 - Polygon composed of a single vegettation type with more or less uniform texture across the polygon.
- 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?

Type One Interspersion



Type Two Interspersion



3b.2 Dominant Plant Species: Vegetation Zone A

What % of the polygon does this vegetative zone occupy?

- 10 25%
- 25 50%
- 50 75%
- **75 90%**
- >90%

Is there notable layering/stratification in this vegetation zone? No

Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Phyla lanceolata

d. Juncus dudleyi

b. Scirpus cyperinus

c. Juncus torreyi

f.

Dominant Shrub Species listed in order of relative abundance.

- a. _____
- c. _____
- b.
- .

Dominant Tree Species listed in order of relative abundance.

- a. <u>Salix interior</u>
- C. _____
- b. _____
- d. _____

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

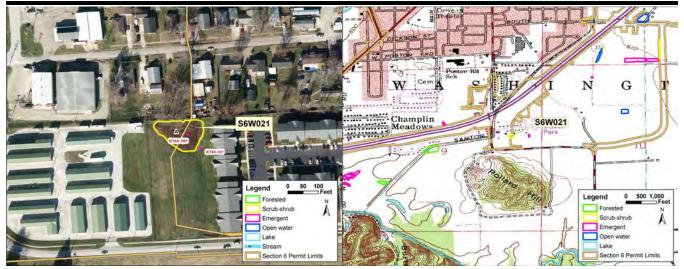
Tree and shrub canopy: nil separate, seldom touching often touching more or less close

NWI Polygon # S6W009A	Data Reference	S6W009	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more that abundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): ☐ yes no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): ☐ yes ■ no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed	plants	Herbs: wide-leaf	ed monocots
horsetail, scour	ing rush spp. (Equisetum) 2	*arrow arum (F	Peltandra virginica) 6
*ferns: marsh sl	hiled fern spp. (Dryopteris) 7	arrow-head sp	p. (Sagittaria) 4
*cinnamon fern	(Osmunda cinnamomea) 9	*green dragon	(Arisaema dracontium) 6
*royal fern (Osn	nunda regalils) 8	Jack-in-the-pu	lpit (Arisaema triphyllum) 4
sensitive fern (C	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species	(if know	*skunk cabbag	ge (Symplocarpus foetidus) 8
marsh club mos	ss (Selaginella apoda) 4	*water arum (0	Calla palustris) 10
Sphagnum mos	ss spp. (Sphagnum) 10	✓ water plantain	(Alisma plantago-aquatica) 2
Herbs: Ivs. floatin	g or submergent	Herbs: dicots - lv	s. opposite/whorled
*bladderwort sp	pp. (Utricularia) 10	*bedstraw spp	. (Gallium) 6
coontail (Cerato	phyllum demersum) 1	beggar's tick s	pp. (Bidens) 3
duckweed spp.	(Lemnaceae) 3	blue vervain (E	Berbena hastata) 3
*pondweed spp	. (Potamogeton) 8	boneset (Eupa	itorium perfoliatum) 4
curlyleaf pondw	reed (Potamogeton crispus)	bugleweed spr	o. (Lycopus) 5
*water lily (Nym	phaea tuberosa) 6	clearweed spp	
water shield (Br	rasenia schreberi) 4		hium perfoliatum) 4
*yellow spattero	lock spp. (Nuphar) 6		pehmeria cylindrica) 3
	, , , ,	*fen betony (P	edicularis lanceolata) 6
Herbs: Ivs. floatin	g or submergent	*gentian spp. (Gentiana Gentianopsis) 8
	Sarracenia purpurea (10)		(Ambrosia trifida) 0
*sundew spp. ([Drosera) 10		Àpocynum cannabinum) 2
、	•		spp. (Eupatorium) 5
Herbs: linear-lvs.	or +/- leafless monocots		p. (Lysimachia) 6
*beak rush spp	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		vsimachia nummularia) 0
*bur reed spp. (` ` ` `	spp. (Mimulus) 4
✓ cat-tail spp. (Ty)		nettle (Urtica p	
	op. (Eriophorum) 10		rife (Lythrum salicaria) 0
	amineae) - indicate types and		llinsonia canadensis) 8
number of species	,		t spp. (Hypericum/Triandeum) 8
a. *wild rice (Zi	zania aquatica) 10	sunflower sp. ((Helianthus) 4
	perennial grass spp. 4:		strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,	swamp milkwe	eed (Asclepias incarnata) 4
foxtail (Alopecru		-	(Ammania Rotala) 2
√ c. introduced g	rass spp. 0:reed canary	*turtlehead sp	
grass (Phalaris,	, reed (Phragmites),	virgin's bower	(Clematis virginiana) 3
annual grasses	such as annual foxtail	water purslane	e (Ludwigia palustris) 3
(Setaria) and ba	arnyard grass (Echinochloa)	winged looses	trife (Lythrum alatum) 5
needle sedge s	pp. (Eleocharis) 1 sp. =2		
*additional :	= 8	Herbs (vines): did	cots - Ivs. alternate or basal and
nutsedge spp. (Cyperus) 2	American bellf	lower (Campanula americana) 4
*orchid spp. 10;	; species (if know	*asters: bristly	aster (Aser puniceus) 7
✓ rush spp. (Junc	us) 4	flat-topped ast	er (Aster umbellatus) 8
sedge spp. (Ca	rex) 1 sp. = 3 🏒 additiona	= 7 other aster spr	o. (e.g. New England, panicled ast
*spiderlily (Hym	enocallis occidentalis) 9	*black-eyed Sເ	usan (Rudbeckia fulgida) 8
sweet flag (Aco	rus calamus) 0		(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10		
	dium mariscoides) 10		amp, water, pale (Rumex) 4
•	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Camassia scilloides) 5		t (Senecio aureus) 4
	ass (Xyris torta) 9 ُ	-	

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	(
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	✓ ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniona) 5	
Hawkey diagta, his basel or alternate and	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - Ivs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	-
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	✓ willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 05120201170070 14-digit HUC: County: Morgan Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R₁E **Ecoregion:** Range: 9 Natural Region: Highland Rim Section: ΝE Size of wetland complex (acres): 0.2086 Quarter:

USACE JurisdictionYesLatitude:39.406523IDEM Jurisdiction:YesLongitude:-86.42155

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W021A	Scrub-Carr	PSS	0.21	poor	fair	fair	RPA	0.11	50.3%

This site is classified as a PSS wetland, 0.21 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.042 acre and temporarily impact 0.063 acre of this wetland. This wetland showed 65% herbaceous cover and 55% sapling/shrub cover. Dominant herbaceous species for this wetland include Carex spp. and Scirpus cyperinus. Dominant sapling/shrub species included Salix interior. Hydrology is likely due to runoff from local roads and parking lots. Animal habitat, botanical diversity, and hydrology function are rated as poor, fair, and fair respectively based on InWRAP summaries for the site.



Polygon S6W021A

Project/Site: I-69 Section 6 Wetland S6W021A		City/Cour	nty: <u>Morgan</u>		Sampling Date: <u>04/06/2017</u>
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling Point IC16A-1D1
Investigator(s): R. Yeager, B. Reust		Section, 7	Γownship, Ra	ange: SEC 9, T11N, R1E	<u> </u>
Landform (hillslope, terrace, etc.): hillslope			Local reli	ief (concave, convex, nor	ne): convex
Slope (%): 5% Lat: 39.40639	ι	Long: <u>-86</u>	.421373		Datum: GCS NAD83
Soil Map Unit Name Martinsville loam, 0 to 2 percent slopes				NWI classif	fication: upland
Are climatic/hydrologic conditions on the site typical for this ti	me of year	r? Yes	X No	(If no, explain Re	marks.)
Are Vegetation X , Soil or Hydrology signif	icantly dist	turbed?	Are "N	Normal Circumstances" բ	oresent? Yes X No:
Are Vegetation, Soil or Hydrology natu	rally proble	ematic?	If nee	eded, explain answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ıg sampli	ing poin	t locations,	, transects, importan	t features, etc.
Hydrophytic Vegetation Present? Yes No	X				
Hydric Soils Present? Yes X No			the Sampled ithin a Wetla		No X
Wetland Hydrology Present? Yes No	<u>X</u>		Tunna Wena		
Remarks: This plot is in a mowed urban area.					
VEGETATION - Use scientific names of plants	A1 1.1	<u> </u>		T	
Tree Stratum (Plot Size: 30' radius)		Species	nt Indicator ? Status	Dominance Test work	
1.				Number of Dominant S That Are OBL, FACW,	
2		· -		Total Number of Domi	 -
3		· 		Species Across All Str	rata: 2 (B)
4				Percent of Dominant S That are OBL, FACW,	
5	0	= Total C	over	That are OBL, FACVV,	0 (A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius)		rotar o	0 7 0 1	Prevalence Index wo	rksheet:
1				Total % Cover o	f: Multiply by:
2.	_			OBL species	0 x 1 = 0
3		-		FACW species FAC species	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
4				· · · · · · · · · · · · · · · · · · ·	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
5					60 x 5 = 300
Herb Stratum (Plot Size: 5' radius)	0	= Total C	over	Column Totals: 1	00 (A) 460 (B)
1. Festuca sp.	60	Yes	UPL	Prevalence Ind	ex = B/A = 4.60
2. Trifolium pratense	35	Yes	FACU		
3. Taraxacum officinale	5	No	FACU	Hydrophytic Vegetati	
4				2-Dominance Test	ydrophytic Vegetation:
5				3-Prevalence Index	
6.			-	4-Morphological Ac	daptations 1(Provide supporting
78			-		r on a separate sheet) phytic Vegetation ¹ (Explain)
8. 9.			-	_	
10.				be present, unless dist	oil and wetland hydrology must turbed or problematic
	100	= Total C	over		
Vine Stratum (Plot Size: 30' radius)				Hydrophytic	
1.				Vegetation	/ N- V
2	0	= Total C	over	Present? Y	es No X
Demonstrate (Include the state of the state			- /	<u> </u>	
Remarks: (Include photo numbers here or on a separate sh	ieet.)				

SOIL Sampling Point IC16A-1D1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR4/3	100					silt loam	
5-24	10YR6/1	65	10YR5/6	35	С	М	sandy loa	m
Histoso Histic E Black H Hydrogo Stratifie 2 cm M	Concentration, D= De I Indiactors: I (A1) pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surfac		Sand Sand Stripp Loam Loam Z Deple	y Gleyed N y Redox (S ed Matrix y Mucky N	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2))	Ind — — —	² Location: PL=Pore Lining, M=Matrix liactors for Problematic Hydric Soils ³ Coast Prairie Redox (A16) Dark Surface (S7) Iron-Manganese Masses (F12) Very Shallow Dark Surface (TF12) Other Soil (Explain in Remarks)
Thick D	ark Surface (A12) Mucky Mineral (S1) uck Peat or Peat (S3		Deple		Surface (F	7)		ndicators of hydrophytic vegetation and etland hydrology must be present, unless disturbed or problematic.
-	`						1	
	Layer (If observed)							
estrictive Type: Depth (in	Layer (If observed)	:					Hydric	Soil present? Yes X No
estrictive Type: Depth (in	Layer (If observed) nches):						Hydric	Soil present? Yes X No
estrictive Type: Depth (in emarks:	Layer (If observed) nches):	:	quired; check all that	apply)				Soil present? Yes X No
Estrictive Type: Depth (in Emarks: DROLO Vetland H rimary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)	: one is red	— Water St — Aquatic F — True Aqu — Hydrogei — Oxidized — Presencei — Recent Iu — Thin Muc	ained Lea Fauna (B1 natic Plants n Sulfide (Rhizosph	3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	<u>Se</u> .s (C3)	econdary Indicators (minimum of two requi Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Estrictive Type:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial	: one is red	— Water St — Aquatic F — True Aqu — Hydrogei — Oxidized — Presencei — Recent Iu — Thin Muc	ained Lea Fauna (B1 latic Plants n Sulfide (Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	4)	<u>Se</u> .s (C3)	econdary Indicators (minimum of two requivations) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
Estrictive Type: Type: Depth (in Emarks: DROLO Vetland H Inmary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel Vetland H Iron De Inundat Sparsel Vetland H Iron De Inundat Sparsel Vetland H Iron De Inundat	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concave ervations: ater Present? Ye e Present?	: one is red magery (e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent In Thin Muc B7) Gauge o (B8) Other (Ex	ained Lea Fauna (B1 latic Plants n Sulfide (Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Odor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	ed Soils (Se (C3)	econdary Indicators (minimum of two requestions Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO Petland H Imary Inc Surface High W Saturati Water M Sedime Drift De Algal M Iron De Inundat Sparsel eld Obse aturation adudes c	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concave ervations: ater Present? Present? Ye Present?	: one is red magery (e Surface	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (E: No X Depth No X Depth No X Depth	ained Lea Fauna (B1 latic Plants of Sulfide (Rhizosph e of Reduct on Reduct on Reduct ck Surface r Well Data kplain in R (inches): (inches):	3) s (B14) Odor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) demarks)	ed Soils (Se	econdary Indicators (minimum of two requestions Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2) FAC-Neutral Test (D5)

Project/Site: I-69 Section 6 Wetland S6W021A		City/County	y: <u>Morgan</u>	Sampling Date: 10/19/2015
Applicant/Owner: INDOT/Lochumueller				State: Indiana Sampling Point IC16A-1W1
Investigator(s): K. Lucier, G. Quigg		Section, To	ownship, Ra	ange: Sec 9-T11N-R1E
Landform (hillslope, terrace, etc.): excavated depression			Local reli	ief (concave, convex, none): concave
Slope (%): <u>0-6</u> Lat: 39.406513	L	_ong: <u>-</u> 86.4	421492	Datum: GCS NAD83
Soil Map Unit Name Martinsville loam, 0 to 2 percent slopes	S			NWI classification: upland
Are climatic/hydrologic conditions on the site typical for this	time of year	r? Yes	X No	(If no, explain Remarks.)
Are Vegetation , Soil or Hydrology sign	ificantly dist	turbed?	Are "N	Normal Circumstances" present? Yes X No:
Are Vegetation , Soil or Hydrology natu	urally proble	ematic?	If nee	eded, explain answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing			locations,	, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No				
Hydric Soils Present? Yes X No			the Sample thin a Wetla	
Wetland Hydrology Present? Yes X No		WIL	um a vvena	and? Yes X No
Remarks: The wetland feature represented by this data policy	oint has bee	en designat	ted as PSS1	l based on the Cowardin et al. classification system.
VECTATION Has acceptific names of plants				
VEGETATION - Use scientific names of plants	A book its	Dominant	Indicator	Ta
Tree Stratum (Plot Size: 30' radius)		Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)
5		= Total Co		That are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum (Plot Size: 15' radius		- Total 00	VCI	Prevalence Index worksheet:
1. Salix interior	50	Yes	FACW	Total % Cover of: Multiply by:
2. Acer saccharum	5	No	FACU	OBL species x 1 = 30
3				FACW species 80 x 2 = 160
4				FAC species 0 x 3 = 0 FACU species 10 x 4 = 40
5				UPL species $0 \times 5 = 0$
Herb Stratum (Plot Size: 5' rdius)	55	= Total Co	ver	Column Totals: 120 (A) 230 (B)
1. Carex sp.	25	Yes	FACW	Prevalence Index = B/A = 1.92
2. Scirpus cyperinus	25	Yes	OBL	
3. Acer saccharum	5	No	FACU	Hydrophytic Vegetation Indicators:
4. Packera glabella	5	No	FACW	1-Rapid Test for Hydrophytic Vegetation:
5. Typha angustifolia	5	No	OBL	X 2-Dominance Test is >50% X 3-Prevalence Index is <=3 1
6				4-Morphological Adaptations (Provide supporting
7				data in Remarks or on a separate sheet)
8. 9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
	65	= Total Co	ver	
Vine Stratum (Plot Size: 30' radius)				Hydrophytic
1				Vegetation
2				Present? Yes X No
	0	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point IC16A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR2/1	100					silty clay loam	<u> </u>
6-10	10YR4/1	90	10YR3/6	10	С	M	silt loam	_
10-18	10YR4/1	50	10YR4/6	50	C	M	loamy sand	
				- — — — — — — — — — — — — — — — — — — —				
	Concentration, D= De	pletion, F	RM=Reduced Matrix,	CS=Cove	red or Coa	ated San		ocation: PL=Pore Lining, M=Matrix
	il Indiactors:							ctors for Problematic Hydric Soils ³
Histoso	` '				Matrix (S4))		past Prairie Redox (A16)
•	pipedon (A2)			y Redox (ark Surface (S7)
•	listic (A3) en Sulfide (A4)			ed Matrix	(ຣຣ) ⁄lineral (F1	1		n-Manganese Masses (F12) ry Shallow Dark Surface (TF12)
	ed Layers (A5)				Matrix (F2)			her Soil (Explain in Remarks)
	uck (A10)			eted Matrix		,	_ 0	Jon (Explain in Nomarks)
•	ed Below Dark Surfac	e (A11)			rface (F6)			
	ark Surface (A12)	,			Surface (F	7)		licators of hydrophytic vegetation and
	Mucky Mineral (S1)			x Depress		,	wetla	and hydrology must be present, unless
5 cm M	uck Peat or Peat (S3)	_ _		<u> </u>			disturbed or problematic.
	Laver /lf abaamiad\							
strictive	Layer (If observed):							
Type: _							Hydric S	oil procent? Yes Y No
Type: Depth (i							Hydric So	oil present? Yes X No _
Type:	nches):						Hydric So	oil present? Yes X No
Type: Depth (ii marks: DROLO	nches): GY ydrology Indicators	:	quired: check all that	annly)				·
Type: Depth (ii marks:	nches): GY ydrology Indicators dicators (minimum of	:					Seco	ondary Indicators (minimum of two requ
Type: Depth (ii marks:	orgy ydrology Indicators dicators (minimum of	:	Water St	ained Lea	` '		<u>Secc</u> _S	ondary Indicators (minimum of two requ urface Soil Cracks (B6)
Type: Depth (ii marks:	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)	:	Water St Aquatic F	ained Lea auna (B1	3) ` ´		<u>Secc</u> S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10)
DROLO Type: Depth (ii Marks: DROLO Tetland H Timary Inc. Surface High W Saturat	orches): Inches): Inches	:	Water St Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3) s (B14)		<u>Secc</u> S D	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2)
DROLO Tetland Hrimary Inc Surface High W Saturat Water I	Inches): Inches	:	Water St Aquatic F True Aqu Hydroge	ained Lea Fauna (B1 natic Plant n Sulfide (3) s (B14) Odor (C1)	vina Roo	S S D D C	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
DROLO Type: Depth (ii marks: DROLO Tetland H rimary Inc Surface High W Saturat Water N Sedime	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) ent Deposits (B2)	:	Water St Aquatic F True Aqu Hydroge Oxidized	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph	3) s (B14) Odor (C1) eres on Liv	-	Secc S D D C ts (C3) S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
DROLO DROLO Vetland H imary Inc Surface High W Saturat Water N Sedime Drift De	Inches): Inches	:	Water St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph	3) s (B14) Odor (C1)	(4)	Secc S D C ts (C3)S S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (CS
DROLO Vetland Hrimary Inc Surface High W Saturat Water I Sedime Drift De Algal M	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) posits (B2)	:	Water St Aquatic F True Aqu Hydroge Oxidized Presence Recent Is	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph	3) s (B14) Odor (C1) eres on Lived Iron (C	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9 tunted or Stressed Plants (D1)
DROLO Tetland Hrimary Inc Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat	riches): PGY Addressible (A2) Idea (A3) Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int posits (B5) Int Over (B5) Int Over (B5) Int Over (B6) Int Over (B	: one is red	— Water St — Aquatic F — True Aqu — Hydrogei — Oxidized — Presencei — Recent Iu — Thin Muc B7) — Gauge o	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (CS tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat	riches): PGY Advisor of the water (A1) Auter Table (A2) Auter (A3) Marks (B1) Author Deposits (B2) Apposits (B3) Author of the water (B4)	: one is red	— Water St — Aquatic F — True Aqu — Hydrogei — Oxidized — Presencei — Recent Iu — Thin Muc B7) — Gauge o	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requ urface Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (CS tunted or Stressed Plants (D1) eomorphic Postion (D2)
DROLO Tetland H Timary Inc Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Sparse	riches): PGY Addressible (A2) Idea (A3) Marks (B1) Int Deposits (B2) Int Deposits (B3) Int or Crust (B4) Int posits (B5) Int Over (B5) Int Over (B5) Int Over (B6) Int Over (B	: one is red	— Water St — Aquatic F — True Aqu — Hydrogei — Oxidized — Presencei — Recent Iu — Thin Muc B7) — Gauge o	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requirers confidence of two requirements confidence of two requirements confidence of two requirers confidence of two requirements confidence of two
DROLO Vetland H Timary Inc Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse	riches): PGY Advisor of the Water (A1) Auter Table (A2) Auter Table (A2) Auter Deposits (B2) Auter Of the Water (B4) Auter Of the Water (B4	: one is red lmagery (e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent In Thin Muc B7) Gauge o Other (E:	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requirers confidence of two requirements confidence of two requirements confidence of two requirers confidence of two requirements confidence of two
DROLO Petland H Imary Inc Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse eld Observations	riches): PGY Addressible (Male and Marks (Male and Male and	: one is red lmagery (e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent In Thin Muc B7) Gauge o Other (E: No X Depth	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc ron Reduc ck Surface r Well Dat kplain in R	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	(4)	Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requirers confidence of two requirements confidence of two requirements confidence of two requirers confidence of two requirements confidence of two
DROLO Tetland H Timary Inc Surface High W Saturat Water I Sedime Drift De Algal M Iron De Inundat Sparse eld Obset aturation	proches): Inches): Inche	: one is red magery (e Surface	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Iu Thin Muc B7) Gauge o (B8) Other (Es	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc on Reduc ck Surface r Well Dat xplain in R	3) s (B14) Ddor (C1) eres on Lived Iron (C tion in Tille (C7) a (D9)	ed Soils (Secce S S S S S S S S S S S S S S S S S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) recomorphic Postion (D2) AC-Neutral Test (D5)
DROLO Vetland H imary Inc Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Sparse eld Obse urface W dater Tab aturation includes c	ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) ion (A3) Marks (B1) at or Crust (B4) posits (B5) ion Visible on Aerial by Vegetated Concave ervations: ater Present? Ye	: one is red magery (e Surface	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (E: No X Depth No X Depth No X Depth	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc on Reduc ck Surface r Well Dat xplain in R (inches): (inches):	3) s (B14) Ddor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) Remarks)	ed Soils (Sect S S S S S S S S S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) recomorphic Postion (D2) AC-Neutral Test (D5)
Type:Depth (ii marks:	riches): Programment of the Water (A1) atter Table (A2) from (A3) atter Table (B4) posits (B3) atter Crust (B4) posits (B5) from Visible on Aerial by Vegetated Concave programment of the Present? Present? Present? Yes apillary fringe)	: one is red magery (e Surface	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (E: No X Depth No X Depth No X Depth	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc on Reduc ck Surface r Well Dat xplain in R (inches): (inches):	3) s (B14) Ddor (C1) eres on Liv ced Iron (C tion in Tille (C7) a (D9) Remarks)	ed Soils (Sect S S S S S S S S S	ondary Indicators (minimum of two requestrace Soil Cracks (B6) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8) aturation Visibile on Aerial Imagery (C9) tunted or Stressed Plants (D1) recomorphic Postion (D2) AC-Neutral Test (D5)

I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/2018

Data reference # S6W021

Wetland Site

Date of site visit: 05/14/15

Total wetland area: 0.2086 acres

- j-t		
Polygon Information		
Polygon ID	S6W021A	
Polygon Size (acres)	0.21	
Wetland Community Type	SC	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	z	
Special Community Type	z	
Rare-Threatened-Endangered Species	z	
Animal Habitat Measures		
Wetland size and connectivity	2	
Surrounding land use	_	
Standing water	_	
Dead woody material	-	
Zonation and interspersion	_	
Stratification	_	
ree canopy	8	
Mature trees	_	
Animal Habitat Measure Score (min = 8, max = 24)	11	
Animal Habitat Measure Rating	poor	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed	-	
Conservatism rating	_	
otal hydrophytic taxa observed	8	
Number of indicator taxa	_	
Exotic species rating	က	
Botanical Measure Score (min = 5, max = 15)	6	
Botanical Measure Rating	fair	
Hydrology Measures		
Water quality protection (= no. of yes answers)	5	
Flood and storm water storage (= no. of yes answers)	_	
Site/Hydrology Score (min = 11, max = 33)	23	
Site/Hydrology Rating	fair	

In-WRAP Summary Sheet

Date Report Generated: Monday, July 30, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W021			
Date of Site Visit: Thursday, May 14, 2015			
Tier 1 Summary:			
a. Total Wetland Area (acres): 0.2086			
b. Wetland size and connectivity - contribution to animal habi	tat:		
Valuable M	lore Favorable	Favorable	Neutral
c. Surrounding land use - numerical rank (max. = 1): 0.30			
d. Value surrounding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:	Polyg	on ID	S6W021A
a. Indiana Wetland community type: Shrub-Carr			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site: culvert			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: None			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species: None			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.): 5	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max 1	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed: 4	Good	Medium	Poor
d. Average coefficient of conservatism: 2.3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed: 26	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

Tier 1: Assessment Overview 1.1 Site Identification:					
Wetland Site Name: N/A					
Ownership (if known): N/A					
USGS Topographic Quadrangle: Martinsville					
USGS Watershed map 14-Digit HUC: Indian Creek - Sand Creek					
Identify each NWI Polygon within the Wetland Site (Polygon specific data)					
NWI Polygon ID Number Cowardin Classification Polygon Size (acres)					
S6W021A PSS1 0.2086					
1.2 Site Visit					
Team Members: Rusty Yeager & Neal Goffinet					
Agency: Lochmueller Group					
Date assessed: 5/14/2015 Time assessed: 3:45:00 PM					
Weather conditions: Cloudy					
Note any unusual weahter events that may have influenced the current conditions within system (e.g. recent heay rains, an unusually dry season, an especially early spring etc.)	h this wetland				
1.3 Wetland Size					
Size of site under assessment: 0.2086					
Size of wetland complex: 0.2086					
 1.4 Site Setting Degree of isolation from other wetlands or wetland complexes: The site is connected upstream and downstream with other wetlands The site is only connected upstrrem with other wetlands The site is only connected downstream with other wetlands ✓ Other wetlands are nearby (within 0.25 mile) but not connected The wetland site is isolated General assessment of adjacent land use / land cover in the area within 50 meters of the the wetland site (indicate the % abundance of each type): 	e perimeter of				

- Native Vegetation woodland
 Native Vegetation old field / scrub
 Industrial
- 0 Agricultural tilled 0 Residential single family
- 0 Agricultural pasture 100 Commercial or multifamily residential
- ____0 ___ Recreation green space, mowed

NWI Polygon # S6W021A	Data Reference# S6W021
see table on page one)	
Tier 2: Individual Polygon: Preliminary Astronomy of the completted on-site for each NWI polygon pres	
.1 Wetland Geomorphic Setting and Surface Wate	r Flow (check one):
✓ Depressional Slope Floor Riverine (within the river/stream banks)	odplainLacustrine
.2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	er than 2 meters n depth? No
standing water normally present in an adjacent po	olygon? <u>No</u>
.3 Apparent Hydroperiod (check one):	
Permanently Flooded	✓ Artificially Flooded
Seasonally Flooded	<u> </u>
Saturated (surface water seldom present	t)Artificailly Drained
.4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
.5 Wetland Community Type for this NWI polygon hrub-Carr	
d.6 Disturbances of Hydrology (check all that apply)	
Ditching	Culvert
Tiles	Other Human Distrubances to the
Dams	Hydrology (explain):
Road or Railroad Embankment	
7 Presence of Invasive Exotics (Score as: S = Scatte	ered, F = Frequent, or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
.8 Presence of Special Hydrologic Conditions (i.e. s	seeps, wet slopes, floating mat):
.9 Presence of Special Community Types:	
BogFen	Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thr	reatened or Endangered Species:
✓ None observed or known to be presen	
RTES Present (list):	
.11 Wetland Polygon Quality Descriptor (see: Wet	land Quality Descriptions and check one):
Good ✓ Medium	Poor
	<u> </u>

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

			ple Features that influence water quality and hydrology:							
Es	tima	ited h	nerbaceouis plant cover (percentage) in the polygon <u>√</u> 100-7575-5050-25<25							
Es	tima	ited v	voody plant foliar coverage in the polygon							
An	nour	nt of o	dead woody material on the soil surface nilscattered frequent							
3a	.2 V	Vate	r Quality Protection Questions:							
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?							
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?							
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.							
	Y	N	3a. Does the wetland have a shape or flow that allows for the settling out of suspended							
	Y	N	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?							
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?							
5.	Ŷ	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?							
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.							
			width of buffer area (in meters 15 approximate slope (percen 10							
3a	.3 F	lood	I and Stormwater Storage / Attenuation Questions:							
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b							
1.	Υ	(N)	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub)							
	v		that will slow overland flow into the wetland? 1h Is there a significant amount of microtopography or vegetative density within the wetland							
	Υ	(N)	1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?							
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?							
3.	Y	N	N Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?							
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?							

Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description 3b.1 Zonation and Interspersion: 1. How may vegetation zones are evident in this wetland polygon? ______1 1b. If only one vegetation zone is evident, which best describes the site? ______Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon. _____Polygon composed of a single vegetation type with more or less uniform texture across the polygon. 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone? Type One Interspersion Type Two Interspersion

3b.2 Dominant Plant Species: Vegetation Zone A

wetland site).

What % of the polygon does this vegetative z	zone occupy?		
10 - 25% 25 - 50%	<u> </u>	75 - 90%	>90%
Is there notable layering/stratification in this v	vegetation zone? No		
Dominant Herbaceous Species (i.e., covering abundance. (Mark with an * any species that			f relative
a. <i>Typha latifolia</i>	d		
b. Symphyotrichum lanceolatum			
c. Solidago gigantea			
Dominant Shrub Species listed in order of re	lative abundance.		
a. Salix interior	C		
b	d		
Dominant Tree Species listed in order of rela	itive abundance.		
a	C		
b	d		
Tree and shrub canopy nil separate	e, seldom touching	often touching mo	re or less close
Mature trees (>12" dbh): yes no			

Other remarks (include personal comments about what adds to or detracts from the quality of this

NWI Polygon # S6W021A	Data Reference S6W021
3b.2 Dominant Plant Species: Vegetation Zone B	
What % of the polygon does this vegetative zone occur	upy?
☐ 10 - 25% ☐ 25 - 50% ☐ 50 -	- 75%
Is there notable layering/stratification in this vegetation	n zone?
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms ex	
a	d
b	e
C	f
Dominant Shrub Species listed in order of relative abu	
a	c
b	d
Dominant Tree Species listed in order of relative abun	
a	c
b	d
Tree and shrub canopy nil separate, seldom	
Mature trees (>12" dbh): ☐ yes no	
Other remarks (include personal comments about what wetland site).	at adds to or detracts from the quality of this
3b.2 Dominant Plant Species: Vegetation Zone C	
What % of the polygon does this vegetative zone occur	upy?
☐ 10 - 25% ☐ 25 - 50% ☐ 50 -	- 75%
Is there notable layering/stratification in this vegetation	n zone?
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms ex	
a	d
b	e
C	f
Dominant Shrub Species listed in order of relative abu	
a	c
b	d
Dominant Tree Species listed in order of relative abun	ndance.
a	c
b	d
Tree and shrub canopy nil separate, seldom	
Mature trees (>12" dbh): yes no	
Other remarks (include personal comments about what wetland site).	at adds to or detracts from the quality of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed p	olants	Herbs: wide-leafe	ed monocots
	ing rush spp. (Equisetum) 2		Peltandra virginica) 6
	niled fern spp. (Dryopteris) 7		p. (Sagittaria) 4
	(Osmunda cinnamomea) 9		(Arisaema dracontium) 6
	nunda regalils) 8		lpit (Arisaema triphyllum) 4
	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species	•		je (Symplocarpus foetidus) 8
	s (Selaginella apoda) 4 s spp. (Sphagnum) 10		Calla palustris) 10 (Alisma plantago-aquatica) 2
Spriagrium mos	s spp. (Spriagrium) 10	_ <u>√</u> water plantain	(Alisina piantago-aquatica) 2
Herbs: Ivs. floating		Herbs: dicots - Iv	s. opposite/whorled
	p. (Utricularia) 10	*bedstraw spp.	•
	phyllum demersum) 1	beggar's tick s	
duckweed spp.			Berbena hastata) 3
	. (Potamogeton) 8		torium perfoliatum) 4
	eed (Potamogeton crispus) (,
	phaea tuberosa) 6	clearweed spp	
	asenia schreberi) 4		hium perfoliatum) 4
"yellow spatterd	lock spp. (Nuphar) 6		pehmeria cylindrica) 3
Harbar Iva flaction			edicularis lanceolata) 6
Herbs: Ivs. floating	g or submergent Sarracenia purpurea (10)		Gentiana Gentianopsis) 8 (Ambrosia trifida) 0
*sundew spp. (I			Apocynum cannabinum) 2
Sundow Spp. (L	2103014) 10		spp. (Eupatorium) 5
Herbs: linear-lys	or +/- leafless monocots		p. (Lysimachia) 6
	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		rsimachia nummularia) 0
*bur reed spp. (spp. (Mimulus) 4
✓ cat-tail spp. (Ty		nettle (Urtica p	
	pp. (Eriophorum) 10	purple loosestr	rife (Lythrum salicaria) 0
Grasses (family Gra	imineae) - indicate types and	I*richweed (Col	linsonia canadensis) 8
number of species		St. John's wort	spp. (Hypericum/Triandeum) 8
	zania aquatica) 10	sunflower sp. (
	perennial grass spp. 4:	•	strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,		ed (Asclepias incarnata) 4
foxtail (Alopecru			(Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead spp	
• •	reed (Phragmites),		(Clematis virginiana) 3
	such as annual foxtail arnyard grass (Echinochloa)		e (Ludwigia palustris) 3 trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2	winged loosesi	une (Lyunum alatum) 5
*additional		Horbe (vince): dic	ots - lvs. alternate or basal and
nutsedge spp. (lower (Campanula americana) 4
• • • • • •	species (if know		aster (Aser puniceus) 7
rush spp. (Junc			er (Aster umbellatus) 8
	,		o. (e.g. New England, panicled ast
	enocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco	•		(Lobelia cardinalis) 4
	Dulichium arundinaceum) 10	cress spp. (Ca	,
	lium mariscoides) 10		amp, water, pale (Rumex) 4
*umbrella sedge	e (Fuirena squarrosa) 10	garlic mustard	(Alliaria petiolata) 0
	amassia scilloides) 5	golden ragwort	t (Senecio aureus) 4
*yellow-eyed gra	ass (Xyris torta) 9		

Herbs (vines): dicots - Ivs. alternate or basal and simple (continued) ✓ *goldenrod spp. (Solidago ohioensis, S. patula, _ *grass of Parnassus (Parnassia glauca) 10 _ *Indian plantain (Cacalia plantaginea) 10 _ ironweed spp. (Vernonia) 4 _ jewelweed, touch-me-not spp. (Impatiens) 3 _ lizard's tail (Saururus cernuus) 4 _ lobelia spp. (Lobelia) 4	Shrubs - leaves alternate *cranberry spp. (Vaccinium) 10 _*dwarf birch (Betula pumila) 10 _*highbush blueberry (Vaccinium corymbosum) 9 _*leatherleaf (Chamaedaphne calyculata) 10 _meadowsweet and Hardhack spp. (Spiraea) 4 _*ninebark (Physocarpus opulifoius) 7 _*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7 *moonseed (Menispermum canadense) 6 primrose-willow spp. (Epilobium Ludwigia) 3 rose mallow spp. (Hibiscus) 4	spice bush (Lindera benzoin) 5*swamp dewberry (Rubus hispidus) 6*swamp holly and winterberry spp. (Ilex) 7swamp rose (Rosa palustris) 5
✓ smartweed spp.: jumpseed, pinkweed, tearthumb, water-pepper, waters smartweed (Polygonum)halbredleaf tearthumb (Polygonum arifolium) 10	Trees - leaves needle shaped*tamarack (Larix laricina) 10
sneezeweed (Helenium autumnale) 3stinging nettle (Laportea canadensis) 2*swamp saxifrage (Saxifraga pennsylvanica) 10*Virginia bluebells (Mertensia virginica) 6waterhemp (Amaranthus tuberculatus) 1wingstem (Actinomeris alternifolia) 3	Trees - leaves compound *ash, black (Fraxinus nigra) 7 ash, green (Fraxinus pensylvanica) 3 *ash, pumpkin (Fraxinus tomentosa) 8 boxelder (Acer negundo) 1 hickory, bitternut (Carya cordiformis) 5 hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - Ivs. basal or alternate and compound or deeply lobedaven spp.: round, white (Geum) 2	honey locust (Gleditsia triacanthos) 1 *poison sumac (Rhus vernix) 10
*buttercup spp.: cursed b., hooked b., swamp b.(Ranunculus) 6 chervil (Chaerophyllum procumbens) 3 *cowbane (Oxypolis rigidior) 7	Trees - leaves simple and opposite ✓ red maple (Acer rubrum) 5 ✓ silver maple (Acer saccharinum) 1
*great angelica (Angelica atropurpurea) 6 hog peanut / ground nut (Amphicarpaea and Apios) 5 honewort (Cryptotaenia canadensis) 3	Trees - leaves simple and alternate *alder, speckled (Alnus rugosa) 9 river birch (Betula nigra) 2 black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5 poison ivy (Rhus radicans) 1 *queen-of-the prairie (Filipendula rubra) 9 senna spp. (Cassia) 4 swamp agrimony (Agrimonia parviflora) 4 *swamp thistle (Cirsium muticum) 8 tall coneflower (Rudbeckia laciniata) 3	cottonwood, eastern (Populus deltoides) 1 cottonwood, swamp (Populus heterophylla) 8 ✓ elm, American (Ulmus americana) 3 hackberry (Celtis occidentalis) 3 ironwood (Carpinus caroliniana) 5 oak, pin or white (Quercus) 4 *oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7 water parsnips (Sium suave) 5 Shrubs - leaves opposite or whorled bladdernut (Staphylea trifolia) 5	<pre>*pawpaw (Asimina triloba) 6 *sugarberry (Celtis laevigata) 7 sweet gum (Liquidambar styraciflua) 4 sycamore, American (Platanus occidentalis) 3 ✓ willow spp. (Salix) 1 sp. = 3</pre>
bladderhit (Staphylea thiolia) 5 buckthorn spp. (Rhamnus cathartica, R. frangula) 0 buttonbush (Cephalanthus occidentalis) 5 dogwwod, red-osier (Cornus stolonifera) 4 *dogwood, blue-fruited or silky (Cornus obliqua) dogwood, gray (Cornus racemosa) 2 elderberry (Sambucus) 2	additional sp. = 7



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 County: Morgan T11N Physiographic Region: Martinsville Hills Township: Interior Plateau R1E **Ecoregion:** Range: Natural Region: Highland Rim Section: 3 Size of wetland complex (acres): 1.2057 Quarter: SW

USACE Jurisdiction Yes Latitude: 39.417087

IDEM Jurisdiction: Yes Longitude: -86.409698

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W027A	Pond	PUB	1.21	no rating	no rating	no rating	RPA	0.00	0.0%



Polygon S6W027A



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Clear Creek - East/West/Grassy Basin: Quadrangle: Martinsville 14-digit HUC: 05120201140140 County: Morgan Physiographic Region: Martinsville Hills Township: T12N Interior Plateau R1E **Ecoregion:** Range: 26 Natural Region: Highland Rim Section: SE Size of wetland complex (acres): 0.0603 Quarter:

USACE JurisdictionYesLatitude:39.444538IDEM Jurisdiction:YesLongitude:-86.386915

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W037A	Wet Meadow	PEM	0.06	poor	poor	fair	RPA	0.06	99.5%

This site is classified as a PSS wetland, 0.06 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.06 acre of this wetland. This wetland showed 100% herbaceous cover and 30% sapling/shrub cover. Dominant herbaceous species for this wetland include Equisetum hyemale. Dominant sapling/shrub species included Salix interior. Hydrology is likely due to runoff from local roads and SR 37. Animal habitat, botanical diversity, and hydrology function are rated as poor, poor, and fair respectively based on InWRAP summaries for the site.



Polygon S6W037A



Polygon S6W037A

Project/Site: I-69 Section 6 Wetland S6W037A	City/	County: Morgan		Sampling Date: <u>04/07/2017</u>
Applicant/Owner: INDOT/Lochumueller			State: Indiana	Sampling Point CL03A-1D1
Investigator(s): R. Yeager, B. Reust	Secti	ion, Township, Ra	nge: SEC 26, T12N, R	1E
Landform (hillslope, terrace, etc.): roadside		Local reli	ef (concave, convex, no	one): flat
Slope (%): 1% Lat: 39.444677	Long:	-86.386898		Datum: GCS NAD83
Soil Map Unit Name Elkinsville silt loam, 6 to 12 percent s	lopes		NWI classi	ification: upland
Are climatic/hydrologic conditions on the site typical for this		Yes X No	(If no, explain Re	emarks.)
Are Vegetation X , Soil X or Hydrology sig	-			present? Yes X No:
Are Vegetation , Soil or Hydrology na			ded, explain answers in	
SUMMARY OF FINDINGS - Attach site map show			transects, importar	nt features, etc.
Hydrophytic Vegetation Present? Yes N	o X			
Hydric Soils Present? Yes N		Is the Sample	d Area	
Wetland Hydrology Present? Yes N	o X	within a Wetla	ind? Yes	No <u>X</u>
Remarks:	·			-
VEGETATION - Use scientific names of plants				
Tree Stratum (Plot Size: 30' radius)	Absolute Don % Cover Spe	ninant Indicator cies? Status	Dominance Test wor	rksheet:
1	ж оста. Ора		Number of Dominant : That Are OBL, FACW	
2.			Total Number of Dom	· · · · · · · · · · · · · · · · · · ·
3.			Species Across All St	
4			Percent of Dominant S	
5			That are OBL, FACW,	, or FAC: 0 (A/B)
O I' (OL LOLL (Diet Size) 45! redice	0 = Tot	tal Cover	Prevalence Index wo	orksheet:
Sapling/Shrub Stratum (Plot Size: 15' radius)			Total % Cover of	
1. 2.			OBL species	$\frac{0}{0} x = 0$
3.			FACW species	0 x 2 = 0
4.			FAC species	0 x 3 = 0
5.			FACU species UPL species	$0 \times 4 = 0$
	0 = To	tal Cover	· <u> </u>	$\frac{100}{100}$ x 5 = $\frac{500}{(A)}$ (B)
Herb Stratum (Plot Size: 5' radius)				
1. Festuca sp.	100 Y	es UPL	Prevalence Ind	dex = B/A = 5.00
2.			Hydrophytic Vegetat	tion Indicators:
3 4.			1-Rapid Test for H	lydrophytic Vegetation:
5.			2-Dominance Test	
6.			3-Prevalence Inde	ex is <=3 ¹ daptations 1(Provide supporting
7				or on a separate sheet)
8			Problematic Hydro	pphytic Vegetation ¹ (Explain)
9				oil and wetland hydrology must
10	100 - 7	tal Cover	be present, unless dis	sturbed or problematic
Vine Stratum (Plot Size: 30' radius)	100 = To	iai Cover		
1			Hydrophytic	
2.			Vegetation Present?	Yes No _X
	0 = To	tal Cover		<u> </u>
Remarks: (Include photo numbers here or on a separate	sheet \		<u> </u>	
(,			

SOIL Sampling Point CL03A-1D1

Profile Desc	ription: (Describe to	the depth	needed to documne	t the indi	cator or cor	nfirm the	absei	nce of i	indicators.)		
Depth	Matrix		Red	ox Featu	es						
(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	T	Texture	<u> </u>	Remarks	
0-4	10YR3/2						s	silt loam	<u> </u>		
4-20	10YR5/6	60	10YR5/2	40			S	silt loam	1		
				·							
				-							
				· ———			-				
-				. ———							
-				. ———							
-	. ———						-				
¹ Type: C=C	Concentration, D= De	pletion, RI	M=Reduced Matrix,	CS=Cove	red or Coa	ted Sand	d Grai	ins.	² Location: PL=	=Pore Lining, M=	:Matrix
Hydric Soi	l Indiactors:							Inc	diactors for Pro	oblematic Hydri	c Soils 3
Histoso	Ι (Δ1)		Sandy	, Glavad I	Matrix (S4)				Coast Prairie R	_	
	pipedon (A2)			/ Redox (Dark Surface (
_	istic (A3)			ed Matrix						se Masses (F12)	1
	en Sulfide (A4)				Mineral (F1)				ark Surface (TF	
	d Layers (A5)				Matrix (F2)					olain in Remarks)	•
_	uck (A10)			ted Matrix						,	
	d Below Dark Surfac	e (A11)			rface (F6)						
	ark Surface (A12)	,			Surface (F	7)		3	Indicators of hy	drophytic vegeta	tion and
Sandy N	Mucky Mineral (S1)		Redo	x Depress	sions (F8)	•		W		y must be prese	
5 cm M	uck Peat or Peat (S3))	_						disturbe	ed or problemation	·-
Restrictive	Layer (If observed):										
Type:											
Depth (ir	nches):						1	Hydric	Soil present?	Yes	No X
Remarks:											
Access road	gravel encountered	at 4 inche	s.								
											
HYDROLO	GY										
Wetland H	ydrology Indicators										
Primary Inc	licators (minimum of	one is req	uired; check all that	apply)				Se	econdary Indica	ators (minimum o	f two required)
Surface	Water (A1)		Water St	ained Lea	ves (B9)				Surface Soil C	cracks (B6)	
	ater Table (A2)		Aguatic F		` '			_	Drainage Patte	` '	
Saturati			True Aqu	`	,			_	_	/ater Table (C2)	
_	Marks (B1)				Odor (C1)				Crayfish Burro		
_	nt Deposits (B2)				eres on Liv	ing Roo	ots (C3	3)	-	ibile on Aerial Im	agery (C9)
	posits (B3)				ced Iron (C	-			-	essed Plants (D	
Algal M	at or Crust (B4)		Recent Ir	on Reduc	tion in Tille	d Soils ((C6)		Geomorphic P	ostion (D2)	
Iron De	posits (B5)		Thin Muc	k Surface	e (C7)				FAC-Neutral T	est (D5)	
Inundat	ion Visible on Aerial I	magery (B	(37) Gauge or	Well Dat	a (D9)						
Sparsel	y Vegetated Concave	Surface ((B8) Other (Ex	oplain in F	Remarks)						
Field Obse	ervations:										
Surface Wa	ater Present? Ye	19	No X Depth	(inches):							
Water Tabl				(inches):							
Saturation				(inches):		— I				_	
	apillary fringe)	··s	No X Deptil	(IIICHES).		— "	Vetlan	nd Hydi	rology Present	:? Yes	_ No <u>X</u> _
Describe Re	ecorded Data (stream	gauge, m	onitoring well, aeria	l photos, ¡	previous in	spection	ns), if a	availabl	e:		
Remarks:											

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W037A	C	ity/County:	Morgan		Sampling Date: 04/06/2017
Applicant/Owner: INDOT/Lochumueller				State: Indiana	Sampling Point CL03A-1W1
Investigator(s): R. Yeager, B. Reust	s	ection, Tow	nship, Ran	ge: SEC 26, T12N, R1	IE
Landform (hillslope, terrace, etc.): roadside			Local relie	f (concave, convex, no	ne): flat
Slope (%): 1% Lat: 39.444666	Lo	ng: <u>-86.38</u>	6939		Datum: GCS NAD83
Soil Map Unit Name Elkinsville silt loam, 6 to 12 percent sl	lopes, eroded			NWI classi	fication: upland
Are climatic/hydrologic conditions on the site typical for this	s time of year?	Yes >	(No	(If no, explain Re	marks.)
Are Vegetation , Soil or Hydrology sign	nificantly distu	rbed?	Are "No	 ormal Circumstances" _I	present? Yes X No:
Are Vegetation , Soil or Hydrology na	turally problem	natic?	If need	ed, explain answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map show			cations, t	ransects, importan	nt features, etc.
Hydrophytic Vegetation Present? Yes X N	o				
	0		Sampled		V No.
Wetland Hydrology Present? Yes X N	o <u> </u>	Within	n a Wetlan	d? Yes	X No
Remarks: The wetland feature represented by this data	point has been	designated	l as PSS1 l	pased on the Cowardin	et al. classification system.
VEGETATION - Use scientific names of plants					
		Dominant I	ndicator	Dominance Test wor	ksheet:
Tree Stratum (Plot Size: 30' radius)	% Cover 3	Species? Yes	Status FACW	Number of Dominant S	Species
1. Fraxinus pennsylvanica			FACW	That Are OBL, FACW	, or FAC: <u>3</u> (A)
2. 3.				Total Number of Domi Species Across All Str	
4.		 -	-	Percent of Dominant S	
5.				That are OBL, FACW,	
	20 =	Total Cove	r	Drevelence Index wa	aulcala a ati
Sapling/Shrub Stratum (Plot Size: 15' radius)	00	.,	E4 0)4/	Prevalence Index wo	
1. Salix interior		Yes	FACW	Total % Cover of OBL species	$\frac{\text{Multiply by:}}{0} = \frac{\text{Multiply by:}}{x \cdot 1 = 0}$
2				· · · · · · · · · · · · · · · · · · ·	150 x 2 = 300
3. 4.				FAC species	0 x 3 = 0
5.				FACU species	0 x 4 = 0
	30 =	Total Cove	r	UPL species Column Totals: 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Herb Stratum (Plot Size: 5' radius)					``
1. Equisetum hyemale		Yes	FACW	Prevalence Ind	lex = B/A = 2.00
2				Hydrophytic Vegetat	ion Indicators:
3. 4.				X 1-Rapid Test for H	ydrophytic Vegetation:
5.				X 2-Dominance Test	
6.				X 3-Prevalence Index	x is <=3 ¹ daptations ¹(Provide supporting
7					r on a separate sheet)
8				Problematic Hydro	phytic Vegetation ¹ (Explain)
9				¹ Indicators of hydric so be present, unless dis	oil and wetland hydrology must
10		Total Cove	r -	be present, unless dis	turbed or problematic
Vine Stratum (Plot Size: 30' radius)				II 4b. e.	
1				Hydrophytic Vegetation	
2				Present?	'es X No
	0 =	Total Cove	r		
Remarks: (Include photo numbers here or on a separate	sheet.)				

SOIL Sampling Point CL03A-1W1

(Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR3/2	100		- '			silt loam	
3-20	10YR4/2	95	10YR4/6	5	С	М	silty clay loa	m
-	Concentration, D= De	pletion, R	M=Reduced Matrix,	CS=Cove	red or Coa	ited Sand		Location: PL=Pore Lining, M=Matrix actors for Problematic Hydric Soils 3
			C 1		M-4-: (C4)			
Histoso	pipedon (A2)			y Gleyed i y Redox (Matrix (S4)			Coast Prairie Redox (A16) Dark Surface (S7)
•	istic (A3)			ed Matrix				ron-Manganese Masses (F12)
	en Sulfide (A4)				Mineral (F1)		/ery Shallow Dark Surface (TF12)
	d Layers (A5)				Matrix (F2)			Other Soil (Explain in Remarks)
•	uck (A10)			ted Matrix		,	_ `	zarer cen (=/,piam m r.temante)
•	d Below Dark Surfac	e (A11)			rface (F6)			
	ark Surface (A12)	,			Surface (F	7)	³ Ir	ndicators of hydrophytic vegetation and
	Mucky Mineral (S1)			x Depress		,	we	tland hydrology must be present, unless
-	uck Peat or Peat (S3)	_		, ,			disturbed or problematic.
strictive	Layer (If observed):							
Туре: _	ochee).						Hydric S	Soil present? Yes X No
Type: Depth (ii	nches):						Hydric \$	Soil present? Yes X No
Type: _ Depth (ii marks:							Hydric \$	Soil present? Yes X No
Type: Depth (ii marks: DROLO	GY ydrology Indicators						Hydric S	Soil present? Yes X No
Type:	GY		quired; check all that	apply)				
Type:	GY ydrology Indicators			apply) ained Lea	ves (B9)		Se	
Type:	GY ydrology Indicators licators (minimum of		Water St		, ,		Se	condary Indicators (minimum of two requ
Type:Depth (ii marks: DROLO etland H imary Inc. Surface, High W	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2)		Water St Aquatic F	ained Lea	3)		<u>Se</u>	condary Indicators (minimum of two requ Surface Soil Cracks (B6)
DROLO Petland Hrimary Inc. Surface High W Saturat Water M	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1)		Water St Aquatic F True Aqu	ained Lea auna (B1 atic Plant	3)		<u>Se</u>	condary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10)
DROLO Type: Depth (in price of the price of	GY ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2)		Water St Aquatic F True Aqu Hydrogel Oxidized	ained Lea Fauna (B1 Jatic Plant Sulfide (Rhizosph	3) s (B14) Odor (C1) leres on Liv	_	Ser — — — ts (C3)	condary Indicators (minimum of two requ Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS
DROLO Wetland Hrimary Inc Surface High W Saturat Water M Sedime Drift De	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3)		Water St Aquatic F True Aqu Hydroger Oxidized Presence	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph	3) s (B14) Odor (C1) neres on Lived Iron (C	4)	Se — — — ts (C3)	condary Indicators (minimum of two requestrace Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
DROLO Vetland H rimary Inc Surface High W Saturat Water M Sedime Drift De Algal M	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)		Water St Aquatic F True Aqu Hydroget Oxidized Presencet Recent Is	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc	3) s (B14) Odor (C1) neres on Lived Iron (Cotion in Tille	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO Vetland Hrimary Inc Surface High W Saturat Water M Sedime Drift De Algal M Iron De	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5)	one is rec	Water St Aquatic F True Aqu Hydrogel Oxidized Presence Recent In Thin Muc	ained Lea Fauna (B1 Jatic Plant In Sulfide (Rhizospher of Reduction Fon Reduction Reduction	3) s (B14) Odor (C1) neres on Lived Iron (C ottion in Tille	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C8) Stunted or Stressed Plants (D1)
Type:Depth (iimarks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4)	one is red	— Water St — Aquatic F — True Aqu — Hydroger — Oxidized — Presencer — Recent In — Thin Muc	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc	3) s (B14) Odor (C1) neres on Lived Iron (C stion in Tille (C7) a (D9)	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO etland H imary Inc Surface High W Saturat Water N Sedime Drift De Algal M Iron De Inundat Sparsel	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I	one is red	— Water St — Aquatic F — True Aqu — Hydroger — Oxidized — Presencer — Recent In — Thin Muc	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface r Well Dat	3) s (B14) Odor (C1) neres on Lived Iron (C stion in Tille (C7) a (D9)	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO Petland H Imary Inc Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Sparsel	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave	one is red magery (I e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (Ex	ained Lea Fauna (B1 uatic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface r Well Dat	3) s (B14) Odor (C1) neres on Lived Iron (C stion in Tille (C7) a (D9)	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO etland H imary Inc Surface High W Saturat Water M Sedime Drift De Algal M Iron De Inundat Sparsel	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial y Vegetated Concave	magery (I e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presencer Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc on Reduc k Surface r Well Dat kplain in F	3) s (B14) Odor (C1) neres on Lived Iron (C stion in Tille (C7) a (D9)	4)	See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
DROLO Control Contr	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations:	magery (I e Surface	Water St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc B7) Gauge or (B8) Other (Ex	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc on Reduc ck Surface r Well Dat xplain in F	3) s (B14) Odor (C1) heres on Lived Iron (C tion in Tille (C7) a (D9) Remarks)	44) ed Soils (See	condary Indicators (minimum of two requestrates Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (CS) Stunted or Stressed Plants (D1) Geomorphic Postion (D2)
Type:Depth (ii marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations: ater Present? Present? Ye Present?	magery (I	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (E: No X Depth No Depth	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc con Reduc ck Surface r Well Dat xplain in F (inches): (inches):	3) s (B14) Odor (C1) heres on Liv ced Iron (C stion in Tille (C7) a (D9) Remarks)	ed Soils (Se 	condary Indicators (minimum of two requestrace Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C8) Stunted or Stressed Plants (D1) Geomorphic Postion (D2) FAC-Neutral Test (D5)
Type:Depth (ii marks:	gy ydrology Indicators dicators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave ervations: ater Present? Present? Present? ye apillary fringe)	magery (I	Water St Aquatic F True Aqu Hydrogei Oxidized Presence Recent In Thin Muc B7) Gauge o (B8) Other (E: No X Depth No Depth	ained Lea Fauna (B1 latic Plant n Sulfide (Rhizosph e of Reduc con Reduc ck Surface r Well Dat xplain in F (inches): (inches):	3) s (B14) Odor (C1) heres on Liv ced Iron (C stion in Tille (C7) a (D9) Remarks)	ed Soils (Se 	condary Indicators (minimum of two requestrace Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visibile on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Postion (D2) FAC-Neutral Test (D5)

I-69 Wetland Quality Assessment Profile

Polygon Size (acres)	Polygon Intormation	4 100 100	
. max = 24) Indent upon community type) = 15) eers) ss answers)	ulygon IU	S6W03/A	
. max = 24) indent upon community type) = 15) ers) ss answers)	ılygon Size (acres)	90.0	
max = 24) Indent upon community type) = 15) Vers) ss answers)	etland Community Type	SC	
. max = 24) Indent upon community type) = 15) Vers)	ષ્d Flag (Special) Indicators		
. max = 24) Indent upon community type) = 15) eers) ss answers)	ecial Hydrologic Conditions	z	
. max = 24) indent upon community type) = 15) eers) ss answers)	ecial Community Type	z	
. max = 24) indent upon community type) = 15) eers) ss answers)	re-Threatened-Endangered Species	Z	
max = 24) Indent upon community type) = 15) Vers) ss answers)	imal Habitat Measures		
core (min = 8, max = 24) ating ept excitics dependent upon community type) axa observed ved min = 5, max = 15) o of yes answers) ge (= no. of yes answers) 1= 11, max = 33)	stand size and connectivity	က	
core (min = 8, max = 24) ating ept exotics dependent upon community type) axa observed ved (min = 5, max = 15) o. of yes answers) ge (= no. of yes answers) 1 = 11, max = 33)	rrounding land use	_	
core (min = 8, max = 24) alting set excites dependent upon community type) as observed ved (min = 5, max = 15) o. of yes answers) ge (= no. of yes answers) 1 = 11, max = 33)	Inding water	-	
core (min = 8, max = 24) ading spt excitcs dependent upon community type) axa observed ved (min = 5, max = 15) o. of yes answers) ge (= no. of yes answers) 1 = 11, max = 33)	ad woody material	-	
core (min = 8, max = 24) a ting ept excitcs dependent upon community type) axa observed ved (min = 5, max = 15) o. of yes answers) ge (= no. of yes answers) 1 = 11, max = 33)	nation and interspersion	-	
core (min = 8, max = 24) ading ept exotics dependent upon community type) axa observed axa observed rved (min = 5, max = 15) o. of yes answers) ge (= no. of yes answers) 1 = 11, max = 33)	atification	-	
	e canopy	_	
	ure trees	_	
	mal Habitat Measure Score (min = 8, max = 24)	10	
	mal Habitat Measure Rating		
	anical Measures (all except exotics dependent upon community type)		
	nber of dominant plant taxa observed	_	
	iservatism rating	_	
	al hydrophytic taxa observed	_	
	nber of indicator taxa	-	
	tic species rating	က	
	tanical Measure Score (min = 5 , max = 15)	7	
	tanical Measure Rating	poor	
	drology Measures		
	ter quality protection (= no. of yes answers)	2	
-	od and storm water storage (= no. of yes answers)	2	
	≥/Hydrology Score (min = 11, max = 33)	19	
	∌/Hydrology Rating	fair	

In-WRAP Summary Sheet

Date Report Genera	ited: Monday, July 30, 2018				
Wetland Site Name:	N/A				
Data Reference #:	S6W037				
Date of Site Visit:	Thursday, October 1, 2015				
Tier 1 Summary	<i>ı:</i>				
a. Total Wetland	d Area (acres): 0.0603				
b. Wetland size	and connectivity - contribution	to animal h	abitat:		
		Valuable	More Favorable	Favorable	Neutral
c. Surrounding	land use - numerical rank (max.	= 1): 0.2	3		
d. Value surrou	nding area adds to animal habita	at:	Valuable	Favorable	Low
Tier 2 SUMMAR	RY:		Polyg	on ID	S6W037A
a. Indiana Wetl	and community type: Shrub-Ca	nrr			
b. Standing wat	er - contribution to animal habit	tat:	Valuable	Favorable	Neutral
c. Disturbances	to site: ditches road/railroad				
d. Exotic specie	s rating:		Good	Medium	Poor
e. Special Hydro	ologic Conditions Observed: No	one			
f. Special Comn	nunity Type: None				
g. Rare-Threate	ned-Endangered Species: No	ne			
h. Polygon Qua	lity Descriptor:		Good	Medium	Poor
Tier 3A SUMMA	ARY:				
a: Dead woody	material as indicator of animal h	nabitat:	Valuable	Favorable	Neutral
b. Water qualit	y protection - numerical rank (6	max.):2	Good	Medium	Poor
c. Flood and sto	orm water storage - numerical ra	ınk (5 max _	2 Good	Medium	Poor
Tier 3B SUMMA	ARY:				
a. Zonation and	I interspersion as indicator of an	imal habitat	t: Valuable	Favorable	Neutral
	as indicator of animal habitat:		Valuable		Neutral
c. Number of d	ominant plant taxa observed:	4	Good	Medium	Poor
d. Average coef	fficient of conservatism: 1	 ,	Good	Medium	Poor
	as indicator of animal habitat:		Valuable		Neutral
f. Mature trees	as indicator of animal habitat:		Valuable	Favorable	Neutral
g. Total hydrop	hytic taxa observed:5		Good	Medium	Poor
h. Number of ir	ndicator taxa: 0		Good	Medium	Poor

0 Residential - single family

Commercial or multifamily residential

0 Agricultural - tilled

O Agricultural - pasture

Recreation - green space, mowed

IWI Polygon # S6W037A	Data Reference# S6W037
see table on page one)	
ier 2: Individual Polygon: Preliminary A o be completted on-site for each NWI polygon pres	
1 Wetland Geomorphic Setting and Surface Water	Flow (check one):
✓ Depressional Slope Floo Riverine (within the river/stream banks)	dplainLacustrine
2 Presence of Standing Water:	
standing water normally present in the polygon?	No
Is standing water is present, is the water greate	r than 2 meters n depth? No
standing water normally present in an adjacent pol	ygon? <u>No</u>
3 Apparent Hydroperiod (check one):	
Permanently Flooded	Artificially Flooded
Seasonally Flooded	
Saturated (surface water seldom present)Artificailly Drained
4 Soil Type	
Organic (i.e. peat, etc.) Mineral	Both Mineral and Organic Present
5 Wetland Community Type for this NWI polygon on the Carr 6 Disturbances of Hydrology (check all that apply):	
✓ Ditching Tiles	Culvert Other Human Distrubances to the
Dams ✓ Road or Railroad Embankment	Hydrology (explain):
7 Presence of Invasive Exotics (Score as: S = Scatte	red. F = Frequent. or C = Common):
Garlic Mustard	Glossy Buckthorn
Phragmities	Reed Canary Grass
Purple Loosestrife	Other (list):
8 Presence of Special Hydrologic Conditions (i.e. se	
9 Presence of Special Community Types:	
BogFen	_Wet Sand / Muck Flats or Marl Seeps
10 Presence of Known Federal or Indiana Rar, Thre	eatened or Endangered Species:
✓ None observed or known to be presen	•
RTES Present (list):	
MILS I ICSCIIC (IISC).	
.11 Wetland Polygon Quality Descriptor (see: Wetla	and Quality Descriptions and check one):
Good Medium ✓	Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

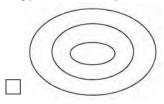
3a	.1 N	Notak	ole Features that influence water quality and hydrology:
Es	tima	ated h	nerbaceouis plant cover (percentage) in the polygon100-75 $\sqrt{}$ 75-5050-25<25
Es	tima	ated v	voody plant foliar coverage in the polygon100-7575-5050-25 _ √ <25
An	nour	nt of o	dead woody material on the soil surface nilscatteredfrequent
3a	.2 V	Vate	r Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.	(Υ)	N N	 If wetland in question is a depressional wetland answer 3a, in not, answer 3b. 3a. Does the wetland have a shape or flow that allows for the settling out of suspended materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Y	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Y	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 0 approximate slope (percen 0
3a	.3 F	lood	I and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
1.	Y	N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub)
	Y	N	that will slow overland flow into the wetland? 1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5.	Y	N	Is the wetland located in a local watershed which has highly modified runoff conditions due to existing development?

Tier 3b Individual Polygon: Rapid Vegetation Description

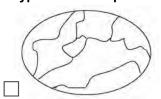
3b.1 Zonation and Interspersion:

- How may vegetation zones are evident in this wetland polygon? ______
 - 1b. If only one vegetation zone is evident, which best describes the site?
 - Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon.
 - Polygon composed of a single vegettation type with more or less uniform texture across the polygon.
- 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone?

Type One Interspersion



Type Two Interspersion



3b.2 Dominant Plant Species: Vegetation Zone A

What % of the polygon does this vegetative zone occupy?

- 10 25%
- 25 50%
- 50 75%
- 75 90%
- >90%

Is there notable layering/stratification in this vegetation zone? No

Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches).

a. Persicaria sp.

d.

b. Typha latifolia

.

c. Equisetum hyemale

f.

Dominant Shrub Species listed in order of relative abundance.

- a. _____
- .
- h
- c. _____

Dominant Tree Species listed in order of relative abundance.

- a. Salix interior
- c. _____
- b. _____
- d. _____

Tree and shrub canopy in nil separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes no

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

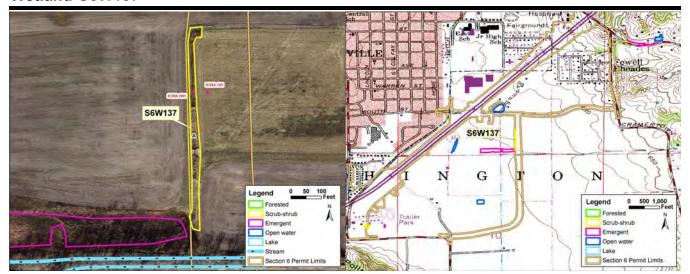
NWI Polygon # S6W037A	Data Reference	S6W037	
3b.2 Dominant Plant Species: Vegetation Zone B			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more that abundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C	f		
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d		
Tree and shrub canopy nil separate, seldom	_	_	
Mature trees (>12" dbh): ☐ yes no			
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone C			
What % of the polygon does this vegetative zone occ	upy?		
□ 10 - 25% □ 25 - 50% □ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetatio	n zone?		
Dominant Herbaceous Species (i.e., covering more thabundance. (Mark with an * any species that forms e			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative abo			
a	C		
b	d		
Dominant Tree Species listed in order of relative abur			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldom	_		
Mature trees (>12" dbh): ☐ yes ■ no	- —		
Other remarks (include personal comments about wh wetland site).	at adds to or det	racts from the quality	of this

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana	SW = southwestern Indiana	numbers = C-coefficents	* = species with high conservatism)
Herbs: non-seed p	olants	Herbs: wide-leaf	ed monocots
✓ horsetail, scouri	ing rush spp. (Equisetum) 2	*arrow arum (F	Peltandra virginica) 6
	niled fern spp. (Dryopteris) 7		p. (Sagittaria) 4
	(Osmunda cinnamomea) 9		(Arisaema dracontium) 6
	nunda regalils) 8		lpit (Arisaema triphyllum) 4
	Onoclea sensibilis) 4		(Pontederia cordata) 5
*other: species			ge (Symplocarpus foetidus) 8
	ss (Selaginella apoda) 4		Calla palustris) 10
spnagnum mos	s spp. (Sphagnum) 10	water plantain	(Alisma plantago-aquatica) 2
Herbs: Ivs. floating		Herbs: dicots - Iv	vs. opposite/whorled
	p. (Utricularia) 10	*bedstraw spp	·
	phyllum demersum) 1	beggar's tick s	
duckweed spp.	•		Berbena hastata) 3
	. (Potamogeton) 8		torium perfoliatum) 4
	eed (Potamogeton crispus)	•	
	phaea tuberosa) 6	clearweed spp	•
	asenia schreberi) 4		hium perfoliatum) 4
^yellow spatterd	lock spp. (Nuphar) 6		pehmeria cylindrica) 3
			edicularis lanceolata) 6
Herbs: Ivs. floating			Gentiana Gentianopsis) 8
	Sarracenia purpurea (10)		(Ambrosia trifida) 0
*sundew spp. ([Diosera) 10		Apocynum cannabinum) 2 spp. (Eupatorium) 5
Horbe: linear-lye	or +/- leafless monocots		эрр. (Lupatorium) 5 p. (Lysimachia) 6
	(Rhynchospora) 10		ty (Rhexia virginica) 5
blueflag iris (Iris			hedge nettle, mtn. mint, skullcap
	cirpus / Schoenoplectus) 5		vsimachia nummularia) 0
*bur reed spp. (spp. (Mimulus) 4
✓ cat-tail spp. (Ty		nettle (Urtica p	
	pp. (Eriophorum) 10		rife (Lythrum salicaria) 0
	imineae) - indicate types and		llinsonia canadensis) 8
number of species	,		t spp. (Hypericum/Triandeum) 8
a. *wild rice (Ziz	zania aquatica) 10	sunflower sp. ((Helianthus) 4
b. most natuve	perennial grass spp. 4:	*swamp loose:	strife (Decodon verticillatus) 8
	na-grass, Canada bluepoint,	swamp milkwe	eed (Asclepias incarnata) 4
foxtail (Alopecru			(Ammania Rotala) 2
	rass spp. 0:reed canary	*turtlehead sp	
	reed (Phragmites),		(Clematis virginiana) 3
	such as annual foxtail		e (Ludwigia palustris) 3
	arnyard grass (Echinochloa)	winged looses	trife (Lythrum alatum) 5
	pp. (Eleocharis) 1 sp. =2	Handaa (odosaa), alia	
*additional =			cots - Ivs. alternate or basal and
nutsedge spp. (• •		lower (Campanula americana) 4 aster (Aser puniceus) 7
rush spp. (Junc	species (if know		er (Aster umbellatus) 8
sedge spp. (Car	•		o. (e.g. New England, panicled ast
• • • •	enocallis occidentalis) 9		usan (Rudbeckia fulgida) 8
sweet flag (Aco	· · · · · · · · · · · · · · · · · · ·		· (Lobelia cardinalis) 4
	Dulichium arundinaceum) 10	cress spp. (Ca	,
	lium mariscoides) 10		amp, water, pale (Rumex) 4
	e (Fuirena squarrosa) 10		(Alliaria petiolata) 0
	Samassia scilloides) 5		t (Senecio aureus) 4
	ass (Xyris torta) 9		,

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (llex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
✓ smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstern (Actinomens alterniola) o	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - lvs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	poison sumac (rinus vernix) to
*buttercup spp.: cursed b., hooked b., swamp	Trace leaves simple and apposite
b.(Ranunculus) 6	Trees - leaves simple and opposite red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	Trees leaves simple and alternate
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	cottonwood, swamp (Populus heterophylla) 8
*queen-of-the prairie (Filipendula rubra) 9	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4	hackberry (Celtis occidentalis) 3
swamp agrimony (Agrimonia parviflora) 4	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Wetland S6W137



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Indian Creek - Sand Creek Quadrangle: Martinsville Basin: 14-digit HUC: 05120201170070 County: Morgan Physiographic Region: Martinsville Hills Township: **T11N** Interior Plateau R1E **Ecoregion:** Range: 3 Natural Region: Highland Rim Section: SE Size of wetland complex (acres): 0.2938 Quarter:

USACE JurisdictionYesLatitude:39.414255IDEM Jurisdiction:YesLongitude:-86.408257

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W137A	Seasonally Flooded Basin	PEM	0.29	poor	poor	poor	RPA	0.29	98.7%

This site is classified as a PSS wetland, 0.29 acre in size. The Section 6 Design Contract 1 Permit Limits would permanently impact 0.29 acre of this wetland. This wetland showed 22% herbaceous cover and 5% sapling/shrub cover. Dominant herbaceous species for this wetland include Symphyotrichum lanceolatum, Carex spp., and unknown spp. Dominant sapling/shrub species included Salix interior. Hydrology is likely due to runoff from local roads and SR 37. Animal habitat, botanical diversity, and hydrology function are all rated as poor based on InWRAP summaries for the site.



Polygon S6W137A

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W137A	City/	County: Martinsvill	e/Morgan	Sampling Date: 2/9/2018
Applicant/Owner: INDOT/Lochumueller			State: Indiana	Sampling Point IC35A-1D1
Investigator(s): Ruth Hook	Sect	ion, Township, Rar	nge: Sec 3-T11N-R1E	
Landform (hillslope, terrace, etc.): excavated drainageway	y	Local relie	ef (concave, convex, no	ne): concave
Slope (%): 0-1 Lat: 39.414598	Long:	-86.408139		Datum: GCS NAD83
Soil Map Unit Name Rensselar cly loam			NWI classi	fication: upland
Are climatic/hydrologic conditions on the site typical for this	time of year?	Yes X No		
Are Vegetation , Soil or Hydrology sign	-			present? Yes X No:
Are Vegetation , Soil or Hydrology na			ded, explain answers in	
SUMMARY OF FINDINGS - Attach site map show				•
·			transcots, importan	Troduics, etc.
Hydrophytic Vegetation Present? Hydric Soils Present? Yes X No.		Is the Sampled	l Area	
Wetland Hydrology Present? Yes N		within a Wetla		No X
Remarks: Data point represents flat field landscape adja	cent to excavated	l drainageway whe	re wetland vegetation a	nd hydrology criteria are not met.
VEGETATION - Use scientific names of plants				
Tree Stratum (Plot Size: 30' radius)	Absolute Don % Cover Spe	ninant Indicator cies? Status	Dominance Test wor	ksheet:
1	76 Cover Spe	cles! Status	Number of Dominant S That Are OBL, FACW	•
2.			,	·
3.			Total Number of Domi Species Across All Str	
4			Percent of Dominant S	Species
5			That are OBL, FACW,	, or FAC: 0 (A/B)
(D) . (C) . (F) . (F)	0 = To	tal Cover	Prevalence Index wo	
Sapling/Shrub Stratum (Plot Size: 15' radius)				
1.			Total % Cover of OBL species	$\frac{\text{of:}}{0} \frac{\text{Multiply by:}}{\text{x 1} = 0}$
2			FACW species	$0 \times 2 = 0$
3. 4.			FAC species	0 x 3 = 0
5.			· · · · · · · · · · · · · · · · · · ·	100 x 4 = 400
	0 = To	tal Cover	UPL species	$\frac{0}{100}$ x 5 = $\frac{0}{100}$ (B)
Herb Stratum (Plot Size: 5' radius)			Column Totals: 1	100 (A) 400 (B)
1. Schedonorus arundinaceus	100	es FACU	Prevalence Ind	lex = B/A = 4.00
2			Hydrophytic Vegetat	ion Indicators:
3				lydrophytic Vegetation:
4			2-Dominance Test	• • •
5.			3-Prevalence Inde	
6				daptations 1(Provide supporting
7. 8.				r on a separate sheet) phytic Vegetation ¹ (Explain)
9.			_	oil and wetland hydrology must
10.			be present, unless dis	
	100 = To	tal Cover		
Vine Stratum (Plot Size: 30' radius)			Hydrophytic	
1.			Vegetation	/oc No V
2		tal Cover	Present? Y	/es No <u>X</u>
		.a. 00vci		
Remarks: (Include photo numbers here or on a separate	sneet.)			

SOIL Sampling Point IC35A-1D1

	Color (moist) 10YR2/1	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture silty clay loam	Remarks
7-14	10YR2/1	95 1	0YR6/8	5	С	PL/M	silty clay loam	prominent redox features
rdric Soil Histosol Histic E Black H Hydroge Stratified 2 cm Mi Deplete Thick Di Sandy M 5 cm Mi	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) uck (A10) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) uck Peat or Peat (S3 Layer (If observed):	e (A11)	Sand Sand Stripp Loam Loam Deple X Redo	y Gleyed I y Redox (: ped Matrix y Mucky I y Gleyed eted Matrix x Dark Su	Matrix (S4) S5) (S6) Mineral (F ² Matrix (F2) (F3) rface (F6) Surface (F	1)	Indiac Coa Dar Iror Ver Oth	pocation: PL=Pore Lining, M=Matrix Interest of Problematic Hydric Soils 3 ast Prairie Redox (A16) Interest of Name of Soils 3 Interest of Name of Name of Soils 3 Interest of Name of Name of Soils 3 Interest of Name of Name of Soils 3 Interes
DROLO	GY ydrology Indicators							
	licators (minimum of		red; check all that	apply)			Seco	ndary Indicators (minimum of two requi
High Wa Saturati Water M Sedimer Drift Der Algal Ma Iron Der Inundati	Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) at or Crust (B4) posits (B5) ion Visible on Aerial I y Vegetated Concave		Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge o	of Reduc	3) s (B14) Ddor (C1) eres on Li ced Iron (C tion in Tille (C7) a (D9)	24)	Dr Dr Cr. ts (C3) Sa Str. (C6) Ge	urface Soil Cracks (B6) ainage Patterns (B10) y-Season Water Table (C2) ayfish Burrows (C8) turation Visibile on Aerial Imagery (C9 unted or Stressed Plants (D1) comorphic Postion (D2) aC-Neutral Test (D5)
	ervations:							
	ater Present? Ye		No X Depth	(inches): (inches): (inches):		= $ $	/-d111	
ırface Wa ater Tabl aturation I	Present? Ye apillary fringe)	es l	NO X Deptil	(11101100).		— ^	etland Hydrolo	ogy Present? Yes No
rface Wa ater Table turation I cludes ca	Present? Ye				orevious ir			gy Present? Yes No _

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: I-69 Section 6 Wetland S6W137A City/County: Martinsville/Morgan					lle/Morgan	Sampling Date: 2/9/2018
Applicant/Owner: INDOT/Lochumueller					State: Indiana	Sampling Point IC35A-1W1
Investigator(s): Ruth Hook		wnship, Ra	ange: Sec 3-T11N-R1E			
Landform (hillslope, terrace, etc.): drainage of	ditch			Local reli	ief (concave, convex, no	ne): concave
Slope (%): 0-1 Lat: 39.474599 Long: -86.408271						Datum: GCS NAD83
Soil Map Unit Name Rensselar cly loam					NWI classi	fication: upland
Are climatic/hydrologic conditions on the site t	ypical for this	time of year	? Yes	X No	(If no, explain Re	emarks.)
Are Vegetation , Soil or Hydrold	ogy sign	ificantly dist	urbed?	Are "l	Normal Circumstances"	present? Yes X No:
Are Vegetation , Soil or Hydrolc				If nee	eded, explain answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site	·			ocations,	, transects, importar	nt features, etc.
Hydrophytic Vegetation Present? Ye	es X No)				
Hydric Soils Present? Ye	s X No			he Sample		V
Wetland Hydrology Present? Ye	s X No	<u> </u>	with	nin a Wetla	and? Yes	X No
Remarks: The wetland feature represented	by this data p	oint has bee	en designate	ed as PEM	1 based on the Cowardir	ո et al. classification system.
VECETATION Line ociontific nomes o	of plants					_
VEGETATION - Use scientific names of	יי אומוונא	Absolute	Dominant	Indicator	Daminaraa Taat	ulsa haasi
Tree Stratum (Plot Size: 30' radius	_)		Species?	Status	Dominance Test wor	
1. Salix interior	- 	5	Yes	FACW	Number of Dominant That Are OBL, FACW	•
2					Total Number of Dom	inant
3					Species Across All St	rata: 5 (B)
4					Percent of Dominant S	
5			= Total Cov		That are OBL, FACW,	, or FAC: <u>80</u> (A/B)
Sapling/Shrub Stratum (Plot Size: 15' radio	ıs)		- Total Cov	CI	Prevalence Index wo	orksheet:
1. Salix interior		5	Yes	FACW	Total % Cover o	of: Multiply by:
2.					OBL species	0 x 1 = 0
3.					FACW species	17 x 2 = 34
4					FAC species FACU species	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
5					UPL species	$0 \times 5 = 0$
Llash Charters (Diet Size: 5' redius	,	5	= Total Cov	er	Column Totals:	27 (A) 64 (B)
Herb Stratum (Plot Size: 5' radius 1. Symphyotrichum lanceolatum	_)	10	Yes	FAC	Prevalence Ind	dex = B/A = 2.37
2. Carex sp.			Yes	FACW	T TOVAIONOO INO	<u> </u>
3. unknown		5	Yes	NL	Hydrophytic Vegetat	ion Indicators:
4. Juncus bufonius		2	No	FACW	_ ·	lydrophytic Vegetation:
5					X 2-Dominance Test X 3-Prevalence Inde	
6					l —	daptations ¹(Provide supporting
7					data in Remarks o	r on a separate sheet)
8					<u> </u>	ophytic Vegetation ¹ (Explain)
9. 10.					¹ Indicators of hydric so be present, unless dis	oil and wetland hydrology must
10.		22	= Total Cov	er	be present, unless us	
Vine Stratum (Plot Size: 15' radius	_)				Hydrophytic	
1					Vegetation	
2					Present?	/es X No
		0	= Total Cov	er		
Remarks: (Include photo numbers here or or	n a separate s	heet.)				

SOIL Sampling Point IC35A-1W1

Depth	Matrix			edox Feature				
Inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc 2	Texture	Remarks
0-4	10YR2/1	95	10YR5/8	5	C	PL/M	sandy loam	prominent redox concentrations
4-18	10YR2/1	70	10YR5/8 & 10YR6/	15 & 15	С	PL/M	sandy loam	prominent redox concentrations
dric Soi Histosol Histic E Black H Hydroge Stratifie 2 cm Mi Deplete Thick D Sandy M 5 cm Mi	I Indiactors:	ace (A11)) S3)	X Sai Str Loa Loa De Re	x, CS=Cover andy Gleyed M andy Redox (S pped Matrix amy Mucky M amy Gleyed M amy Gleyed M bleted Matrix dox Dark Sur bleted Dark S dox Depressi	Matrix (S4 (S6) (S6) Iineral (F ⁻ Matrix (F2 (F3) face (F6) Surface (F	1)	Indiact Coa X Darl Iron Very Othe	cation: PL=Pore Lining, M=Matrix cors for Problematic Hydric Soils st Prairie Redox (A16) c Surface (S7) -Manganese Masses (F12) c Shallow Dark Surface (TF12) er Soil (Explain in Remarks) cators of hydrophytic vegetation and and hydrology must be present, unless disturbed or problematic.
Depth (in	nches):						Hydric Soi	I present? Yes X No
Depth (ir marks:	nches):	rt of this da	ata point review.				Hydric Soi	I present? Yes <u>X</u> No _
soils wer	re examined as pa	rt of this da	ata point review.				Hydric Soi	I present? Yes X No
Depth (in marks: soils were	GY general description of the second of the	ors:		at apply)				
Depth (ir marks: soils wer DROLO etland H	GY ydrology Indicato licators (minimum	ors:	equired; check all th		vas (BQ)		Secon	dary Indicators (minimum of two requ
Depth (ir marks: soils were DROLO etland Himary Indo	GY ydrology Indicato licators (minimum Water (A1)	ors:	equired; check all th	Stained Leav	` '		Secon	dary Indicators (minimum of two requ
Depth (ir marks: soils wer DROLO etland H imary Ind Surface High Wa	GY ydrology Indicato licators (minimum Water (A1) ater Table (A2)	ors:	equired; check all th Water Aquati	Stained Leav Fauna (B13	3)		Secon Sur X Dra	dary Indicators (minimum of two requ face Soil Cracks (B6) ninage Patterns (B10)
Depth (ir marks: soils wer DROLO etland H imary Ind Surface High Wa Saturati	GY ydrology Indicate licators (minimum Water (A1) ater Table (A2) on (A3)	ors:	equired; check all th Water Aquati True A	Stained Leaver Fauna (B13)	3) s (B14)		Secon Sur Dra Dry	dary Indicators (minimum of two requ face Soil Cracks (B6) ninage Patterns (B10) -Season Water Table (C2)
Depth (ir marks: soils wer DROLO etland H imary Ind Surface High Wa Saturati Water M	GY ydrology Indicate licators (minimum Water (A1) ater Table (A2) on (A3) Marks (B1)	ors:	equired; check all th Water Aquati True A Hydrog	Stained Leaver Fauna (B13 quatic Plants pen Sulfide O	3) s (B14) dor (C1)	iving Root	Secon Sur X Dra Dry Cra	dary Indicators (minimum of two requ face Soil Cracks (B6) ainage Patterns (B10) r-Season Water Table (C2) ayfish Burrows (C8)
DROLO etland H imary Ind Surface High Wa Saturati Water M Sedime	GY ydrology Indicator licators (minimum Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2)	ors:	equired; check all th Water Aquati True A Hydroq Oxidiz	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizosphe	3) s (B14) dor (C1) eres on Li	-	Secon Sur X Dra Dry Cra s (C3) Sat	dary Indicators (minimum of two requ face Soil Cracks (B6) hinage Patterns (B10) r-Season Water Table (C2) hyfish Burrows (C8) huration Visibile on Aerial Imagery (C8
DROLO etland H imary Ind Surface High Wa Saturati Water M Sedime Drift De	re examined as paragraphic part of the examined part o	ors:	equired; check all th — Water — Aquati — True A — Hydrog — Oxidiz — Preser	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospheice of Reduce	3) s (B14) dor (C1) eres on Li ed Iron (C	C4)	Secon	dary Indicators (minimum of two requiface Soil Cracks (B6) hinage Patterns (B10) r-Season Water Table (C2) hyfish Burrows (C8) huration Visibile on Aerial Imagery (C8)
DROLO etland H imary Ind Surface High Wa Saturati Water M Sedime Drift De Algal M	re examined as paragraphic par	ors:	equired; check all th Water Aquati True A Hydrog Oxidiz Preser Recen	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizosphet Iron Reduct	B) s (B14) dor (C1) eres on Li ed Iron (C	C4)	Secon	dary Indicators (minimum of two requires Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) auration Visibile on Aerial Imagery (C9) anted or Stressed Plants (D1)
Depth (ir marks: soils were properties of the control of the contr	re examined as paragraphic par	ors: of one is re	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reducture Ruck Surface	B) (B14) (C1) (C1) (C1) (C1) (C1) (C1) (C7)	C4)	Secon	dary Indicators (minimum of two requiface Soil Cracks (B6) hinage Patterns (B10) r-Season Water Table (C2) hyfish Burrows (C8) huration Visibile on Aerial Imagery (C8)
Depth (ir marks: soils were possible were possible were possible were possible were possible water to possible possible water to possible	re examined as paragraphic par	ors: of one is re	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M (B7) Gauge	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizosphet Iron Reduct	B) G (B14) Hoor (C1) Heres on Li Heres on Ci Heres on Till Heres Heres	C4)	Secon	dary Indicators (minimum of two requirect Soil Cracks (B6) ainage Patterns (B10) ar-Season Water Table (C2) ayfish Burrows (C8) auration Visibile on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Postion (D2)
Depth (ir marks: soils were better the bette	re examined as paragraphic par	ors: of one is re	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M (B7) Gauge	Stained Leaver Fauna (B13 quatic Plants per Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data	B) G (B14) Hoor (C1) Heres on Li Heres on Ci Heres on Till Heres Heres	C4)	Secon	dary Indicators (minimum of two requirect Soil Cracks (B6) ainage Patterns (B10) ar-Season Water Table (C2) ayfish Burrows (C8) auration Visibile on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Postion (D2)
Depth (ir marks: soils were possible were possible were possible were possible were possible with a setting water water water water possible possible water possible water possible water possible water possible water	re examined as paragraphic par	ors: of one is re	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M (B7) Gauge (B8) Other	Stained Leaver Fauna (B13 quatic Plants per Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data	B) G (B14) Hoor (C1) Heres on Li Heres on Ci Heres on Till Heres Heres	C4)	Secon	dary Indicators (minimum of two requirect Soil Cracks (B6) ainage Patterns (B10) ar-Season Water Table (C2) ayfish Burrows (C8) auration Visibile on Aerial Imagery (C9) anted or Stressed Plants (D1) comorphic Postion (D2)
DROLO PROLO PR	re examined as particles of the particle	ors: of one is re al Imagery ave Surface	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M (B7) Gauge e (B8) Other	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data (Explain in Reduct Iron Iron Reduct Iron Reduct Iron Reduct Iron Reduct Iron Iron Iron Iron Iron Iron Iron Iron	B) G (B14) Hoor (C1) Heres on Li Heres on Ci Heres on Till Heres Heres	C4)	Secon	dary Indicators (minimum of two requires Soil Cracks (B6) ainage Patterns (B10) a-Season Water Table (C2) ayfish Burrows (C8) auration Visibile on Aerial Imagery (C9) anted or Stressed Plants (D1)
Depth (irmarks: soils were properties of the control of the contro	re examined as paragraphic procession (A1) atter Table (A2) on (A3) flarks (B1) atter Toposits (B2) posits (B3) at or Crust (B4) posits (B5) fon Visible on Aericy Vegetated Concorrections: atter Present?	ors: of one is re al Imagery ave Surface	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge e (B8) Other No X Dep	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data Explain in Reduct th (inches):	B) G (B14) Hoor (C1) Heres on Li Heres on Ci Heres on Till Heres Heres	ed Soils (Secon	dary Indicators (minimum of two requirece Soil Cracks (B6) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) suration Visibile on Aerial Imagery (C9) nted or Stressed Plants (D1) comorphic Postion (D2) C-Neutral Test (D5)
DROLO Tetland H mary Ind Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De Inundati Sparsel eld Obse atter Table	re examined as paragraphic processes	ors: of one is real al Imagery ave Surface Yes Yes Yes	equired; check all the Water Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge e (B8) Other No X Dep	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data Explain in Reduct (inches): _th (inches): _th (inches): _	B) G (B14) Podor (C1) Peres on Li ed Iron (C Gion in Till (C7) G (D9) G (D9)	ed Soils (Secon	dary Indicators (minimum of two requirece Soil Cracks (B6) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) curation Visibile on Aerial Imagery (C9) nted or Stressed Plants (D1) comorphic Postion (D2) C-Neutral Test (D5)
Depth (irmarks: soils were provided in the control of the control	re examined as paragraphic processes	ors: of one is real al Imagery ave Surface Yes Yes Yes	equired; check all the Land Mater Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other No X Dep No X Dep	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data Explain in Reduct (inches): _th (inches): _th (inches): _	B) G (B14) Podor (C1) Peres on Li ed Iron (C Gion in Till (C7) G (D9) G (D9)	ed Soils (Secon	dary Indicators (minimum of two requirece Soil Cracks (B6) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) curation Visibile on Aerial Imagery (C9) nted or Stressed Plants (D1) comorphic Postion (D2) C-Neutral Test (D5)
DROLO Tetland H mary Ind Surface High Wa Saturati Water M Sedime Drift De Algal M Iron De Inundati Sparsel eld Obse atter Table	re examined as paragraphic processes	ors: of one is real al Imagery ave Surface Yes Yes Yes	equired; check all the Land Mater Aquati True A Hydrog Oxidiz Preser Recen Thin M Gauge (B8) Other No X Dep No X Dep	Stained Leaver Fauna (B13 quatic Plants gen Sulfide Oed Rhizospherice of Reduct Iron Reduct uck Surface or Well Data Explain in Reduct (inches): _th (inches): _th (inches): _	B) G (B14) Podor (C1) Peres on Li ed Iron (C Gion in Till (C7) G (D9) G (D9)	ed Soils (Secon	dary Indicators (minimum of two requirece Soil Cracks (B6) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) suration Visibile on Aerial Imagery (C9) nted or Stressed Plants (D1) comorphic Postion (D2) C-Neutral Test (D5)

I-69 Wetland Quality Assessment Profile

Date Report Generated: 5/22/2018

Data reference # S6W137

Wetland Site

Date of site visit: 12/13/17

Total wetland area: 0.2938 acres

Polygon Information		
Polygon ID	S6W137A	
Polygon Size (acres)	0.29	
Wetland Community Type	SC	
Red Flag (Special) Indicators		
Special Hydrologic Conditions	z	
Special Community Type	Z	
Rare-Threatened-Endangered Species	z	
Animal Habitat Measures		
Wetland size and connectivity	2	
Surrounding land use		
Standing water	2	
Dead woody material		
Zonation and interspersion		
Stratification	_	
Tree canopy		
Mature trees		
Animal Habitat Measure Score (min = 8, max = 24)	10	
Animal Habitat Measure Rating	poor	
Botanical Measures (all except exotics dependent upon community type)		
Number of dominant plant taxa observed		
Conservatism rating		
Total hydrophytic taxa observed	_	
Number of indicator taxa		
Exotic species rating	е	
Botanical Measure Score (min = 5, max = 15)	2	
Botanical Measure Rating	poor	
Hydrology Measures		
Water quality protection (= no. of yes answers)		
Flood and storm water storage (= no. of yes answers)	2	
Site/Hydrology Score (min = 11, max = 33)	15	
Site/Hydrology Rating	poor	
		۱

In-WRAP Summary Sheet

Date Report Generated: Monday, July 30, 2018			
Wetland Site Name: N/A			
Data Reference #: S6W137			
Date of Site Visit: Wednesday, December 13, 2017			
Tier 1 Summary:			
a. Total Wetland Area (acres): 0.2938			
b. Wetland size and connectivity - contribution to animal habi	itat:		
Valuable M	lore Favorable	Favorable	Neutral
c. Surrounding land use - numerical rank (max. = 1):0.20	_		
d. Value surrounding area adds to animal habitat:	Valuable	Favorable	Low
Tier 2 SUMMARY:	Polyg	on ID	66W137A
a. Indiana Wetland community type: Shrub-Carr			
b. Standing water - contribution to animal habitat:	Valuable	Favorable	Neutral
c. Disturbances to site: ditches			
d. Exotic species rating:	Good	Medium	Poor
e. Special Hydrologic Conditions Observed: none			
f. Special Community Type: None			
g. Rare-Threatened-Endangered Species: None			
h. Polygon Quality Descriptor:	Good	Medium	Poor
Tier 3A SUMMARY:			
a: Dead woody material as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Water quality protection - numerical rank (6 max.):0	Good	Medium	Poor
c. Flood and storm water storage - numerical rank (5 max2	Good	Medium	Poor
Tier 3B SUMMARY:			
a. Zonation and interspersion as indicator of animal habitat:	Valuable	Favorable	Neutral
b. Stratification as indicator of animal habitat:	Valuable		Neutral
c. Number of dominant plant taxa observed: 4	Good	Medium	Poor
d. Average coefficient of conservatism: 2.3	Good	Medium	Poor
e. Tree canopy as indicator of animal habitat:	Valuable		Neutral
f. Mature trees as indicator of animal habitat:	Valuable	Favorable	Neutral
g. Total hydrophytic taxa observed:4	Good	Medium	Poor
h. Number of indicator taxa: 0	Good	Medium	Poor

O Road / highway / railroad bed / parking lot

Commercial or multifamily residential

0 Industrial

0 Residential - single family

Native Vegetation - woodland

100 Agricultural - tilled

O Agricultural - pasture

Native Vegetation - old field / scrub

Recreation - green space, mowed

ier 2: Individual Polygon: Preliminary Assessment o be completted on-site for each NWI polygon present in the wetland) 1 Wetland Geomorphic Setting and Surface Water Flow (check one): ✓ Depressional Slope Floodplain Lacustrine Riverine (within the river/stream banks) 2 Presence of Standing Water: standing water normally present in the polygon? Yes Is standing water is present, is the water greater than 2 meters n depth? No standing water normally present in an adjacent polygon? Yes 3 Apparent Hydroperiod (check one): Permanently Flooded Artificially Flooded ✓ Seasonally Flooded Artificially Drained 4 Soil Type Organic (i.e. peat, etc.) ✓ Mineral Both Mineral and Organic Present 5 Wetland Community Type for this NWI polygon (see Key to Wetland Communities of Indiana): nrub-Carr 6 Disturbances of Hydrology (check all that apply): ✓ Ditching Culvert Tiles Other Human Distrubances to the Hydrology (explain): Road or Railroad Embankment 7 Presence of Invasive Exotics (Score as: S = Scattered, F = Frequent, or C = Common): Garlic Mustard Glossy Buckthorn Phragmities Reed Canary Grass Purple Loosestrife Other (list): 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): one 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: ✓ None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	NWI Polygon # S6W137A	Data Reference# S6W137
a be completted on-site for each NWI polygon present in the wetland) 1 Wetland Geomorphic Setting and Surface Water Flow (check one): ✓ Depressional Slope Floodplain Lacustrine Riverine (within the river/stream banks) 2 Presence of Standing Water: standing water normally present in the polygon? Yes Is standing water is present, is the water greater than 2 meters in depth? No standing water normally present in an adjacent polygon? Yes 3 Apparent Hydroperiod (check one): — Permanently Flooded Artificially Flooded — Seasonally Flooded Artificially Drained 4 Soil Type — Organic (i.e. peat, etc.) ✓ Mineral Both Mineral and Organic Present 5 Wetland Community Type for this NWI polygon (see Key to Wetland Communities of Indiana): nrub-Carr 6 Disturbances of Hydrology (check all that apply): ✓ Ditching Culvert — Tiles Other Human Distrubances to the Dams Hydrology (explain): Road or Railroad Embankment 7 Presence of Invasive Exotics (Score as: S = Scattered, F = Frequent, or C = Common): Garlic Mustard Glossy Buckthorn — Phragmities Reed Canary Grass — Purple Loosestrife Other (list): 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): one 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: ✓ None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	see table on page one)	
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Riverine (within the river/stream banks) 2 Presence of Standing Water: standing water normally present in the polygon? Yes Is standing water is present, is the water greater than 2 meters n depth? No standing water normally present in an adjacent polygon? Yes 3 Apparent Hydroperiod (check one): Permanently Flooded	.1 Wetland Geomorphic Setting and Surface Wa	ater Flow (check one):
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5 Wetland Community Type for this NWI polygon (see Key to Wetland Communities of Indiana): □ Ditching	4 Soil Type	
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Tiles Other Human Distrubances to the Dams Hydrology (explain): Road or Railroad Embankment 7 Presence of Invasive Exotics (Score as: S = Scattered, F = Frequent, or C = Common): Garlic Mustard Glossy Buckthorn Phragmities Reed Canary Grass Purple Loosestrife Other (list): 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): one 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: ✓ None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	.6 Disturbances of Hydrology (check all that app	ply):
Dams Road or Railroad Embankment 7 Presence of Invasive Exotics (Score as: S = Scattered, F = Frequent, or C = Common): Garlic Mustard Phragmities Purple Loosestrife Other (list): 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): one 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: ✓ None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	✓ Ditching	Culvert
Road or Railroad Embankment 7 Presence of Invasive Exotics (Score as: S = Scattered, F = Frequent, or C = Common): Garlic Mustard Phragmities Purple Loosestrife 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	Tiles	Other Human Distrubances to the
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Purple Loosestrife Other (list): 8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	Garlic Mustard	Glossy Buckthorn
8 Presence of Special Hydrologic Conditions (i.e. seeps, wet slopes, floating mat): 9 Presence of Special Community Types: Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	Phragmities	Reed Canary Grass
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Bog Fen Wet Sand / Muck Flats or Marl Seeps 10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):		
10 Presence of Known Federal or Indiana Rar, Threatened or Endangered Species: ✓ None observed or known to be presen RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	э Presence от Special Community Types:	
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RTES Present (list): 11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	10 Presence of Known Federal or Indiana Rar,	Threatened or Endangered Species:
11 Wetland Polygon Quality Descriptor (see: Wetland Quality Descriptions and check one):	✓ None observed or known to be preser	n
	RTES Present (list):	
	.11 Wetland Polygon Quality Descriptor (see: W	Vetland Quality Descriptions and check one):
Good Medium √ Poor	Good Medium	√ Poor

Tier 3a: Individual Polygon: Rapid Hydrology Indicators

to existing development?

20	4 6	lotok	No Features that influence water quality and bydrology.
			ole Features that influence water quality and hydrology: nerbaceouis plant cover (percentage) in the polygon 100-75 75-50 √ 50-25 <25
			voody plant foliar coverage in the polygon100-7575-5050-25<25
An	nour	nt of o	dead woody material on the soil surfacenilscatteredfrequent
3а	.2 V	Vate	r Quality Protection Questions:
1.	Y	N	Does the wetland have a significant amount of vegetative (specifically herbaceous and woody plant) density to potentially uptake dissolved nutients?
2.	Y	N	Managed water (e.g. municipal or road stromwater drainage, agricultural drainage outlet, industrial or municipal wastewater) is not discharged into the wetland polygon?
3.			If wetland in question is a depressional wetland answer 3a, in not, answer 3b.
	Y	(N)	3a. Does the wetland have a shape or flow that allows for the settling out of suspended
	Y	N	materials before teh water reaches the center of the wetland? 3b. Is the position of the wetland in the landscape such that run-off is held or filtered before entering a surface body of water down gradient?
4.	Υ	N	Does the wetland lack steep slopes, large impervious areas, moderate slopes with row cropping, or areas with severe overgrazing within 100 meters of its border?
5.	Y	N	Are there recreational lakes, fishable or navigable watercourses, or water supply sources down gradient in the local watershed?
6.	Υ	N	Is a vegetative buffer area or another wetland polygon (areas where overland flow could be filtered) located upland and adjacent to the wetland polygon? If yes, describe buffer area width and slope.
			width of buffer area (in meters 0 approximate slope (percen 0
3a	.3 F	looc	l and Stormwater Storage / Attenuation Questions:
1.			If wetland in question is a depressional wetland answer 1a, in not, answer 1b
	Y	N	1a. Around the wetland is there a buffer strip of natural vegetation (forested, old field, scrub)
	Y	N	that will slow overland flow into the wetland? 1b. Is there a significant amount of microtopography or vegetative density within the wetland to reduce the veolocity of the water leaving the wetland?
2.	Y	N	Does the wetland lack man-made structure that would speed the flow of water from the wetland (tiles, culverts, ditches)?
3.	Y	N	Is the flood potential high in the local watershed in which the wetland is located (history of flood damages)?
4.	Y	N	Is the wetland located in a watershed where the majority f the upland soils are claye and impermeable, or is bedrock within two feet of the top of the soil profile?
5	\bigcirc	N	Is the wetland located in a local watershed which has highly modified runoff conditions due

Tier 3b Individual Polygon: Rapid Vegetation Description 3b.1 Zonation and Interspersion: 1. How may vegetation zones are evident in this wetland polygon? 1b. If only one vegetation zone is evident, which best describes the site? Polygon composed of amosaic of small vegetation patches, hummocks, or tussocks, heterogeneous textures across the polygon. Polygon composed of a single vegettation type with more or less uniform texture across the polygon. 2. If more than one vegetation zone is present in the polygon, which intersperision diagram most closely represents the distribuion of these zone? **Type Two Interspersion Type One Interspersion** 3b.2 Dominant Plant Species: Vegetation Zone A What % of the polygon does this vegetative zone occupy? 10 - 25% 50 - 75% 75 - 90% 25 - 50% >90% Is there notable layering/stratification in this vegetation zone? Yes Dominant Herbaceous Species (i.e., covering more than 10% of the area) listed in order of relative abundance. (Mark with an * any species that forms extensive monocultural patches). a. Equisetum hyemale b. Symphyotrichum lanceolatum

f.

Dominant Shrub Species listed in order of relative abundance.

Dominant Tree Species listed in order of relative abundance.

a. Salix interior

d. _____

b. Populus deltoides

Tree and shrub canopy: nil separate, seldom touching often touching more or less close

Mature trees (>12" dbh): yes

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

NWI Polygon # S6W137A	Data Reference	e S6W137	
3b.2 Dominant Plant Species: Vegetation Zone I	3		
What % of the polygon does this vegetative zone occ	:upy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms of			relative
a	d		
b	e		
c	f		
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d		
Dominant Tree Species listed in order of relative abu	ndance.		
a	C		
b	d		
Tree and shrub canopy: nil separate, seldon	touching 🔲 oft	en touching 🔲 more	or less close
Mature trees (>12" dbh): yes no			
Other remarks (include personal comments about what wetland site).	at adds to or det	racts from the quality	of this
3b.2 Dominant Plant Species: Vegetation Zone (;		
What % of the polygon does this vegetative zone occ	:upy?		
☐ 10 - 25% ☐ 25 - 50% ☐ 50	- 75%	75 - 90%	Section >90%
Is there notable layering/stratification in this vegetation	n zone?		
Dominant Herbaceous Species (i.e., covering more tabundance. (Mark with an * any species that forms of			relative
a	d		
b	e		
C			
Dominant Shrub Species listed in order of relative ab			
a	C		
b	d.		
Dominant Tree Species listed in order of relative abu			
a	C		
b	d.		
Tree and shrub canopy nil separate, seldon			
Mature trees (>12" dbh): yes no	о Ш	<u> </u>	
Other remarks (include personal comments about w	act adds to or dat	roots from the quality	of this

Other remarks (include personal comments about what adds to or detracts from the quality of this wetland site).

3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern Indiana	numbers = C-coefficents * = species with high conservatism)
Herbs: non-seed plants	Herbs: wide-leafed monocots
✓ horsetail, scouring rush spp. (Equisetum) 2	*arrow arum (Peltandra virginica) 6
*ferns: marsh shiled fern spp. (Dryopteris) 7	arrow-head spp. (Sagittaria) 4
*cinnamon fern (Osmunda cinnamomea) 9	*green dragon (Arisaema dracontium) 6
*royal fern (Osmunda regalils) 8	Jack-in-the-pulpit (Arisaema triphyllum) 4
sensitive fern (Onoclea sensibilis) 4	pickerel weed (Pontederia cordata) 5
*other: species (if know	*skunk cabbage (Symplocarpus foetidus) 8
marsh club moss (Selaginella apoda) 4	*water arum (Calla palustris) 10
Sphagnum moss spp. (Sphagnum) 10	water plantain (Alisma plantago-aquatica) 2
Herbs: Ivs. floating or submergent	Herbs: dicots - Ivs. opposite/whorled
*bladderwort spp. (Utricularia) 10	*bedstraw spp. (Gallium) 6
coontail (Ceratophyllum demersum) 1	beggar's tick spp. (Bidens) 3
duckweed spp. (Lemnaceae) 3	blue vervain (Berbena hastata) 3
*pondweed spp. (Potamogeton) 8	boneset (Eupatorium perfoliatum) 4
curlyleaf pondweed (Potamogeton crispus) 0	bugleweed spp. (Lycopus) 5
*water lily (Nymphaea tuberosa) 6	clearweed spp. (Pilea) 3
water shield (Brasenia schreberi) 4	cup plant (Silphium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6	false nettle (Boehmeria cylindrica) 3
	*fen betony (Pedicularis lanceolata) 6
Herbs: Ivs. floating or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea (10)	giant ragweed (Ambrosia trifida) 0
*sundew spp. (Drosera) 10	Indian hamp (Apocynum cannabinum) 2
	Joe-pye weed spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless monocots	*loosestrife spp. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10	meadow beauty (Rhexia virginica) 5
blueflag iris (Iris virginica) 5	mint spp. e.g. hedge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenoplectus) 5	moneywort (Lysimachia nummularia) 0
*bur reed spp. (Sparganium) 9	monkey flower spp. (Mimulus) 4
cat-tail spp. (Typha) 1	nettle (Urtica procera) 1
*cotton grass spp. (Eriophorum) 10	purple loosestrife (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate types and	
number of species	St. John's wort spp. (Hypericum/Triandeum) 8
a. *wild rice (Zizania aquatica) 10	sunflower sp. (Helianthus) 4
b. most natuve perennial grass spp. 4:	*swamp loosestrife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada bluepoint,	swamp milkweed (Asclepias incarnata) 4
foxtail (Alopecrus); other	toothcup spp. (Ammania Rotala) 2
c. introduced grass spp. 0:reed canary	*turtlehead spp. (Chelone) 8
grass (Phalaris, reed (Phragmites), annual grasses such as annual foxtail	virgin's bower (Clematis virginiana) 3
(Setaria) and barnyard grass (Echinochloa)	water purslane (Ludwigia palustris) 3 winged loosestrife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 sp. =2	willged loosestille (Lytillulli alatulli) 5
*additional = 8	Herbs (vines): dicots - lvs. alternate or basal and
nutsedge spp. (Cyperus) 2	American bellflower (Campanula americana) 4
*orchid spp. 10; species (if know	*asters: bristly aster (Aser puniceus) 7
rush spp. (Juncus) 4	flat-topped aster (Aster umbellatus) 8
sedge spp. (Carex) 1 sp. = 3 additional	
*spiderlily (Hymenocallis occidentalis) 9	*black-eyed Susan (Rudbeckia fulgida) 8
sweet flag (Acorus calamus) 0	cardinal flower (Lobelia cardinalis) 4
*3-way sedge (Dulichium arundinaceum) 10	cress spp. (Cardamine) 4
*twig rush (Cladium mariscoides) 10	dock spp.: swamp, water, pale (Rumex) 4
*umbrella sedge (Fuirena squarrosa) 10	garlic mustard (Alliaria petiolata) 0
wild hyacinth (Camassia scilloides) 5	golden ragwort (Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9	

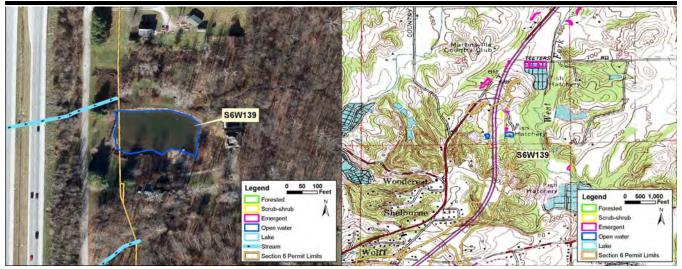
3b.4 Species richness and indicator speceis. Check all species observed within the polygon. Important: if multiple species from one genus or family (marked with spp.) are seen, indicate the number of species.

(N = northern Indiana SW = southwestern Indiana	numbers = C-coefficents * = species with high conservatism)
Herbs: non-seed plants	Herbs: wide-leafed monocots
✓ horsetail, scouring rush spp. (Equisetum) 2	*arrow arum (Peltandra virginica) 6
*ferns: marsh shiled fern spp. (Dryopteris) 7	arrow-head spp. (Sagittaria) 4
*cinnamon fern (Osmunda cinnamomea) 9	*green dragon (Arisaema dracontium) 6
*royal fern (Osmunda regalils) 8	Jack-in-the-pulpit (Arisaema triphyllum) 4
sensitive fern (Onoclea sensibilis) 4	pickerel weed (Pontederia cordata) 5
*other: species (if know	*skunk cabbage (Symplocarpus foetidus) 8
marsh club moss (Selaginella apoda) 4	*water arum (Calla palustris) 10
Sphagnum moss spp. (Sphagnum) 10	water plantain (Alisma plantago-aquatica) 2
Herbs: Ivs. floating or submergent	Herbs: dicots - Ivs. opposite/whorled
*bladderwort spp. (Utricularia) 10	*bedstraw spp. (Gallium) 6
coontail (Ceratophyllum demersum) 1	beggar's tick spp. (Bidens) 3
duckweed spp. (Lemnaceae) 3	blue vervain (Berbena hastata) 3
*pondweed spp. (Potamogeton) 8	boneset (Eupatorium perfoliatum) 4
curlyleaf pondweed (Potamogeton crispus) 0	bugleweed spp. (Lycopus) 5
*water lily (Nymphaea tuberosa) 6	clearweed spp. (Pilea) 3
water shield (Brasenia schreberi) 4	cup plant (Silphium perfoliatum) 4
*yellow spatterdock spp. (Nuphar) 6	false nettle (Boehmeria cylindrica) 3
	*fen betony (Pedicularis lanceolata) 6
Herbs: Ivs. floating or submergent	*gentian spp. (Gentiana Gentianopsis) 8
*pitcher plant (Sarracenia purpurea (10)	giant ragweed (Ambrosia trifida) 0
*sundew spp. (Drosera) 10	Indian hamp (Apocynum cannabinum) 2
	Joe-pye weed spp. (Eupatorium) 5
Herbs: linear-lvs. or +/- leafless monocots	*loosestrife spp. (Lysimachia) 6
*beak rush spp (Rhynchospora) 10	meadow beauty (Rhexia virginica) 5
blueflag iris (Iris virginica) 5	mint spp. e.g. hedge nettle, mtn. mint, skullcap
bulrush spp. (Scirpus / Schoenoplectus) 5	moneywort (Lysimachia nummularia) 0
*bur reed spp. (Sparganium) 9	monkey flower spp. (Mimulus) 4
cat-tail spp. (Typha) 1	nettle (Urtica procera) 1
*cotton grass spp. (Eriophorum) 10	purple loosestrife (Lythrum salicaria) 0
Grasses (family Gramineae) - indicate types and	
number of species	St. John's wort spp. (Hypericum/Triandeum) 8
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b. most natuve perennial grass spp. 4:	*swamp loosestrife (Decodon verticillatus) 8
cut-grass, manna-grass, Canada bluepoint,	swamp milkweed (Asclepias incarnata) 4
foxtail (Alopecrus); other	toothcup spp. (Ammania Rotala) 2
c. introduced grass spp. 0:reed canary	*turtlehead spp. (Chelone) 8
grass (Phalaris, reed (Phragmites), annual grasses such as annual foxtail	virgin's bower (Clematis virginiana) 3
(Setaria) and barnyard grass (Echinochloa)	water purslane (Ludwigia palustris) 3 winged loosestrife (Lythrum alatum) 5
needle sedge spp. (Eleocharis) 1 sp. =2	willged loosestille (Lytillulli alatulli) 5
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sweet flag (Acorus calamus) 0	cardinal flower (Lobelia cardinalis) 4
*3-way sedge (Dulichium arundinaceum) 10	cress spp. (Cardamine) 4
*twig rush (Cladium mariscoides) 10	dock spp.: swamp, water, pale (Rumex) 4
*umbrella sedge (Fuirena squarrosa) 10	garlic mustard (Alliaria petiolata) 0
wild hyacinth (Camassia scilloides) 5	golden ragwort (Senecio aureus) 4
*yellow-eyed grass (Xyris torta) 9	

Herbs (vines): dicots - lvs. alternate or basal and	
simple (continued)	Shrubs - leaves alternate
*goldenrod spp. (Solidago ohioensis, S. patula,	*cranberry spp. (Vaccinium) 10
*grass of Parnassus (Parnassia glauca) 10	*dwarf birch (Betula pumila) 10
*Indian plantain (Cacalia plantaginea) 10	*highbush blueberry (Vaccinium corymbosum) 9
ironweed spp. (Vernonia) 4	*leatherleaf (Chamaedaphne calyculata) 10
jewelweed, touch-me-not spp. (Impatiens) 3	meadowsweet and Hardhack spp. (Spiraea) 4
lizard's tail (Saururus cernuus) 4	*ninebark (Physocarpus opulifoius) 7
lobelia spp. (Lobelia) 4	*shrubby cinquefoil (Potentilla fruticosa) 9
*marsh marigold (Caltha palustris) 7	spice bush (Lindera benzoin) 5
*moonseed (Menispermum canadense) 6	*swamp dewberry (Rubus hispidus) 6
primrose-willow spp. (Epilobium Ludwigia) 3	*swamp holly and winterberry spp. (Ilex) 7
rose mallow spp. (Hibiscus) 4	swamp rose (Rosa palustris) 5
smartweed spp.: jumpseed, pinkweed,	
tearthumb, water-pepper, waters smartweed	Trees - leaves needle shaped
(Polygonum)	*tamarack (Larix laricina) 10
halbredleaf tearthumb (Polygonum arifolium) 10	
sneezeweed (Helenium autumnale) 3	Trees - leaves compound
stinging nettle (Laportea canadensis) 2	*ash, black (Fraxinus nigra) 7
*swamp saxifrage (Saxifraga pennsylvanica) 10	ash, green (Fraxinus pensylvanica) 3
*Virginia bluebells (Mertensia virginica) 6	*ash, pumpkin (Fraxinus tomentosa) 8
waterhemp (Amaranthus tuberculatus) 1	boxelder (Acer negundo) 1
wingstem (Actinomeris alternifolia) 3	hickory, bitternut (Carya cordiformis) 5
wingstorn (/ totallornelle diterrillella) e	hickory, shellbark (Carya laciniosa) 8
Herbs: dicots - Ivs. basal or alternate and	honey locust (Gleditsia triacanthos) 1
compound or deeply lobed	*poison sumac (Rhus vernix) 10
aven spp.: round, white (Geum) 2	poison sumae (rands vernix) to
*buttercup spp.: cursed b., hooked b., swamp	Trees - leaves simple and opposite
b.(Ranunculus) 6	red maple (Acer rubrum) 5
chervil (Chaerophyllum procumbens) 3	silver maple (Acer saccharinum) 1
*cowbane (Oxypolis rigidior) 7	sliver maple (Acer saccharillum) i
*great angelica (Angelica atropurpurea) 6	Trees - leaves simple and alternate
hog peanut / ground nut (Amphicarpaea and	*alder, speckled (Alnus rugosa) 9
Apios) 5	river birch (Betula nigra) 2
honewort (Cryptotaenia canadensis) 3	black, gum (Nyssa sylvatica) 5
meadow rue spp. (Thalictrum) 5	cottonwood, eastern (Populus deltoides) 1
poison ivy (Rhus radicans) 1	
*queen-of-the prairie (Filipendula rubra) 9	cottonwood, swamp (Populus heterophylla) 8
	elm, American (Ulmus americana) 3
senna spp. (Cassia) 4 swamp agrimony (Agrimonia parviflora) 4	hackberry (Celtis occidentalis) 3
	ironwood (Carpinus caroliniana) 5
*swamp thistle (Cirsium muticum) 8	oak, pin or white (Quercus) 4
tall coneflower (Rudbeckia laciniata) 3	*oak, Shumard's, swamp chestnut, swamp whit
*water hemlock spp. (Cicuta) 7	*pawpaw (Asimina triloba) 6
water parsnips (Sium suave) 5	*sugarberry (Celtis laevigata) 7
Obs. Landau and Market Barbara	sweet gum (Liquidambar styraciflua) 4
Shrubs - leaves opposite or whorled	sycamore, American (Platanus occidentalis) 3
bladdernut (Staphylea trifolia) 5	willow spp. (Salix) 1 sp. = 3
buckthorn spp. (Rhamnus cathartica, R.	additional sp. = 7
frangula) 0	
buttonbush (Cephalanthus occidentalis) 5	
dogwwod, red-osier (Cornus stolonifera) 4	
*dogwood, blue-fruited or silky (Cornus obliqua)	
dogwood, gray (Cornus racemosa) 2	
elderberry (Sambucus) 2	

Herbs (vines): dicots - lvs. alternate or basal and					
simple (continued)	Shrubs - leaves alternate				
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*dogwood, blue-fruited or silky (Cornus obliqua)					
dogwood, gray (Cornus racemosa) 2					
elderberry (Sambucus) 2					

Wetland S6W139



Wetland Location on 2015 Aerial Photograph

Wetland Location on Martinsville USGS Quadrangle

Basin: Clear Creek - East/West/Grassy Quadrangle: Martinsville 14-digit HUC: 05120201140140 County: Morgan T12N Physiographic Region: Martinsville Hills Township: Interior Plateau Ecoregion: R1E Range: Natural Region: Highland Rim Section: 26 Size of wetland complex (acres): 0.6098 Quarter: SE

USACE JurisdictionYesLatitude:39.442839IDEM Jurisdiction:YesLongitude:-86.386262

Polygon ID	Community Type	Cowardin Class	Polygon Area (acres)	Animal Habitat Measure	Botanical Measure	Hydrology Measure	Alternative	Area Impacted (acres)	Percent Polygon Impacted
S6W139A	Pond	PUB	0.61	no rating	no rating	no rating	RPA	0.00	0.0%